Making Digital Connectivity Work for MSMEs

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Working Group Report on Connectivity for MSMEs

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Acknowledgements

This report and its recommendations are a collective endeavour drawing on contributions and insights from the participants of the ITU/UNESCO Broadband Commission for Sustainable Development's Working Group on Connectivity for MSMEs.

The Working Group on Connectivity for MSMEs is co-chaired by Ms. Pamela Coke-Hamilton, Executive Director of ITC, and Mr. Mats Granryd, Director General of the GSMA. The Working Group Co-Chairs greatly and sincerely appreciate the efforts and expertise of James Howe of ITC and Melle Tiel Groenestege and Luca Elmosi of the GSMA, who co-ordinated the Working Group and managed the development of the report, and the Working Group members and external experts for their invaluable contributions, kind review, and useful comments and feedback. The Working Group members and experts are listed below.

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Disclaimer

This research report, titled Making Digital Connectivity Work for MSMEs, is based on data and material accessible as of 31 August 2023 and may not reflect circumstances thereafter.

This report has been prepared by Mr. Michael Kende, and the members of the Broadband Commission Working Group on Connectivity for MSMEs co-chaired by Ms. Pamela Coke-Hamilton, Executive Director of ITC, and Mr. Mats Granryd, Director General of the GSMA.

The ideas and opinions expressed in this publication do not necessarily reflect the views of the Broadband Commission members or their affiliated organizations, and as such, are not attributable to any one organization or individual. This Working Group report does not commit the Broadband Commission for Sustainable Development.

ITC Foreword

For more than a decade the Broadband Commission has sought to ensure that digital connectivity fulfils its potential to accelerate our shared goals for development.

New technologies and significant advances in the capabilities of the communications infrastructure should mean that the entire world can readily access information and services for education, healthcare, government services, trade and more.

Collectively these ambitions have become known as "digital for development" and have only grown in importance since progress toward the Sustainable Development Goals seems to have faltered. We hope that the efficiencies and scale provided by upgraded communications and technologies – including tech frontiers such as Artificial Intelligence – can be leveraged for good, and accelerate our work to improve human wellbeing and life in general.

For these ambitions to be realized, significant ground remains to be covered. Firstly, we must ensure that access to tools and networks is inclusive to the world's poor and marginalized communities. It is also necessary to go beyond a focus on infrastructure and consider how these communities can take part in the digital economy as producers, not merely as consumers. Moreover, when businesses, from the very largest to the very smallest, can use digital channels and tools to make money, then investments in connectivity will follow.

This is in large part the driving force that inspired us to set up this Working Group in collaboration with the GSMA. We acknowledge the astonishing progress that has been made by the technology sector to grow processing power and network coverage. Today, almost the entire global population lives within reach of the internet. But there is still work to be done!

Our research and work across developing countries show that many entrepreneurs and micro, small, and medium-sized enterprises face significant barriers to realizing their full potential in digital trade. From a lack of knowledge and skills to the unavailability of services or lack of access to a

supportive environment, these barriers continue to hinder many small business owners from the productive use of digital connectivity. As a result, there is a growing gap that risks excluding these small businesses – and with them most of the population – from adequately participating in the modern economy. If that gap is allowed to widen, our ambitions for inclusive, and sustainable, development will fail to be met.

Recognizing that digital connectivity is central to the competitiveness of small businesses, ITC has launched a dedicated strategic initiative called "Switch ON" which builds the capabilities for digital trade among entrepreneurs and policymakers and leverages the investments of partners in infrastructure and services.

I would like to thank the members of the Working Group for their contribution to this report. We hope that you will join us in this mission toward greater digital connectivity, and together deliver on the recommendations outlined.

Ms. Pamela Coke-Hamilton
Executive Director, ITC

GSMA Foreword

With only two years left to achieve the Broadband Commission's target of halving the number of unconnected micro, small, and medium enterprises (MSMEs), there has never been a more urgent time to act boldly and accelerate our collective efforts.

Across the world MSMEs play a major role in many economies, particularly in low- and middle-income countries. They represent about 90% of businesses and more than 50% of employment worldwide.[1] While more people and businesses are using mobile connectivity than ever before, many MSMEs in low- and middle-income countries are missing out on its benefits – connecting them to channels, information, services and resources to grow their businesses, optimize their supply chains, and reach new markets.

As we approach the halfway point of the UN 2030 Agenda, we must ensure that MSMEs are able to benefit from accessing and using the internet. This includes addressing the needs and barriers of those most at risk of being left behind, including women entrepreneurs. Considering the impact of MSMEs in low- and middle-income countries, improving their connectivity will be key to driving social and economic growth, and achieving the United Nations Sustainable Development Goals.

We hope that the recommendations contained in this report will inspire concerted action to reduce the digital divide and tackle the key barriers preventing MSMEs, including women entrepreneurs, from accessing and using the internet. As connectivity becomes more embedded in every aspect of society, this is the moment to increase our efforts, working together to ensure that we build a sustainable future where everyone, everywhere can reap the full benefits of connectivity.

Mats Granryd
Director General, GSMA

[1] World Bank Group: Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital.

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Executive Summary

Increasing the connectivity of micro, small, and medium enterprises (MSMEs) to the Internet and broader digital economy will promote the economic development of emerging countries.

MSMEs form the largest share of economies in emerging and developing regions and are thus critical to achieving the SDGs. Given the importance of connectivity in aiding their growth, increasing the number of MSMEs that are online and able to benefit fully from connectivity will not only support those companies but also promises to deliver broader social and economic benefits.

