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ROADMAP FOR EMPOWERING WOMEN-LED FIRMS IN ECOMMERCE AND THE DIGITAL ECONOMY

September 30, 2021

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ROADMAP FOR EMPOWERING WOMEN-LED FIRMS IN ECOMMERCE AND THE DIGITAL ECONOMY

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I. INTRODUCTION

In recent years, governments and companies around the world have made significant efforts to enable women-led firms to access business opportunities, technologies, training, and financing. For example, numerous governments have created programs for women in STEM, helped women-led firms access broadband and new technologies, and connected women-led start-ups to early-stage investors. Some countries such as Canada, France, and Sweden have placed gender issues at the center of their foreign assistance policies. Governments' growing interest in promoting women is reflected in the United Nations 2030 Sustainable Development Goals, many of which have a specific focus on gender equality and the empowerment of women.

These are positive steps. Programs to empower women can help them start and grow their businesses, build wealth, and attain their full potential in life. In turn, women's advancement is key for optimizing the use of societies' productive resources and promoting economic growth, household welfare, and intergenerational wealth transfer.¹

However, considerable gaps persist between men and women in access to education, technologies, lucrative employment, and opportunities for starting a business. These gaps have widened during the COVID-19 pandemic, which has hit women workers and business owners around the world considerably harder than men.² At the same time, the COVID-19 crisis has pushed consumers around the world online, expanding the opportunities for women-led firms to reach new customers, markets, suppliers, and services. Governments, donors, and corporations have in ecommerce an outstanding and timely opportunity to enable and help women-led firms to recover from the crisis and grow.

Of course, work to enable women-led firms to grow through ecommerce is already underway. Since the start of the pandemic, several donors and major corporations have stepped up their work supporting women-led firms in the digital economy and become increasingly active in supporting women-led firms in ecommerce. Among them is the US Agency for International Development (USAID), which supported the preparation of this report, as well as the USAID-backed Alliance for eTrade Development, which consists of 12 leading private-sector partners and aims to enable micro, small, and medium-sized enterprises (MSMEs) in developing countries to engage in ecommerce.³

As the development community and corporations focus on promoting women-led firms in trade and economies, much remains to be learned about the approaches that are in place and what actually works to enable women-led firms to grow through ecommerce and online platforms, allowing them to reach and transact with service providers, suppliers, and customers around the world.

The purpose of this report is to start bridging this knowledge gap, and shape governments, development organizations and corporations' programming to promote different types of women-led firms in the digital economy, and to catalyze innovative approaches that support women-led firms at scale and with lasting impact. Specifically, this report: (1) takes stock of women-led firms' use of ecommerce and online platforms in their businesses; (2) assesses the pain points that women-led firms face when growing their online sales and businesses; (3) explores the types of approaches that have been deployed to date by donors, governments, corporations, and other stakeholders to build women-led firms' capacities for ecommerce; and (4) develops a roadmap of strategies and tactics for governments, private-sector players, and the international development community to optimize capacity-building among women-led firms to use ecommerce and build new value in the global digital economy.

This report leverages new survey data in five countries—Indonesia, Mexico, Nigeria, Kenya, and the United States (the benchmark country). It also draws on interviews with representatives from various

programs that support women-led firms, as well as women-led firms themselves. It combines this data with leading-edge approaches from corporate learning and the development field to address the following questions:

- **How do women-led firms in different countries and firm segments use digital technologies** such as ecommerce platforms and online services, and how do they convert technology use into new sales and employment opportunities?
- **How do women-led firms sequence their acquisition of digital technologies** and what do their digital journeys look like?
- **Which types of women-led firms are likeliest to adopt new technologies and “graduate” to fully digitized enterprises** that use technologies throughout their businesses and sales cycles?
- **What challenges do women-led firms face in growing into digitized online sellers,** and how are they addressing these challenges?
- **How have developing country governments, donors, development organizations, and corporations** structured capacity-building programs aimed to promote women-led firms in ecommerce?
- **How could governments, development organizations, and private-sector leaders further orient their capacity-building programs and other initiatives** to enable more women-led firms to start, acquire digital technologies, and progress on digital journeys to grow into thriving global online sellers?

As women can make a major difference in firms even if they aren't the CEO, this paper broadens the traditional definition of “woman-led firm” beyond firms that have a female CEO to include those that have a male CEO but whose executive teams are mostly made up of women.

The next section discusses insights from survey data and interviews on how women-led firms use ecommerce and online platforms and how they sequence their adoption of digital tools and technologies. Section three considers approaches that have been used to train women-led firms in ecommerce and lays out ideas for constructing impactful ecommerce capacity-building programs for women-led firms. Section four discusses broader considerations for governments and other stakeholders that will enable women-led firms' digital transformation and opportunities in the digital economy. Section five concludes.

II. HOW DO WOMEN-LED FIRMS USE ONLINE PLATFORMS AND ECOMMERCE? INSIGHTS FROM SURVEY DATA

There are increasingly rich findings on how the use of digital technologies and ecommerce can accelerate women's advancement in different roles, including as business owners, solo entrepreneurs, and consumers, and what the unique challenges facing women-led firms are in benefiting from technologies. Some of findings include:

- **Increased sales and exports.** Multiple firm-level surveys, including ones supported by the eTrade Alliance, suggest that women-led firms are just as likely as *comparable* male-led firms (firms of similar sizes and geographies, and with similar technologies and human capital) to use ecommerce and digital technologies. They are also as likely to benefit from ecommerce in terms of new customers, higher revenues, higher margins, and export opportunities.⁴ Just like their men-led firms, women-led firms that sell online are more likely to export than firms that do not sell online. Overall, in firm studies that compare “apples to apples,” the gender of the CEO plays practically no role in arbitrating firms' gains from ecommerce or constraints to growing online sales. The differences in ecommerce use and firm performance are universally shaped by firm size—microenterprises are significantly less likely to use ecommerce than large firms—and geography—rural firms are less likely to engage in ecommerce than firms in metropolitan regions.

However, surveys also show that a disproportionate share of larger, urban, and technology-intensive firms that tend to do well in ecommerce are run by men. Meanwhile, women-led firms tend to account for a relatively large share of micro and small firms and rural firms. This suggests that women-led firms face greater barriers and frictions to journey from micro firms to larger, technology-driven online sellers.

- **Access to finance.** Both research and anecdotal evidence suggest that women face higher hurdles than do men in accessing financing for their businesses, whether equity from angels or venture capital funds or loans from banks.⁵ This, studies indicate, is partly because of gender biases among investors and lenders.⁶ However, women appear to be better able to access loans from online platforms.⁷ For example, there is also evidence from Germany that fintechs can help make lending decisions more gender-blind and facilitate women-led firms' access to finance.⁸ Studies suggest that online lenders have in general helped bridge MSME financing gaps and been additive, providing credit to firms that have failed to secure financing from banks.⁹ They are also helpful for online sellers: our recent study suggests that MSMEs that sell online tend to be likelier to use fintech for financing than offline seller firms, and firms that have used fintech in the past tend to prefer them for future financing needs as well.¹⁰
- **Access to online work.** Digital technologies have opened up opportunities for women to work remotely, whether by teleworking in their own companies, as digital nomads, or via online marketplaces such as Fiverr, Upwork, and Freelancer used by businesses and entrepreneurs around the world to procure online services. Online work can be particularly empowering for women, especially in cultures where they are expected to stay at home and where their ability to access professional networks and gather the social and tactical skills needed to excel are more limited. Teleworking and online job opportunities can also benefit women who require more flexible schedules to care for their children. Indeed, women appear to self-select into online work. For example, the World Bank found that there are proportionately many more

women employed on the online platform Upwork (44 percent of the total) than there are in the offline nonagricultural labor market (25 percent).¹¹

- **Benefits and insurance.** Some online platforms and freelance sites also provide women with insurance and benefits that they have typically never had. For example, the South African home-cleaning marketplace SweepSouth offers freelancers life and disability insurance, while Wesabi, a platform matching home repair professionals with homeowners in Nigeria, offers professional indemnity insurance against theft or damages to protect both the contractor and the homeowner.¹²
- **Access to learning and networks.** Women can and frequently do access online platforms such as YouTube to access rich educational content and tools to support their businesses, learn new skills, and solve day-to-day business problems.
- **Access to a wider variety of goods at lower prices.** Women also benefit from ecommerce and digital tools and platforms as consumers. Women hold more wealth than ever before, in both absolute and relative terms—currently about a third of the world’s total.¹³ While gender does not tend to account for variations across consumers in use of ecommerce—such characteristics as income, race, and educational attainment tend to drive online shopping behaviors—women just like men do reap a consumer surplus online.¹⁴ For example, in a recent study conducted on Visa’s payment network, the consumer surplus from ecommerce was found to be worth \$1,100 annually to an average American household, equivalent to a 1.1 percent gain in consumption.¹⁵ Women in rural areas also benefit from ecommerce as a way to reduce travel time, find cheaper products, and access the same variety of products and services available to their urban peers.¹⁶

Research on the impact of platforms and ecommerce on women and women-led firms is growing. However, relatively little is known about exactly how different types of women-led firms use ecommerce and digital technologies, how they benefit, what constraints they face, and how the development community can enable women to access and use platforms and ecommerce at scale to create new value and build their businesses.

A. HOW WOMEN-LED FIRMS USE ECOMMERCE AND PLATFORMS AND HOW THEY BENEFIT

To explore how MSMEs use ecommerce and other online platforms and technologies, we fielded an online survey with 2,536 firms in Mexico, Indonesia, Nigeria, Kenya, and the United States, which served as the benchmark country. Some 30 percent of the surveyed firms are led by a female CEO, and in most of these firms, women make up 50 percent or more of the executive teams and staff (figures 1 and 2). There are also 132 firms with a male CEO that have mostly female executive teams: these firms are here also classified as “women-led firms.” This paper thus focuses on 891 firms that have a female CEO or a majority female management team despite having a male CEO. These two categories are shown in red in figure 1. The samples are relatively similar in size across the five markets and represent a wide range of sectors (figures 3 and 4).

Figure 1: Number of firms in the sample by size, gender of CEO, and gender of the executive team

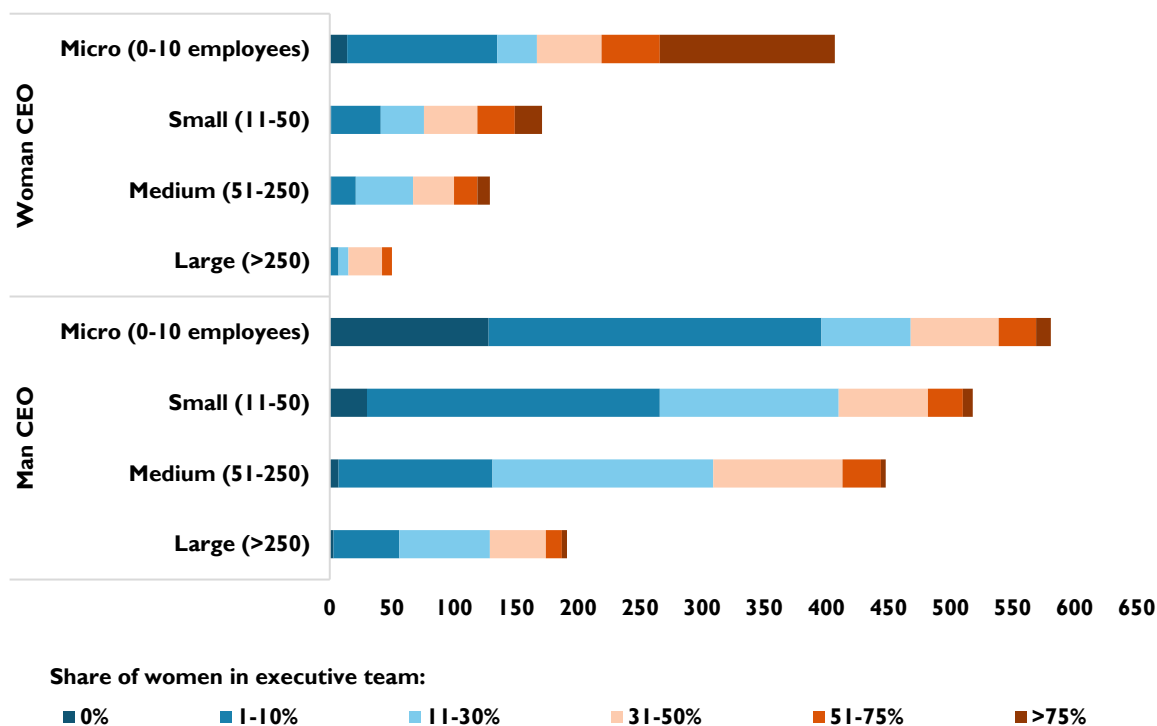


Figure 2: Number of firms in the sample, by share of women in companies' staff and executive teams

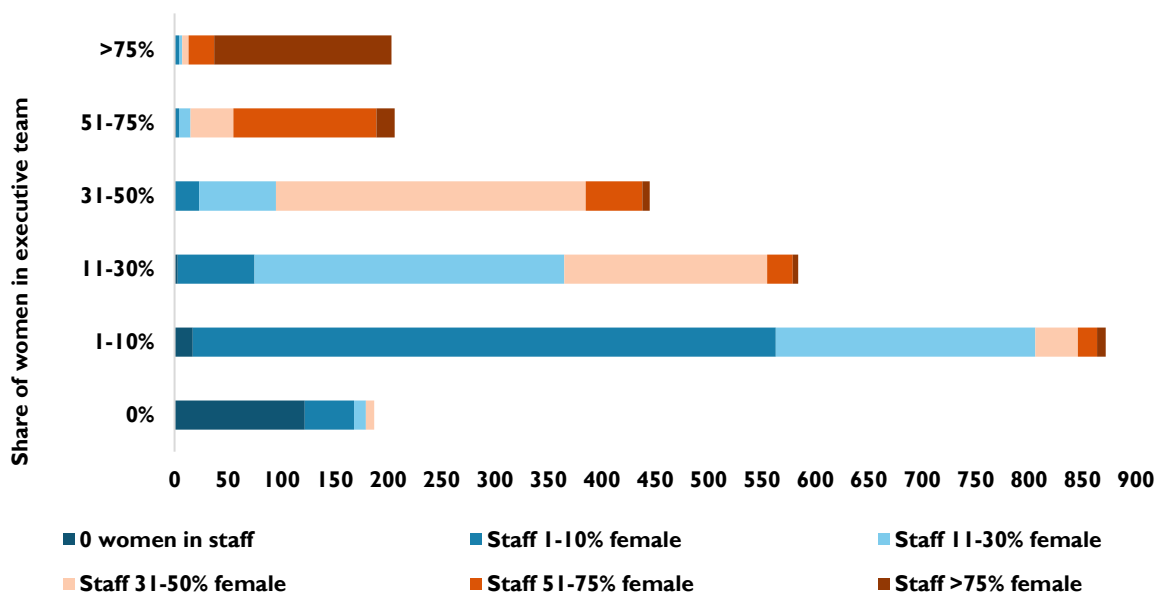


Figure 3: Share of firms by country

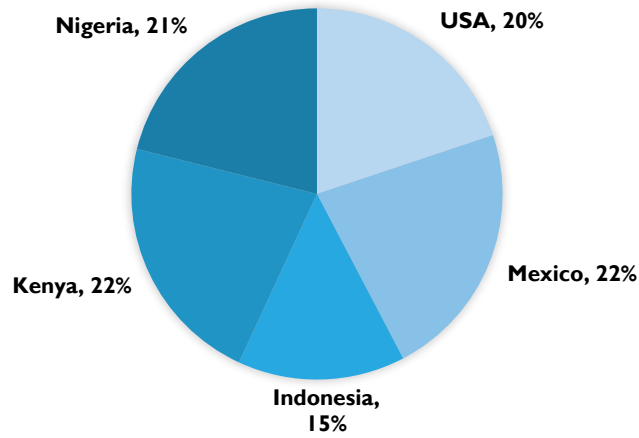
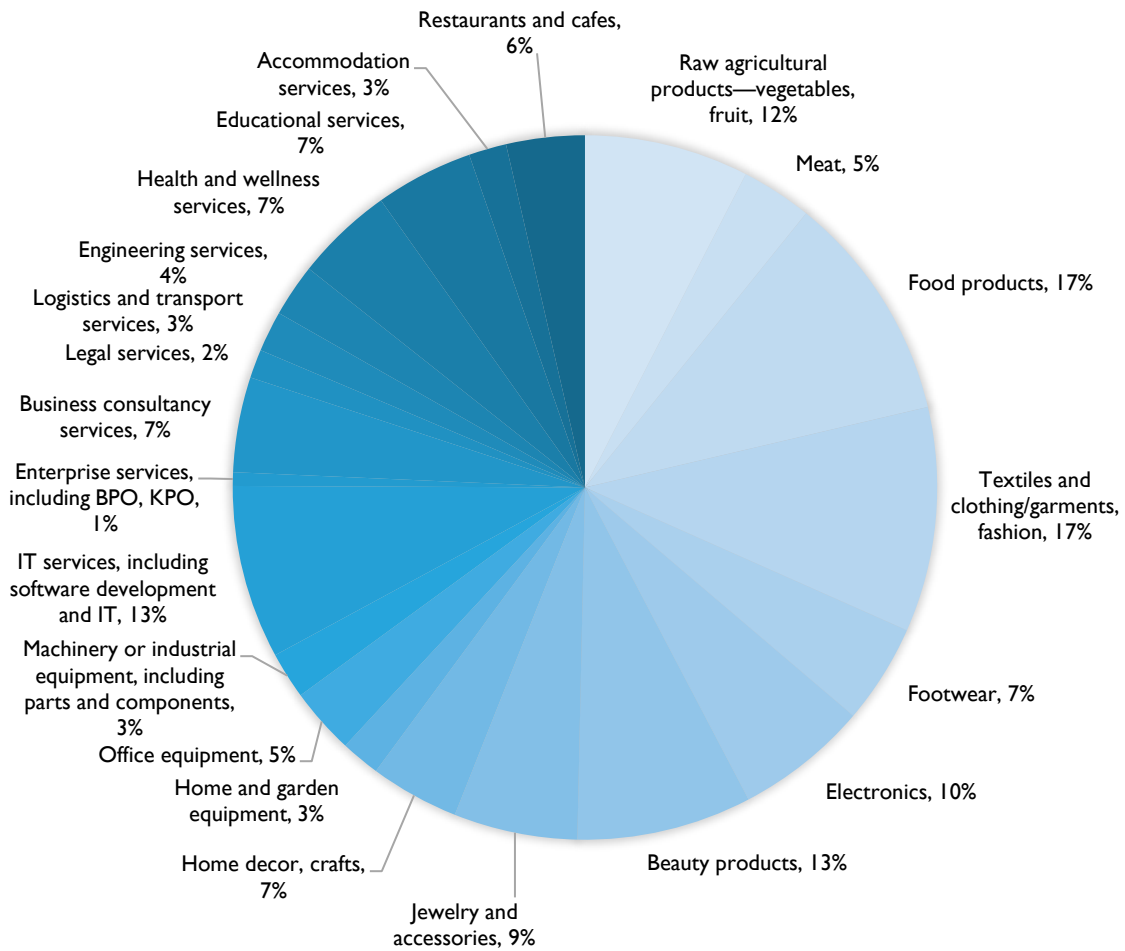


Figure 4: Share of firms by sector



As is common across surveys, most of the surveyed firms are social sellers—they use social media to sell and market their goods and services and transact with the customer using WhatsApp and other messaging apps (table 1). Meanwhile, midsize and larger companies have already started to use online stores and marketplaces that make them visible to hundreds of millions of customers around the world. The patterns are similar across economies, although US and Mexican firms are likelier to use global (mostly US-based) marketplaces such as eBay and Amazon, while sellers in Indonesia, Kenya, and Nigeria are avid users of regional marketplaces such as Lazada, Jumia, and Konga. Mexican firms are also avid users of WhatsApp.

Table 1: Women-led firms’ use of selected online channels by country and size

Country	Number of employees	Social seller	Use Facebook	Use Instagram	Use Whatsapp	Have own online store	Marketplace seller	Sell on a global marketplace	Use Amazon	Use eBay	Use no platforms on social media
United States	Micro (0-10 employees)	71%	61%	41%	10%	12%	32%	32%	16%	14%	23%
	Small (11-50)	78%	63%	58%	30%	33%	23%	23%	10%	8%	5%
	Medium (51-250)	89%	74%	64%	45%	26%	49%	49%	40%	11%	9%
	Large (>250)	100%	81%	62%	52%	14%	62%	62%	52%	29%	0%
Mexico	Micro (0-10)	98%	87%	56%	86%	17%	12%	12%	7%	6%	2%
	Small (11-50)	93%	86%	69%	93%	24%	36%	36%	33%	10%	0%
	Medium (51-250)	98%	93%	55%	59%	30%	30%	30%	25%	16%	0%
	Large (>250)	92%	83%	50%	58%	42%	33%	33%	33%	8%	0%
Indonesia	Micro (0-10)	98%	71%	84%	86%	37%	55%	8%	4%	2%	2%
	Small (11-50)	95%	64%	73%	73%	39%	45%	18%	14%	5%	2%
	Medium (51-250)	88%	79%	71%	71%	42%	54%	21%	17%	17%	4%
	Large (>250)	100%	82%	82%	55%	36%	36%	18%	18%	9%	0%
Kenya	Micro (0-10)	97%	87%	55%	93%	11%	29%	9%	2%	2%	4%
	Small (11-50)	100%	97%	74%	87%	29%	42%	26%	13%	8%	0%
	Medium (51-250)	97%	93%	66%	86%	21%	34%	24%	17%	7%	7%
	Large (>250)	100%	100%	88%	88%	50%	63%	50%	38%	25%	0%
Nigeria	Micro (0-10)	96%	90%	76%	94%	20%	28%	16%	6%	2%	4%
	Small (11-50)	93%	86%	77%	86%	16%	30%	16%	7%	2%	2%
	Medium (51-250)	100%	95%	90%	95%	57%	43%	19%	14%	14%	0%
	Large (>250)	100%	100%	80%	67%	40%	53%	47%	13%	13%	0%

The surveyed women-led firms vary further in terms of their overall digital maturity—their use of technologies to operate their companies and access customers, financing, and services. Indeed, the data yields four archetypes for women-led firms, classified by digital maturity level: mature digital enterprises, emerging digital enterprises, social sellers, and incipient digitizers (table 2).

Firms in these groups share certain characteristics. For example, highly digitized firms use sophisticated software across company functions, rely on digital services such as fintechs, and sell their goods and services on global online marketplaces. These tend to be medium-sized and larger firms that operate in B2B markets and are located in major cities, have typically been in business for at least 5–6 years, and are led by teams containing at least one executive with a university degree. They deal with technology-savvy customers and thus likely have high returns on technology adoption. These firms, categorized as “As” in our mapping, tend to engage in trade and have strong growth rates—more than half of them grow at more than 10 percent per year. They tend to report significant gains from technologies, in

terms of increased sales, export diversification, improved cash flow, and improved access to high-quality vendors. They are also eager to learn more and invest in their digital transformation.

At the other end of the spectrum are “Ds,” or incipient digitizers that have barely set out on their digital journeys and that tend to struggle with the basics for doing ecommerce, such as reliable internet connections and basic knowledge about using online platforms. These firms tend to service individual consumers in sectors such as healthcare and education; they are also found in the textile and apparel and food and agricultural sectors. Ds tend to use mobile payments and social media accounts but not many other digital services. They tend to be located in smaller cities and rural areas with limited access to the world-class talent, services, and connections available to types A and B, which are typically located in large cities. Types C and D tend to be younger, smaller, slower-growing, and more heavily staffed by women than As and Bs. They were generally also hit harder by the COVID-19 crisis, reporting that the pandemic has made it harder for them to invest in building ecommerce capacities. These firms also tend to be in local B2C services. “Ds” may be less interested in investing on ecommerce and digital capabilities because their customer base is more local and, especially in rural areas, less digitized than the customer bases of the other groups.

Table 2: Archetypes of women-led firms, by digital maturity

Archetype	% of sample	% of firms that are micro and small	Typical technologies used by 50% of firms	Typical sales channels	Typical sectors and clients	Located in	% of firms with >10% y-o-y growth	% of firms with >50% of team with university degrees	% of firms with no executives with university degrees	Age
A Mature digital enterprise	31%	52%	CRM, SRM, ERP systems, software to manage inventory and accounting, mobile payments, digital payments, online banking	Marketplaces, own online store, social channels	B2B IT services, food products, textiles and apparel, beauty products, agricultural products	74% first-tier; 5% rural	51%	45%	0%	53% of firms >6 years; 3% <1 year
B Emerging digital enterprise	25%	71%	Mobile payments, digital payments, online banking, 25% use CRM and SRM systems	Social media, own online store	B2C and B2B food products, textiles and apparel, beauty products, home decor products, IT services	65% first-tier; 8% rural	42%	46%	1%	41% of firms >6 years; 6% <1 year
C Social seller	26%	82%	Mobile payments, digital payments, online banking; ~45% use CRM, SRM, ERP systems	Social media, messaging apps	Mostly B2C food products, textiles and apparel, accessories	57% first-tier; 8% rural	27%	47%	8%	39% of firms >6 years; 11% <1 year
D Incipient digitizer	18%	93%	Mobile payments; 40% use online banking and digital payments; no use of CRM, SRM, ERP systems	Social media, messaging apps	B2C educational and health services, textiles and apparel, agricultural and food products, jewelry, beauty products	53% first-tier; 17% rural	28%	46%	12%	36% of firms >6 years; 12% <1 year

Archetype	% of firms with >50% of executive team women	>50% of staff women	% of firms with one or more executives with IT background	% of firms that export	% of firms with >25% of revenue from exports	If export: avg. number of foreign markets	% of firms that import	% that say Covid made it much more important to invest in ecommerce
A Mature digital enterprise	40%	36%	21%	70%	33%	3.3	77%	71%
B Emerging digital enterprise	36%	34%	22%	53%	22%	2.8	66%	62%
C Social seller	46%	45%	15%	24%	8%	2.7	39%	64%
D Incipient digitizer	63%	62%	13%	15%	6%	2.7	29%	54%

There are further differences across these four groups. Firms in group A not only use various types of technologies but tend to use them intensively—three-quarters of them report using various types of software, ERP systems, and cloud computing services weekly (figure 5). Highly digitized firms are also likelier than other firms to use online marketplaces and to prefer digital payments, while incipient digitizers rely on traditional methods like cash for domestic transactions and bank wires for cross-border transactions (figures 6 and 7).

There are likely good reasons why a type “A” marketplace seller, for instance, tends to use bundles of digital services and technologies: they need digital payments and lending platforms to transact more effectively with their online customers and access fast-disbursing working capital loans to quickly fulfill online orders. Granted, marketplace sellers have also grown more accustomed to using online service providers than, say, offline sellers or social sellers, and tend to trust them more easily. That said, both highly and less digitized women-led firms have gained from the online tools they use. For early digitizers, benefits are about gaining confidence and skills; for mature digitizers, they are about the bottom line—revenue, customers, and financing (figure 10).