The Broadband Commission Advocacy Target 6 focuses on increasing the connectivity of MSMEs by 50%, by 2025, an important target given their share in emerging economies. Addressing this connectivity gap presents a few challenges, not least the shortage of data on MSME connectivity.

Data on MSME connectivity is limited

The Broadband Commission notes that relevant data on MSME connectivity is largely unavailable. There is no data gathered globally to determine how MSMEs are using their connectivity, nor are there studies of MSMEs that are not yet online, to help guide our understanding of the current roadblocks to connectivity.

Nonetheless, this report draws upon two studies that can provide an insightful starting point to understand the usage of connectivity among MSMEs and the associated benefits: a study by ITC on MSME connectivity in Francophone Africa, and a study by the GSMA on the use of mobile connectivity by women micro-entrepreneurs.

MSME connectivity is a journey, not a destination

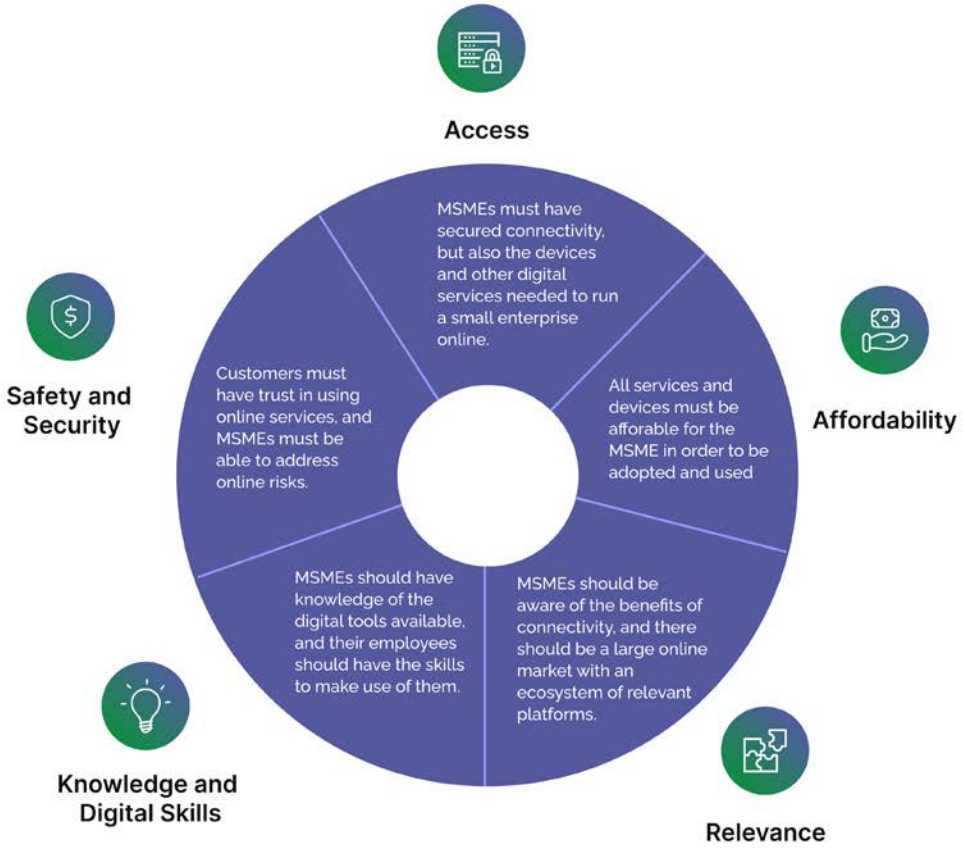
MSME connectivity is a journey through several stages of connectivity: individual connectivity, basic MSME connectivity, and advanced MSME connectivity for larger MSMEs.

Micro-enterprises can go online with the connectivity, devices, and services of the business owner and/or employees. While larger enterprises essentially require the same elements, as seen in **Figure 1**, they require more advanced solutions, with higher speed connectivity, better devices and deeper digital skills, and tools to protect their online business and users' data and privacy.

A framework to assess connectivity

To assess MSME connectivity, we have applied a broad framework, taking into account the elements of the UN imperative for universal and meaningful connectivity: access, affordability, relevance, knowledge and digital skills, and safety and security.

Figure 1: Framework for MSME connectivity



Source: Broadband Commission Working Group, 2023

Crucially, enterprises of all sizes also depend on a set of "digital enablers" in order to turn their connectivity into further economic value. These include web hosting and cloud-based services, platforms, digital financial services and access to e-government services. While digital skills are required to use these enablers, the enablers themselves can help simplify tasks for small enterprises and may incorporate training elements. They may also provide data protection services to ensure user privacy. The vibrancy of this ecosystem of supporting digital enablers is a determinant of the ability of small enterprises to be competitive online.

Benefits of connectivity

The benefits of connectivity for MSMEs and their owners, employees, communities, and economies, are significant. Connectivity can increase revenues through access to new customers and better market information, as well as helping to lower costs, for example, by making transactions more efficient.

Digital platforms can accelerate these benefits by bringing together buyers and sellers, enabling payments, and arranging delivery of goods or services. As MSMEs are the largest part of every national economy in terms of revenues and jobs, their economies benefit from connectivity through increased economic growth, more trade, higher-value jobs, and greater resilience.

Recommendations for closing connectivity gaps

All stakeholders can help play their part in removing barriers to MSME connectivity, across all sections of the connectivity framework.

Efforts must be taken to efficiently close gaps in connectivity and ensure that existing networks are reliable. Taxes and duties on connectivity and devices must be weighed against the benefits of increased affordability. Platforms to help MSMEs connect with consumers and deliver their services should be enabled, with safety and security in mind, and relevant skills must be taught in schools and through online platforms and trained digital ambassadors. Finally, all these efforts must be inclusive, to close the digital gender divide and provide opportunities for all marginalized communities to participate in the digital economy.

The Broadband Commission intends this report as a means to create awareness and inspire action to address the issue of MSME connectivity. First, data on MSME connectivity is needed to measure the status quo, track progress, and study the barriers facing MSMEs in order to help remove them. Second, existing and new efforts should be coordinated, within groups of stakeholders and among different groups, to learn from best practices and avoid duplication. And last, but not least, increased awareness of the importance of MSME connectivity is needed to drive a sustained effort to fill the knowledge gaps and tackle barriers. The importance of MSME connectivity should be highlighted to help reach the sustainable development goals and through the actions taken by all stakeholders to achieve universal and meaningful connectivity.

Introduction

The connectivity of micro, small, and medium enterprises (MSMEs) to the Internet and broader digital economy is an under-looked development issue. While there is significant effort put into closing the digital divide, MSMEs are typically not addressed separately from individuals and households, and when addressing challenges facing MSMEs, connectivity is typically only one of many issues addressed. This study aims to fill this gap by focusing specifically on increasing the connectivity of MSMEs in line with the aims of the Broadband Commission.

The broadband advocacy targets

The ITU/UNESCO Broadband Commission for Sustainable Development Working Group on Connectivity for MSMEs seeks to focus directly on increasing connectivity for MSMEs and the benefits that would result.[1]

The Broadband Commission has seven 2025 Advocacy Targets, which serve to guide policy for national and international action in broadband development. Advocacy Target 6 focuses on MSME Connectivity: "Get MSMEs Online: By 2025, improve connectivity of micro-, small- and medium sized enterprises by 50%, by sector".[2] The Broadband Commission notes that relevant data in aggregate, or by sector, is not available to track progress, which increases the challenges of meeting an already urgent target.

This study focuses on MSME connectivity in low- and middle-income countries (LMICs). More specifically, the emphasis will be on digital connectivity – fixed or mobile broadband access to the Internet - rather than the desired digital transformation of the enterprises, while noting that digital connectivity is a means to that end, not an end in itself. We will also explore the numerous barriers to MSME connectivity that need to be addressed, along with the digital enablers that can help reach this target.

However, it is important first to understand why this topic is critical to sustainable development, given the importance of MSMEs for the economies of LMICs and the importance of connectivity for MSMEs.

MSMEs make up the largest share of companies and employees in low- and middle-income countries

MSMEs play an outsize role in economies globally, including in LMICs. In those countries that provide statistics, the World Bank found that formal MSMEs employ 72% of private sector workers globally – the figure is 91% in lower middle-income countries and 81% in low-income countries.[3] Of course, the figures are even higher when including informal companies, but there is even less data available on the companies in the shadow economy. There are, however, estimates that informal companies make up more than 90% of businesses in some emerging and developing regions.[4]

The United Nations General Assembly designated 27 June as the annual MSME Day, recognizing the importance of MSMEs in achieving the SDGs.[5] According to the UN Department of Economics and Social Affairs (DESA), MSMEs can help to promote all 17 SDGs, in particular Goal 1, ending poverty by creating employment; Goal 5, achieving gender equality through ownership of an MSME or employment; Goal 9, through MSMEs promoting innovation; Goal 8, focused on creating jobs and economic growth (with a specific focus on the growth of MSMEs) and Goal 10, reducing inequality by promoting economic inclusion.[6] The ITU separately demonstrates how digital

technologies can help achieve each of the SDGs.[7] Here we combine the two strands to show the importance of equipping MSMEs with digital technologies, beginning with connectivity

MSMEs can benefit significantly from connectivity

Connectivity can have a significant impact on MSMEs, which in turn can have a significant economic impact. MSMEs with connectivity can participate in regional, national, or global marketplaces, selling goods or services to existing customers more efficiently, or to new customers they could otherwise not reach. Connectivity can also be a gateway to help MSMEs achieve financial inclusion, by giving them the facility to make payments and access the capital and credit needed to grow. Further, connectivity can empower economic inclusion, providing opportunities to reduce the gender divide, enable employment for people with disabilities, increase activity in rural areas, and drive good employment opportunities for youth.

The benefits of - and need for - MSME connectivity were highlighted by the impact of the COVID-19 pandemic. In particular, restrictions during lockdowns limited business, causing shutdowns and unemployment. Consumers could not shop in person, employees were not able to report to work, and supply chains were disrupted. The ITC COVID-19 Business Impact Survey showed that nearly two-thirds of micro and small firms reported that the crisis strongly affected their business, compared with 40% of large companies. In terms of geography, the greatest impact was in Africa, whereas in terms of sectors, the greatest impact was in accommodation and food services. Finally, women-led firms were more affected than men-led firms.[8]