Figure 5: Frequency of platform and technology use, by firms' digital maturity

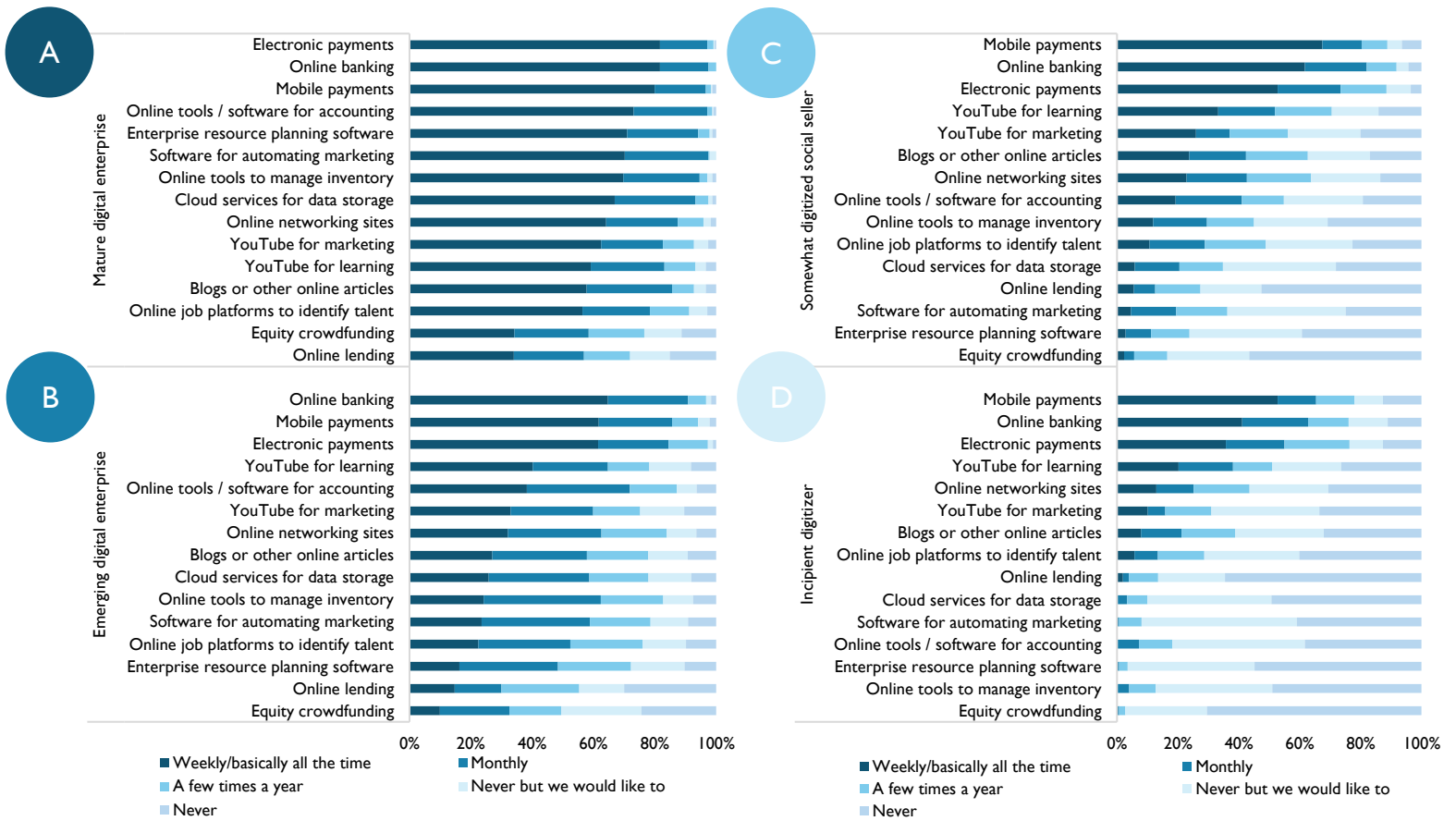


Figure 6: Percentage of firms that use platforms to market and sell

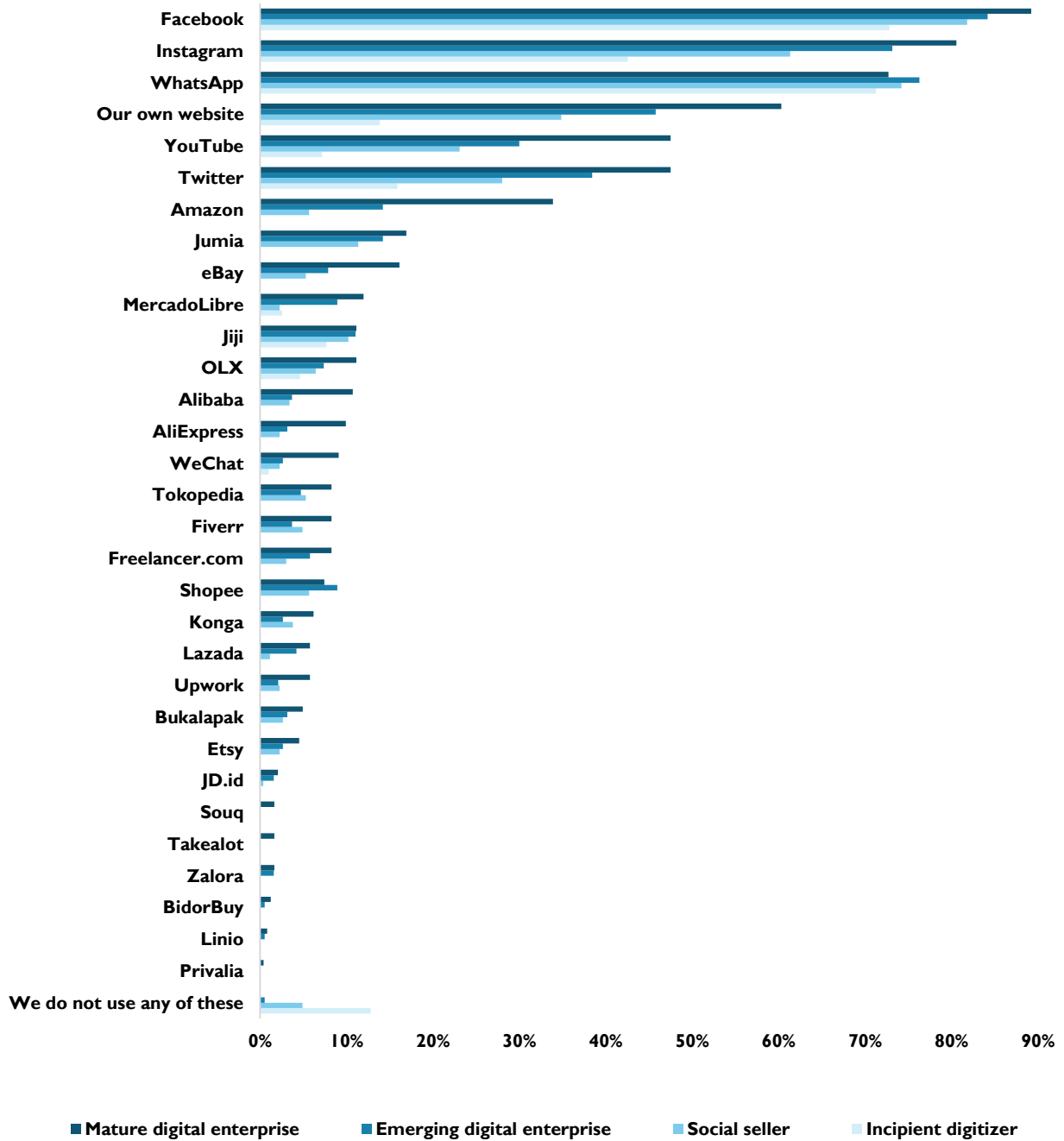


Figure 7: Methods for receiving payments, by firms' digital maturity

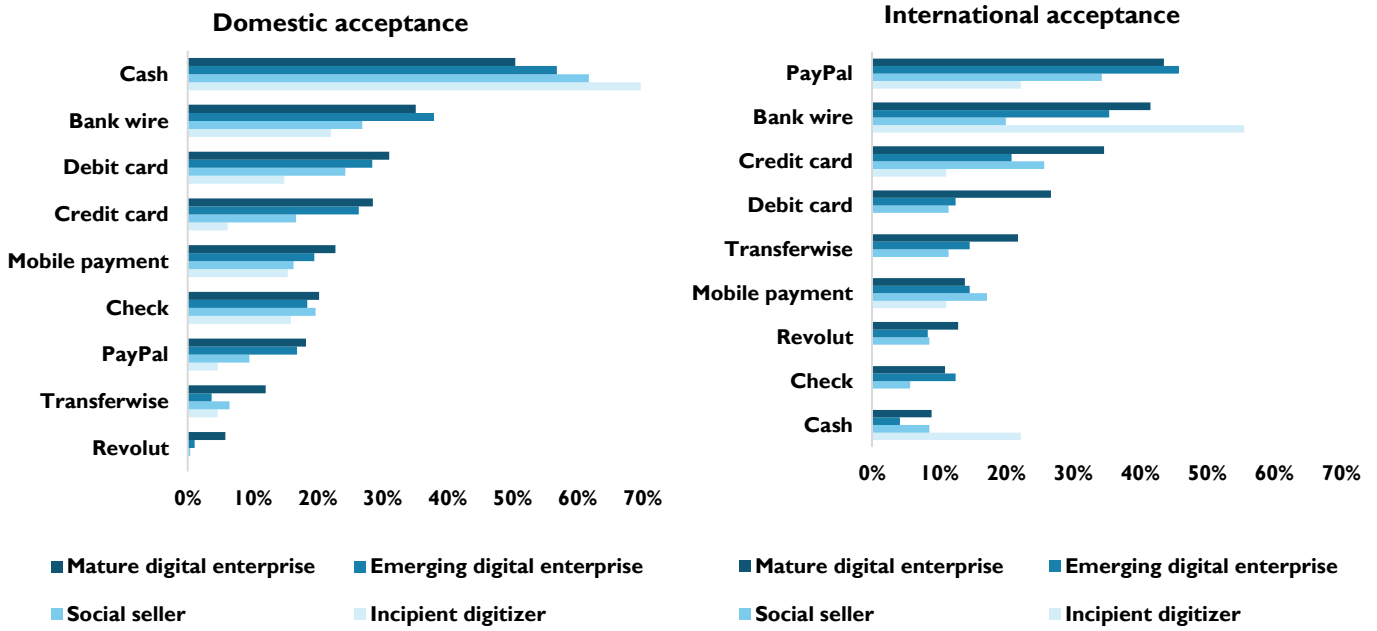
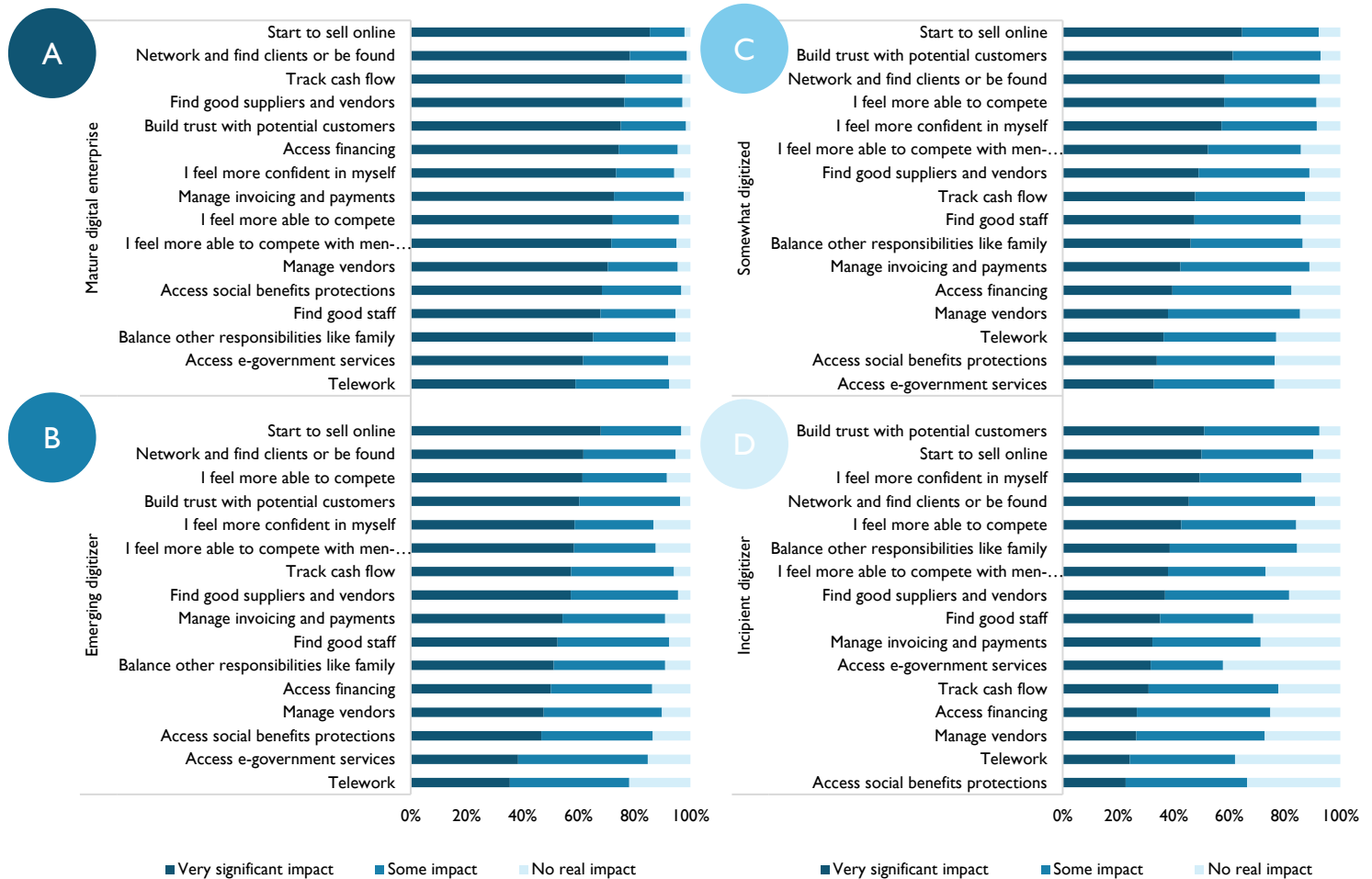


Figure 8: Gains from online platforms and digital technologies



Asked specifically about gains from ecommerce use, significant majorities of all firm types report access to new domestic customers and increased revenue as key benefits; mature digital firms have also gained new export opportunities and been able to access new vendors (figure 9). Covid-19 has intensified these firms' interest in investing in their ecommerce businesses—over 60 percent of As, Bs, and Cs alike look to invest more in their ecommerce businesses in 2021 (figure 10).

Figure 9: Gains from ecommerce, by firms' digital maturity

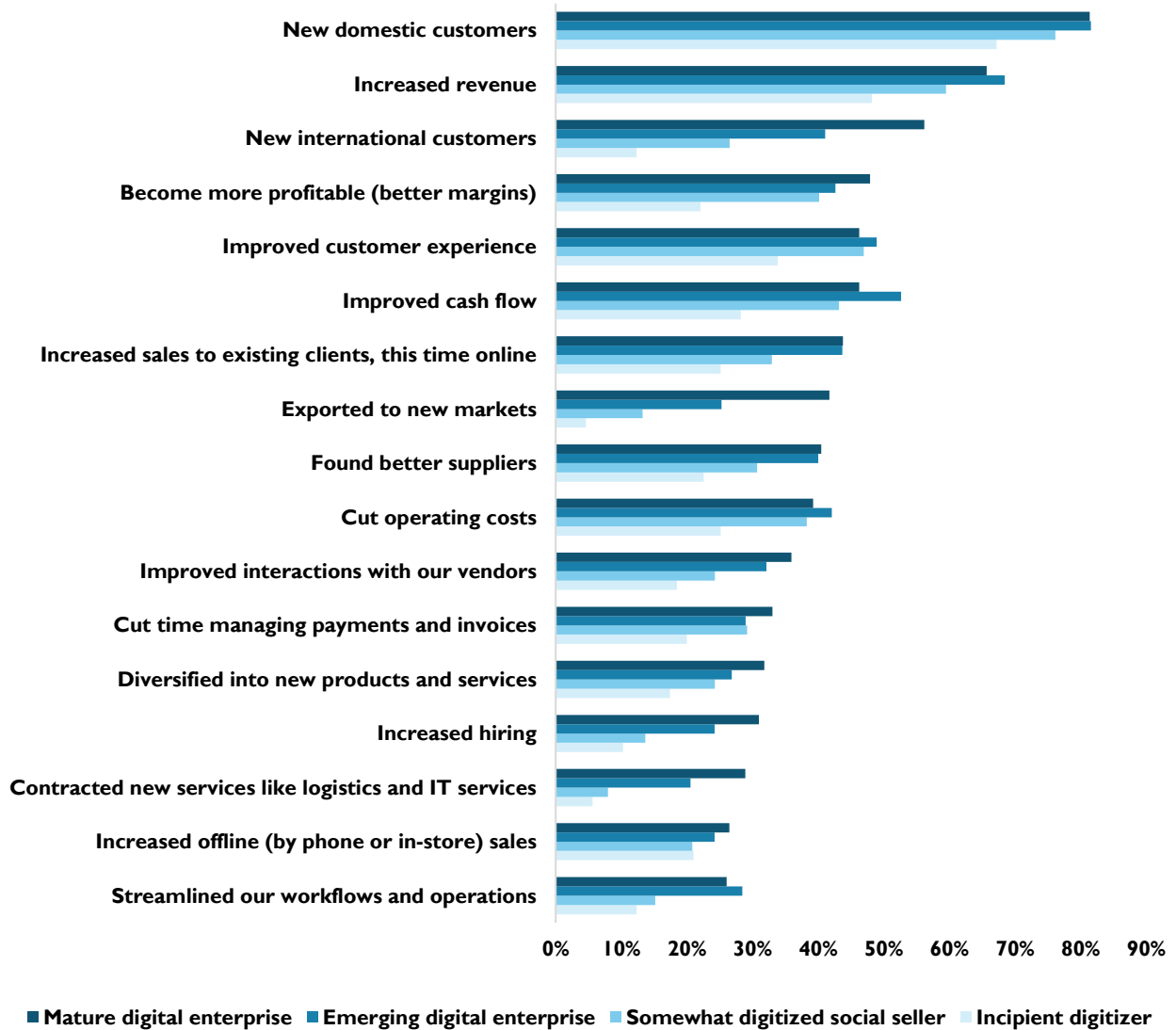
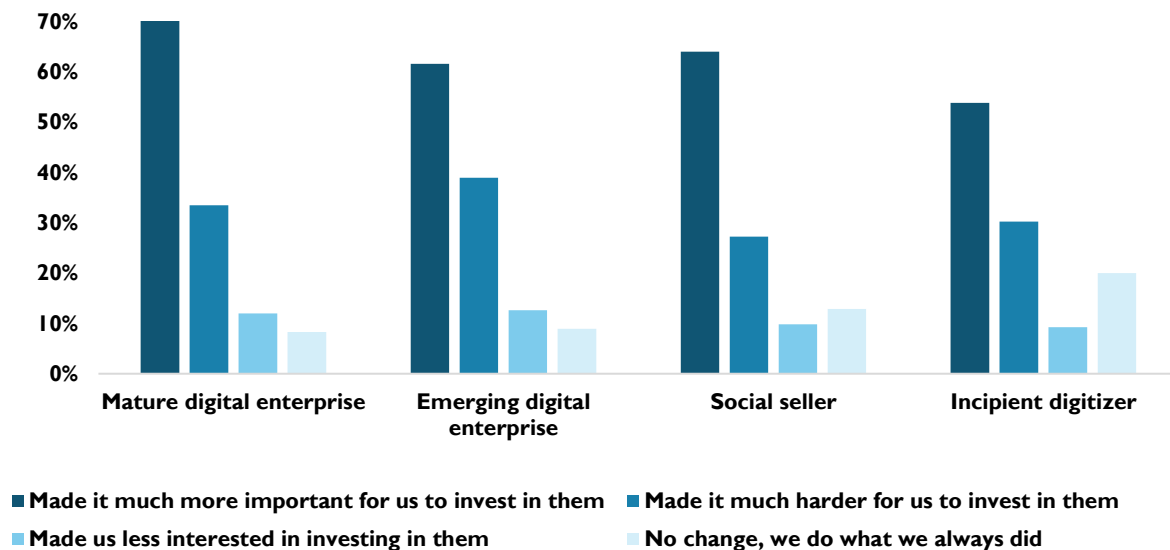


Figure 10: How has Covid-19 impacted your interest in investing time and money in ecommerce and digital capabilities?



B. ACCELERATING WOMEN-LED FIRMS' DIGITAL JOURNEYS: ARE MATURE DIGITIZERS BORN OR MADE?

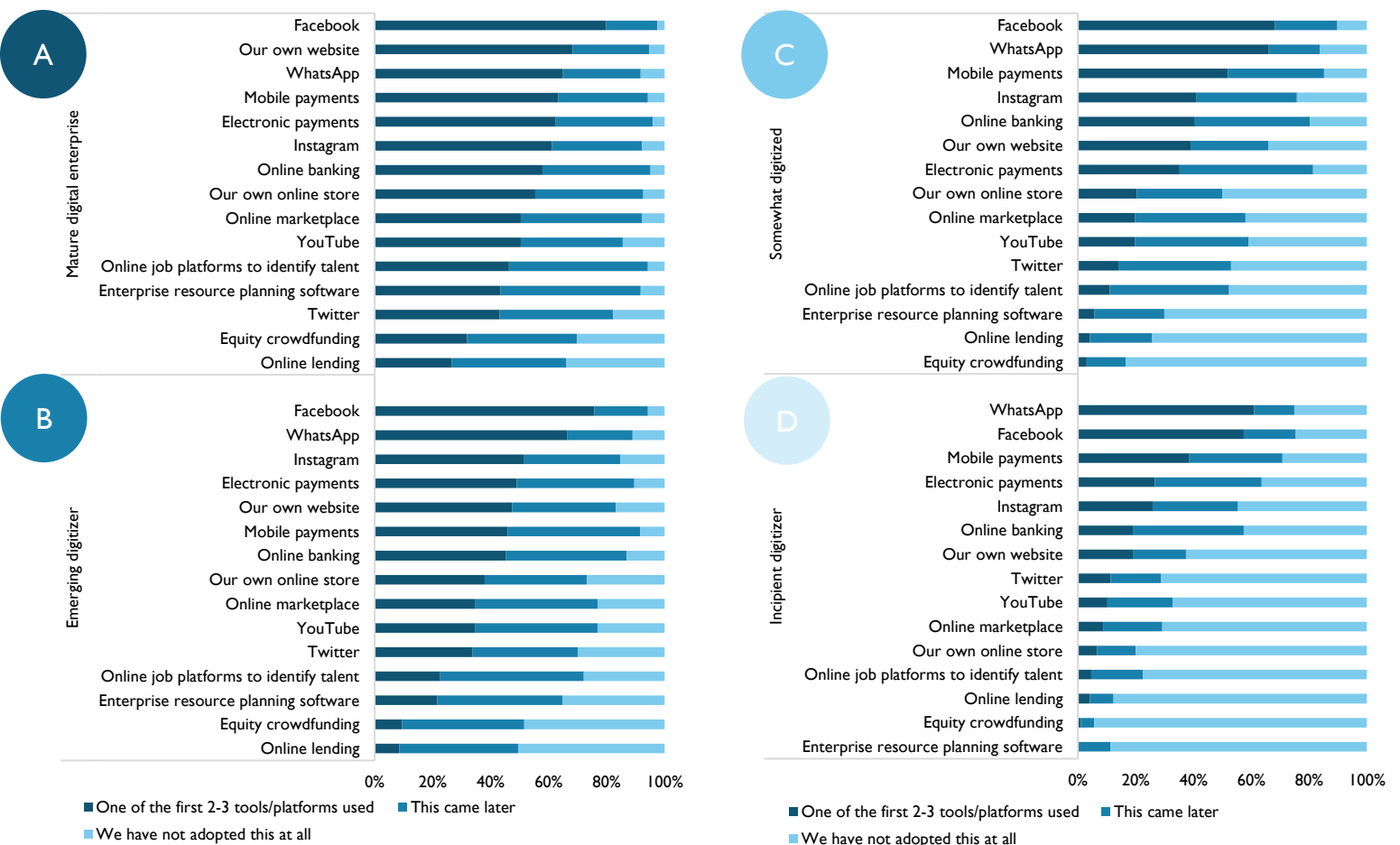
Women-led firms in all countries vary by their digital maturity, and digitally mature firms tend to outperform their peers in ecommerce use, growth, export participation, and ecommerce sales. They are also likelier than other firms to want to invest in their digital journeys and ecommerce development. Certain firm characteristics (such as size, age, location, and thus access to human capital and quality internet and digital services) are systematically correlated with digital maturity and firm performance: mature digital firms are larger, older, located in major cities, and have strong talent pools.

How can donors, governments, corporations, and other stakeholders interested in promoting women-led firms in ecommerce and the digital economy then make more women-led firms into As? The data suggest two answers.

- Born digital.** Some firms, by virtue of their location, customer base, technology portfolio, and human capital, are likelier to be born as large digital enterprises or grow quickly into digitized firms. In other words, As may be born as Bs and quickly grow into As. For example, a well-capitalized firm with world-class talent located in a major city is much better placed to grow into an online seller and digital enterprise than, say, a firm starting out in a remote region with unreliable internet connections and an inexperienced team. In our survey, about one-half of As report having set up a store on a marketplace and used a job platform to identify talent as their 2–3 first technologies. These firms are “digital natives” that sell goods and services exclusively online and typically use digital services extensively. In contrast, firms that start out in rural regions devoid of world-class connections, talent, and services are likelier to be born as Ds.
- Journey to digital.** The survey data presented here is a snapshot of women-led firms that can also be read as “digital journeys,” where firms that start as Ds or Cs can work their way to

becoming Bs and As. Looking at the data this way, there appear to be empirical regularities in women-led firms' digital journeys—how firms sequence their adoption of technologies and how they mature into digital enterprises and online sellers. For example, one interpretation of the data is that firms typically start their digital journeys by adopting social media and mobile payments, followed by accessing digital payments, before finally setting up online stores and getting on online marketplaces (figure 11). They then tend to access other digital services such as fintechs for online loans and technologies such as ERP systems and software that create operational efficiencies in such areas as inventory management, accounting, and marketing. As they grow their technology portfolios and progress with their digital transformation, they also become more productive, which enables them to access the resources needed to acquire and use more technologies (case 1). Figure 12 provides a succinct visualization of this digital journey.

Figure 11: Sequences in the adoption of online platforms, by firms' digital maturity



Case 1: Digitizing sales in an analogue sector, starting with social media and WhatsApp

Eskalia is a family-owned construction wholesale business led by María Rosa Brito, a Venezuelan architect who migrated to the Dominican Republic in 2003. María Rosa has had a long career in sales in the construction industry, with clients including local hardware stores and construction contractors in the cities of Santo Domingo and Punta Cana. However, profit margins in the construction industry are tight, and ecommerce is still underdeveloped as customers like in-person contact, informal contracts, and cash payments.

Still, María Rosa was convinced that going digital would pay off. She began by building a website, and when the COVID-19 pandemic hit she decided to enable online purchases, too. Her conversion rate was very low at first but improved as she added different digital channels, including social messaging tools, social media advertising, search engine optimization, and short how-to videos. Google Business and Google Ads have helped to generate awareness about the company and acquire new customers. The use of hashtags has helped to promote organic online advertising through Instagram and increase Eskalia's reach to such segments as architects. Eskalia also deployed WhatsApp Business to communicate with clients who do not use email.

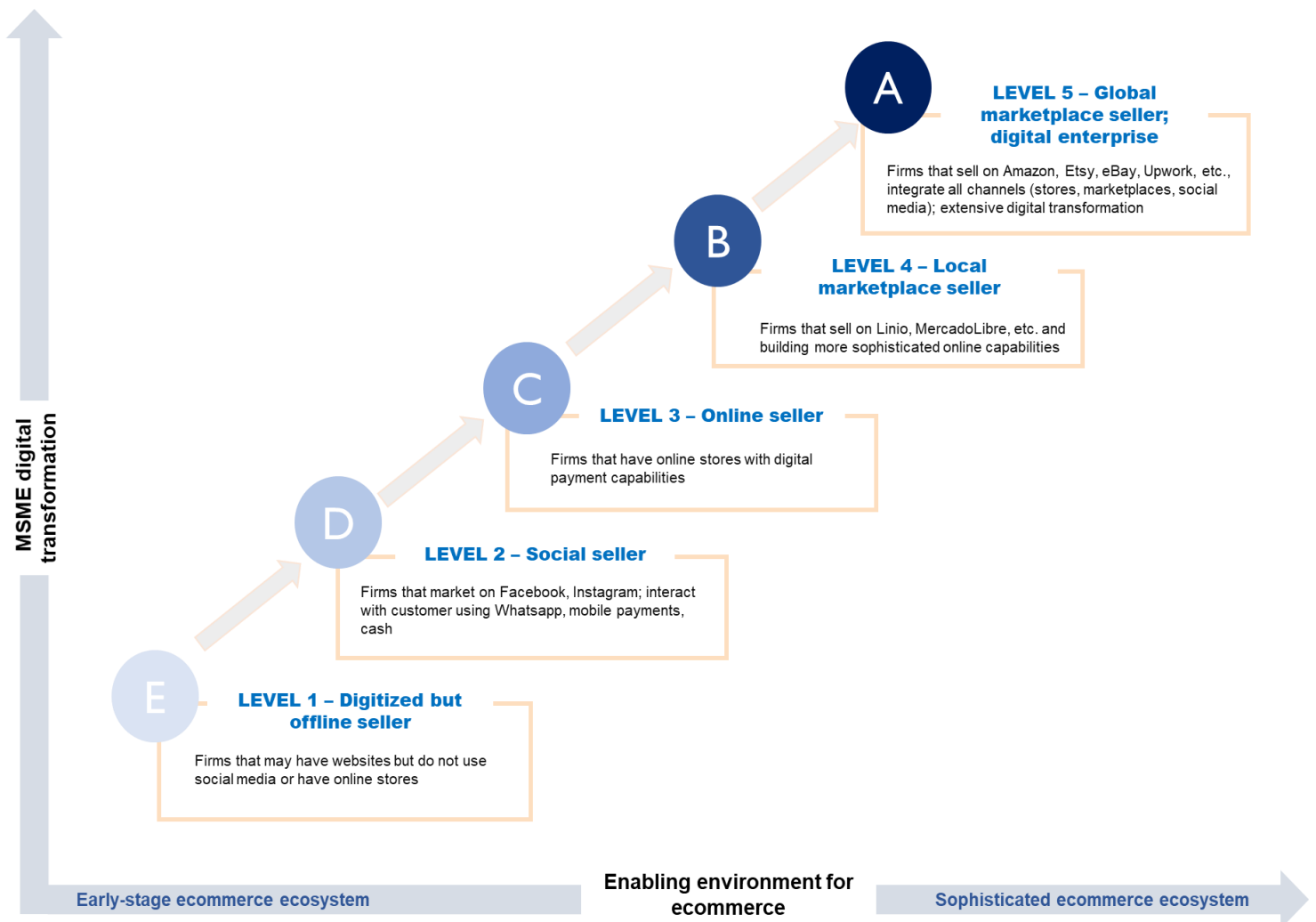
Since the start of COVID-19, Eskalia's clients have come online and started to pay digitally rather than with cash or checks. In the past, María Rosa was concerned about the fees associated with digital payments but came to appreciate the efficiency gains from using digital payments during the crisis.

María Rosa is learning about digital marketing strategies through the eWomen Training Program run by the eCommerce Institute. One of the most useful topics that she learned about through the program was business intelligence—analyzing data to make effective decisions. She also believes that it is important for women leaders to have good mentors to discuss strategies with and help them improve.

María Rosa believes ecommerce is leveling the playing field with her male colleagues, who traditionally made business deals and decisions while playing sports or engaging in other social activities with each other. However, she does feel hampered by generational gaps—like some of the other Generation Xers on the course, María Rosa feels she is facing greater challenges to using digital tools than millennials.

Case prepared by Prospera Consortium.

Figure 12: The digital journeys of online sellers and the drivers for these



Source: Nextrade Group.