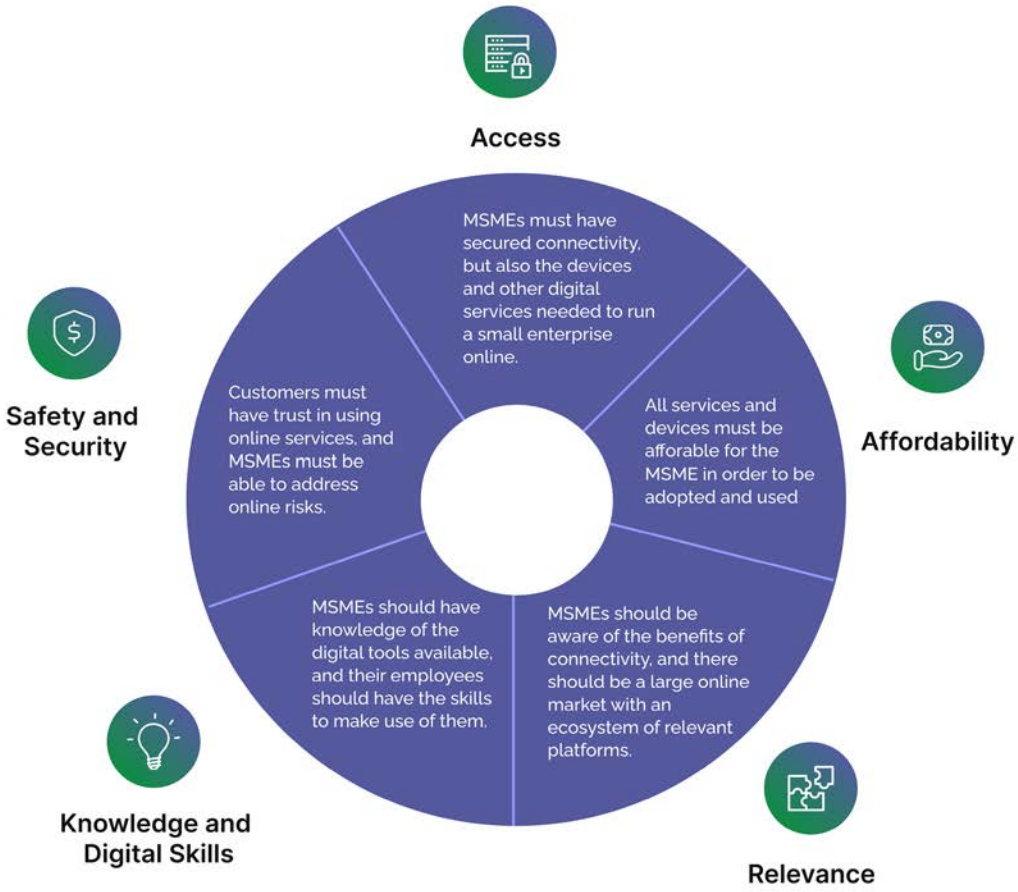
During this period, digital connectivity helped MSMEs to be resilient, as they could buy and sell online using digital payments, and many employees could work from home. An UNCTAD survey of 9 countries showed a significant increase in online shopping during COVID-19, which was most pronounced in emerging economies.[9] Government assistance, where available, helped companies respond to the online demand. For instance, a study in Ghana during COVID-19 showed how government agencies and technology firms facilitated online payments so that even the smallest of enterprises could mobilize digital resources to be able to conduct, and even grow, their businesses.[10]

A broad framework is needed to assess MSME connectivity

In light of the role of connectivity in helping to realize the Sustainable Development Goals and the urgency of doing so, the current UN imperative is achieving universal and meaningful digital connectivity, defined as "the possibility for everyone to enjoy a safe, satisfying, enriching, productive and affordable online experience". [11]

A framework of relevant enablers has been identified by ITU, the GSMA and others, the lack of which presents barriers to access for individuals, who could also be micro-entrepreneurs.[12] We use this to develop a framework in **Figure 2** for MSME connectivity, which we build on in **Section 2.3** to extend from micro-entrepreneurs to larger MSMEs fully participating in the global digital economy.

Figure 2: Framework for MSME connectivity



Source: Broadband Commission Working Group, 2023

This framework will guide our assessment of the state of MSME connectivity in the next section, as well as identify the drivers of the benefits of MSME connectivity, the barriers to achieving full connectivity, and finally the recommendations for helping to progress the Broadband Commission MSME Advocacy Target.

Endnotes

[1] Broadband Commission: Working Group on Connectivity for MSMEs.

[2] Broadband Commission: Achieving the 2025 Advocacy Targets.

[3] World Bank Group, SME Finance Forum, and IFC Analysis Note: Micro, Small and Medium Enterprises – Economic Indicators. Government data is only available in 77 economies overall, including 15 lower middle-income countries and 4 low-income countries.

[4] UNCTAD: The COVID-19 Pandemic Impact on Micro, Small and Medium Sized Enterprises.

[5] United Nations General Assembly: Micro-Small and Medium-sized Enterprises Day.

[6] UN DESA: Micro-, Small, and Medium- sized Enterprises and their role in achieving the Sustainable Development Goals.

[7] ITU: Digital technologies to achieve the UN SDGs.

[8] ITC: SME Competitiveness Outlook 2020: COVID-19: The Great Lockdown and its Impact on Small Business.

[9] UNCTAD: COVID-19 and E-commerce: Findings from a survey of online consumers in 9 countries.

[10] ITU Connect2Recover: Digital Transformation of Micro-Enterprises in Ghana.

[11] ITU: Universal and meaningful connectivity: The new imperative and Connect 2030 – an agenda to connect all to a better world.

[12] United Nations Office of the Secretary-General's Envoy on Technology: Achieving universal and meaningful digital connectivity; ITU: Global Connectivity Report 2022; and GSMA: A new framework for Meaningful Connectivity.

1

Assessing the State of MSME Connectivity

Section 1: Assessing the State of MSME Connectivity

Assessing MSME connectivity presents a considerable challenge from the outset. There are no global studies of MSME connectivity that would enable measurement of the current state of connectivity and progress. There is also little data on the number of MSMEs by country and even less on how many are connected.

This compares unfavourably with statistics on individual connectivity, where countries have census data on their population size, and surveys of those online, which enables the International Telecommunication Union (ITU) to estimate that at least 66% of the population is online today, with a digital divide of up to 2.7 billion people.[1] Further, there is relatively little study of the digital activities of those enterprises that are online, or those that are not online, which would help to develop policies to increase connectivity and its benefits.

1.1 Data on the state of MSME connectivity is limited

There are several challenges to measuring global MSME connectivity. First, one must know the number of MSMEs in existence, and second, one must know the number that are digitally connected. Very few countries gather both measures consistently, and given that definitions may vary, the measures are hard to compare across countries.

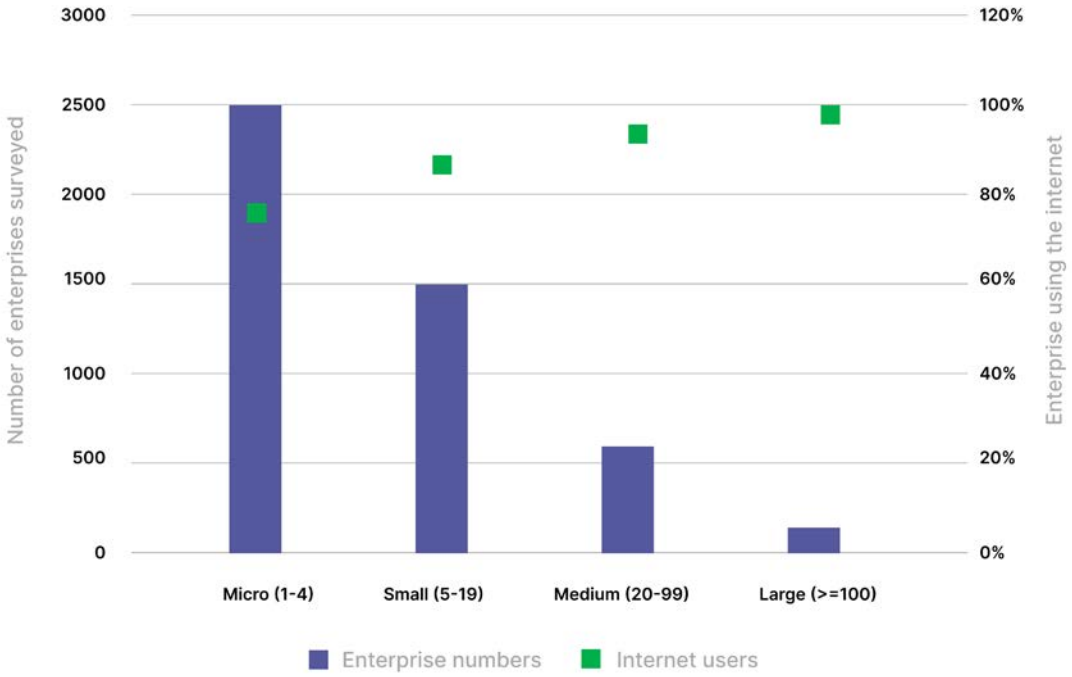
Starting with data on the number of MSMEs, there are two challenges. First, there are no universally agreed definitions of enterprise categories by size, such as what is a small enterprise, or even what metric to use. The most common metric is the number of employees, while others include revenues or assets, or some combination of the metrics.[2] Even when using employee count, the number in each category may differ. For instance, some countries consider MSMEs to be enterprises with up to 250 employees, while others limit MSMEs to less than 100 employees.

Second, even with an agreed definition of what constitutes an MSME, it may only be possible to count formal enterprises, which misses a big piece of the puzzle; by one estimate, 81% of all business enterprises globally are informal, representing 70% of employees in developing and emerging countries.[3]

Moreover, there is very little data on the connectivity of MSMEs, especially within LMICs. While the Partnership on Measuring ICT for Development - an international, multi-stakeholder initiative for improving ICT data - has included twelve measures of ICT access and use by enterprises among its core indicators, few countries gather the data today.[4] Further, there are few surveys of enterprises who are not online, to help determine what the barriers are and be able to address them.

A recent report by the International Trade Centre (ITC) highlights the benefits of such data, which are featured here as a starting point for assessing MSME connectivity in LMICs. ITC surveyed MSMEs in eleven countries in Francophone Africa, to provide insights on the state of connectivity in those countries.[5] Figure 3 shows the percentage of MSMEs using the Internet in those countries grouped by size of company, showing that the larger the company, the more likely it is to be online.[6]

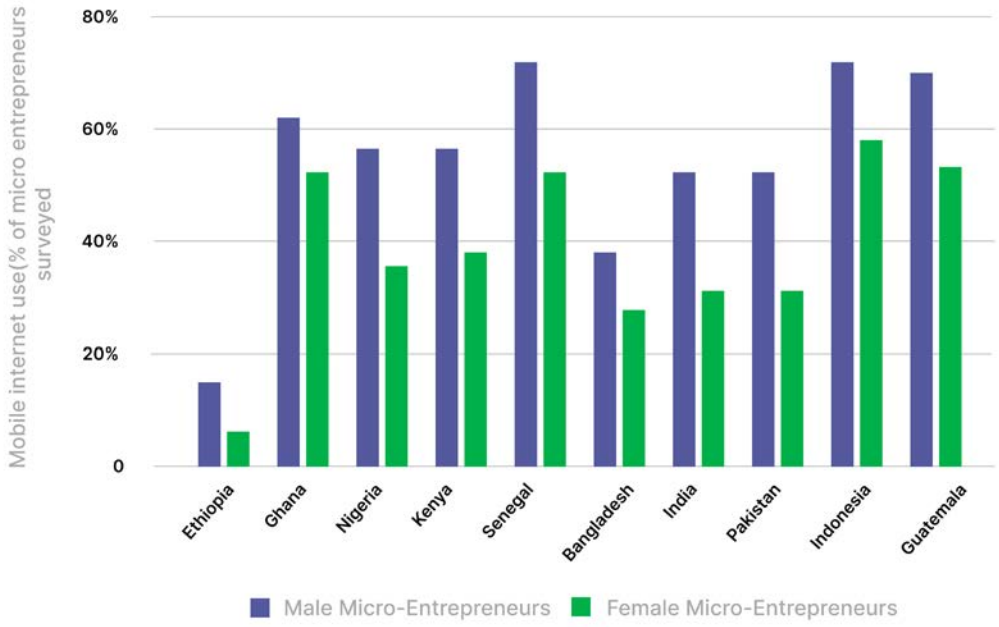
Figure 3: Is your company using the Internet for business operations and interactions?