Empirically, most developing country firms are still Cs. To date, few Ds and Cs have grown into As: in other words, the As observed today represent a small subset of the Bs, Cs, and Ds of yesterday. For the development community, the key question might then be how to then make more Cs and Ds into As.

There is no algorithm or econometric model that would provide a simple formula for firms or countries to succeed in e-commerce. However, by now there is data and case study evidence to make a few general statements about why some women-led firms “rise to the top” and become highly digitized online sellers, while others don’t.

First, type A firms have by definition already carried out extensive digital transformations. They also benefit from a policy environment and services ecosystems that are conducive to e-commerce, such as being located in countries and cities with strong digital and logistics services and technological talent. In our survey, US MSMEs from every archetype group proved much more likely to sell on marketplaces than digitally mature firms in poorer developing countries.

Second, type A firms have been keenly committed to their digital journeys for a long time. Surveys reveal time and again that not all business owners are interested in growing their firms, exporting, or digitizing further, nor do they see the return on investment from acquiring new technologies for their businesses. In general, surveys suggest that type C and D firms are less likely to be interested in digitizing or exporting than type A firms, and are less concerned about barriers to their online sales (figure 13). This of course partly reflects the fact that a share of Ds provide place-bound services, such as educational or healthcare services, and have no particular incentives to internationalize—in contrast to type A firms, who are already interacting with global customers and see a clear path to growing their global online businesses with further support and financing. Consequently, type As are often keenest to learn more about succeeding in ecommerce.

Indeed, the third likely reason for As' rise to the top is that they are avid learners who teach themselves, including using online resources and training programs. In our survey, mature digitizers report having learned about ecommerce on video platforms and from peers and mentors; few have used government programs or courses that target women (figure 14). Of course, this may simply suggest that firms that are type As today have had more opportunities to learn than type Ds or Cs. At the same time, As may also value learning—they may be where they are today *because* they have always been learning (cases 2 and 3).

Figure 13: Share of firms seeing a challenge as “huge” for doing ecommerce, by firms’ digital maturity

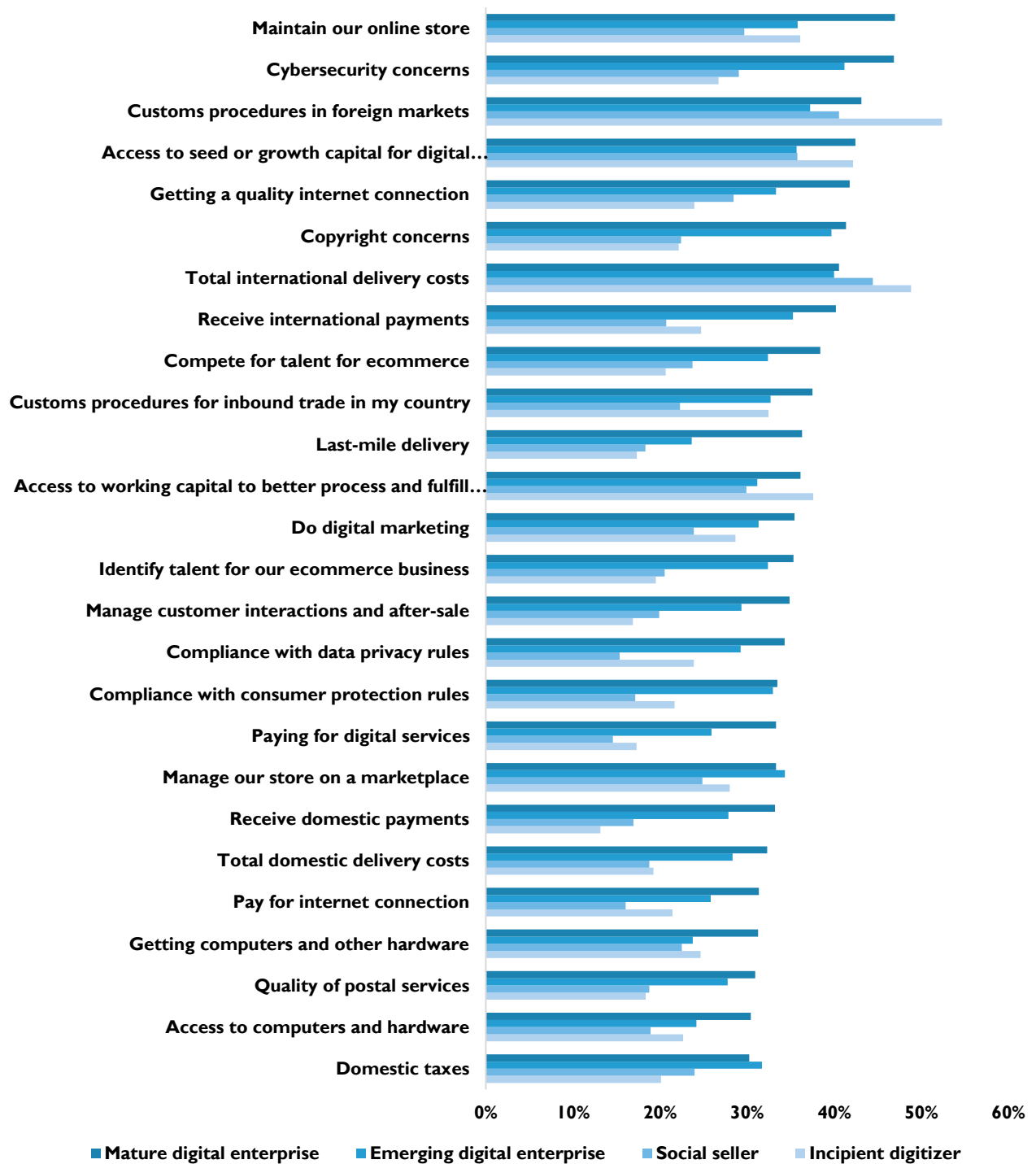
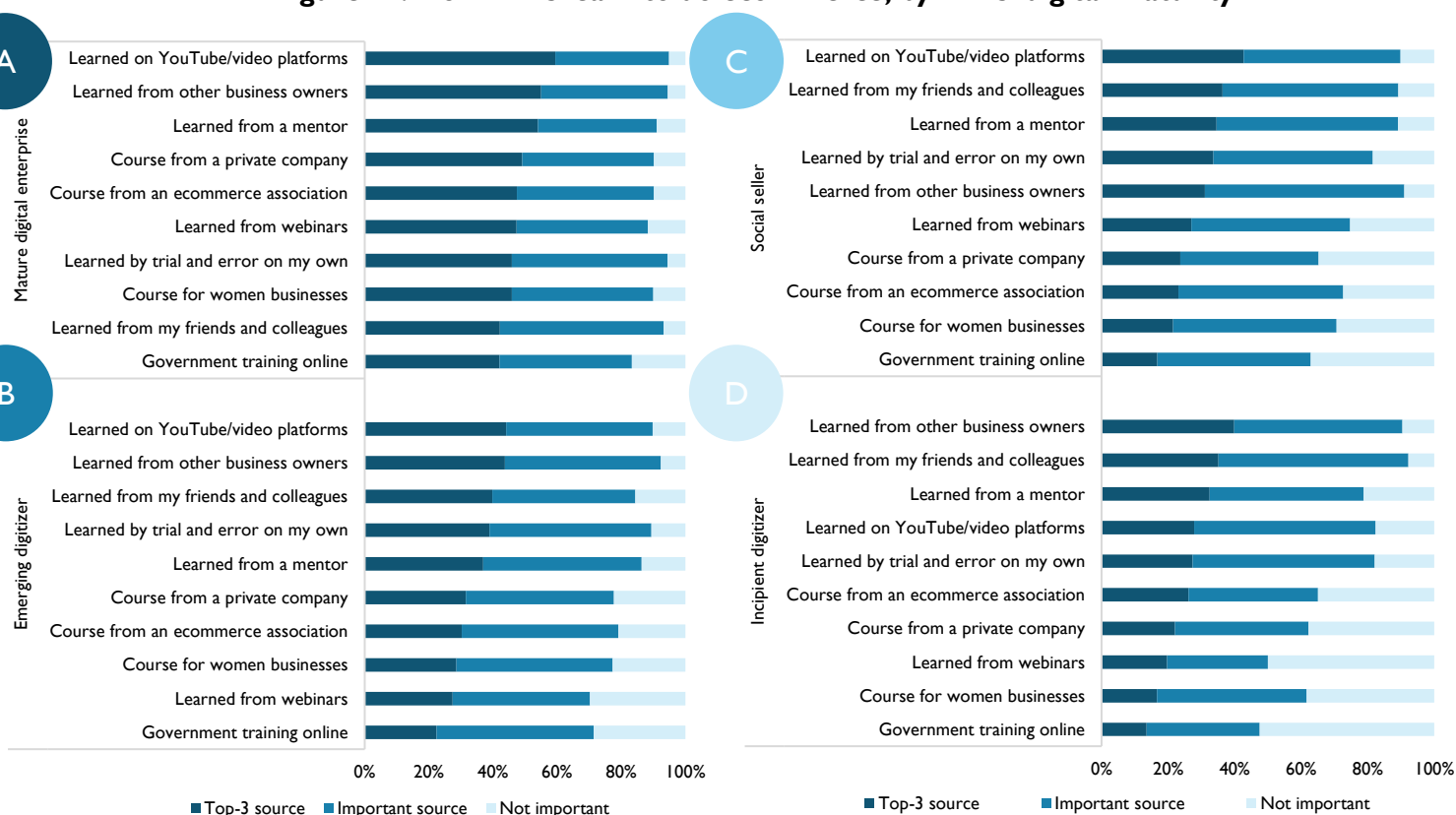


Figure 14: How firms learn to do ecommerce, by firms' digital maturity



Case 2: Getting from Kenya to global fashion industry marketplaces

Khangadelic was founded in 2015 by Wacu Kihara in Kenya. Wacu studied fashion in Florence, Italy, and later founded Khangadelic, bringing together her passion for fashion and her commitment to environmental sustainability and social impact. Khangadelic sells fashion and home decor products made out of khangas, vibrantly colored printed cotton fabrics that the company sews into reversible handbags, tablecloths, placemats, kitchen aprons, and, more recently, face masks. Production is outsourced to local manufacturers with rigorous quality control and standards.

Khangadelic is currently selling through gift stores and online marketplaces. The main marketplace the company sells through is eBay, and it is also planning to use Etsy. Khangadelic is targeting niche segments in different markets, especially the United States and, more recently, Japan and South Korea.

Wacu's digital journey has been rocky. For example, Khangadelic started out by selling its products in the clothing and apparel sections on online marketplaces but encountered competitors with much cheaper products. Over time, Wacu learned to list her products more strategically. Cross-border payments and logistics also posed challenges. Shipping single units was too expensive, leading Wacu to set up a fulfillment center in the United States. In Wacu's experience, the drivers for success in selling through online

marketplaces include the right price, product differentiation, and communication around the brand and its values, such as sustainability and social impact.

Wacu has enrolled in different programs with the Kenya Export Promotion Council and the International Trade Center's (ITC) SheTrades Program, where she has taken part in one-on-one training programs with an ecommerce coach who supports her on the use of digital tools, international logistics, and payments in order to develop exporting capacities. She has also participated in several trade fairs where she gained exposure to international markets, including Sourcing at Magic and New York Fashion Week. Wacu also participates in the ITC SME Academy, where she is constantly learning how to improve her products, export strategies, and ecommerce. Through these programs, she has further learned about the importance of telling the company's story, knowing and engaging with the customer, building a community, and segmenting her market.

Prepared by Prospera Consortium.

Case 3: Building digital and ecommerce logistics capabilities one element at a time—e-exporting from Nigeria

In 1992, Morin Obaweja co-founded Morin-O, a decor and gifts company in Lagos, Nigeria. She has had a long career in the pharmaceutical and health industry, where she still works as a consultant, while also promoting African art, fashion, and crafts through Morin-O.

Morin has invested her creativity, time, and resources into Morin-O, gaining international recognition. She has participated in export promotion programs with the Nigerian Export Promotion Council and attended exhibitions and fashion trade fairs like the Project and Magic trade shows in Las Vegas. Morin is an alumnus of the Vital Voices Entrepreneurs in Handcrafts Leadership and Business Development Program, and Creative Learning's Aid to Artisans Market Readiness Program held at the NY Now Show. Morin is also an active participant in ITC's SheTrades program.

Her digital journey has been long and involved many stages. One key aspect was orchestrating savvy fulfillment and warehousing arrangements to ship goods to customers in the United States and Europe promptly, which helps gain customers' trust.

Cross-border payments represented another bottleneck. In the early days of her ecommerce journey, Morin was not able to receive payments in Nigeria. However, opening a bank account in the United States enabled her to receive payments through global online payment platforms. She also wrestled with the challenges of accessing long-term financing, and having enough cash flow to hire and pay for talent to improve user experience and carry out digital marketing.

Morin stresses the importance of learning the customers' language and culture and hiring local experts to manage marketing and digital strategy. For digital marketing, Morin has implemented Google Analytics, improved the website's SEO, and added other new functionalities to boost her online presence. She has also paired her marketplace store with articles in fashion industry blogs which in turn have driven traffic to her website.

Morin does not see any limitations for women in ecommerce. She believes that business leaders that engage in ecommerce need to be highly analytical and know their customer base, develop valuable content that speaks to their customers, and analyze the data to understand what works and what doesn't. "Ecommerce is all about data," she says.

Prepared by Prospera Consortium.

These patterns are no different for women-led and men-led firms. But the challenges to starting a business and making progress on a digital journey may be less daunting for men (case 4).

Case 4: Why focus on women if women and men-led firms do equally well online?

There are no particular differences between the performances of comparable women- and men-led firms: women-led firms are just as likely to digitize and benefit from technology as men-led firms with similar characteristics, such as size and location. At each level of digital maturity, women- and men-led firms perform very similarly in terms of use of marketplaces and other platforms, and of revenue growth, export participation, and export sales (figures 15 and 16). These patterns do not change if we simplify and disaggregate firms by the gender of the CEO, except that there are more women-led firms in categories C and D than A and B. Women-led firms are smaller and more often informal on average than firms led by men.

Figure 15: Performance of comparable women- and men-led firms

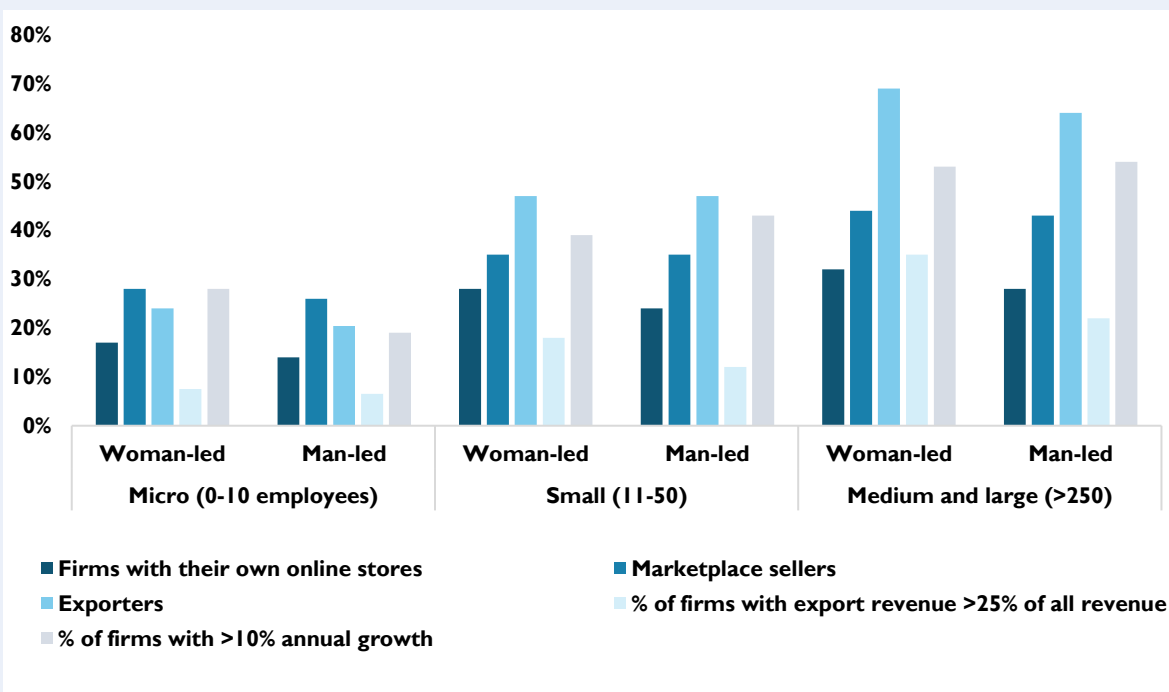
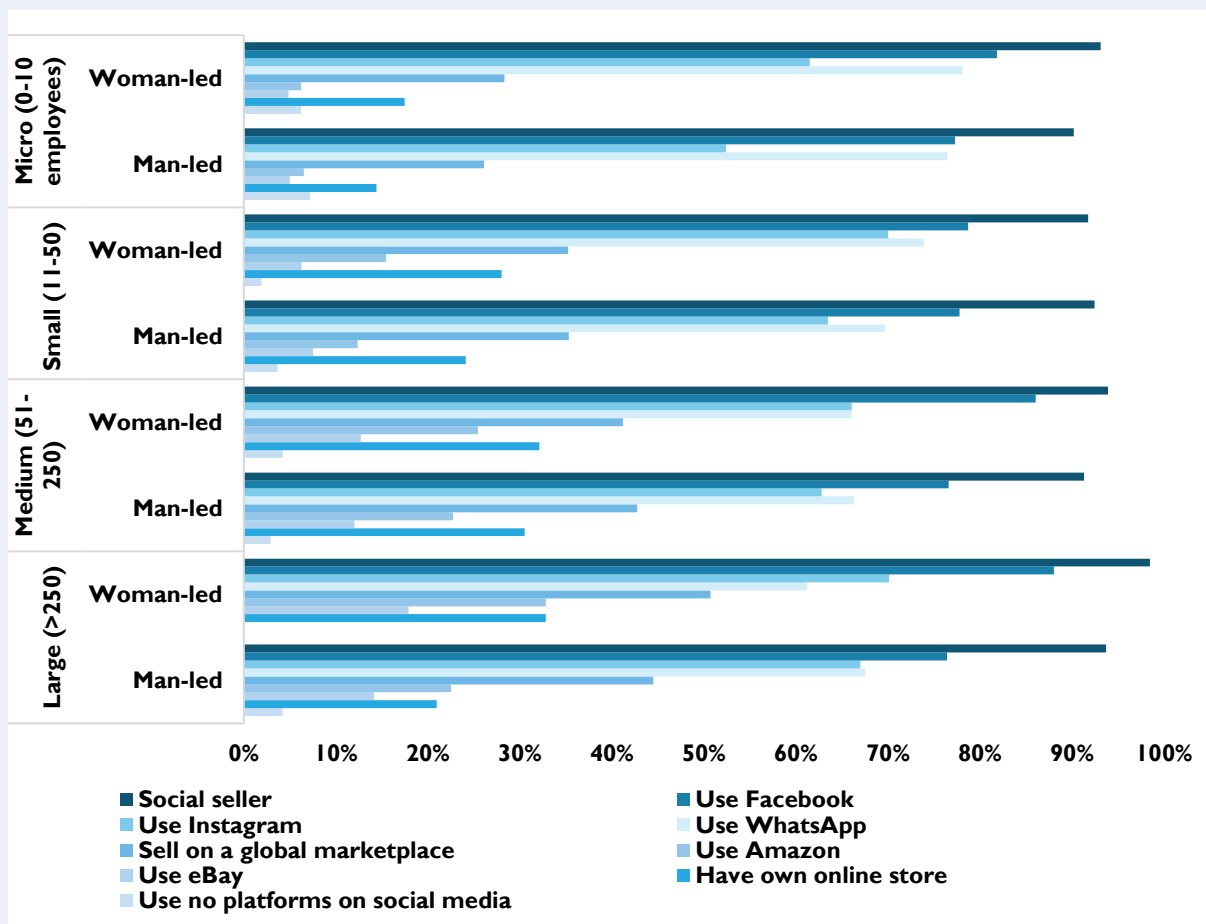


Figure 16: Use of online channels by women-led and men-led firms, by size



These findings suggest that once women-led firms attain the same level of digital maturity as men-led firms, they do just as well if not better than men-led firms. However, women may face greater challenges than men in forming a company and accessing technology and financing to get started as business owners and online sellers. The empirical evidence on how level the playing field is for women vs. men to launch a business is quite dispersed and qualitative and often specific to a context. What is clear is that fewer women than men run and own formal companies in most countries. According to the World Bank’s Enterprise Surveys, 15 percent of Latin American firms, 13 percent of African firms, and 19 percent of Asian firms had a female CEO, and women held slightly more than a third of management positions in firms. In OECD members and China, 25 percent of self-employed people are women.

Also well-known are gender gaps in access to technology. Some 300 million fewer women than men use mobile internet, a gender gap of 20 percent.¹⁷ Women in low- and middle-income countries are 8 percent less likely than men to own a mobile phone. These gender gaps in access to technology are feared to have widened in COVID-19, as women have experienced a greater economic shock as employees and business owners than men.

There are certainly also more subtle barriers to women getting into business, such as access to business networks, facilities, and financing. For example, in one program we interviewed, a rural handicraft producer in India had to ask permission from her husband and mother-in-law to utilize household assets for a small workshop, as in her society, such assets belong to the husband and his family.

Barriers to women's advancement in the economy have spurred some women to start their own firms, either out of necessity (according to Babson, 42 percent of women-led firms in Sub-Saharan Africa and 32 percent in Latin America are being launched out of necessity, compared to 26 percent and 23 percent of men-led firms in these areas, respectively) or out of frustration.¹⁸ Several women business owners that participated in our focus group indicated that they had started their own businesses in part because they faced barriers to advancement with their male employers.

Women-led firms probably also face greater challenges than comparable men-led firms in moving from one level of digital maturity to another—a hypothesis that we have yet to test. One persistent challenge for women is more limited access to external financing and fewer funds of their own to invest in a business than men.¹⁹ Women are found to be less likely to make loan requests, partly because they self-censor, believing gender biases will lead their applications to be rejected.²⁰

In short, survey and case study data suggest that (1) developing country women-led firms do just as well as comparable men-led firms in ecommerce, but that (2) women face greater obstacles than men in getting into business, and (3) women-led firms likely face greater barriers than comparable men-led firms in moving up the digital maturity ladder. This in turn means that public policy can usefully (1) help women-led firms to be started in the first place and (2) accelerate women-led firms' digital journeys—such as by improving access to smartphones and computers and online payment and marketing capabilities, followed by access to financing, talent, and services.

III. ACCELERATING WOMEN-LED FIRMS' DIGITAL JOURNEYS THROUGH CAPACITY-BUILDING: WHAT IS BEING DONE AND WHAT IS THE NEXT STATE OF THE ART?

Women-led firms that make intensive use of technologies outperform less technology-intensive firms led by women or, for that matter, men. Especially in developing economies, women-led firms, just like men-led firms, are still in the early stages of their digital development, typically using social media platforms, messaging apps like WhatsApp, and digital payments to market their goods and services and interact and transact with customers. However, women-led firms are also eager to gain new digital capabilities and invest in their ecommerce development.

How then to best accelerate women-led firms' digital journeys, improve their access to and use of digital technologies and ecommerce, and translate this use into sales, growth, and jobs?

There are many useful approaches, such as improving the policy environment for ecommerce, providing firms with financing for digital transformation, reskilling workers, and so on. A broad range of developed and developing country governments, corporations, and international organizations have set up programs in all these areas and many others for women and women-led firms to enhance their business skills, acquire digital capabilities, and transact with customers (table 3; appendix table 1; case 5). There are also many support programs offered to both genders. The share of donor spending in programs that are principally or significantly aimed at supporting women more than doubled as a share of all development assistance in 2010–19 (figure 17). However, the amount directed to SMEs, ICTs, and trade development (as opposed to such areas as education and health) has remained rather constant, at less than 2 percent of total gender-related support.

Table 3: Examples of initiatives to support women-led firms, by type of sponsor

	Area supported	Governments	Private sector	PPP and/or international organization
Capabilities for transacting	Ecommerce development	<ul style="list-style-type: none"> SME Corp. Malaysia's Netpreneur initiative Mexico's <i>Mujeres en la transformación digital</i> program El Salvador's PROESA workshops 	<ul style="list-style-type: none"> eWomen by eCommerce Institute Etsy onboarding for Indian artisans Shopify's Women Entrepreneur program 	<ul style="list-style-type: none"> Alliance for eTrade Development with USAID World Bank's We-Fi for women in MENA Panama and UNDP's <i>Mujer emprende export</i>
	Export promotion	<ul style="list-style-type: none"> ProChile's Export Woman Uruguay XXI Women Exporter workshops Canada's Business Women in International Trade 	<ul style="list-style-type: none"> UPS Women Exporters Program DHL's GoTrade Initiative 	<ul style="list-style-type: none"> ITC SheTrades EU/ITC/DHL link Central America WBEs with global markets
	Supplier development	<ul style="list-style-type: none"> South African women's procurement program India's Womaniya eMarketplace ChileCompra's Mercado Público 	<ul style="list-style-type: none"> Cargill Diverse Supplier program for women and minorities Coca-Cola supplier diversity program P&G supplier program for Indian women-led firms 	<ul style="list-style-type: none"> PepsiCo and USAID PPP to support women in agricultural value chains Boyrer Group and IFC's promotion of women-led firms in Boyrer value chains UNOPS Possibilities Program
Digital capabilities	Financing and incentives—women-led tech companies	<ul style="list-style-type: none"> Singapore SG Women in Tech Community Start-Up Chile S Factory Startup India for women-led tech innovation 	<ul style="list-style-type: none"> South Africa's Dazzle Angels FirstCheck Africa 	<ul style="list-style-type: none"> Inter-American Development Bank's WeXchange ADB/private sector She Loves Tech Annual Global Start-up Competition
	Digital skills development	<ul style="list-style-type: none"> Indonesia's programming courses for home makers and domestic workers Morocco's Infitah for Her SME Corp. Malaysia's Women Netpreneur initiative 	<ul style="list-style-type: none"> Developers in Vogue coding camp in Ghana CodingGirls in Singapore Mastercard's Girls4Tech 	<ul style="list-style-type: none"> Women ICT Frontier Initiative (WIFI) by UN Asian and Pacific Training Center for ICT for Development Laboratoria Bootcamp for Women in Latin America
	Digital transformation support	<ul style="list-style-type: none"> Singapore's SG Women in Tech Community Platform Start-Up Chile has S Factory support first-time women entrepreneurs 	<ul style="list-style-type: none"> Google's Internet Saathi program Microsoft's Women Digital Future initiative 	<ul style="list-style-type: none"> Inter-American Development Bank's #100K Challenge Women ConnectAmericas Virtual Accelerator 2.0
Business capabilities	Financing—all firms	<ul style="list-style-type: none"> Botswana's Women's Economic Empowerment Program Mexico's PRONAFIM women financing facility 	<ul style="list-style-type: none"> Visa She's Next program Women on the Move by JPMorgan Chase RisingTide Africa 	<ul style="list-style-type: none"> World Bank We-Fi Women Entrepreneurship Development Project (WEDP) SEAF Women's Opportunity Fund
	General business support	<ul style="list-style-type: none"> India's Women Entrepreneurship Platform Chile's <i>Mujer Emprende</i> initiative 	<ul style="list-style-type: none"> Grow with Google Visa's She's Next program Visa Practical Business Skills and Visa Practical Money Skills 	<ul style="list-style-type: none"> US government's Women's Global Development and Prosperity Initiative (W-GDP) UNESCAP's Catalyzing Women's Entrepreneurship EU's Accelerating Women's Enterprise (AWE)

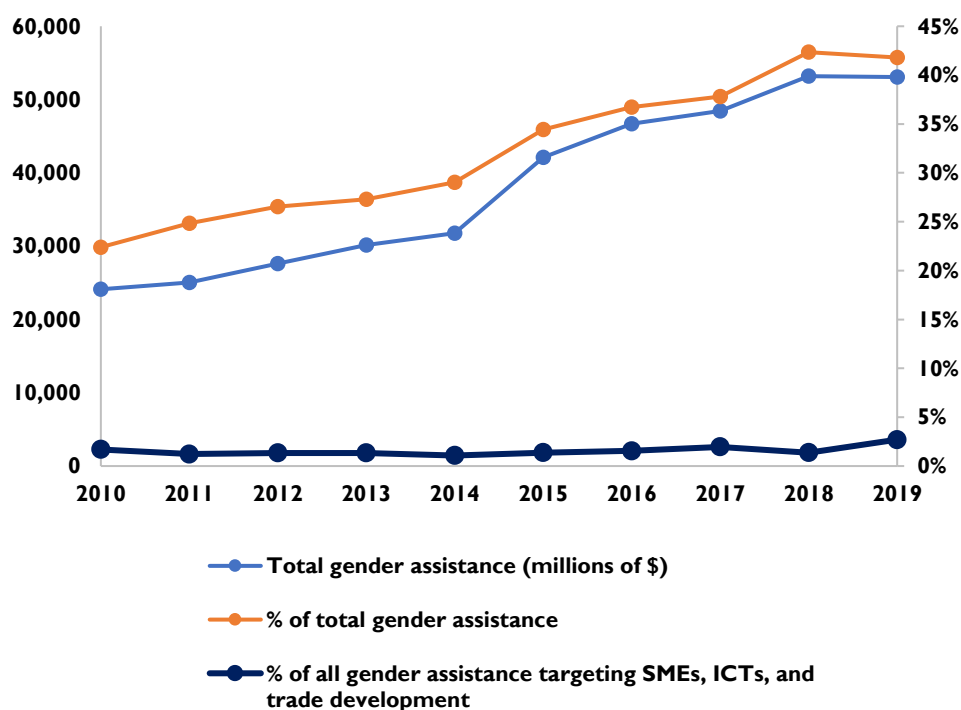
Case 5: Visa's She's Next initiative recognizes high-performing female entrepreneurs

In 2019, Visa launched the She's Next, Empowered by Visa initiative to boost women-owned small businesses around the world through shared research (such as this document), experience, and technologies. Since its launch, the program has hosted workshops in New York, Atlanta, Washington, DC, Toronto, and marked its first global expansion with a workshop in Cape Town, South Africa.²¹ The workshops connect like-minded women entrepreneurs with industry experts for education, practical tools, resources, and insights, as well as inspiration and networking opportunities.