Source: ITC, 2022

A recent study by the GSMA on the digital inclusion of women micro-entrepreneurs across ten low- and middle-income countries also shows that many micro-businesses are still offline, as shown in Figure 4.[7] Moreover, the results make it clear that women micro-entrepreneurs are less likely than men to use mobile internet for their business. The reasons for this are explored further below in Box 2.

Figure 4: Mobile internet use by micro-entrepreneurs

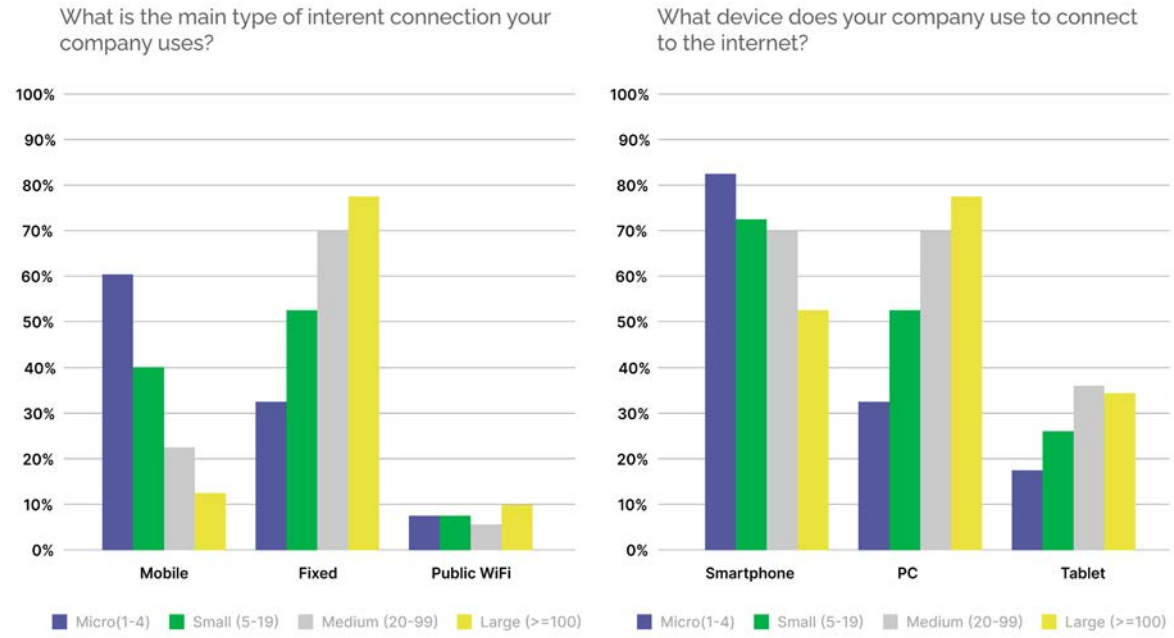


Source: GSMA 2023

1.2 The state of MSME access and usage of connectivity

According to the ITC Francophone study, the type of Internet connection and the device used differs widely depending on the size of the enterprise, as shown in Figure 5. The smallest enterprises are more likely to use mobile as opposed to fixed broadband as their main form of connectivity - accessing the Internet via a smartphone rather than tablet or PC - while the largest are more likely to use fixed broadband with a personal computer, alongside mobile connectivity and devices. This confirms that initiatives seeking to increase MSME connectivity should focus on both forms of access and a variety of devices.

Figure 5: Internet connection and device used

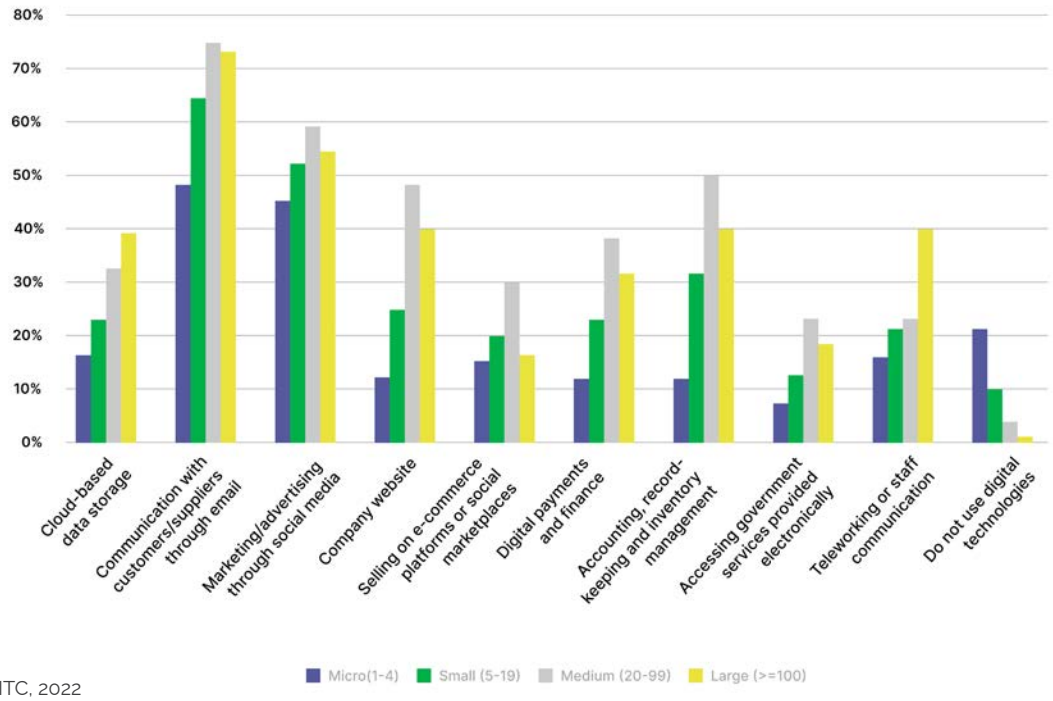


Source: ITC, 2022)

The enterprises surveyed use their connectivity for a wide range of purposes, as shown in Figure 6. Overall, the most used services irrespective of MSME size are communications with customers or suppliers through e-mail, and marketing and advertising through social media. These functions use services that are likely to be quite familiar to employees from their personal use – e-mail and social media. These services are free or low cost, available for informal enterprises, and can provide access to significant amounts of information, as well as helping enable customer interactions. However, while these tools can help to increase the reach of the enterprise and increase productivity, they are not sufficient to fully benefit from digital connectivity.

The other functions surveyed require additional digital technologies, such as cloud storage, creating a website, accessing a platform, or government services, using digital payments and business tools such as inventory management. The largest enterprises use these other digital technologies more than the micro-enterprises, but none of these functions are used by more than 40% of all the enterprises surveyed, and by no more than 20% of the smallest enterprises. As the micro-enterprises make up the bulk of the enterprises surveyed, this represents a significant gap in usage to fill.[8]

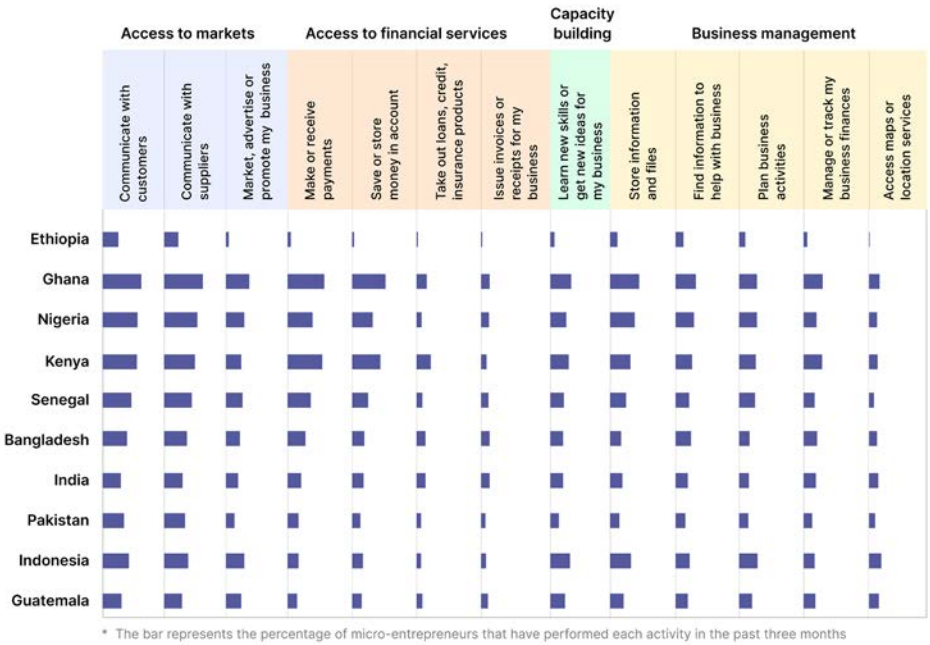
Figure 6: Do you use digital technologies for any of the following purposes?



Source: ITC, 2022

Data from the GSMA in Figure 7 show similar results: communications with customers and suppliers, as well as making or receiving payments, are among the most common ways micro-enterprises use mobile technology for their business. This data includes non-Internet use cases such as voice calls and mobile money, which provide value to the micro-enterprise and can act as stepping stones to Internet use cases.

Figure 7: Mobile use cases performed by micro-entrepreneurs*



Source: GSMA 2023

1.3 Digital enablers to facilitate connectivity for MSMEs globally

There are a number of digital enablers that could facilitate the use of these digital technologies (and others) to benefit MSMEs that are already online and encourage new MSMEs to go online. Where these enablers are not readily available, they should be facilitated; where already available, MSMEs should be made aware of their benefits.

These enablers include the following:

1. **Cloud-based services,** including cloud-based storage as well as other cloud-based business services such as accounting, record-keeping, and inventory services. Accessing these services in the cloud reduces capital and operating expenses for MSMEs because they do not have to purchase their own servers and software, and hire staff for operations and maintenance. The cloud company can also help protect MSMEs from cybersecurity attacks.

2. **Web hosting services** can help to create and maintain a website the business can use for marketing and sales. Often web hosting is provided by the registrar who sells the domain name to the business, which can also be used to create matching e-mail addresses to help with branding.[9]

3. **Data centres,** to host cloud providers and web hosting services. A local data centre can help ensure that services can choose to be provided locally, so they are delivered with low latency and increased resilience, as they would not depend on international connections.