On its website, She's Next offers a wealth of free informational resources and tools to enable women entrepreneurs' continued success and growth, including how-to guides on topics such as digital transformation, ways to reduce costs, marketing, and how to handle online reviews.²² There is also a practical business skills program that offers free educational resources and interactive tools to start, manage, and grow a business. Its target is micro and small enterprises, and the information is available in Spanish and English.²³ In the United States, Visa has also developed a grant program for Black women founders, offering \$10,000 and a one-year coaching membership to IFundWomen.²⁴

Another recent launch in early 2021 marks the further global expansion of She's Next, this time into Central Asia. In partnership with local business associations, the program launched in Uzbekistan, Ukraine, Belarus, Georgia, and Serbia. The Central Asia program targets women who are developing their businesses or have just started and will consist of five webinars with leading business experts.²⁵

Figure 17: Aid committed to development projects that principally or significantly support women, 2010–19



Source: OECD Development Assistance Committee (DAC) gender equality policy marker.

The approach that this report focuses on is ecommerce capacity-building. Indeed, capacity-building can be considered a type of “technology” that enables firms to improve their processes, scale production, and innovate. To gain a deeper understanding of the approaches used in programs that seek to promote women’s participation in ecommerce and of the lessons learned to date, we interviewed the managers of six programs targeting women-led firms: the ITC’s She Trades, eCommerce Institute’s eWomen Program, TFO Canada’s Women in Trade for Inclusive and Sustainable Growth, UPS’s Women Exporter program, the World Bank’s Women Entrepreneurs Finance Initiative (We-Fi), and UNCTAD’s eTrade for Women.

We also harvested information and lessons learned from capacity-building programs offered by the eTrade Alliance, including by UPS and the eCommerce Institute in the Americas, Amazon in India, SouqFann in Jordan, and Nextrade Group’s work with FDCO in Brazil and with We-Fi in the Middle East.

These programs represent a wide range of approaches in what they set out to accomplish, what they deliver and how, and how they measure progress (table 4). Some programs train firms to establish an online sales channel or onboard an online marketplace over several weeks. Most focus on firms that have some level of digitization, such as social channels, and are at the start of their digital journeys, perhaps because these types of firms abound. A handful of programs or entities (like SouqFann) take the opposite approach—they help women-led firms, typically solo entrepreneurs, to outsource all key digital functions such as online marketing, fulfillment, and data analytics, enabling firms to specialize in what they do best, typically designing and making products and services. Most programs have some metrics of success but few measure success longer than a year after the training they provide ends.

Several programs, including the eTrade Alliance and its partners, are leveraging public–private partnerships to deepen their impact across a wider market (case 6).

Table 4: Selected approaches to promoting women-led firms in ecommerce

Features	SheTrades	UPS Women Exporters Program	UNCTAD eTrade for Women	eCommerce Institute eWomen	World Bank We-Fi	TFO Canada Women in Trade for Inclusive and Sustainable Growth	Souq Fann	Amazon Saheli India
Description	Aims to create an ecosystem of integrated solutions that empower women economically through greater integration in trade and investment; acts on 7 pillars, and offers a digital one-stop-shop through the SheTrades online platform as a UN public good for learning, networking, and buying and selling on the go.	Seeks to increase participants' understanding of trade and exporting, as well as their knowledge of key logistics concepts for exporting.	Aims to contribute to inclusive and sustainable economic growth by empowering women from developing and transition economies in the digital economy through regional masterclasses with networking, community-building, and policy dialogue.	Promotes female talent and leadership in the ecommerce industry through training and mentorship, as well as networking events.	Supports women entrepreneurs by scaling up access to financial products and services, building capacity, expanding networks, offering mentors, and providing opportunities to link with domestic and global markets, with an emphasis on ecommerce enablement.	Builds the capacity of Trade Support Institutions in Africa, Latin America, Caribbean, Asia, and the Middle East to engage more women in leadership positions and as clients and improve the ability of women-led exporters to understand and meet the demand of Canadian and other global markets.	Provides talented artisans from the MENA region with access to international markets via an easy-to-use online platform that helps share their stories, sell their products regionally and globally, and supports warehousing, shipping, payments, and sales reporting.	Enables Indian women to become successful sellers on Amazon by offering personalized training, account management support, product photo and listing support, and increased visibility on the Saheli storefront.
Geography	Global	Global	Global	Latin America	Global	Latin America, Sub-Saharan Africa, Asia and Middle East	MENA	India

Features	SheTrades	UPS Women Exporters Program	UNCTAD eTrade for Women	eCommerce Institute eWomen	World Bank We-Fi	TFO Canada Women in Trade for Inclusive and Sustainable Growth	Souq Fann	Amazon Saheli India
Eligibility for business	Based on ISO definition. ²⁶ Women-led business that is at least 25 % owned by one or more women; whose management and control lie with one or more women; which has at least one third of the board of directors comprised of women, where a woman is a signatory of the business's legal documents and financial accounts; and which is operated independently from businesses that are neither led nor owned by women.	Women entrepreneurs who sell nonperishable goods that can be exported.	Women entrepreneurs with established digital maturity and leadership.	Women entrepreneurs in Latin America, from beginning to advanced levels.	MSMEs with a marketable product.	SMEs in sectors like fresh fruits/vegetables, processed food, artisan products, services; a majority of SME exporters should be women-led under this program.	Artisans in the MENA region, can be men or women, but mostly women are on the site.	Indian women entrepreneurs already selling on Amazon, affiliated with partners, or part of NGO/ government supporting women's empowerment.

Program structure	SheTrades	UPS Women Exporters Program	UNCTAD eTrade for Women	eCommerce Institute eWomen	World Bank We-Fi	TFO Canada Women in Trade for Inclusive and Sustainable Growth	Souq Fann	Amazon Saheli India
1. Setting a goal	Connecting three million women to markets by 2021	Grow the number of women-led firms engaged in trade and their earnings	Enable women digital entrepreneurs to grow as leaders and help shape gender-oriented policy	Promote female leadership and opportunities in the ecommerce industry	Improve market access for women-led SMEs through ecommerce	Build capacity for women exporters to Canadian and foreign markets	Provide the opportunity for local artisans in MENA to sell products online easily	Support women-led SMEs to sell and flourish on Amazon
2. Targeting firms	Women entrepreneurs in developing and least developed economies, willing to grow their businesses and connect to markets.	Women entrepreneurs who sell nonperishable goods and want to export	Mature digital entrepreneurs who want to grow their business, network, contribute to policy making and impact local ecosystems	MSMEs with an established business, viable products or services, and market demand	Trainers with ecommerce/coaching background; MSMEs with a marketable product	Sectors with high female employment potential, low environmental impact	Local artisans in the MENA region	Must already: sell on Amazon, be affiliated with partners, or government program/NGO supporting women
3. Recruiting firms	Partnerships with governments, private sector, business support organizations, and financial institutions	Through partnerships, i.e., ITC's SheTrades, World Bank's We-Fi, USAID eTrade Alliance	Target potential participants on social media as well as through partner network / recommendations	Interview firms to assess their digital maturity level and knowledge of ecommerce	Through business associations, social media, livestreaming informational sessions	Through local partner institutions	Inbound on website; information sessions	
4. Selecting firms	Women entrepreneurs in developing and least developed countries; can also register on the online platform	Firms that want to export nonperishable goods, have potential as e-exporters	Digital businesses with a woman in the founding team.	Motivated firms who want to learn; all levels of digital maturity accepted	Trainers pass application surveys and interviews; firms are committed and have a marketable product	Sectors like fresh fruits/vegetables, processed food, artisan products, services; women-led firms, in all the regions under the program	Application review that includes seller's story and product sampling	Formal company/proprietorship, bank account access

Step	SheTrades	UPS Women Exporters Program	UNCTAD eTrade for Women	eCommerce Institute eWomen	World Bank We-Fi	TFO Canada Women in Trade for Inclusive and Sustainable Growth	Souq Fann	Amazon Saheli India
5. Designing content	Offer women a platform to advance their desired skills, in their own time, and grow their business via more than 200 online resources (e-learning courses and webinars, form basics on how to build a business plan, to marketing, logistics and exporting strategies	Cross-border logistics, ecommerce strategy, warehousing, freight forwarding, etc. – partners can choose topics of keenest interest	Masterclass offer business skills sessions, discuss policy environment, and offer access to role models and networking	Ecommerce and management skills, events with business leaders, access to coaching, community	Marketplace onboarding, pricing, and shipping strategies, marketing tools	Improve technical and marketing skills, participate in ecommerce and trade shows	Offers sales platform, help with shipping, warehousing, sales reporting, payments, global market access	Onboarding, product photography and listing support, marketing support
6. Delivery methods	Capacity-building on-site and online. coaching, one-on-one assistance; trade fairs, B2B meetings, procurement opportunities and match-making with financiers and investors	Series of webinars by UPS experts; recorded for future downloading	3-day masterclasses; membership in a networking community (free of charge), Ad-hoc learning events and selected networking opportunities	Webinars, guest speakers, case studies, coaching	Half-day courses over 2 weeks; ongoing WhatsApp group for teachers/trainers	Virtual workshops, modules, webinars	Via SouqFann's online platform	Online/offline training programs, assigned account manager, networking events

Step	SheTrades	UPS Women Exporters Program	UNCTAD eTrade for Women	eCommerce Institute eWomen	World Bank We-Fi	TFO Canada Women in Trade for Inclusive and Sustainable Growth	Souq Fann	Amazon Saheli India
7. Measuring firms' learning	Can track learning progress through the app; For in-country interventions, post-training surveys are deployed to assess uptake and impact on businesses. The initiative also employs mixed methodologies to capture impact on job creation and poverty reduction.	Surveys post training; for clients, growth of shipments	Feedback survey to assess the relevance of support provided	Post-training survey to assess if skills are implemented, and effects on business	Post-training survey to evaluate increases in knowledge	Post-training cases and assessments	Number of artisans onboarded; sales made	have potential as e-exporters
8. Measuring program's impact	Number of women connected to market; number of businesses strengthening their business practices and operations.	Metrics on sales, exports and other business KPIs post-training	Number of women entrepreneurs impacted by the initiative; feedback from participants	Number of firms/women trained, tools implemented, firms with own online/marketplace stores	Number of advisers and firms trained; increase in firms' revenue and export markets	Number of firms trained	Number of artisans onboarded; sales made	Success stories highlight programs' impact, sales on Amazon

Case 6: eTrade Alliance: Public–private partnerships to deepen impact for a wider group of women-led firms

Governments and businesses share an interest in promoting ecommerce among MSMEs, so program managers should consider opportunities for building public–private partnerships. By pooling private- and public-sector assets, capabilities, and networks, PPPs can help programs reach more women-led firms, obtain greater resources, and help create new markets much more quickly, yielding sustainable results and promoting self-reliance.

The eTrade Alliance aims to enable developing country MSMEs to use ecommerce and grow their online sales. It brings together the resources, networks, and development expertise of USAID with the platforms, logistics, payment, and financing capabilities of its 12 partner companies. The eTrade Alliance is training MSMEs in developing countries to set up online stores, get on global online platforms, and train online sellers to export, with a particular focus on women-led and rural firms. Its projects specifically targeting women-led firms include the following:

- **Visa**, a key partner in this report, is growing the She’s Next women’s business assistance program through the Alliance, as well as practical business skills and practical money skills toolkits.
- **UPS** is expanding its Women Exporters program to a broader set of Asian, African, and Latin American women-led firms to promote learning around ecommerce logistics, warehousing, freight forwarding, and market access. About 1,100 firms have benefited so far.
- **eCommerce Institute** has awarded scholarships to 130 women-led MSMEs across Latin America to participate in beginner, intermediate, and advanced ecommerce training classes.
- **Etsy** is enabling Indian semiurban and rural artisans, many of them women, to create shops, assisting with photography and providing support with order processing for an initial start-up term.
- **Mastercard** is offering financial literacy and digital payments training programs.

By partnering with USAID, all these companies can significantly expand their reach, tap into entirely new networks, and test their capabilities and services with underserved markets. Meanwhile, USAID can leverage sophisticated expertise, technology assets, and capabilities by working with these partners, test and measure new approaches nimbly, and deepen its development impact. The eTrade Alliance is also promoting policy dialogues with governments around the world on policies and practices to promote women-led firms in ecommerce.

What are the lessons learned from existing ecommerce capacity-building programs regarding what works—what could a donor or an aspiring capacity-building program manager learn from past experiences in setting up an impactful ecommerce development program for women-led firms?

Ecommerce capacity-building efforts and initiatives targeting are mostly about *how* to do something to arrive at the desired result, such as making first online sales on a global marketplace, setting up an online store, making the first sale using digital payments, and so on. Learning in ecommerce capacity-building programs is typically not highly conceptual and about “what” to do and why. Meanwhile, initiatives that support firms, say, with broader digital transformation work are much more conceptual. There are thus two types of activities that require two rather distinct approaches—one more defined and “micro,” and the other more conceptual or “macro” (table 5).

Table 5: Types of approaches to enable women-led firms in the digital economy: from mastering a digital tool to defining digital transformation

	Micro approach	←————→	Macro approach
Desired result for a firm	Adopt and apply a specific tool or service in the ecommerce sales cycle	Build online sales channel and execute ecommerce sales cycle start to finish	Digital enterprise—successful digital transformation to move up the digital maturity ladder
Content examples	<ul style="list-style-type: none"> Set up an online store Onboard a marketplace Use a specific payment method 	<ul style="list-style-type: none"> Onboard a global marketplace Adopt and use specific tools for the entire ecommerce sales cycle (marketing, payments, logistics, etc.) 	<ul style="list-style-type: none"> Define corporate pain points and functions to digitize Define potential solutions Test solutions and tools
Answers	<ul style="list-style-type: none"> Applying: “How to do x” 	<ul style="list-style-type: none"> Operationalizing: “What exactly to do and how,” “What are best practices?” 	<ul style="list-style-type: none"> Problem-solving and choosing from many options: “What to do and why,” “What works”
Type of endeavor	<ul style="list-style-type: none"> Defined: Adopt and optimize 	<ul style="list-style-type: none"> Semi-defined: Select and manage 	<ul style="list-style-type: none"> Open-ended: Research, test, develop
Delivery methodologies	<ul style="list-style-type: none"> Microlearning, 2–10-minute doses Gamified learning 	<ul style="list-style-type: none"> Microlearning Peer learning Gamified learning Adaptive delivery, precision training 	<ul style="list-style-type: none"> Self-paced lab Executive education, coaching Strategy consulting Demos of solutions Peer learning
Criteria for firms	<ul style="list-style-type: none"> Commitment to ecommerce, evidenced by investment of staff time and resources Vision for how the platform or technology can enhance business outcomes 	<ul style="list-style-type: none"> Strong commitment to ecommerce, evidenced by investment of staff time and resources Existing online sales Staff capabilities to execute Ideally several products and existing exports 	<ul style="list-style-type: none"> Top priority for CEO and board Insight into technologies and pain points they could solve Readiness to invest in resources for transformation
Opportunity to mass-customize	<ul style="list-style-type: none"> Very high 	<ul style="list-style-type: none"> High 	<ul style="list-style-type: none"> Medium
Expected results	<ul style="list-style-type: none"> Faster service to existing customers Customer satisfaction Time savings and efficiencies 	<ul style="list-style-type: none"> Greater revenue New customers New markets New suppliers New higher-skill jobs and wages 	<ul style="list-style-type: none"> Efficiency gains Cost savings New ideas for ways to leverage technology to solve pain points, create new services

Source: Author.

Section (a) below discusses ways to structure these more micro approaches. Section (b) turns briefly to the more macro approaches (that can usefully build on the micro approaches). The discussion is based on insights from survey data, interviews with women-led firms and ecommerce development programs, evolving corporate learning, and development science and practice.

A. BUILDING FOR SUCCESS: TACTICS FOR DESIGNING PROGRAMS TO ENABLE WOMEN-LED FIRMS TO USE ECOMMERCE

The following section explores best practices and pitfalls for ecommerce capacity-building programs for women-led firms (mostly those in the first two categories in table 5).

- Setting a goal and approach for the program
- Finding and selecting firms
- Crafting the approach and content of capacity-building initiatives
- Optimizing delivery methods
- Measuring learning and satisfaction
- Measuring the program's impact
- Ensuring sustainability

I. SETTING A GOAL AND APPROACH FOR THE PROGRAM

Capacity-building programs need to establish key performance indicators and target results. Results may relate to financial metrics (revenue, profitability, exports, cost savings, market share), new customers and markets, new products, customer satisfaction and retention, customer acquisition, and the diversification of products and services offered and markets accessed. Results can also relate to innovation (such as new products or services launched), new products and services, and employee satisfaction and retention. Ultimately capacity-building is to enable enterprise growth, job creation, and higher wages.

Some of the programs we reviewed focus on enabling a certain number of firms to set up online stores and social channels (We-Fi in some countries). Others support firms in making their first online sales (eCommerce Institute's beginner and intermediate programs). Yet others focus on enabling firms to make export sales using ecommerce (eCommerce Institute and Nextrade in Brazil; We-Fi in some countries). Some have broader goals, such as UNCTAD's eTrade for Women, which enables women-led firms that run ecommerce businesses to train women entrepreneurs and engage in public policy debates. Programs typically have target numbers, such as 100 firms trained, and KPIs, such as products sold or domestic and export sales realized.

Most countries lack publicly available data on ecommerce use in different firm segments. Some ecommerce capacity-building programs have carried out robust diagnostics of firms' current use of ecommerce and maturity of the ecommerce ecosystems, to better define target segments and learning approaches. For example, in each target country, the We-Fi program carries out a robust diagnostic on the context, service providers in the ecommerce ecosystem (such as marketplaces, digital payment platforms, logistics services, customs brokers, and so on), sectors and firm types with the highest potential for ecommerce, and institutions and service providers that could continue to offer training programs to MSMEs after the program ends.

This type of approach enables a program to set appropriate targets for getting women-led firms in a given market ready for ecommerce. For example, in countries such as Brazil, which has a deep pool of thriving online sellers that still sell mostly to the domestic market, a capacity-building program may be useful in helping firms to export using ecommerce. Likewise, in small developing economies with few robust online sellers and thus a shallow pool of firms that could readily thrive in cross-border ecommerce, trainees need basic support in setting up their first online channels and making their first online sales.

Programs can also target prominent sectors in the country in question in advance, such as textile and apparel or food products. Most programs interviewed for this study focused on goods rather than on services; in many cases, they pursued specific sectors and occasionally even specific products. This is a useful approach in that programs can offer targeted capacity-building tailored to sectoral specificities, and participants can gain highly relevant information on the right channels for reaching buyers in their sectors.

However, even when taking a sectoral approach, the **key is to segment firms based on their digital maturity**: some firms in a sector may only have social media capabilities, while others may already export using online channels. These two groups may be from the same sector, but they have completely different needs and objectives and need to access distinct capacity-building offerings.

2. FINDING AND SELECTING FIRMS: LOOK FOR E-READINESS, COMMITMENT, AND PRODUCTS FOR WHICH THERE IS ONLINE DEMAND AND CUSTOMERS

The effectiveness of the activities in an ecommerce capacity-building program depends to a great extent on the selection of firms that are poised to benefit from the program and improve their performance. Once the program has determined its objectives, it needs to identify and select fitting firms.

I. IDENTIFYING FIRMS AND ACCESSING THEIR DATA

There are some considerations when recruiting firms:

- **Use a wide funnel to recruit firms.** There are many ways to reach firms. Many programs recruit firms through online means, through business and ecommerce associations, government agencies, social media, and the livestreaming of informational sessions, such as on Facebook. In the recruitment of women-led firms, programs tend to have to dig deeper and cast a wider net as women-led firms, especially informal ones, are often not part of business associations and may also be located far from leading cities. Recruitment materials should highlight that the program is for women—or that women are highly encouraged to apply if the program is for both genders. This encourages women, especially in societies where they have traditionally been underserved and marginalized.
- **Use demanding entrance surveys to screen out less committed firms; prepare for dropouts.** It is very important to ensure that firms are committed to their digital journeys. One way to gauge commitment is by asking firms about the importance of ecommerce in their business and the number of full-time staff they will allocate to building their ecommerce business. Another is to make the application process challenging, such as by including surveys and interviews, as these processes tend to make less committed firms drop out. In implementing programs like We-Fi, program managers have asked applicants to submit 30–60-second videos explaining why they wish to join the program. Still another way of identifying firms that are committed is to ask them to pay for some part of the training. While companies often want training programs for free, having “skin in the game” will bolster commitment. Programs offered for free often have high attrition rates—indeed, even paid programs usually have some attrition (typically 10–20 percent). Even for programs with highly committed trainees, it may be helpful to have a waiting list of firms that can readily be tapped if others drop out and to record early classes to enable these firms to catch up.

- **Focus on women-led firms without screening out women leaders who do not yet have a business.** One consideration when working with women-led firms is whether to focus exclusively on the existing pool of women-led firms or to also include women who may be leaders in ecommerce and business in their countries and do not have their own companies yet. In other words, programs should not necessarily screen out women just because they haven't started their own business, precisely because a program of this kind can enable women to grow into leadership roles in their current organizations (where they can also influence male colleagues' thinking about women's capabilities) and/or encourage them to get their own business started.
- **Sensitize recruitment and course materials to gender.** As important as the training that is being provided is the messaging about gender in the course materials and curricula. Training materials should be screened for language and images that may be inadvertently biased against women—for example, case studies and imagery need to speak to female entrepreneurs and show women in action and in charge (case 6). It will also be very useful to use inclusive language and pictures and testimonials from successful female entrepreneurs.

Case 7: Identifying gender biases in learning materials

Recruitment and learning materials can have unintended biases that dampen women's interest in applying for training. Likewise, they may send messages about how women should behave or the limits of what they can aspire to. Instructors and program managers can unwittingly be blind to more subtle forms of bias. For example, UNESCO studies have found that some texts underrepresent women and contain stereotypes about women or offensive comments about women.²⁷ A body of academic work that has studied textbooks in schools found a disheartening amount of content (text and images) presenting women as subordinate, dependent, more sensitive and emotional, less hardworking, and less skilled, while also making less space for women in text and images.²⁸

In ecommerce capacity-building programs that aim to skill and champion women-led firms, program managers should consider aspects such as words, narrative, images, and numbers and ask questions around proposed materials, as highlighted in the UN guidelines on gender-inclusive language:

- Do the materials show females and males with equal respect and potential?
- Do the materials show females and males an equal number of times?
- Do the materials use gender-inclusive terms such as “friends,” “scholars,” “trainees,” “participants,” and “students” (as opposed to terms that implicitly apply to just one gender)?
- Do curricula reflect the needs and life experiences of both males and females?
- Do materials show women in charge, such as presenting, talking, pointing, working on a computer, managing, supervising, and selling?
- Do curricula and instructors promote equality among men and women?
- Do courses that prioritize women encourage women to participate?

One revealing test for expressions that have a gender bias is asking whether the phrase would sound odd if the gender roles described in it were reversed. For example, would the phrase “he throws like a boy” sound strange?

Another consideration is to promote messaging and culture where women and men are not seen as being two distinctive groups. For example, an instructor may not want to split men and women into their own groups, as such splitting reinforces the notion of gender differences.²⁹

The UN has created a gender-inclusive language toolbox, which is available at: <https://www.un.org/en/gender-inclusive-language/toolbox.shtml>.

A guided exercise on making a text gender-inclusive is available at: [https://www.un.org/en/gender-inclusive-language/assets/pdf/EN-Toolbox-Apply-the-guidelines-to-a-text_\(self-paced\).pdf](https://www.un.org/en/gender-inclusive-language/assets/pdf/EN-Toolbox-Apply-the-guidelines-to-a-text_(self-paced).pdf)

A good gender checklist for content creators is available at: https://www.un.org/gender/sites/www.un.org.gender/files/dpi_gender_checklist_for_content_creation_2018.pdf

Programs can also partner with gender sensitization scholars when designing materials and supporting instructors.

II. USING DATA AND PREDICTIVE ANALYTICS TO SELECT THE RIGHT FIRMS

One way of selecting the right firms is to know in advance which types of firms are poised to benefit from and succeed in the program, and then use data to identify the cream of the crop.

For example, in Brazil's Trade Facilitation Program B2C Ecommerce Pilot, Nextrade Group used a data-driven approach to select the right firms using eight specific metrics that predict a company's propensity to thrive in ecommerce. These eight criteria emerged from a previous Nextrade diagnostic survey of 3,000 firms that identified the key characteristics that product success at e-exporting. They also drew on the Nextrade team's knowledge of firms' propensity to benefit from the program and their commitment to it (as revealed by proxies like the number of dedicated ecommerce staff) (figure 18). Each firm was scored based on its responses to these eight questions, to generate a shortlist. Given the program's focus on inclusion, women- and minority-led firms received additional points.

This data-driven selection and segmentation process was followed by a manual analysis of each firms' products and demand for similar products on global marketplaces like eBay among North American customers. This analysis was based on product-level data from eBay's Terapeak that enables firms using the platform to see demand for specific product categories in different markets. The importance of choosing firms with products that have the right price points and are in demand on target channels cannot be overstated. This also enables program managers to then support firms in promoting specific products that have the best odds for success. For firms that have achieved a certain level of brand recognition, it is easier to attain sustainable online sales.

“The most important predictor of whether a firm will succeed in an ecommerce program is having a marketable product for which there is demand. If the product is not marketable, does not fit an online sales or distribution channel, or if the product does not appeal to clients, then it is probably very unlikely that it will sell online. The program and the firm would waste resources.”

Fabian Staechelin, Ecommerce Expert with e-traid, ITC, and Nextrade

The entrance survey was also used to set a baseline for the firms that ultimately entered the program, to gauge their use of different marketplaces and online platforms for their growth and to enable assessments of the program's impact. Firm characteristics such as sector, size, the gender of the CEO and executive team, geolocation, and export participation enabled a rich segmentation of firms and the progress of different types of firms to be gauged in the reporting of results. This exercise of scoring and assessing firms also enabled the team to gain a deeper understanding of the target firms' capabilities, offerings, and needs so that they could adapt training materials and approaches in advance.

Figure 18: Criteria to identify firms that are poised to succeed in capacity-building programs for using ecommerce to export: example from Nextrade program in Brazil



Main areas assessed	Specific criteria / success driver	Points				
		1 point for each of the following:	2 points for each of the following:	3 points for each of the following:	4 points for each of the following:	5 points for each of the following:
Ecommerce readiness	Number of existing online sales channels	1	2	3	4	5 or more
	Existing online store(s)	No				Yes
	% of online sales of all sales	1-10%	11-25%	26-50%	51-75%	>75%
	Number of products available to sell online	<5	5-10	11-50	51-200	>200
E-Export readiness	Number of staff dedicated to e-export business	1	2	3	4	5 or more
	Exports as % of sales and % of online sales	1-10%	11-25%	26-50%	51-75%	>75%
	English fluency of staff	Read	Some speaking	Proficient	Conversational	Fluent
Gender	Female CEO	No	No	Yes		

Total possible: 38 points



Nextrade Group (2020).

A rigorous and rather ruthless selection process for firms and products is a key step toward achieving the desired results from capacity-building. Ensuring firms are well-matched to the program will also keep them interested in it, help them attain results faster, and deepen their commitment to and investment in their digital journeys.

Another way to think about selection is that even a rather lengthy ecommerce capacity-building program is but a brief moment in a company's life cycle. It enables a firm to gain a new capability or use a new service, but it is unlikely that it will be transformational in and of itself or transform underperforming firms into outperformers.

Program managers do not always have to build their own surveys: digital readiness diagnostic exercises are increasingly becoming freely available. For example, tools like Chequeo Digital (Digital Check), developed by the Inter-American Development Bank, can help both program managers and companies themselves to gauge their ecommerce readiness vis-à-vis their counterparts and highlight areas that they need to work on.

Granted, inclusiveness is an important consideration that data-driven methods may overlook. After all, donors often have an interest in working with underserved women-led firms that may not score too well but are of interest for the donor to promote. Program managers then will need to make additional efforts to identify firms of this kind that are also poised to succeed in the program and/or offer additional support firms that are of interest to a donor but that lag others in the cohort. In the Brazil program, the eCommerce Institute organized additional mentoring sessions for participating Afro-Brazilian women who were not as prepared as some other participants for an advanced cross-border ecommerce course.

One important consideration during the firm selection process is to gauge not only their own digital readiness but also that of their customers. Firms have much greater incentives to invest in their ecommerce capabilities if their customers are digitizing. In developing countries, customers still often value face-to-face interactions, prefer simple WhatsApp communications and want to transact in cash. However, this is changing rapidly due to COVID-19 as consumers across segments have migrated online—so that going forward, a growing set of developing country firms will likely perceive a greater return on investing in digital and ecommerce capabilities.

Once the firms have been selected, expectations need to be set. Each selected firm should:

- **Set targets and KPIs.** The first step for firms admitted to the program is to set clear goals and ways of measuring them. Targets help both the firm and program managers to track progress and address problems. For example, if an online seller that is thriving in its domestic market has not made sales a few weeks after onboarding a marketplace, the program manager can quickly address potential problems with the match of product category to the channel, or price to shoppers' willingness to pay, for example. Another useful tactic is for participants to write a vision statement of themselves as if they had already completed the program: for example, "Today, we are a multinational company exporting online to five new markets." A clear, audacious goal enables businesses to retain and apply information better and remain inspired.
- **Get participants to commit to providing information,** for example by responding to surveys during and after the course and helping them to understand how they can use this data during the program.

- **Empower participants with their own data.** Each participant can be given the aggregated or anonymized data from intake surveys and subsequent surveys for them to understand how they fit into the cohort and what challenges others are facing.
- **Set up WhatsApp groups and channels to communicate and engage with the firm.** Firms typically have many questions and want to interact with program managers and instructors outside the program hours. While there are more sophisticated and secure messaging tools, WhatsApp has become a de facto communication tool across many markets. WhatsApp interactions may be time-consuming, but they are very useful for gauging participants' preferences and addressing problems early on, such as preempting attrition.

3. WHAT TO TALK ABOUT: APPROACHES AND CONTENT FOR CAPACITY-BUILDING PROGRAMS

To date, ecommerce development programs include a variety of learning approaches for different levels of digital maturity. Selected examples by level include:

- **For incipient digitizers: basic digital skills, online presence, outsourced store management.** Women-led microenterprises tend to be the least digitized firms and the likeliest not to have any online channels, especially in rural areas. These firms require support to learn even basic skills such as typing online. For example, when the Inter-American Development Bank deployed the Digital Check online questionnaire in rural regions of Guatemala, it found that some staff at some firms did not even know how to use an app on their phones to start answering the questions.

At the same time, the payoffs of working with rural enterprises can be significant, especially when firms have distinctive products for which there is demand in national and global markets and when they have previously traded through intermediaries. For example, eTrade Alliance partner Etsy is onboarding Indian artisans whose families may have produced the same, distinctive products for centuries but have typically sold these disadvantageously through distributors. These artisans, who are often women, can significantly increase their revenues and profit margins by selling online directly to consumers in advanced economies, but they require a great deal of assistance and support to craft their stories, take professional pictures of their products, create their catalogs, and process and fulfill orders. Amazon India has set up a program for women-led firms to sell to the domestic market through the Saheli marketplace (case 8). In the Middle East, the SouqFann marketplace in Jordan helps solo entrepreneurs to focus on their craft by handling their online stores and orchestrating their digital marketing, logistics, and payments (case 9).

Case 8: Amazon's Saheli marketplace empowers women entrepreneurs in India

Women in India, especially in rural areas, are often expected to focus on childcare and perform household chores and low-paying jobs. A woman seeking to start her own business may require approval from her husband and in-laws to access the internet and office space.

To enable Indian women to start and grow their businesses, Amazon India has implemented several initiatives for women to network, develop digital skills, and sell goods on ecommerce platforms. Amazon's Saheli storefront, which launched in 2017, helps women entrepreneurs sell their products across India. Saheli showcases products such as handicrafts, apparel, home decor, accessories, spices, and jewelry. To be

accepted into the program, women entrepreneurs have to be registered as sellers on Amazon, be affiliated with partners looking to sell on Amazon, or be connected to a government agency or nonprofit that champions women. They should also have a formal company, access to a bank account, and inventory.

Once part of the program, the women receive personalized training, account management support, and help with marketing and listing their products. They receive subsidized referral fees that are 12% or less depending on the category, and their products receive increased visibility by being listed on the Saheli storefront. The program also hosts marketing and networking events such as Smbhav and Small Business Day.

Another initiative that Amazon India is planning to showcase and empower women entrepreneurs is a series of limited-edition bookmarks that tell inspiring stories of women who have been successful at selling on the platform.

By sharing these stories, Amazon India hopes to encourage and inspire other women. One of these success stories is that of Christie Jobin, a textile designer and the founder of Looms and Weaves, who has increased her sales of handwoven goods to over 250 orders per day by improving quality and design and expanding product offerings. Meet Gupta, the owner of specialized toy retailer Shummee, has successfully positioned her brand on the platform and is now competing with larger retailers and top brands in the Indian market. Shilpa, who was limited by her country's cultural beliefs and a low-paying job, was able to increase her income by setting up an online business to sell medical devices through Amazon, as she found this was a niche area that was underserved.

While these are only a few of many women who have found success selling on Amazon, it is important to note that many firms can still face challenges on the platform. Some of the main challenges are technical tasks, including managing product portfolios and handling pricing structures and policies. Businesses also struggle with achieving high-quality product photography and meeting minimum order requirements. It is important for women-owned businesses to continue acquiring the skills and technical capabilities needed to overcome these challenges.

Amazon India will continue promoting ecommerce among women-led MSMEs through the above initiatives, and through partnerships with key stakeholders such as UN Women, the Self-Employed Women Enterprise (SEWA), and Impulse Social Enterprise.

Prepared by Prospera Consortium.

Case 9: SouqFann harnesses the power of specialization to let women-led firms focus on their core competences

In Arabic, Souq Fann means “art market,” and Souqfann.com is an online platform and community of artists and artisans from around the Middle East and North Africa.³⁰ Those selling through the site are highly skilled artisans, typically women. In Jordan, where SouqFann is based, only nine percent of firms are owned by a woman and almost 30 percent of these women-led firms are actually home-based solo entrepreneurs, often making handicrafts.³¹ They excel at making crafts, but as solo entrepreneurs, they might be overwhelmed by the demands of running an online store and orchestrating their digital marketing, logistics, and payments. SouqFann takes care of these aspects of running an ecommerce business, enabling the artisans to specialize in their area of strength.

The platform is particularly useful for the many women who live far from city markets or who also work as homemakers. Merchants set their prices and SouqFann helps them warehouse their products and ship them

internationally. The team gives each merchant a monthly report on their sales and pays them by cash, money transfer, or a check that is cashable at a Western Union office.

SouqFann is a public–private partnership supported by UNESCO, the European Union, the King Hussein Foundation, the microfinance platform Tamweelcom, and several other organizations.

- **For social sellers: Setting up online stores and online sales capabilities, with sector-specific deep-dives.** In just about every developing country, social sellers are the most dominant type of merchant. These firms have some digital skills and use social media and WhatsApp extensively, but often still transact with cash and do not have online stores or sell through online marketplaces. These firms benefit from “ecommerce 101.” For example, the eCommerce Institute has beginner, intermediate, and advanced ecommerce development programs, and also offers sector-specific intermediate and advanced ecommerce courses in food, apparel, real estate, and pharmaceuticals, among others. These course contents often include such topics as setting up a PayPal or marketplace account, pricing and shipping strategies, marketing tools, business policies such as returns and refunds, and seller reviews.
- **For emerging digitizers: Choosing the right marketplaces, onboarding on online marketplaces, and putting ecommerce capabilities in place across the sales cycle.** For sellers that already have a presence in local marketplaces and perhaps in online stores, the next steps are learning about setting up a store on a regional or global marketplace, connecting social media accounts, pricing products appropriately, choosing the right marketplaces to sell on, orchestrating logistics and dealing with reverse logistics, and managing market access issues and after-sale processes. In programs that help firms onboard global marketplaces, it is important to engage business development teams from the target marketplaces as partners, to preempt account suspensions.

Emerging digitizers also benefit from e-export advice, including support from national trade promotion agencies. There are useful concepts offered by export promotion agencies. For example, the UK Department of Industry and Trade has a selling online overseas channel selection tool for firms to select the optimal online marketplace through which to e-export. Likewise, the US Commercial Service offers a low-cost website globalization review gap analysis service to help US companies to gauge the readiness of their various digital channels for export markets.³²

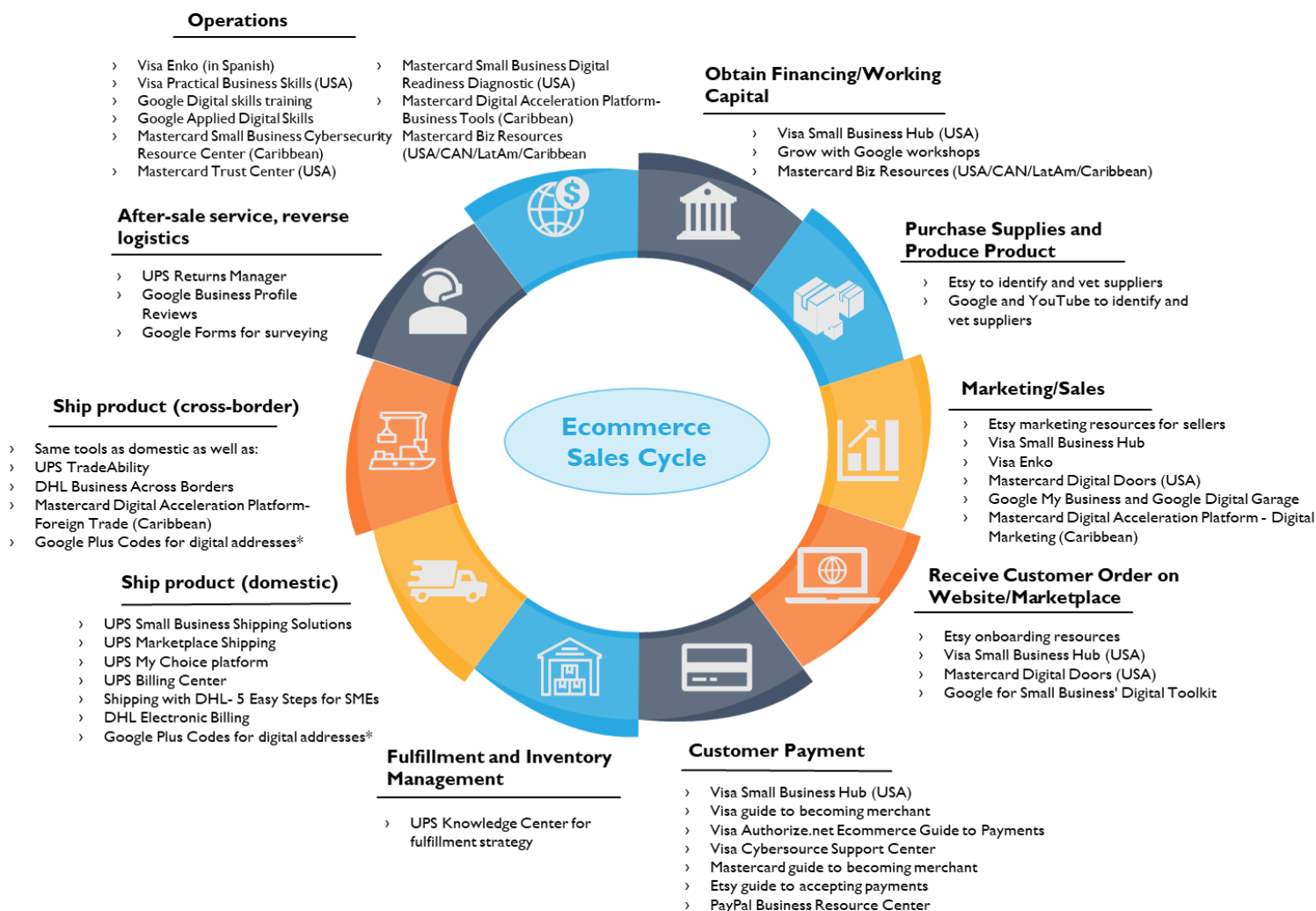
- **For emerging and mature digitizers: managing multiple channels.** Firms that are further ahead and already selling on many marketplaces will benefit from simplifying, streamlining, and scaling their activities. Examples of this include channel management platforms that help them manage all their online stores from a single place, strategic work to select the right logistics partners, and assistance in dealing with divergent regulatory challenges such as different market access, tax, and consumer protection regimes in different markets. There are many solutions available to these types of sellers to optimize and automate their operations; they can benefit from expert guidance and strategizing around the optimal set of capabilities and services.
- **For mature digitizers: executive education and mastermind groups.** Women that lead firms with greater digital maturity and business capabilities can benefit from “mastermind” groups and programs that promote networking and leadership for policy advocacy. For example,

UNCTAD's eTrade for Women Program offers women ecommerce leaders opportunities to shape public policy at global conferences and network with each other, with the support of prominent regional eTrade ambassadors. The eCommerce Institute's eWomen program has a strong focus on cultivating participating women's leadership skills. Indeed, many interviewees highlighted the importance of pairing women's technical skills development with work to build their leadership skills and peer-learning with other successful women.

During any type of course and capacity-building initiative, program managers can benefit from:

- **Tracking progress, targeting outcomes, and being intentional.** Start modules and training programs by having firms review their personalized goals and learning objectives, and articulate three specific questions they want to answer for themselves during a specific module. This helps firms to consider information delivered to their unique circumstance.
- **Offering complementary tools and services in local languages.** Firms that participate in capacity-building programs often do not know about the tools and capabilities available to support their companies. Program managers should bring together these resources—eTrade Alliance's partners offer a wide range of free resources across MSME sales cycles via the Alliance's 360° Ecommerce Academy and 360° business solutions that can be tailored to any one country and type of firm (figure 19). There are also freely available courses for using a specific platform or marketplace, for example by Amazon, Shopify, and the Facebook SME Academy. Many tools and courses are still only available in English or a handful of languages—program managers can support translation into local languages.
- **Sensitizing and engaging men.** The eCommerce Institute has found that genuinely empowering women in ecommerce requires the engagement of men who are still often the ones leading large ecommerce companies. The eCommerce Institute has promoted mixed training programs for years and has also featured and highlighted women leaders during the ecommerce days it holds annually in 18 Latin American countries. Its approach is based on the notion that raising the profile of successful women digital entrepreneurs inspires not only the next generation of female entrepreneurs but also exposes men to successful women and enables women to rise faster to leadership roles in the digital economy.

Figure 19: The eTrade Alliance 360° Ecommerce Academy: Free Tools

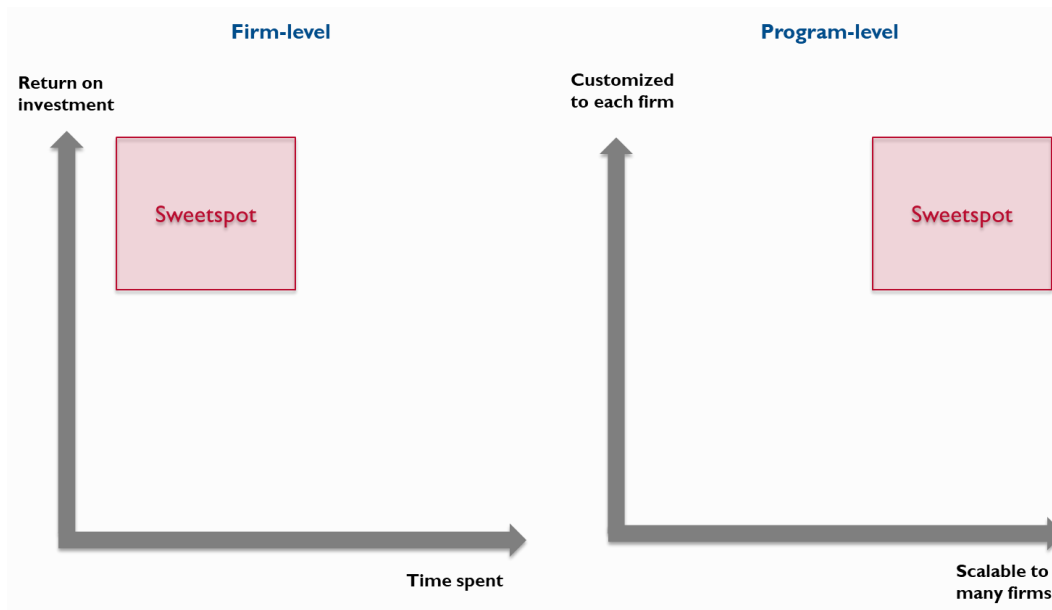


Source: Nextrade Group.

4. DELIVERY METHODS: TOWARD BITE-SIZED, ADAPTIVE MICROLEARNING AND MASS-CUSTOMIZATION

Ecommerce capacity-building often aims to apply a specific platform or solution, typically in one or many parts of the ecommerce sales cycle. The training is not as much about *what* to do to bolster a company's growth or results as about *how* to do something to achieve the desired result, such as making the first online sales in a global marketplace, setting up an online store, making the first sale using digital payments, and so on. From the start, both program managers and participants are clear on what they want to accomplish and how and what the desired result is—participants simply need to learn to apply a platform, solution, or service. Both program managers and participants are highly incentivized to attain results quickly and maximize return on investment efficiently, as both want the solutions that are in the red square in figure 20.

Figure 20: The sweet spot for ecommerce development programs: getting to results quickly and at scale



Source: Nextrade Group.

The aspirations on the axes are often in tension with one another. Getting to results can be a battle against time, especially if the participant faces frictions such as dealing with resistance to change in their businesses or is up against connectivity or language barriers. Selecting firms that are ready to implement can significantly accelerate progress. Similarly, customizing content to each firm while catering to hundreds or thousands of firms is a familiar challenge in SME capacity-building and export promotion. These challenges can be ameliorated to an extent by selecting firms at similar digital maturity levels and facing similar challenges. Over time, as sophisticated AI-driven adaptive learning becomes more common, technology will likely increasingly enable programs to target “markets of one” and mass-customize offerings.

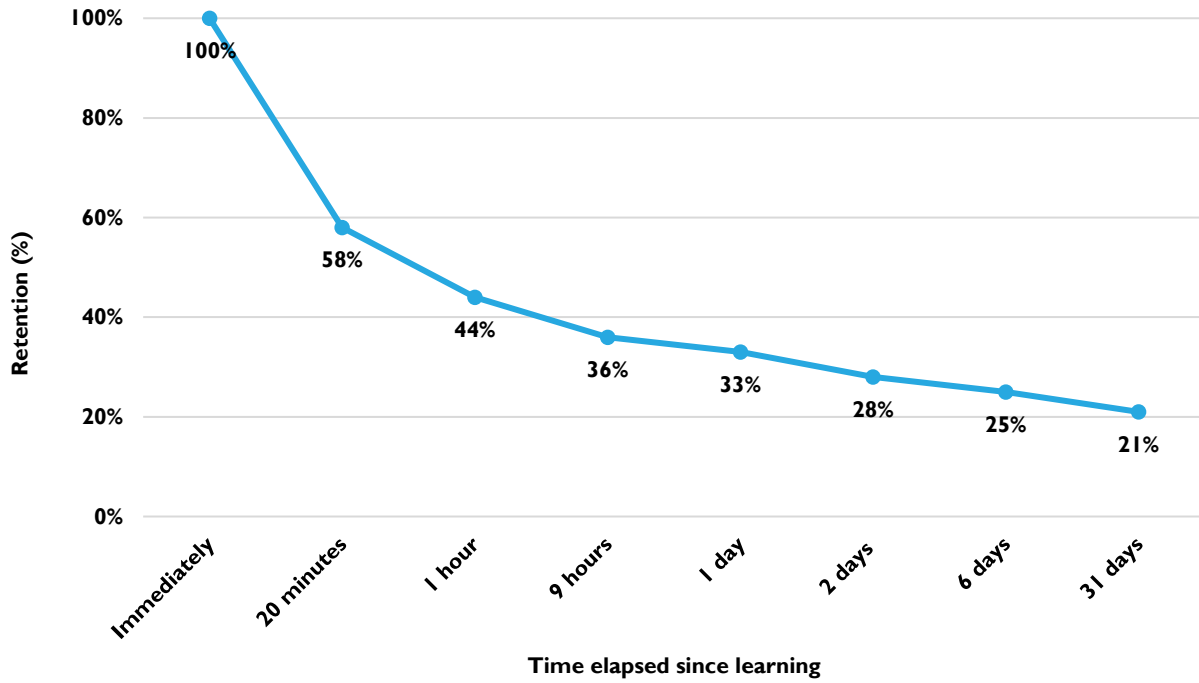
Interviews with program managers and implementors revealed the tensions of getting to results quickly and mass-customizing. There exist a wide variety of delivery methods, such as regular online courses to cohorts of companies (for example, eCommerce Institute, TFO Canada), group and one-on-one online and in-person training (ITC), train-the-trainer approaches and face-to-face training of small cohorts of SMEs (We-Fi), and group discussions and expert meetings (eTrade for Women). Covid-19 has forced planned in-person training programs online, and this trend of online and hybrid training will likely continue also after the crisis.

Courses vary by how often they take place. In UPS’s case, the program is offered once a week for four weeks. We-Fi’s courses are half a day for 2–3 days for two weeks, while those of the eCommerce Institute can be several weeks long—for example, a cross-border ecommerce course offered in Brazil to 150 firms totaled 180 hours. Training to onboard a firm to a marketplace can involve half- to full-day sessions of one-on-one support followed by lighter follow-up sessions to optimize the new store. In cases where the programs focus on training the trainers, trainers first train firms, and then program managers work with trainers to train SMEs.

However, our surveys and interviews also reveal that regardless of training delivery models, there are four typical challenges facing participants:

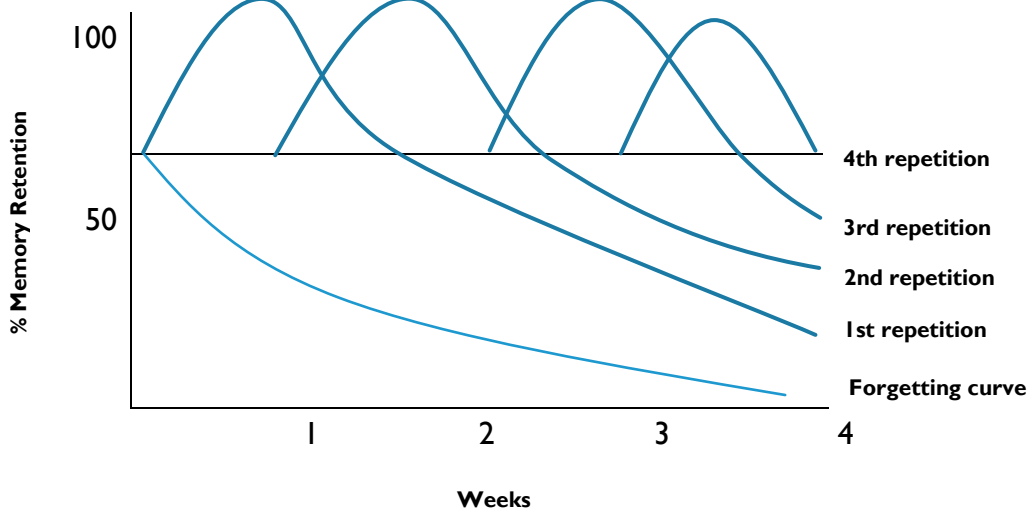
- **Limited time for “binge learning.”** In surveys to gauge their satisfaction with programs, participants most often cite lack of time as the main impediment: after all, they are busy executives with full-time jobs and full lives. Today, capacity-building is typically compartmentalized and organized around “binge learning,” that is, formats that require a person to sit down at their computer for an hour or two at a given time and take in information in one big bite during that period. This model is rather rigid—resulting in abandonment, especially during Covid, as women faced growing online business opportunities while also having to respond to burgeoning family obligations.
- **Limited retention.** Human’s retention of information is dismally low. The famous curve of forgetting shows that about 50 percent of information received is lost in one hour, 66 percent in 24 hours, and 75 percent in a week (figures 21a and 21b).³³ Unless the information is repeated multiple times or is readily applicable to the firm, it tends to be quickly forgotten.
- **Excessively long learning-to-applying cycles.** Even when information is retained, there are frictions in applying it. One friction is limited time: day-to-day work and tasks get in the way, and if the information does not immediately translate into revenue, it may never be applied. Another typical friction is knowledge about the potential applications and technologies for operationalizing learning in a particular firm and the perception that ecommerce and technologies are expensive to use.
- **Levels of ex ante knowledge and learning paces vary widely.** Every firm and participant is different and arrives with different levels of knowledge, information, and problems to solve. However, each also already knows a great deal and can access information from multiple sources. Capacity-building programs are still rather “one-size-fits-all”— and need to better allow participants to build and customize their program or learn at their own pace.

Figure 2 1a: The Ebbinghaus Forgetting Curve



Source: Intela

Figure 2 1b: Spaced repetition reduces forgetting



Source: Easygenerator.

These challenges are universal and also afflict general MSME and corporate training programs. In light of these challenges, there are several useful methodologies for delivering capacity-building, which include the following approaches:

- **Make training results-focused.** Make participants set clear quantifiable targets they want to meet during the program, share these with the group before starting, and track their progress. Reward the best performers at the end. Tracking and highlighting results is also relevant in that the sooner firms attain results, the more motivated they will be to continue and invest time and resources in their ecommerce business. A lack of results will also enable the program manager to quickly address issues such as flawed pricing or product-channel fit.
- **Make training relevant through mass-customization.** To be retained and applied, capacity-building contents need to be highly customized and relevant—ideally delivered as an on-the-job training experience where participants readily apply their training to solve specific problems, experiment, and apply specific solutions specific to their business situations and objectives. How can such mass-customized “markets of one” approaches be implemented? One simple method is enabling participants to design their own curriculum; another is one-on-one mentoring and portfolios. These, however, are not as flexible or customized as what could be described as “precision training” and adaptive delivery, wherein AI and algorithmic approaches are used to match content most suitable for the participant to meet her goals, and at the pace she can bet progress. The design may need to include customized support, such as digital marketing and leadership coaching.
- **Rapid delivery in readily applied micro-doses.** Content is best absorbed and applied when it arrives in small chunks. Among the hottest trends in today’s corporate learning management is microlearning, where trainees learn a skill or information in short, 2–15- minute bite-size chunks through various interactive media like games, chatbots, and flashcards (case 9). This is how firms also like to learn—in our survey, women-led firms in every market articulated a strong preference for applied microlearning, such as through short YouTube videos, the contents of which they then had to apply (figure 22). Research on microlearning has been growing in the past 15 years and suggests several benefits relating to engagement, confidence at performing tasks, and retention of information.³⁴ Even more miniaturized learning or “nanolearning” experiences where a person answers a couple of questions in a few seconds can also be effective.³⁵

Case 10: “Who has all that time?!” How programs can use microlearning to get overwhelmed executives to learn, retain, and apply

Executives around the world are perennially too busy to train. Training often entails taking several hours off of work, only to then dive back to urgent tasks at the office and quickly forget what was just learned. Time pressures like these have also been a significant challenge in ecommerce capacity-building programs, especially for women-led firms amid COVID-19: many suddenly had to balance a boom in their businesses as shoppers moved online while also attending to children studying remotely and spending far more time at home.

Perhaps the hottest trend in corporate learning and development, microlearning aims to overcome the problem of limited time and low retention. Microlearning is about delivering information in bite-size chunks of about five minutes. Each chunk is highly applied and aims to reach a single goal. Microlearning modules come in different formats such as videos, infographics, small quizzes, flashcards, chatbots, animation, and

quick tasks. Microlearning can be especially engaging and impactful when gamified and combined with instant feedback and emotional symbols like emojis, badges, and peer recognition that have been found to boost morale and engagement.³⁶

As an example, major US department store Bloomingdale's used microlearning for employee safety training, with 3–5-minute sessions on such topics as safely using ladders, cleaning up broken glass, and correct use of box cutters. Employees could access a session at any time during a shift through tablets or at the point-of-sale interface. Some 90 percent of employees participated voluntarily, and 83 percent believed the information prevents accidents. Likely partly as a result of this training, safety claims dropped by 41 percent.³⁷

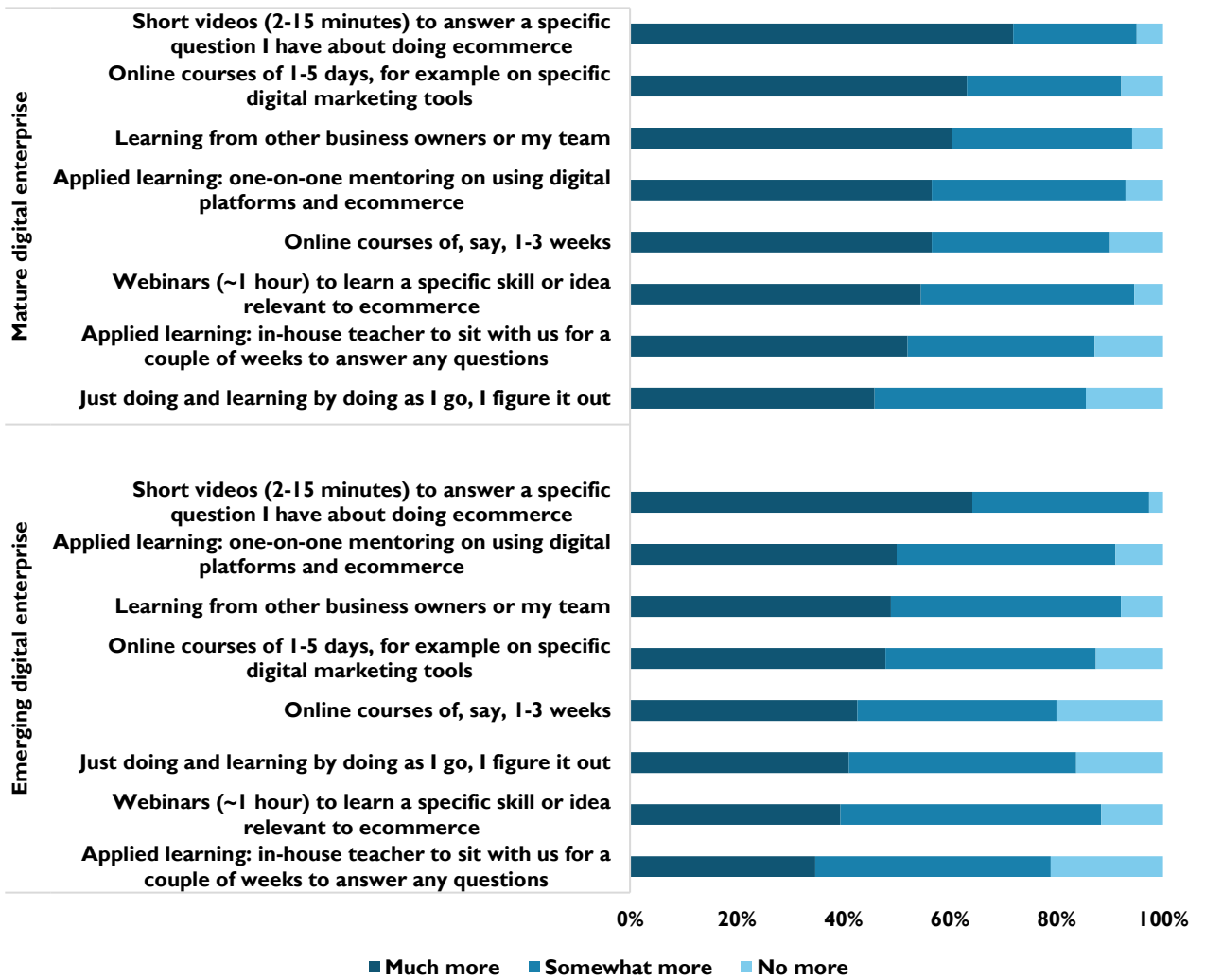
There is evidence across sectors such as law enforcement, hospitality, medicine, government, and farming that microlearning accelerates learning, enhances engagement, and induces participants to provide feedback and find background information—which also means that participants, when exposed to applicable “just-enough information,” like to identify the information that is more superfluous and less relevant themselves.³⁸

By administering learning in small, repeated doses, microlearning is believed to support retention—essentially flattening the forgetting curve. The ideal microlearning is also adaptive to an individual's level of knowledge and pace of learning.

Microlearning can of course also be drawn into and embedded in longer learning and courses, such as massive open online courses (MOOCs), or even in teaching, say, a play by Shakespeare. In one study, German researchers assessed learning and retention among students that read a full book of 16 chapters and then took a test, those that read four chapters and took four tests, and those that took tests after each chapter. In an evaluation after each group had taken their respective tests, the group that took frequent tests outperformed the others by 22 percent and took 28 percent less time to complete this evaluation than the group that read the entire volume. It also did 8 percent better than the group that read the work in four parts.³⁹

Figure 22: Preferred learning methods for women-led firms, by firms' digital maturity

A



B



C



D



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ Much more ■ Somewhat more ■ No more

- Applied learning.** The importance of immediate application—essentially, learning-by-doing and on-the-job training—cannot be overstated in ecommerce capacity-building. It leads to a sense of progress, keeps participants engaged, enables quick wins. Applied microlearning is especially useful, for example, in helping firms onboard a global marketplace by breaking this up into steps: several discrete microtasks, each with their own goal, that together create a functional, attractive store on a global marketplace.⁴⁰ Virtual and augmented reality can be used to practice skills in advance and operate in hypothetical scenarios.
- Adaptive learning.** Ecommerce capacity-building should not be rigid and based on a set curriculum, but should adapt and evolve with participants, harnessing their innovations and ideas. Today’s course participants by and large expect adaptive learning experiences as they have grown accustomed to using the internet as their customized “personal assistant” and learning tool. AI and machine learning enable highly adaptive and customized learning that is tailored to participants’ level of knowledge, needs, goals, and pace of learning.

- **Peer learning and improvisational design.** Firms also like to form part of groups on WhatsApp or other messaging apps where they can share questions, solutions, and ideas and engage in organic discussions. Group interactions can also be structured as improvisational design experiences, with course materials providing background information while the learning process focuses on active problem-solving, applying learning, and teamwork “on the fly.” Interviews have revealed significant benefits from peer learning—firms shared ideas and best practices with each other and also benefited from mutual moral support (case 11, table 6). For women participants, who are often outnumbered by men at ecommerce events, these community conversations allowed them to interact safely with other women leaders grappling with similar challenges.
- **Traditional mentorship still matters.** Mentoring still matters, especially for women-led firms—for example, the eCommerce Institute delivers training but increasingly also provides post-training mentoring for the participants to apply the solutions in their businesses.
- **Delivering training wherever the participants are.** Rather than pursuing a specific format (be it e-learning or in-person learning), learning experiences should be designed to reach participants through their favorite learning channels, such as their phones or tablets or at their offices in a hybrid format, and so on.

Case 11: Recommendations for training programs from a digital native travel accessory business

Trip-Shirt is a family-owned business led by Lorena Valente. Founded in Casilda, Argentina, a small city 400 kilometers from Buenos Aires, Trip-Shirt manufactures luggage covers and travel products that other brands can use as accessories.

In 2020, the COVID-19 crisis prompted Lorena to pursue online opportunities. She enrolled in the eight-month intensive eWomen training program run by the eCommerce Institute, which helped her improve Trip-Shirt’s website and implement digital tools and an online store that is supporting the old B2B brick-and-mortar operation.

Lorena is a constant learner and has been able to learn quickly online from the rural region where she lives. She did not grow up with digital technologies and found it hard to acquire digital skills and use technology, but working side by side with other women entrepreneurs in the training program gave her more confidence.

Lorena stresses that ecommerce capacity-building programs need to be flexible, as women entrepreneurs have particularly heavy full-time work loads and household obligations. In her view, classes should be an hour long at most and be available any time, for self-paced learning.

She would like to have multimedia classes that include case studies, videos, and guest speakers with experience in building online businesses. Lorena also stresses that interaction with other women from across Latin America was the most valuable part of the training program, as it enabled her to build a business network with other women and learn about online business and markets in other countries.

Prepared by Prospera Consortium.

Table 6: Findings from interviews and focus groups with women-led firms

Area addressed	Typical findings from interviews with training participants
<p>Drivers for success in becoming an online seller</p>	<ul style="list-style-type: none"> • Prior university education and professional career • Staying motivated and persistent through challenges • Being resourceful: researching on own, seeking out opportunities and ways to constantly improve • Personal commitment to using the programs they are enrolled in, staying in contact, and learning about and taking advantage of new offerings • Digital skills aptitude and development • Carving out time to make training and learning a priority • Confidence in acquiring and strengthening skills
<p>Typical challenges on the digital journey</p>	<ul style="list-style-type: none"> • Ensuring the product is competitive and that there is demand for it • Customers' limited digitization • Obtaining financing/working capital • Acquiring the digital skills and tools needed to operate an ecommerce website or sell on a marketplace • Finding time to commit when there are other obligations, e.g., at home • Navigating lack of payment infrastructure and/or lack of interoperability in payment platforms • Building trust and credibility with potential customers • Finding the most cost-effective and efficient logistics options • Understanding the customer and how to use tools for digital marketing (i.e., SEO, analytics)
<p>Main benefits from training courses</p>	<ul style="list-style-type: none"> • Learning essentials of online presence, such as understanding and engaging with the customer, using social media for branding and building community, how to photograph products for display online, market segmentation, digital marketing, data analytics • Learning how to onboard marketplaces and effective strategies such as shipping and promotions • Learning how to create an online store • Gaining access to international trade fairs • Networking opportunities with other participants • Mentorship and one-on-one coaching

<p>Best practices and/or suggested improvements to courses—content and delivery method</p>	<ul style="list-style-type: none"> • Shorter courses (i.e., up to one hour) that can be self-paced • Dynamic courses: include case studies, guest speakers, make it interesting • Expert guidance and one-on-one support • Regular communication to keep learning more about the space and opportunities to gain more skills • Community and mentorship • Receiving a certificate or something similar to display on website or LinkedIn to show completion of course
<p>Typical challenges participants need to address after course</p>	<ul style="list-style-type: none"> • Interoperable cross-border digital payments • High commissions and fees for digital payments • High logistics costs • Potential need for fulfillment/warehousing for cross-border trade • Accessibility/access to global or regional marketplaces • Access to capital

5. MEASURING LEARNING AND SATISFACTION

Gauging participants’ learning and satisfaction and providing feedback is critical to keep adapting content to participants’ needs, promote engagement, and support learning. There is a substantial body of research that shows that frequent feedback and polling support engagement, retention, and morale in educational settings.⁴¹

The programs reviewed for this report gauge learning and satisfaction in different ways, typically through pulse surveys during training and short surveys at mid-point, and surveys with participants after the entire program is over, as well as spontaneous dialogues between participants and instructors on WhatsApp throughout the training. However, the process of soliciting and providing feedback could be even more frequent and interactive and might consist of:

- **Instant performance appraisals and feedback to participants** on their performance. Instant feedback improves learning and can be especially quick and easy with microlearning approaches.

*“The most important takeaway from the research is that **the shorter the time interval between eliciting the evidence and using it to improve instruction, the bigger the likely impact on learning ... the biggest impact happens with ‘short-cycle’ formative assessment, which takes place not every six to ten weeks but every six to ten minutes, or even every six to ten seconds.**”*

— Dylan Wiliam and Siobhán Leahy, *Embedding Formative Assessment: Practical Techniques for K–12 Classrooms* (Florida: Learning Sciences International, 2015).

- **Employee engagement software enables participants and instructors to celebrate achievements and send compliments in real-time**, while enabling program managers to access a stream of data on the learning culture (case 12).
- **High-frequency evaluations of instructors, content, and delivery methods**, such as exit surveys, pulse surveys, and star ratings for microlearning. Polling also has a positive effect on engagement and retention and presents a viable option for educators to enhance their practice.⁴² Polls and pulse surveys can also promote critical questioning and clarifications.
- **Use of WhatsApp groups and tools like “Workplace by Facebook” can be especially useful in eliciting feedback from participants in an unstructured format.** Working much like a Facebook group or a Twitter, these tools enable participants to post comments freely, unfettered by the format of traditional surveys.
- **Generating data on participants’ gestures, micro-expressions, and haptics** (use of technology to gauge motion and touch such as gestures on visual interfaces). Micro-expressions and haptics, both increasingly available, can provide a rich stream of feedback on issues such as the challenges participants experience when learning about a specific topic and their alertness and emotional state. Haptics can also be used to support social interactions, such as in gaming.⁴³
- **Transferring learning data back to students**, for them to reflect on their performance.
- **Surveying participants during and after the program.** The data accessed during the program can be complemented by online surveys on satisfaction and the application of lessons, at a high level of disaggregation. For example, at the eCommerce Institute program, which was run in partnership with the eTrade Alliance in 2020 for mostly solopreneurs or microenterprises, some 75 percent of attendees reported “significant gains” in their use of ecommerce, 65 percent in digital marketing, 60 percent in understanding online customers, and 50 percent in learning about optimizing fulfillment. Some 65 percent reported “improvements” or “significant improvements” in such key performance indicators as making first their online sales and gaining new domestic customers, and 25 percent reported improvements in KPIs for gaining international customers.
- **Prizes and awards motivate firms to perform.** None of the programs that were reviewed included prizes or awards for high-performing firms. Sometimes this may be by design, to encourage collaboration among participants rather than competition. However, prizes and awards can be energizing and motivating. eCommerce Institute does offer certificates for those that complete courses and ex post mentoring and networking opportunities. The eCommerce Institute also rewards the best-performing ecommerce ecosystem firms in every Latin American market during its annual eCommerce Day, which is held in 18 countries in the region. These awards have become a source of great pride for many companies.⁴⁴ MATrade, Malaysia’s export promotion agency, has organized highly publicized annual Export Excellence awards since 2019.⁴⁵

Case 12: Spreading the love: software to improve participant engagement

Ensuring engagement and participation during ecommerce capacity-building work is often a challenge, as participants tend to be busy entrepreneurs and executives with many distractions. Several surveys

and studies indicate that prompt recognition of good work and a person's strengths significantly boosts engagement, and that almost half of employees would give more recognition if there was an easy tool for doing so.⁴⁶

In ecommerce training programs, the use of emoji and GIFs within WhatsApp has become an easy form of “micro-feedback” that can be used to acknowledge good work and also to have fun, offer encouragement, and build a sense of a cohort. This is good for learning: for example, there is a substantial body of scientific evidence that shows that using emojis significantly enhance outcomes in areas such as education, cross-cultural communication, and marketing. For example, emojis have been found to help students better understand what they have learned, especially in online learning environments.⁴⁷ Research also shows that when informative content like prices or ecommerce platform functionalities are presented in isolation, engagement diminishes, but when it is presented with likes, hearts, and other emotional content or images, engagement increases.⁴⁸

However, even more sophisticated means can be used to promote and track engagement. By using employee engagement software—apps like Disco, SalesScreen, and Bucketlist—trainers and program managers can express regular, frequent appreciation to trainees, colleagues, and other individuals they interact with.

These tools help participants and instructors gain recognition, meet goals, and quantify a program's culture. These types of apps can also be used by program managers to reward actions and behaviors that are positive, such as sharing ideas or asking perceptive questions.

6. MEASURING BUSINESS RESULTS

A pervasive challenge in measuring training programs is how to measure business results and develop program impact over time, as companies may not respond to surveys or open their books until long after training is over, and especially as it is challenging to attribute longer-term development outcomes to the program. Indeed, few programs have measured outcomes rigorously over time. The We-Fi program seeks to be an exception, as it includes monitoring and evaluations of business outcomes such as revenue increases and market diversification over a year after implementation. The eTrade Alliance too measures impacts through participant surveys and aims to carry out these surveys every six months.

There are many methods and measures that could potentially be used to gauge the impact of ecommerce capacity-building. These include:

- **Asking participants about their perceptions of capacity-building work during, immediately after, and several months after the session or program.** The obvious downside to this approach is that the respondent's assessment of the program's contribution is subjective and based on the perceived importance of it in comparison with other variables, including factors that may have existed before the program.
- **Using the contingent method of asking firms how much they would have paid for the capacity-building in light of its impact.** This, too, is subjective but perhaps reveals more about the gains that firms have obtained.
- **Establishing agreements in advance to enable the program to access firm data (such as data on the firm's revenues and exports) for the year or two after the program, for example, and control for other variables such as economic fluctuations that may**

also impact firm performance. In countries such as Brazil, firms' revenue and export data can be obtained from public agencies using the company's identification number, so programs would need to have this number and be allowed to link it to users. As capacity-building is just one small event in a firm's life cycle, monitoring and evaluation processes need to take into account other firm-specific events such as securing an inventor and entering a new market, and external shocks such as economic downturns.

- **Using prizes and awards to incentivize firms to submit their data, including well after the program (such as by rewarding the firm that grows the most in the year after the training program).** This can also encourage firms to set targets and perform. This type of competition can also be broader, for example an “e1000 competition” along the lines of the renowned Inc. 1000 competition in the United States that annually awards America's fastest-growing MSMEs.
- **Using marketplace data to obtain a rich data stream.** In programs that onboard firms to marketplaces, data can be shared with these platforms while tracking clicks per store and product, new visitors, visitors by market, sales by product and markets, and so on.
- **Accessing qualitative information on outcomes.** Quantitative metrics are important to enable program managers to learn about the program ROI—the ratio between the number of desired impacts that were actually attained and the cost of running the program. However, programs also need to be opened to track more unexpected benefits. For example, participants often learn about new tools and services from each other, and sometimes even create business partnerships with each other. These outcomes may be harder to quantify, but learning about them is very valuable and can be implemented through focus group discussions after the training program ends, exchanges on platforms like Facebook Workplace, and open-ended surveys.
- **Benchmarking and tracking performance by finely disaggregated segments.** To track the program's impact on different types of firms and to better tailor and target future interventions, it is essential to harvest data on firm characteristics throughout. This data might include the firm's size, sector, location, growth, export participation, gender composition (such as the gender of the owner or CEO or the percentage of women in the management or executive teams), and, when feasible, the ethnicity of the owner and management teams. To understand how successful a new ecommerce capacity-building program is within different segments, the results can be benchmarked and compared to those attained in other types of capacity-building programs (such as traditional export promotion programs).
- **Measuring attribution with outcome data, control groups, and econometrics.** Attribution is a persistent challenge in training programs. A company's performance does not typically lie within the control of the training program but is also shaped by a great many variables that may or may not relate to the training, such as changes in the company's human resource pool or access to capital. As ecommerce capacity-building programs proliferate and are used by more firms, one approach to measuring attribution is to use a control group of firms that do not receive the same “treatment” or training as the groups that do. In addition, econometrics are needed to relate training to outcomes. This would not be anything new: there are many studies using econometrics to examine such issues as export promotion agencies' impact on the rise of new exporters and growth of exports.

7. ENSURING SUSTAINABILITY

Programs should incorporate sustainability considerations in the design phase, to ensure that skills are transferred in a way that benefits a broader set of firms than those that are targeted during the program itself:

- **Ensure success with business KPIs during the program.** The best way to ensure sustainability is for the program to help firms generate sales, which encourages them to keep learning and investing in their ecommerce capabilities. Staff from the most successful firms also learn actively, by themselves, and typically shift organically to using new digital technologies and services; they can be empowered with access to additional technology capabilities and services.
- **Use train-the-trainer approaches to cultivate local capacities for ecommerce capacity-building.** Another way to support sustainability is to train trainers and support them in becoming “force multipliers” that go on to build the capacities of many firms over time. Ideally, these trainers would have experience with training SMEs and have access to many SMEs—for example, they might be established business consultants or work at business associations. Through this approach, the We-Fi program has trained dozens of experts who then train sets of MSMEs both during the We-Fi intervention and, it is hoped, for years afterward. Also the US State Department and Canada’s TFO work with trade promotion organizations in beneficiary countries to strengthen their approaches and capacities to deliver ecommerce training programs and services. Trainers would ideally be trained not just to teach content, but to become local ecommerce thought leaders who build and spread knowledge on ecommerce and digital skills development. Donors can then leverage their expertise and ask them for new ideas in building more impactful programs.
- **Open access to services and capacity-building through technology, with government and public-private partnerships.** Technology can also be used as a force multiplier to scale capacity-building programs. For example, in Brazil, the ecommerce capacity-building pilots were explicitly aimed to contribute to the development of a trade hub platform supported by the government and the private sector. The platform is envisioned to include modules and services that automate and scale the firm selection, capacity-building, and services that were tested through the pilot.

B. SUMMARY OF RECOMMENDATIONS

Interviews, surveys, and reviews of leading-edge work in corporate development suggest there are certain best practices when setting up capacity-building programs for women-led firms:

- Start with concrete goals and business KPIs.
- Use data to select the best-fit firms for the program and set a baseline and learn firms’ main constraints.
- Put participants at the center: participants learning and applying their new knowledge is key to achieving the desired results, not the delivery of knowledge by an instructor.
- Enable participants to customize their curriculum and access just-in-time, just-for-me, and highly applied content in small microlearning modules. Participants are busy executives who are pressed for time and often have a strong knowledge base. Learning needs to center not on the volume of information that is absorbed but rather on the capabilities that are created and harnessed.

- Facilitate peer learning and mastermind groups to share information, solve problems, and build business synergies. Participants learn most from each other, and women are especially empowered by seeing other women in similar settings.
- Attrition rises as stakes drop. Ensure participants are keenly committed by filtering them using rigorous entry surveys and by asking them to pay a fee to take part.
- Deliver where the participant is and make delivery device-agnostic—users can learn on their PCs in the office, tablets at home, or on smartphones on the fly.
- Provide constant feedback through pulse surveys, engagement platforms, and haptics.
- Sensitize recruitment and training materials and instructors to gender and reinforce the vision of women as leaders.
- Raise awareness about women’s potential and success stories among men (business partners, investors, colleagues at large ecommerce companies, etc.).
- Prioritize women’s access to and the ability to test resources and solutions (such as for digital marketing, payments, etc.) for carrying out an ecommerce sales cycle.
- Select trainers with strong technical knowledge about ecommerce and operating experience in ecommerce—and make them into empowered, active learners and thought leaders who spread knowledge of ecommerce development.
- Provide dashboards to users so they can see how far they have come and how close they are to completing a course and receiving their next certification.

Table 7 summarizes best practices and assumptions and pitfalls to avoid in the ten key areas for setting up capacity-building programs.

Table 7: Best practices and common pitfalls in programs aimed to promote women-led firms in the digital economy

Step	Best practices and considerations	Assumptions to avoid
I. Setting a goal	<ul style="list-style-type: none"> • Program objective informs the types of firms to target • Primary way of targeting firms is by digital maturity and online sales, not size or sector • Goals such as setting up social media channels and interacting with clients on WhatsApp are for incipient digitizers that interact with customers in-person and by phone • Goals such as opening an online store, making the first online sale, and digitizing payments are for emerging digitizers that typically are thriving social sellers and interact with customers online • Goals such as setting up a store on a global marketplace, making the first e-export sale, and diversifying export markets are for sellers that have a thriving online business in their local markets, ideally speak English, sell multiple products, and have inbound international demand • Goal setting can be preceded by a broader market assessment, to set targets appropriate to the market’s maturity level (for example, the poorest countries have few digitally mature women-led firms but do have significant constraints, such as limited connectivity; large emerging markets have large pools of thriving online sellers ready to internationalize) • Sector-specific programming is ideal, to deliver especially relevant content and optimize peer learning 	<ul style="list-style-type: none"> • Most firms will benefit one way or another • Ecommerce capacity-building is like traditional export promotion about leads and target markets
2. Recruiting firms	<ul style="list-style-type: none"> • Ensure wide funnel and broad geographic reach: partnering with local organizations, such as women’s associations, export promotion agencies, local and national governments, and ecommerce associations; advertise and livestream on social media • Create an online application process that generates a database of scores to select firms quantitatively • Commitment and drive are critical: make firms do a 30-second video on why they want to engage • Ask firms about willingness to pay even a nominal amount • Ask firms about their main constraints, interests, and goals, to adapt course contents and delivery • Ensure recruitment is sensitized to gender: program materials show women in charge, explicitly mention that women-led firms are encouraged to apply, showcase testimonials by a female business owner, etc. 	<ul style="list-style-type: none"> • “Usual suspect” channels such as business associations will reach target women-led firms • Firms will want to take the program if they only know about it • Firms think hard about whether to sign up • Offering programs for free benefits firms • Easy signup processes are helpful

Step	Best practices and considerations	Assumptions to avoid
3. Selecting firms	<ul style="list-style-type: none"> • Target firms that are poised to benefit and succeed, such as: <ul style="list-style-type: none"> - Incipient digitizers: - Prove demand for products - High level of commitment to learning and growing ecommerce business - Staff capabilities for building an ecommerce business - No obvious binding constraints: firms have access to the internet - Mature digitizers: - Product in demand in global markets - Thriving online store in the domestic market - Existing export sales (at least 10%–25% of sales are exports) - English skills • Select firms using quantitative and qualitative metrics • Prioritize (1) digital maturity, (2) export readiness, (3) demonstrable commitment, and (4) products in demand in marketplaces 	<ul style="list-style-type: none"> • All firms can benefit from the program • Incipient digitizers benefit from interaction with advanced peers
4. Designing content	<ul style="list-style-type: none"> • Emphasize achieving results rather than just learning new knowledge or skills • Applied learning is critical: set up an online store, onboard marketplace, set up payments, optimize display, etc.; learning-by-doing improves odds of hitting KPIs, identifying problems during the course • Adaptive learning: adjust contents to participants’ level and needs as revealed by intake survey, commentary, machine learning • Enable customized approaches and participants designing their own experiences • Give firms additional resources on services and solutions available in the market, such as digital marketing, market access, payments, or logistics • Ensure course contents are sensitized to gender 	<ul style="list-style-type: none"> • Improving knowledge is as important as improving business outcomes • Program will be transformative for participants
5. Delivery methods	<ul style="list-style-type: none"> • Avoid compartmentalized binge learning • Integrate training to flow of work—applied, gamified microlearning optimizes impact • Make delivery adaptive: tailored to participants’ goals, capabilities, learning, enable self-paced learning • Use peer learning and improvisational learning as core delivery method • Bring training to where firms are and be device-agnostic; ensure women have devices • Ensure instructors and delivery methods are sensitized to gender and accessible to women 	<ul style="list-style-type: none"> • More information is better • Participants retain all knowledge delivered • Participants automatically apply what they learn • Instructors understand women’s issues and challenges • Participants respect instructors’ and program managers’ time

Step	Best practices and considerations	Assumptions to avoid
6. Limiting attrition, encouraging strong performances	<ul style="list-style-type: none"> • Design a rigorous selection process to ensure good fit and highly committed candidates • Focus on attaining business results during the program • Provide incentives for seeing the program through—prizes, discounts, or mentorship • Enable participants to customize their program and self-pace • Be available to discuss challenges around participation with firms (including via WhatsApp) • Expect 10%–20% dropout rate and have a waiting list 	<ul style="list-style-type: none"> • All firms will show up on day 1 • Participants consider the program central to their businesses and schedules
7. Measuring firms' learning	<ul style="list-style-type: none"> • Pulse surveys, haptics, sentiment tracking to gauge progress and problems in real-time • Instant feedback through platforms from instructors accelerates learning • Track target business metrics during the training • Use incentives such as prizes and awards 1 and 2 years after the program to incentivize firms to submit data on their performance • Give all data to participants for self-reflection 	<ul style="list-style-type: none"> • Survey should measure content learned rather than business targets met • Ex post surveys convey the best information
8. Measuring the program's impact	<ul style="list-style-type: none"> • Disaggregate data by different firm segments, sectors, geographies • Polling participants on the perceived impact of training (easy but subjective) • Contingent method of how much participants would have paid in retrospect • Access revenue and export data from participants and control group • Econometrics to rigorously detect impact at firm and cohort level 	<ul style="list-style-type: none"> • Surveying perceptions on impacts is the best and only available method
9. Ensuring sustainability	<ul style="list-style-type: none"> • Seek quantifiable business success <u>during</u> the program to incentivize firms to invest in their own development • Train trainers that already work with SMEs • Develop a platform approach with local trade promotion organizations and the private sector to digitize and scale services 	<ul style="list-style-type: none"> • Programs that are successful can easily scale as-is

IV. TOWARD DIGITAL TRANSFORMATION AND POLICIES CONDUCTIVE TO ECOMMERCE

Ecommerce capacity-building is often a rather defined process—about how to accomplish a specific task or master a specific platform and service. However, as companies engage in ecommerce and grow, they will typically look to adopt further technologies and platforms that enable them to streamline various areas of doing business. In other words, companies look to engage in a digital transformation.

A. HOW TO TEACH AND ENABLE DIGITAL TRANSFORMATION

Donors, governments, and corporations can also facilitate this broader process—but it requires a different approach from the capacity-building discussed earlier. Digital transformation requires more conceptual and strategic thinking as to what to do and why to do it, as well as selecting the appropriate path to follow from many alternatives. Donors and other stakeholders can play a meaningful role in three areas where firms typically face challenges in implementing their digital transformation:

- **Identification of pain points.** Firms often intuitively think that technology can streamline and create new efficiencies, but they do not necessarily know about optimal solutions for the pain points their businesses face or set aside adequate senior executive time for this process.
- **Lack of awareness about technology solutions.** Firms typically state that they do not know what technologies exist and how they might best be applied in their businesses.
- **Cost.** Firms are concerned about the total cost of acquiring and applying new technologies.

For example, a company may know that its billing department handles invoices and payments in an arcane, analogue fashion, such as re-entering information from emailed PDF invoices into Excel files, online banking forms, and the company’s own ERP systems. However, it does not necessarily know the extent to which a digital solution would alleviate this pain point, how peers are handling billing and invoicing, what best practices and technologies exist in the market, what the cost savings might be from moving to an alternative system, and how much digitizing the billing process would cost. This is where international development programs and corporations can usefully step in. However, the capacity-building work required is different from onboarding a marketplace or setting up an online store. This broader digital transformation work is more open-ended and involves at least seven steps:

1. Identifying and quantifying problems and pain points;
2. Designing potential solutions—services, technologies, capabilities, business models;
3. Developing consensus around the need for a solution in a company;
4. Learning about existing solutions, such as different technologies;
5. Developing a proof of concept to assess the viability of the proposed approach and solution;
6. Scaling the solution to a pilot and measuring the payoffs; and
7. Financing the solution’s adoption.

This process can involve some microlearning, but it is typically more akin to economic research and change and innovation management. Consequently, it is perhaps better accomplished through self-paced lab approaches, tailored accelerator programs, and executive education-type work. There should also be opportunities for interdisciplinary and cross-sectoral learning. This exploratory approach often also results in incidental learning—many new ideas and learning that went beyond the intended outcome.

Of course, many firms, often the most successful ones, do not necessarily seek support for advancing on their digital journeys—they learn actively on their own, lock in customers and raise capital, and typically graduate rather “organically” to using new digital technologies and services.

Indeed, the capacity-building programs observed in this paper and around the world are attended by self-selected firms that are actively *seeking* help. Programs thus likely miss considerable sets of firms at both ends of the proverbial barbell—firms that do not want to dedicate time to learning or even know about opportunities to learn, and outperforming firms that do not need the kinds of support discussed in this paper. However, just because these firms have never enrolled in capacity-building programs doesn’t mean that there isn’t more to do to support them. To enable firms’ “natural” digital journeys and technology adoption, donors, governments, and companies can helpfully bolster the supply side, such as by:

- Enabling firms’ access to a wide variety of high-quality online services;
- Raising firms’ awareness of various services and technologies and helping firms select the most suitable technologies;
- Creating digital transformation funds to finance firms’ acquisition of digital technologies and services;
- Facilitating interoperability of services, such as through digital ID systems and the use of open APIs; and
- Ensuring that technologies and digital services are equally available to both genders.

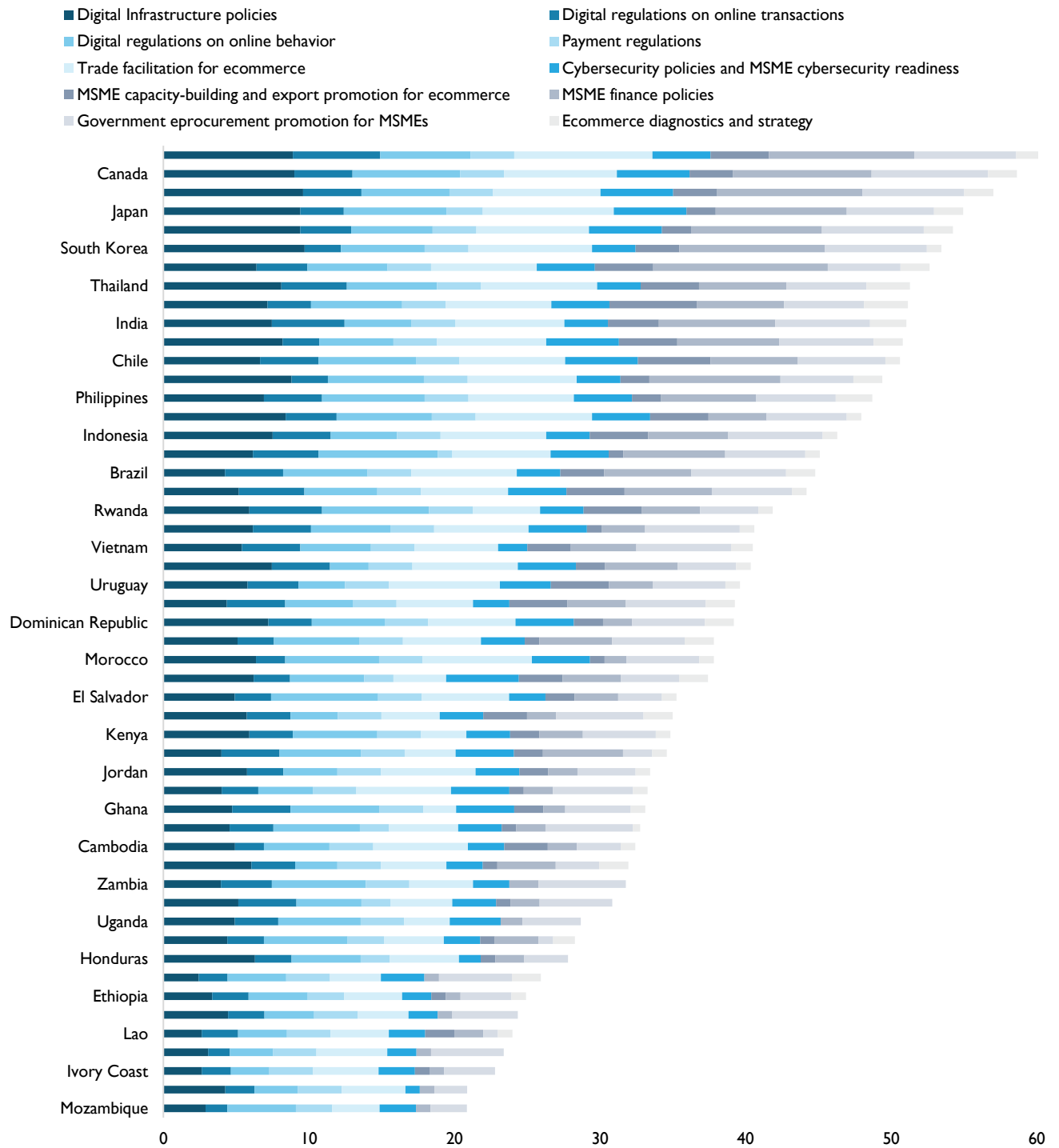
B. BUILDING AN ENABLING POLICY ENVIRONMENT FOR WOMEN’S ECOMMERCE

Donors, governments, and corporations also need to support an enabling policy environment for ecommerce and digital transformation. USAID has recently supported a policy toolkit, especially for Asia-Pacific governments to conduct a self-assessment of how they better support women-owned businesses in cross-border ecommerce.⁴⁹ It could be argued that the governments that have been most successful at helping the creation and growth of women-led firms have typically focused heavily on creating an enabling environment conducive to ecommerce. The eTrade Alliance has supported an extensive comparative mapping of the adoption of 100 policies that are conducive to MSME ecommerce in ten major policy domains in 52 countries (figures 23–24). The index includes gender dimensions, such as whether a country has e-export promotion or financing programs that target women. Broadly speaking, countries that do well on this index also tend to have developed specific strategies and interventions to support women-led firms.

This index also points to the fact that enabling women-led firms in ecommerce is not only about designing appropriate programs and building women’s capacities—it is a whole-of-government agenda to

put in place an enabling environment for ecommerce. Our policy report discusses pro-ecommerce policies in detail, including ones specifically affecting women.⁵⁰

Figure 23: Draft Digital Policy and MSME Ecommerce Policy Index 2020–21 (maximum: 75)



Source: Suominen, Vambell and Furttek (2021).

C. MAKING THE WHOLE GREATER THAN THE SUM OF THE PARTS: SYNERGIES AROUND POLICY REFORMS, PROGRAMMATIC APPROACHES, AND IMPACT ANALYSES

In addition to adopting good policies to promote women-led firms (as well as men-led firms) in ecommerce, donors, governments, and corporations can also work together to make more of ecommerce capacity-building programs for women-led firms in the following ways:

- **Draw lessons learned about policy barriers and frictions from program participants and managers.** The regulatory and policy challenges encountered by firms, especially those led by women, may not be apparent to governments. Discussions with women who participate in capacity-building programs are a very useful way of learning about policy frictions faced by firms. Several of the program organizers that we interviewed noted that further policy reforms will be required to enable participants to take full advantage of ecommerce. Stakeholders in ecommerce capacity-building programs have an excellent opportunity to promote dialogue and highlight regulatory challenges that require attention. For example, program managers could invite government officials and legislators to interact with program participants for a few hours and learn about policy-related challenges, including challenges unique to small women-led firms. Program managers could deliver a policy brief of recommendations to these officials.
- **Create synergies among programs supporting women-led firms.** Some ecommerce capacity-building programs are collaborating with local stakeholders such as trainers, associations, and governments, both to ensure sustainability (so that local stakeholders absorb the information and leverage it), and in some instances to pool resources aimed at empowering women. These types of partnerships are increasingly viable in light of the proliferation of support programs for women-led firms, and they could be especially useful among commerce capacity-building programs and national financing, digital transformation, and export promotion programs targeting women-led firms. There is an increasingly rich body of support programs for women-led firms, but the whole of these efforts could be made much greater than the current sum of the parts. A recent meta-analysis of 57 impact assessments of programs that support women-led firms found that these “training-plus” approaches have the greatest chance of creating lasting effects.⁵¹
- **Collaborate on data and impact assessments.** Programs tend to have very limited data on participants or control groups’ performance in trade. Meanwhile, several governments have firm-level data on exports and imports. This is an area for collaboration: programs can seek to partner with governments to understand the longer-term performance of target companies in trade by leveraging government data. This method is applied in Brazil’s Trade Facilitation Program, with consent from participating companies.

V. CONCLUSION

In the 4th century BCE, a Greek woman, Agnodice, was denied an education in medicine in Athens because of her gender and went to study in Egypt, where women could become priests and doctors, before returning to her home city to practice medicine disguised as a man.⁵² In the late 1700s, three commoners—Nadezha Shergina, Marfa Kokina, and Domna Yuferova—were among numerous women industrialists in Russia, running a paper mill, tannery, and a luxury silk factory, respectively, and managing dozens of serfs and workers.⁵³ Unlike their peers in some countries even today, their holdings were protected by laws under which married women could own property. In 1909, as the automobile gained popularity in America and before women were able to vote, a 22-year old mother and homemaker, Alice Ramsey of New Jersey, set out to debunk the widespread myth that men were superior motorists by becoming the first woman to drive across America, traveling for 59 days at the breakneck speed for the era of 40 miles an hour and making several repairs to the car herself on the way, quite literally paving the way for women drivers and mechanics.⁵⁴ A mere decade later, a Black girl, Creola Katherine Johnson, was the fourth child born to a working-class family in West Virginia. After enrolling in high school at the age of 10, decades before the civil rights movement, this brilliant woman went on to join NASA as the mathematician who performed the calculations of orbital mechanics and trajectory for the historic 1969 Apollo 11 flight to the moon, among other space odysseys.⁵⁵ At 97, she was presented the Presidential Medal of Freedom.

These and the few case studies in this report are just a handful of the hundreds of millions of stories, mostly untold, of how for millennia women have decided on a goal, mastered the craft needed to attain it, and then built, transformed, and run organizations, often against naysayers, societal expectations, racial discrimination, and existing laws. Only on rare occasions were these pioneers protected by laws or surrounded by female peers. In 2021, hundreds of millions of women wake up every day around the world to excel at their craft and build their businesses. In many parts of the world, their odds are far better than even a couple of decades earlier, as a great many governments, businesses, universities, and international institutions and leaders, both women and men, are increasingly prioritizing women's empowerment. Learning, too, is easier in that women with quality internet can access massive quantities of information from around the world at any time. Potential business partners and customers are much more visible and accessible than ever before.

As technologies and methods to deliver training advance and change, what women are taught must also change. Indeed, emerging technologies enable women-led firms to teach themselves and customize training to their needs. Our interviews with women-led firms highlight the interest in highly applied learning, mentorship, and time-saving, self-paced practical approaches that simplify and shorten content and make it available when participants want to use it and in a format that suits them. These lessons likely apply just as well to men-led firms.

There are, however, some gender-specific issues to consider. Peer learning and interaction are especially important for women, who are often outnumbered in the business world by men. Raising the profile of successful women digital entrepreneurs also helps inspire the next generation of women and men, increase women's credibility in the industry, and amplify their voice in policymaking processes. There is also a growing awareness about the importance of programs to sensitize recruitment and course materials to women, attract traditionally excluded groups to participate, and put an end to persistent gender biases.

Going forward, the delivery of capacity-building and support for women-led firms need to evolve with the possibilities of technology. AI will enable entirely new opportunities for mass-customizing content and delivery to the executive, her role, her knowledge base, and the pace and way she learns and applies

knowledge best. Virtual and augmented reality can be used to practice skills in advance and operate in hypothetical scenarios—and also enable women-led firms to offer their own customers more immersive experiences. Leveraging data on micro-expressions will enable rich datasets of analysis that can help customize capacity-building further. The digitization of corporate data and the development of data-rich corporate IDs open new opportunities for measuring the gains of capacity-building and the return on dollars spent.

Societies truly thrive only when women thrive, including as leaders in business and government. This fact is increasingly widely accepted around the world. Digitization is opening entirely new opportunities for enabling women and women-led firms to thrive. The task for governments, development organizations, and corporations championing women is to discover, test, apply, and re-discover the best approaches for different types of firms and amid technological change.

Appendix I

Table I-1: Illustrative examples of programs to enable women-led firms to adopt, absorb, and apply technologies

Type	Government	Private sector	International institutions and PPPs
Programs to enable women-led firms to access broadband and other technologies and engage in a digital transformation	<ul style="list-style-type: none"> In 2014, the UK Government's Equalities Office set up a new £1m Challenge Fund alongside the national Broadband Delivery UK program to enable women entrepreneurs to leverage superfast broadband. The Colombian Ministry of Information Technology is offering ICT and digital transformation training to 6,000 Colombian female entrepreneurs between the ages of 18 and 60 on topics like AI, cloud computing, and design thinking. 	<ul style="list-style-type: none"> In 2018, mobile telecom companies Claro, Digicel, and Telefónica Movistar signed the GSMA Humanitarian Connectivity Charter and committed to advancing gender equality and the empowerment of girls and women through investments in LTE technology in Panama to expand internet access in rural or remote places and help narrow the gendered digital divide. Google's Internet Saathi program launched in 2016 to bring internet literacy to women from underdeveloped areas in India. Over 30 million women had benefited by 2021. The Center for Global Entrepreneurship and Economic Development (CGEED) established a digital transformation grant for women-led firms in ECOWAS member states. 	<ul style="list-style-type: none"> The IDB's #100kChallenge aims to connect, certify, and coach 100,000 women entrepreneurs in the Americas by 2021, with contributions from several private-sector partners, including Microsoft, which contributes experts to conduct online and in-person workshops to promote the digital transformation of women-led businesses in the region. Mastercard, the Entrepreneurship Center of INCAE, and the IDB's ConnectAmericas for Women initiative launched the Virtual Accelerator 2.0 in 2021, with an Innovative Entrepreneur Toolkit certificate training that focuses on digital transformation.
Incentives and support for women-led tech companies	<ul style="list-style-type: none"> Singapore's SG Women in Tech Community Platform connects women tech professionals with a support network, resources, and Infocomm media opportunities. Chile's start-up accelerator, Start-Up Chile, has S Factory support first-time women entrepreneurs with business development and funding support. In 2020, the Startup India program launched a start-up incubator to support tech-based innovations led by women entrepreneurs. 	<ul style="list-style-type: none"> Women in Tech is a global organization that gathers all people, networks, and organizations that are engaged in bridging the gender gap in the technology sector, with members in over 100 countries. 	<ul style="list-style-type: none"> The UN's She Innovates Global Program provides meetups and events for women entrepreneurs and innovators, a mentorship platform, and learning labs to help women scale their innovations. The IDB's WeXchange connects women entrepreneurs in STEM with investors and mentors in Latin America and the Caribbean.

Type	Government	Private sector	International institutions and PPPs
Financing programs for women-led companies—grants, debt, or equity	<ul style="list-style-type: none"> The UK government’s British Business Bank’s Aspire Fund supports women-led businesses across the UK, targeting firms ready for growth capital. Botswana’s Gender Affairs Departments sponsors a Women’s Economic Empowerment Program which provides seed money to women entrepreneurs/women-led start-ups. The government of Colombia introduced a credit line to provide financing for women entrepreneurs and hopes to reach 20,000 businesswomen. 	<ul style="list-style-type: none"> Angel funds such as FirstCheck Africa, Rising Tide Africa, and South Africa-based Dazzle Angels have all launched initiatives with a specific focus on providing equity to African female-led start-ups. 	<ul style="list-style-type: none"> Women Entrepreneurs Opportunity Facility (WEOF), a partnership between the IFC’s Banking on Women and Goldman Sachs’s 10,000 Women, offers new incentives for financial institutions to provide working capital solutions that specifically include women-owned businesses. The Women Entrepreneurship Development Project (WEDP), a World Bank program, provides financing for women entrepreneurs in Ethiopia. The World Bank’s We-Fi program provided nearly \$62 million to AfDB’s Affirmative Finance Action for Women in Africa (AFAWA), to support 40,000 SMEs in 21. SEAF Women’s Opportunity Fund and Australia’s Investing in Women for women-led/-owned SMEs in Southeast Asia.
Skills development programs, such as women in STEM	<ul style="list-style-type: none"> Indonesia’s Creative Economy Agency has offers programming courses for homemakers and foreign domestic workers. Thai Ministry of Digital Economy and Society promotes women students’ digital skills. Morocco’s Infitah for Her program was launched in 2012 to enhance the digital skills of women entrepreneurs, who received free IT training and a digital license that gave them access to the Infitah for Her package, which included a laptop, a 12-month internet connection, and a billing solution at a subsidized price. 	<ul style="list-style-type: none"> In 2019, the UK-SA Tech Hub announced it partnered with the Future Females organization to give scholarships to 50 South African women entrepreneurs that will provide these women with access to a virtual business incubator and teach women how to use technology to scale their businesses. Developers in Vogue is a coding bootcamp for women based in Ghana, offered at low prices or sometimes free if funded through a partner institution such as the IFC. CodingGirls in Singapore seeks to increase female presence in technology and offers introductory courses in technology as well as a platform for networking. 	<ul style="list-style-type: none"> UN’s Asian and Pacific Training Center for ICT for Development runs the Women ICT Frontier Initiative (WIFI) program, which seeks to support women’s entrepreneurship through ICT capacity development.

Type	Government	Private sector	International institutions and PPPs
Procurement and supplier programs for women	<ul style="list-style-type: none"> In August 2020, the president of South Africa outlined a new plan to set aside 40% of public procurement for women-owned businesses. National departments are expected to monitor and report on how many women have participated in each public procurement process. In Uganda, the Public Procurement and Disposal of Public Assets Authority has partnered with the Uganda Women Entrepreneur's Association, with funding from UN Women to train over 860 women entrepreneurs on public procurement as of March 2021. India launched Womaniya on Government eMarketplace, which helps women entrepreneurs and women's self-help groups to sell products directly to government ministries, departments, and institutions. 	<ul style="list-style-type: none"> In 2018, Procter & Gamble announced it would source \$30 million from women-owned businesses across India over the following three years. In 2018, Coca-Cola announced its goal of spending \$1 billion by 2021 with diverse suppliers, including women-owned businesses. WEConnect International identifies, educates, registers, and certifies women's business enterprises based outside of the US that are at least 51% owned, as well as managed and/or controlled by one or more women, and then connects them with multinational corporate buyers. 	<ul style="list-style-type: none"> In 2018, the World Bank Group pledged to double its spending with women-owned businesses by 2023. UNOPS Possibilities Program comprises supplier engagement workshops and a dedicated solutions portal that aims to identify unique and innovative products or services that could add value to UNOPS projects. It targets local MSMEs, with a focus on women- and youth-owned enterprises.
Ecommerce development programs for or emphasizing women	<ul style="list-style-type: none"> SME Corp. Malaysia's Women Netpreneur Program builds women-led firms' capabilities in digital business and ecommerce. Mexico's <i>Mujeres en la transformación digital</i> program trains 20,000 women to run their ecommerce businesses and develop digital and financial skills. El Salvador's export promotion agency PROESA has held specialized workshops on ecommerce for women. 	<ul style="list-style-type: none"> Etsy trains Indian artisan MSMEs to onboard marketplaces and improve their marketing skills. eCommerce Institute's eWomen program builds women's ecommerce and management skills and opens women's access to peers, coaching, and mentorship. Shopify's Women Entrepreneur site is set up to encourage women to build their ecommerce capabilities, with success stories from other women entrepreneurs, guides on how to get started, how to generate sales, and recommended podcasts. 	<ul style="list-style-type: none"> World Bank's Women Entrepreneurs Finance Initiative (We-Fi) provides ecommerce training for women-owned SMEs. UNCTAD eTrade for Women provides masterclasses, policy dialogue and engagement, and capacity-building for women digital entrepreneurs in trade.

Type	Government	Private sector	International institutions and PPPs
Export promotion programs for women	<ul style="list-style-type: none"> • Canada’s Business Women in International Trade aims to create opportunities for Canadian women-owned and women-led businesses to successfully expand into global markets. • ProChile’s Export Woman program provides training and networking to empower women to export. • Uruguay’s export promotion agency Uruguay XXI has hosted Women Exporter workshops. 	<ul style="list-style-type: none"> • UPS Women Exporters program provides training and webinars for women-led businesses to increase exporting capabilities. <p>DHL’s GoTrade Initiative initiates projects to digitize and help speed up customs clearance, reduce delays at borders and generally reduce the costs of cross-border trade, with programs designed especially for women-led firms.</p>	<ul style="list-style-type: none"> • ITC’s SheTrades seeks to connect three million women entrepreneurs to global markets by 2021 through online training, mentoring, and a one-stop-shop platform to share, learn, and do business on a global scale.
General business support	<ul style="list-style-type: none"> • Chile’s Mujer Emprende program for women entrepreneurs promotes women-led firms throughout the country and aims to improve the skills and abilities needed to help these businesses succeed. • India’s Women Entrepreneurship Platform, part of the Startup India program, provides an ecosystem for budding and existing women entrepreneurs across the country by providing different support services like incubation, training, marketing, and mentorship. 	<ul style="list-style-type: none"> • Visa She’s Next provides a practical business skills portal that offers free educational resources and interactive tools (in English and Spanish) to help business owners start, manage, and grow their businesses, as well as workshops with business experts. • Grow with Google for women-led businesses offers free workshops, events, and coaching sessions to keep these businesses moving forward. 	<ul style="list-style-type: none"> • Accelerating Women’s Enterprise (AWE), funded by the European Union’s Interreg Program, supports women’s entrepreneurship in the UK and France. • UNESCAP’s Catalyzing Women’s Entrepreneurship program aims to advance women entrepreneurship and market participation in the Asia-Pacific region through policy and advocacy, innovative financing, and ICT and business skills.

Sources for Table I-1

UK, see: <https://www.ispreview.co.uk/index.php/2014/05/1m-fund-help-female-entrepreneurs-benefit-superfast-and.html>

Colombia, see: <https://www.mintic.gov.co/micrositios/porticmujer/748/w3-channel.html>

Indonesia, see: <https://apnews.com/38c1c855ced64435bc8274c7f26f43ec>

Google, see: <https://www.indiatoday.in/technology/features/story/only-with-access-to-information-can-women-move-forward-pna-chadha-on-google-internet-saathi-programme-1777117-2021-03-09s>

GEED, see: <https://opportunitydesk.org/2020/08/05/cgeed-digital-transformation-grant-2020/>

Microsoft, see: <https://connectamericas.com/content/9-multinational-companies-join-100kchallenge>

Mastercard, see: <https://www.iadb.org/es/noticias/incae-mastercard-y-bid-lanzan-aceleradora-virtual-de-comercio-para-emprendedoras>

Singapore, see: <https://www.imda.gov.sg/news-and-events/impact-news/2019/11/Empowering-women-in-tech>

Chile, see: https://apolitical.co/en/solution_article/chiles-government-accelerator-investing-women-led-startups

India, see: <https://www.startupindia.gov.in/content/sih/en/ams-application/incubator-m.html?applicationId=5f06bdde4b0f2b258378ee9#:~:text=Zone%20Startups%20India%20is%20launching,them%20in%20business%20their%20venture>

Women in Tech, see: <https://women-in-tech.org/>

She Innovates, see: <https://www.unwomen.org/en/how-we-work/innovation-and-technology/un-women-global-coalition-for-change/she-innovates-global-programme>

WEXchange, see: <https://www.iadb.org/en/news/wexchange-launches-annual-competition-women-entrepreneurs-stem>

UK Aspire Fund, see: <https://www.british-business-bank.co.uk/ourpartners/aspire-fund/>

Botswana, see: <https://www.gov.bw/grants/womens-economic-empowerment-programme>

Colombia, see: <https://www.bancoldex.com/noticias/gobierno-lanza-primer-credito-exclusivo-para-mujeres-empresarias-traves-de-bancoldex-3539>

African angel funds, see: <https://techcrunch.com/2021/01/26/these-investors-want-to-back-ridiculously-early-led-african-startups/>

EDP, see: <https://www.worldbank.org/en/results/2016/07/21/financing-women-entrepreneurs-in-ethiopia-women-entrepreneurship-development-project-wedp>

EOP, see: <https://blogs.worldbank.org/psd/initiatives-can-help-counter-coronavirus-impact-women-owned-businesses>

AFDB, see: <https://www.afdb.org/en/news-and-events/global-partners-announce-61-8-million-allocation-to-african-development-bank-initiative-for-women-entrepreneurs-19268>

SEAF, see: <https://www.seaf.com/investing/asia/seaf-womens-opportunity-fund/>

Indonesia, see: <https://mashable.com/2017/04/19/coding-mum-singapore-hk/>

Thailand, see: <https://news.itu.int/spotlight-digital-inclusion-girls-women-rural-thailand/>

[Morocco](https://www.giswatch.org/en/country-report/economic-social-and-digital-rights-escrs/morocco), see: <https://www.giswatch.org/en/country-report/economic-social-and-digital-rights-escrs/morocco>

[UK-SA Tech Hub](https://ventureburn.com/2019/03/future-females-uk-sa-tech/), see: <https://ventureburn.com/2019/03/future-females-uk-sa-tech/>

[Developers in Vogue](https://developersinvogue.org/), see: <https://developersinvogue.org/>

[CodingGirls](https://codinggirls.sg/), see: <https://codinggirls.sg/>

[WIFI](https://www.unsdglearn.org/courses/the-women-ict-frontier-initiative-wifi/), see: <https://www.unsdglearn.org/courses/the-women-ict-frontier-initiative-wifi/>

[South Africa](https://www.cips.org/supply-management/news/2020/august/women-to-receive-40-public-procurement-tenders/), see: <https://www.cips.org/supply-management/news/2020/august/women-to-receive-40-public-procurement-tenders/>

[Uganda](https://www.ppda.go.ug/enhancing-women-participation-in-procurement-an-effort-by-ppda-uweal-un-women/), see: <https://www.ppda.go.ug/enhancing-women-participation-in-procurement-an-effort-by-ppda-uweal-un-women/>

[India](https://www.opengovasia.com/government-launches-portal-to-support-woman-entrepreneurs-in-india/), see: <https://www.opengovasia.com/government-launches-portal-to-support-woman-entrepreneurs-in-india/>

[India](https://economictimes.indiatimes.com/industry/cons-products/fmcg/pg-to-source-usd-30-million-from-70-owned-biz-in-india/articleshow/62710014.cms?from=mdr), see: <https://economictimes.indiatimes.com/industry/cons-products/fmcg/pg-to-source-usd-30-million-from-70-owned-biz-in-india/articleshow/62710014.cms?from=mdr>

[Coca-Cola](https://www.coca-colacompany.com/content/dam/journey/us/en/responsible-business/supplier-diversity/coca-cola-supplier-diversity-2020-commitment.pdf), see: <https://www.coca-colacompany.com/content/dam/journey/us/en/responsible-business/supplier-diversity/coca-cola-supplier-diversity-2020-commitment.pdf>

[EConnect](https://weconnectinternational.org/), see: <https://weconnectinternational.org/>

[Procurement Map](https://procurementmap.intracen.org/), see: <https://procurementmap.intracen.org/>

[World Bank](https://www.worldbank.org/en/events/2021/02/11/gender-and-equality-in-public-procurement#1), see: <https://www.worldbank.org/en/events/2021/02/11/gender-and-equality-in-public-procurement#1>

[IFC](https://www.ifc.org/wps/wcm/connect/region__ext_content/ifc_external_corporate_site/sub-region+africa/news/a_global_partnership_to_support_women_owned_businesses), see: https://www.ifc.org/wps/wcm/connect/region__ext_content/ifc_external_corporate_site/sub-region+africa/news/a_global_partnership_to_support_women_owned_businesses

[Malaysia](https://www.smecorp.gov.my/index.php/en/programmes/1/2015-12-21-09-57-03/women-entrepreneur-programme), see: <https://www.smecorp.gov.my/index.php/en/programmes/1/2015-12-21-09-57-03/women-entrepreneur-programme>

[Salvador](http://www.proesa.gob.sv/novedades/noticias/item/1190-proesa-proporciona-formacion-especializada-a-sarias-salvadore), see: <http://www.proesa.gob.sv/novedades/noticias/item/1190-proesa-proporciona-formacion-especializada-a-sarias-salvadore>

[Mexico](http://www.tiempo.com.mx/noticia/shcp_comercio_electronico_mujeres_capacitacion_formal_marzo_2021/), see: http://www.tiempo.com.mx/noticia/shcp_comercio_electronico_mujeres_capacitacion_formal_marzo_2021/

[India](https://www.allianceforetradedevelopment.org/etsy-training-india), see: <https://www.allianceforetradedevelopment.org/etsy-training-india>

[eCommerce Institute](https://ecommerce.institute/ewomen/), see: <https://ecommerce.institute/ewomen/>

[Shopify](https://www.shopify.com/entrepreneur/women), see: <https://www.shopify.com/entrepreneur/women>

[World Bank](https://www.worldbank.org/en/news/press-release/2020/02/16/world-bank-group-launches-initiatives-supporting-women-entrepreneurs), see: <https://www.worldbank.org/en/news/press-release/2020/02/16/world-bank-group-launches-initiatives-supporting-women-entrepreneurs>

[Trade for Women](https://unctad.org/topic/ecommerce-and-digital-economy/etrade-for-women), see: <https://unctad.org/topic/ecommerce-and-digital-economy/etrade-for-women>

[Canada](https://www.tradecommissioner.gc.ca/businesswomen-femmesdaffaires/index.aspx?lang=eng), see: <https://www.tradecommissioner.gc.ca/businesswomen-femmesdaffaires/index.aspx?lang=eng>

[Chile](https://www.prochile.gob.cl/innovacion-y-competitividad/mujer-exportadora), see: <https://www.prochile.gob.cl/innovacion-y-competitividad/mujer-exportadora>

[Uruguay](https://www.uruguayxxi.gub.uy/en/i-want-to-export/success-stories/women-entrepreneurs-challenges-and-opportunities-for-improvement/), see: <https://www.uruguayxxi.gub.uy/en/i-want-to-export/success-stories/women-entrepreneurs-challenges-and-opportunities-for-improvement/>

[UPS](https://www.ups.com/us/en/services/small-business/women-exporters-program.page?), see: <https://www.ups.com/us/en/services/small-business/women-exporters-program.page?>

For DHL, see: <https://www.dhl.com/global-en/spotlight/sustainability/gotrade-program.html>

For SheTrades, see: <https://www.shetrades.com/>

For Chile's Mujer Emprende, see: <https://www.chileatiende.gob.cl/fichas/13045-programa-mujer-emprende-me>

For Startup India, see: <https://www.startupindia.gov.in/content/sih/en/government-schemes/Wep.html>

For Visa, see: <https://usa.visa.com/run-your-business/women-small-business.html>

For Google, see: https://grow.google/womenled/#?modal_active=none

For AWE, see: <https://www.acceleratingwomensenterprise.uk/>

For UNESCAP, see: <https://www.unescap.org/projects/cwe>

Appendix II

Table II-I: Selected programs to promote women-led firms in ecommerce, by characteristics

Name of program	Region	Details	Type of funding	Implementing partners	Illustrative initiatives	Requirements
eWomen, eCommerce Institute	Latin America, Globalizing	Promote female talent in the ecommerce industry, increase opportunities for women to access decision-making levels within their company, industry, and ecommerce ecosystem, and give support/training to women to start a personal project focused on the digital economy.	Private: leading global ecommerce-related companies.	eCommerce Institute and specialized tutors	In April 2020, eWomen led a specific initiative that provided 130 scholarships to women who led MSMEs in Latin America to support the development of their digital skills and access to tools to participate in global ecommerce. The program is also training 150 firms, mostly women-led, on cross-border ecommerce in Brazil in 2020–21.	For the scholarship program, preference was given to women owners of MSMEs in rural areas and artisan sectors.
SheTrades, ITC	Global	SheTrades.com is a platform that allows women-owned businesses, organizations, companies, and partner institutions to connect and network with each other; buy and sell products and services; access workshops, trade fairs, and other business events; and learn new skills through online courses, webinars, and market tools on various trade-related topics.	Public: governments ministries and departments from the UK, Denmark, Finland, Iceland, the Netherlands, Norway, Sweden, Japan, and Germany; the UPS Foundation, Enhanced Integrated Framework (EIF); and the OPEC Fund for International Development, with funds provided by ITC's Global Trust Fund.	ITC with various consultants	The SheTrades Commonwealth Project enables women-owned businesses in Kenya, Ghana, Nigeria, and Bangladesh to increase their visibility and connect with potential buyers, investors, suppliers, and business support organizations; learn new skills to grow their business through e-learning courses, on-site workshops, and webinars; and receive support to attend national, regional and international trade events.	There are multiple different projects and initiatives within SheTrades, but a common requirement is for businesses to be at least 30% women-owned.
Women Exporters Program, UPS	Mexico, Nigeria, Vietnam, UAE, US, Philippines, Malaysia	Seeks to increase participants' understanding of trade and exporting, as well as their knowledge of key logistics concepts for exporting.	PPP: UPS and ITC under the She Trades initiative.	UPS	A series of workshops were hosted in the US on export strategies, tools, and resources to enter new markets, insights on how to build an export-friendly digital presence, guidance on package flow, and preparing an export shipment.	Company at least 30% owned, managed, and controlled by women; legally registered and incorporated; active user on shetrades.com
We-Fi World Bank	Global	Supports women entrepreneurs by scaling up access to financial products and services, building capacity, expanding networks, offering mentors, and providing opportunities to link with domestic and global markets, with an emphasis on ecommerce enablement.	Public: founding financial contributors include Australia, Canada, China, Denmark, Germany, Japan, the Netherlands, Norway, the Russian Federation, Saudi Arabia, the Republic of Korea, the UAE, the UK, and the US.	Led by implementing partners that are accredited by the We-Fi Governing Committee and various World Bank contractors	A train-the-trainers program was run in Jordan where ecommerce experts provided training for a cadre of ecommerce trainers who will then train SMEs in the country to onboard marketplaces.	The advisers should have previous retail, ecommerce, and training/coaching experience. The SMEs should be women-owned with products that can be sold online and a willingness to learn to sell online.

Name of program	Region	Details	Type of funding	Implementing partners	Illustrative initiatives	Requirements
eTrade for Women, UNCTAD	Global	Aims to contribute to inclusive and sustainable economic growth by empowering women in the digital economy of developing and transition economies through regional masterclasses with networking, community-building, and policy dialogue.	Public: led by UNCTAD and supported by the governments of the Netherlands and Sweden	International organizations, regional development banks, civil society entities, and national agencies	In October 2020, eTrade for women held a masterclass for 16 women digital entrepreneurs from five Southeast Asian countries, who were founders of either a digital business or of a company that makes use of ecommerce and digital platforms. The class was a mix of learning sessions, policy dialogue, and networking.	Mature digital entrepreneurs.
ecommerce Capacity Development Programme for Women Entrepreneurs in South Africa, AWIEF	South Africa	Aims to provide 40 South African women entrepreneurs with technical learning, training, and mentoring support on how to start, grow, and scale ecommerce businesses.	Public: Canada Fund for Local Initiatives (CFLI) finances the program	Africa Women Innovation & Entrepreneurship Forum (AWIEF)	Participants in the program receive the tools, information, and knowledge needed to run a business online in South Africa and internationally, training and mentorship by ecommerce experts, a toolkit with templates and tips for running a business through ecommerce channels, and free AWIEF Community membership for one year.	South African women who seek skills/knowledge to grow their business online, have access to a computer and can commit 5+ hours weekly to the program.
Zimba Women, Zimba Women	Sub-Saharan Africa	Zimba Women aims to enable the empowerment and development of women entrepreneurs in Africa by providing cross-cutting e-solutions and technology to provide affordable market accessibility and capacity-building. They have a variety of programs including website creation assistance; events, workshops, and training; assistance with seeking funding; and an ecommerce platform called Zimba Mart.	PPP: Facebook and Deloitte, the Uganda Investment Authority, Uganda Revenue Authority, and United States Mission in Uganda	Zimba Women and partners	Zimba Mart is an online platform that was created by Zimba Women as part of its vision to be the leading women's ecommerce provider in Africa by 2025. This platform aims to create an online presence for the various female-oriented businesses within or outside Uganda to increase access to markets.	Women interested in entrepreneurship and ecommerce.
Linking Central American Women Business Enterprises (WBEs) with the Global Gifts and Home Decoration Market, DHL	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama	Enhance the export competitiveness of Central American Women Business Enterprises (WBEs) producing craft products for the gifts and home decoration industry by enabling them to sell their products online.	Public: EU	ITC in collaboration with the Secretariat for Central American Economic Integration (SIECA)	As part of this program, DHL will offer its expertise to support the 200 ecommerce businesses currently enrolled in this program. It will provide logistics training support and preferential shipping rates on international orders. DHL experts are also supporting ITC by training coaches at six local partner institutions on international logistics, customs processes, and trade regulations. These coaches will then pass on this knowledge to the women-led businesses.	A women-owned business that produces crafts products for the gifts and home decoration industry.
PYMEXPORTA, DHL	Central and South America	PYMEXPORTA offers training modules that address topics such as logistics, exports, imports, and ecommerce to make it easier for its SMEs to export their products through the various tools available to DHL.	Private: DHL	DHL and in-country partners	DHL has trained more than 9,000 SMEs in Latin America on topics such as international trade and cross-border electronic commerce. In 2020, DHL Express hosted more than 30 free webinars to support SMEs as their logistics partner on their journey to internationalization.	SME in Latin America with a willingness to export.

Name of program	Region	Details	Type of funding	Implementing partners	Illustrative initiatives	Requirements
GoTrade, DHL	Global, with a focus on Africa	The main goal of GoTrade is to support sustainable economic growth by increasing the number and volume of SMEs trading across borders, through digitization of customs and trade processes, and promotion of ecommerce and low-emission logistics in cities.	PPP: German Federal Ministry for Economic Cooperation and Development and DHL	DHL, develoPPP.de (German government program for sustainable business initiatives in developing countries)	Initiatives include a new digital system to allow companies in Africa to complete customs procedures online and new ecommerce platforms to create new sales markets; training and promotion of women entrepreneurs; and working with WTO Member Countries to ensure that Trade Facilitation Agreement (TFA) reforms are implemented in a way that supports real sustainable economic growth.	Focus on developing countries, emphasis on training women entrepreneurs
She's Next, Empowered by Visa, Visa	Global	She's Next provides networking and support opportunities by linking women small business owners with like-minded peers and experts, workshops, a funding, and education platform that provides access to capital through grants and crowdfunding, a Practical Business Skills program that offers free educational resources and interactive tools, and how-to guides on digital transformation, managing online reviews, marketing strategies, and more.	Private: Visa	Visa and various in-country partners	She's Next workshops in the US and South Africa brought hundreds of female entrepreneurs together to engage in workshops about building their brand, money management, payments technology, and the fundamentals of leadership. In Central Asia, She's Next is launching an educational program for women in business, consisting of five webinars with leading business experts who will share their experience, knowledge, and practical skills on relevant topics.	Women entrepreneurs and business owners
Forum of Women Entrepreneurs Córdoba (FEMCBA), Government of Córdoba, Argentina	Córdoba, Argentina	FEMCBA is a comprehensive project to promote and support local entrepreneurs to promote their economic autonomy and professional development by offering an online marketplace to sell products, training courses in financial education, ecommerce, and entrepreneurship, and a credit line.	Public: Government of the Province of Córdoba, through the Ministry of Women, with the support of the Federal Investment Council (CFI)	Government of the Province of Córdoba	The FEM Credit Line is for women entrepreneurs registered on the FEM platform. It offers a credit line of ARS35,000 (~\$435) at 0% interest with a 4-month grace period and then 12 fixed installments of ARS2,916.	To sell on the marketplace: woman entrepreneur or women-owned business To access credit line: domiciled in the province of Córdoba, having a savings account in her name, tax registration, 25% of the approved FEM program, project in growth stage, guarantor with a salary receipt or income certification
Women Netpreneur, Gorgeous Geeks	Malaysia	The Women Netpreneur program is a program supported by SME Corp. Malaysia to ensure that women entrepreneurs are always up-to-date on changes in the emerging business landscape, especially in technology and digitization, and starting and growing an online business.	Public: SME Corp Malaysia	Gorgeous Geeks Malaysia with private partners such as Shopee, I!street, Auction, Facebook, Buy Malaysia (MPay), and Global Halal Data Pool	The webinar workshops include topics such as how to digitalize business, how to expand business through social media, how to generate leads, and how to connect to customers on a free video-sharing website.	Malaysia women SMEs

Name of Program	Region	Details	Type of funding	Implementing partners	Illustrative initiatives	Requirements
Ecommerce Grant Program, Economic Development Authority of Newport News	Newport News, USA	The purpose of this program is to assist small, women- and minority-owned, for-profit Newport News companies in growing their business through ecommerce by providing them a grant.	Public: Economic Development Authority of the City of Newport News, Virginia (EDA)	Newport News Department of Development	Approved grant uses include consulting services, web design and development services, ecommerce services, and internet marketing services.	A for-profit small, women-owned, or minority-owned business. Grants are to be used for the creation or enhancement of ecommerce sites.
Women in Trade for Inclusive and Sustainable Growth, TFO Canada	Sub-Saharan Africa, LAC, Asia, and Middle East	The WIT program aims to build the capacity of Trade Support Institutions (TSIs) to engage more women in leadership positions and as clients and improve the ability of women-led exporters to understand and meet the demand of Canadian and other global markets.	Public: Global Affairs Canada	TFO with public and private support; Trade Support Institution partners, for example, PROMPERU, ProColombia, AGEXPORT	Capacity-building for TSIs on understanding the gender gap in trade, training on the Canadian market, and gender-responsive export readiness services. Training programs also for SMEs to strengthen technological skills, digital marketing strategies, and participation in ecommerce platforms, and access events such as NYNow and virtual trade missions.	Sectors such as fresh fruits and vegetables, processed foods, and niche market artisan products and services. The majority must be women-owned/led, and 50% of project resources are to be allocated in Sub-Saharan Africa.

Table II-2: Selected programs, by specific offerings

Name of program	Sector focus	Focus on women	Cost-share with firms	Research	Policy	Training programs	Networking or events	Coaching or mentoring	Access to digital library	IT skills	Marketplace or online store	E-payment platform	Logistics	Financing	Grants
eWomen		✓	✓			✓	✓	✓	✓	✓					
SheTrades		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Women Exporters Program		✓				✓							✓		
We-Fi		✓				✓		✓			✓	✓	✓	✓	✓
eTrade for Women		✓			✓	✓	✓	✓							
AWIEF Ecommerce Program		✓				✓	✓	✓			✓				
Zimba Women		✓				✓	✓	✓		✓	✓				
Central American WBES-Home Goods	✓	✓				✓		✓					✓		
PYMEXPORTA						✓							✓		
GoTrade		✓		✓	✓	✓							✓		
She's Next		✓				✓	✓	✓						✓	
FEMCBA		✓				✓	✓	✓			✓	✓		✓	
Women Netpreneur		✓				✓	✓								
Ecommerce Grant Program															✓
WIT Inclusive and Sustainable Growth	✓	✓				✓	✓	✓		✓					

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References

¹ For a summary, see Kati Suominen, “Women-led Firms on the Web: Challenges and Solutions,” issue paper, International Centre for Trade and Sustainable Development (2018), https://ictsd.iisd.org/sites/default/files/research/women-led_firms_on_the_web_-_suominen.pdf

² See, for example, <https://www.thedrum.com/news/2020/07/15/covid-19-has-ravaged-small-businesses-asia-pacific-will-they-recover> and <https://blogs.worldbank.org/psd/initiatives-can-help-counter-coronavirus-impact-women-owned-businesses>.

³ Cargill, DHL, Element, Etsy, Google, the Latin American ecommerce Institute, Mastercard, PayPal, Ringier One Africa Media, UPS, and Visa.

⁴ This point has been verified time and again by the surveys Nextrade conducted across dozens of locations with various clients in 2016–2021, including the data in this report. See, for example, Kati Suominen, “Accelerating MSME Ecommerce in Africa: Roadmap,” Report for the Alliance for eTrade Development and USAID (June 30, 2021), and Kati Suominen, “Accelerating MSME Ecommerce in Mexico,” Report for the Alliance for eTrade Development and USAID (June 30, 2021).

⁵ It is not entirely clear whether success is due to the web being more gender-blind, the rise of women as online lenders and investors through women-focused platforms such as Portfolia, or other factors. See Candida G. Brush, Patricia G. Greene, Lakshmi Balachandra, and Amy E. Davis, *Women Entrepreneurs 2014: Bridging the Gender Gap in Venture Capital* (Babson Park, MA: Arthur M. Blank Center for Entrepreneurship, 2014). Nor is it clear whether women do better in equity crowdfunding than in purely offline raises. Likewise, the jury is still out as to whether banks’ algorithmic loan decisions are advantageous to women. For example, a study in Sweden found that bankers’ analysis of a borrower’s creditworthiness based on data and documentation had a greater gender bias against women than when the bankers met the borrower in person. See Malin Malmstrom and Joakim Wincent, “The Digitization of Banks Disproportionately Hurts Women Entrepreneurs” *Harvard Business Review*, September 19, 2018, <https://hbr.org/2018/09/research-the-digitization-of-banks-disproportionately-hurts-women-entrepreneurs>.

⁶ Alberto Alesina and Francesca Lotti, “Do Women Pay More for Credit? Evidence from Italy,” *Journal of the European Economic Association* 11, no. 1 (2013); Salman Alibhai, Simon Bell, and Gillette Conner, *What’s Happening in the Missing Middle? Lessons from Financing SMEs* (Washington, DC: World Bank, 2017); Giorgio Calcagnini, Germana Giombini, and Elisa Lenti, “Gender Differences in Bank Loan Access: An Empirical Analysis,” *Italian Economic Journal* 1 no. 2 (2015); and Sarah K. Harkness, “Discrimination in Lending Markets: Status and the Intersections of Gender and Race,” *Social Psychology Quarterly* 79 no. 1 (2016).

⁷ Nataliya Barasinska and Dorothea Schäfer, “Is Crowdfunding Different? Evidence on the Relation between Gender and Funding Success from a German Peer-to-Peer Lending Platform,” *German Economic Review* 15 no. 4 (2014); Dan Marom, Alicia Robb, and Orly Sade, “Gender Dynamics in Crowdfunding: Evidence on Entrepreneurs, Investors, and Deals from Kickstarter,” *SSRN Electronic Journal* (May 2014).

⁸ Barasinska, Nataliya, and Dorothea Schäfer. 2014. “Is Crowdfunding Different? Evidence on the Relation between Gender and Funding Success from a German Peer-to-Peer Lending Platform.” *German Economic Review* 15 (4).

⁹ OnDeck for example “looks at more than 2,000 data points to create an accurate business credit profile. These data range from cash flow and transactional data to public records to our own extensive internal historical performance data.” See Miranda Eifler, “The OnDeck Score: Making Targeted Small Business Lending Decisions in Real Time,” ondeck.com, accessed October 19, 2020, <https://www.ondeck.com/resources/ondeckscore>. For studies on the impact of Fintechs, see for example Schweitzer, Mark E and Brett Barkley, 2017. “Is ‘Fintech’ Good for Small Business Borrowers? Impacts on Firm Growth and Customer Satisfaction,” Federal Reserve Bank of Cleveland (February 1), <https://www.clevelandfed.org/newsroom-and-events/publications/working-papers/2017-working-papers/wp-1701-is-fintech-good-for-small-business-borrowers.aspx>; Usman Ahmed, Thorsten Beck, Christine McDaniel and Simon Schropp, “Filling

the Gap How Technology Enables Access to Finance for Small- and Medium-Sized Enterprises; 2016, innovations/volume 10, number 3/4, https://www.mitpressjournals.org/doi/pdf/10.1162/inov_a_00239.

¹⁰ For a summary, see Kati Suominen, “Consumer Surplus of Ecommerce,” Alliance for tTrade Development Blog, Accessed March 2021, <https://www.allianceforetradedevelopment.org/ecommercesconsumersurplus>

¹¹ World Bank, *World Development Report 2016: Digital Dividends* (Washington, DC: World Bank, 2016), <http://www.worldbank.org/en/publication/wdr2016>

¹² “Women-Owned SMBs and Digital Platforms: Promises, Perils & Implications,” Visa issue note (2020).

¹³ Anna Zakrzewski, Kedra Newsom Reeves, Michael Kahlich, Maximilian Klein, Andrea Real Mattar, and Stephan Knobel, “Managing the Next Decade of Women’s Wealth,” BCG (April 9, 2020), <https://www.bcg.com/publications/2020/managing-next-decade-women-wealth>

¹⁴ Ethan Lieber and Chad Syverson, “Online vs. Offline Competition,” in *Oxford Handbook of the Digital Economy*, ed. Martin Peitz and Joel Waldfogel (New York: Oxford University Press, 2012).

¹⁵ Paul Dolfen, Liran Einav, Peter J. Klenow, Benjamin Klopach, Jonathan D. Levin, Larry Levin, and Wayne Best, “Assessing the Gains from Ecommerce,” Working Paper, Stanford University (October 31, 2019) <http://stanford.edu/~bklopach/assessing-gains-ecommerce.pdf>. Most gains stemmed from substitution from brick-and-mortar offline sellers to online sellers (gain from variety), and some from reduced travel time to offline sellers (gain from convenience). The gains were proportionately greater with higher-income segments and in densely populated American counties.

¹⁶ See Victor Couture, Benjamin Faber, Yizhen Gu, and Lizhi Liu, “Ecommerce Integration and Economic Development: Evidence from China,” (July 2017), <https://economics.mit.edu/files/14343>; and Jingting Fan, Lixin Tang, Weiming Zhu, and Ben Zou, “The Alibaba Effect: Spatial Consumption Inequality and the Welfare Gains from Ecommerce,” *Journal of International Economics* 114 (September 2018): 203–220.

¹⁷ “Connected Women: The Mobile Gender Gap Report 2020,” GSMA (March 2020), <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>

¹⁸ “2018/2019 Women’s Entrepreneurship Report,” *Global Entrepreneurship Monitor* (November 2019), <https://www.gemconsortium.org/report/gem-20182019-womens-entrepreneurship-report>

¹⁹ “2018/2019 Women’s Entrepreneurship Report,” *Global Entrepreneurship Monitor* (November 2019), <https://www.gemconsortium.org/report/gem-20182019-womens-entrepreneurship-report>

²⁰ See, for example, Vanessa Naegels, Neema Mori, and Bert D’Espallier, “An Institutional View on Access to Finance by Tanzanian Women-owned Enterprises,” *Venture Capital* (August 23, 2017), <https://www.tandfonline.com/doi/abs/10.1080/13691066.2017.1358927?journalCode=tvec20>

²¹ “Visa: She’s Next Initiative Goes Global,” PYMNTS.com (October 22, 2019), <https://www.pymnts.com/visa/2019/visa-shes-next-initiative-goes-global/>

²² Visa She’s Next, accessed April 2021, <https://usa.visa.com/run-your-business/women-small-business.html>

²³ Visa Practical Business Skills, Visa, accessed April 2021, <https://www.practicalbusinessskills.com/>

²⁴ Visa She’s Next Grant Program for Black Women-Owned Businesses, IFundWomen, accessed April 2021, <https://ifundwomen.com/visa>

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- ²⁵ “Visa Announces Launch of She’s Next, Empowered by Visa Global Initiative in Central Asia,” *UZ Daily* (March 19, 2021), <http://www.uzdaily.com/en/post/64317>
- ²⁶ See International Organization for Standardization, “IWA 34:2021(en) Women’s entrepreneurship — Key definitions and general criteria,” <https://www.iso.org/obp/ui/#iso:std:iso:iwa:34:ed-1:vl:en>
- ²⁷ Valter Lima, “How to Identify Gender Inequality in Teaching Materials,” *Learning English* (August 22, 2017), <https://learningenglish.voanews.com/a/how-to-identify-gender-inequality-in-teaching-materials/3996027.html>
- ²⁸ See, for example, Abolaji Samuel Mustapha, “Gender Equality in and Through Education in Nigeria: Gender Representation in Learning Materials,” Department of Humanities, Faculty of Development and Society Sheffield Hallam University (September 2012), http://shura.shu.ac.uk/5503/3/Mustapha_Gender_equality_in_and_through_education_in_Nigeria_research_report.pdf; Sylvie Cromer and Carole Bruegilles, “Analysing Gender Representations in School Textbooks,” CEPED (January 2009), https://www.researchgate.net/publication/332935088_Analysing_gender_representations_in_school_textbooks; Melis Akay Sahin and Mehmet Acikalin, “Gender Representation in Elementary and Middle School Social Studies Textbooks in Turkey,” *Journal of International Women’s Studies* 22, no. 1 (February 2021), <https://vc.bridgew.edu/cgi/viewcontent.cgi?article=2382&context=jiws>; and Mesude Atay and Ipek Danju, “Analysis of 1st Grade and 5th Grade Textbooks and Primary School Student’s Views About Personal Traits in Gender Role in Society,” *Procedia Social and Behavioral Sciences* 47 (2012) <https://www.sciencedirect.com/science/article/pii/S1877042812023506>
- ²⁹ Kieran Chidi Nduagbo, “How Gender Disparities Affect Classroom Learning,” *ASCD* 15 no. 22 (July 23, 2020), <http://www.ascd.org/ascd-express/vol15/num22/how-gender-disparities-affect-classroom-learning.aspx>
- ³⁰ SouqFann, accessed August 2021, <https://souqfann.com/en/about/>
- ³¹ “USAID Lens MSE Survey Gender Differences,” USAID Jordan Local Enterprise Support Project (LENS), accessed August 2021, https://jordanlens.github.io/research/outputs/infographics/MSE_Infographics_Gender_Differences_EN.pdf
- ³² See <https://www.great.gov.uk/selling-online-overseas/>, <https://www.trade.gov/website-globalization-review-gap-analysis>, and <https://www.trade.gov/e-commerce-digital-strategy>
- ³³ “Curve of Forgetting,” Campus Wellness, University of Waterloo, accessed March 2021, <https://uwaterloo.ca/campus-wellness/curve-forgetting>
- ³⁴ See, for example, YM Lee, I. Jahnke, and L. Austin, “Mobile Microlearning Design and Effects on Learning Efficacy and Learner Experience,” *Educational Technology Research and Development* 25 no. 3 (2021): 585–619, <https://doi.org/10.1007/s11423-020-09931-w>; RP Díaz Redondo, M. Caeiro Rodríguez, J. López Escobar, and A. Fernández Vilas, “Integrating Micro-Learning Content in Traditional E-Learning Platforms,” *Multimedia Tools and Applications* 80 (2021): 3121–3151, <https://doi.org/10.1007/s11042-020-09523-z>; and R. Polasek and T. Javorcik, “Results of Pilot Study into the Application of MicroLearning in Teaching the Subject Computer Architecture and Operating System Basics,” *2019 International Symposium on Educational Technology (ISET)* (Hradec Kralove, Czech Republic, 2019), 196–201, <https://doi.org/10.1109/ISET.2019.00048>; and Jing Li, Yan Song, Zhongyu Wei, and Kam-Fai Wong, “A Joint Model of Conversational Discourse and Latent Topics on Microblogs,” accessed August 2021, <http://arxiv.org/abs/1809.03690>, (2018).
- ³⁵ T. Hug, “Microlearning: A New Pedagogical Challenge,” *Microlearning: Emerging Concepts, Practices and Technologies after e-Learning. Proceedings of Microlearning 2005* (Innsbruck: Innsbruck University Press, 2005), 13–18.
- ³⁶ Susan Von Bampus, “Introducing IBM Micro Learning—A Hands-on Lab Experience,” *IBM Blog* (April 20, 2018), <https://community.ibm.com/community/user/wasdevops/blogs/kristen-meren/2018/08/21/introducing-ibm-micro-learning-a-hands-on-lab-expe>

³⁷ “Axonify Case Study: Bloomingdale’s Uses Microlearning, Big Data, and Machine Learning to Prove Training Saved \$3 Million in 1 Year,” accessed August 2021, <https://explore.axonify.com/20-ret-1105-retail-performance/20-RET-1001-bloomingdales-business-impact-case-study>

³⁸ See, for example, A. Hesse et al., “Short Communication: Microlearning Courses are Effective at Increasing the Feelings of Confidence and Accuracy in the Work of Dairy Personnel,” *Journal of Dairy Science* 102, no. 10 (October 2019), <https://www.sciencedirect.com/science/article/abs/pii/S0022030219306605>; Deno Norsanto and Yusep Rosmansyah, “Gamified Mobile Micro-Learning Framework: a Case Study of Civil Service Management Learning,” International Conference on Information and Communications Technology (ICOIACT), Yogyakarta, Indonesia March 6–7, 2018, <https://ieeexplore.ieee.org/abstract/document/8350765>; Jennie C. De Gagne et al., “Microlearning in Health Professions Education: a Scoping Review Protocol,” *JBI Evidence Synthesis* 17, no. 6 (June 2019) https://journals.lww.com/jbisrir/fulltext/2019/06000/microlearning_in_health_professions_education_a.2.aspx; and Joel Reynolds and Mary Jo Dolasinski, “Microlearning: A Pilot Study,” *Perspectives in Asian Leisure and Tourism* 5 (2020), <https://scholarworks.umass.edu/palat/vol5/iss1/1/>

³⁹ Felix Kapp et al., “Distributing vs. Blocking Learning Questions in a Web-Based Learning Environment,” *Journal of Educational Computing Research* 41, no. 4 (January 1, 2015), <https://journals.sagepub.com/doi/abs/10.2190/ec.51.4.b>

⁴⁰ Corey Bleich, “What Should We Expect for the Future of Corporate Training in 2020?” *Edgepoint Learning*, accessed March 2021, <https://www.edgepointlearning.com/blog/future-of-corporate-training-2019/>

⁴¹ For a succinct summary, see Saddiya Rose, “Exploring the Impact of In-Class Polling Tools on Student Engagement in Higher Education,” *Technology and the Curriculum* (Summer 2019), <https://techandcurr2019.pressbooks.com/chapter/polling-tools-and-engagement/>

⁴² Saddiya Rose, “Exploring the Impact of In-Class Polling Tools on Student Engagement in Higher Education,” *Technology and the Curriculum* (Summer 2019), <https://techandcurr2019.pressbooks.com/chapter/polling-tools-and-engagement/>

⁴³ See Felix Hamza-Lup and Ioana Andreea Stefan, “The Haptic Paradigm in Education: Challenges and Case Studies,” *Internet and Higher Education* 13 (November 2010), 78–81.

⁴⁴ See <https://ecommerce.institute/ecommerce-award/>

⁴⁵ See <https://www.exportawards.com.my/award-categories.aspx>

⁴⁶ Sabrina Son, “12 Mind-Blowing Stats on Employee Recognition You Need to Know,” *Tiny Pulse*, August 4, 2016, <https://www.tinypulse.com/blog/sk-employee-recognition-stats>

⁴⁷ For a review, see Qiyu Bai et al., “A Systematic Review of Emoji: Current Research and Future Perspectives,” *Frontiers in Psychology* 10 (2019), <https://doi.org/10.3389/fpsyg.2019.02221/>

⁴⁸ D. Lee, K. Hosanagar, H. Nair, “The Effect of Social Media Marketing Content on Consumer Engagement: Evidence from Facebook,” *SSRN* (2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2290802.

⁴⁹ Shamarukh Mohiuddin, Ruta Aidis, and Leslie Griffin, “Women-Owned Businesses in Cross Border Ecommerce: A Diagnostic Toolkit,” Nathan Associates, accessed March 2021, <https://www.nathaninc.com/wp-content/uploads/2020/10/Women-owned-Businesses-in-Cross-Border-Ecommerce-Toolkit-FINAL-12.8.pdf>

⁵⁰ Kati Suominen, Erica Vambell, and Mariah Furtek, “Expanding MSME Ecommerce in Developing Countries: State of Policies and Path Forward,” Policy Report for USAID (2021, forthcoming), <https://www.allianceforetradedevelopment.org/ecommerce-policy-report-index>.

⁵¹ Ana Revenga and Meagan Dooley. 2020. “What Works for Women Microentrepreneurs? A Meta-Analysis of Recent Evaluations to Support Female Entrepreneurship,” Global Working Paper 142, Global Economy and

Development, Brookings Institution, https://www.brookings.edu/wp-content/uploads/2020/09/What-works-for-women-entrepreneurs_final.pdf

⁵² Joshua J. Mark, “Women in Ancient Egypt,” World History Encyclopedia, November 4, 2016, accessed August 2021, <https://www.ancient.eu/article/623/women-in-ancient-egypt/>

⁵³ Johanna Ilmakunnas, Marjatta Rahikainen, and Kirsi Vainio-Korhonen, *Early Professional Women in Northern Europe, c. 1650–1850* (Abingdon: Routledge, 2019).

⁵⁴ Rebecca Bernard, “American Women and Cars: A Historic Love Affair,” The Newswheel, August 26, 2016, accessed August 2021, <https://thenewswheel.com/american-women-and-cars-a-historic-love-affair/>

⁵⁵ “Katherine Johnson,” Wikipedia, accessed March 20, 2020, https://en.wikipedia.org/wiki/Katherine_Johnson