4. **Online platforms** such as e-commerce marketplaces can provide multiple services for MSMEs, helping to increase sales, provide ancillary services, and lower transaction costs (see Box 1 below).

5. **Digital financial services** provide access to banking services, enabling online payments for buying and selling with low transaction costs. They can also provide MSMEs access to credit, for instance to purchase supplies and secure capital for growth and expansion.

6. **E-government services** can enable online business registration and electronic tax payments among other services, most efficiently as part of an integrated platform. A digital ID program can help users authenticate themselves and increase digital inclusion and trust. The digital ID should encompass all citizens, as well as displaced populations in the country, to provide inclusive access to all online services while also maximizing the market size for enterprises.

7. **MSME Information portals** allow small enterprises to readily understand and calculate the implications of being online.[10]

These digital enablers can help support MSMEs in achieving the full benefits of digital connectivity, enabling them to take part in the digital economy, as shown in the following case study.

Case Study: Busu Natural Skincare[11]

Busu is a micro-enterprise in Kenya, which develops skincare products. The company has three full-time employees, along with temporary staff as needed, and produces its products in-house through a certified laboratory facility. Busu sells products in individual shops and to companies for corporate gifts, and it also sells online in Kenya and the rest of East Africa.

Each employee has a mobile phone and a data subscription, and each has a laptop with access to a fixed account for the office. Busu uses WhatsApp for communications, and markets and sells products through Instagram, Facebook, and its own website which provides information and takes orders.[12] Busu works with several digital enablers, including Rasmutu, which developed their website; Truehost, which hosts their website; Twiva, which helps generate sales using online influencers; Sendy Fulfillment, which delivers orders; and M-Pesa for payments.

Despite this, the company faces challenges. Between 17% and 19% of revenues are spent on connectivity, which is not always reliable, with outages that result in downtime. Further, there is a lack of trust in online payments, particularly for first-time buyers, resulting in the need to use cash on delivery (for which a commission must be paid to the delivery service). Deliveries outside Kenya are made by travelling acquaintances due to high cross-border costs. And finally, not all potential customers are online, particularly in rural areas, limiting the size of the accessible market.

Digital skills and capacity development are needed to access and benefit from these digital enablers. Some digital enablers include in-built training for users, but MSMEs must first have the confidence and skills to get online to access the digital enablers.

Some MSMEs may have the necessary skills from their employees' use of individual connectivity, while others may need basic training to go online and get started. As noted below, an important element of any MSME connectivity strategy is to provide the digital skills necessary to take MSMEs through the entire journey of connectivity

1.4 The MSME connectivity journey

Based on this assessment of the state of connectivity, we can highlight three stages of online development for an MSME, as depicted in the pyramid below:

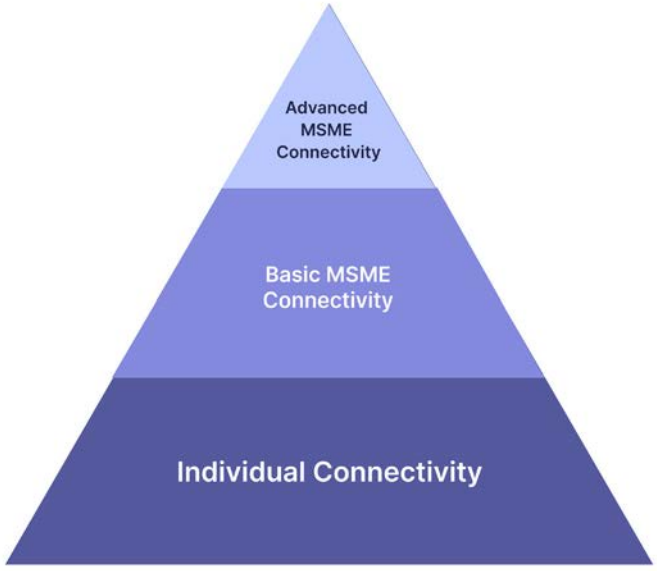
- **Individual connectivity:** MSMEs using their individual connectivity and tools for their enterprise, including personal mobile money accounts. This would generally involve using mobile broadband with a smartphone to access instant messaging, e-mail and social media services for communications and marketing. This is most likely to be used by a micro-enterprise of one or several employees and is

- presumably the most common stage, given the prevalence of micro-enterprises.

- **Basic MSME connectivity:** MSMEs using a suitable mobile broadband package and/or fixed broadband, along with the appropriate devices, business accounts for social media and e-mail to brand their communications and marketing, and more advanced digital financial services such as a mobile money merchant account. This is one step up in the stages of connectivity, building on the previous stage as the MSMEs grow.

- **Advanced MSME connectivity:** MSMEs using the appropriate digital enablers to derive the full benefits of connectivity. This includes cloud computing, business applications, and platforms such as e-government services, with a full range of digital financial services integrated into their services. This is the ultimate stage of connectivity, for the largest and/or most digitally advanced MSMEs.

Figure 8: Stages of connectivity



Efforts to advance the benefits of MSME connectivity must focus on moving MSMEs through these stages of development, by facilitating the relevant enablers and removing barriers in each of the stages. Moving up through the stages is a journey, with backsliding possible based on the goals of the enterprise and the skills and resources available to sustain the digital growth. As more companies move up the pyramid, it may help others move up by providing models for growth and the scale necessary for the digital enablers needed to sustain the growth.

Endnotes

[1] ITU: Statistics.

[2] World Bank Group, SME Finance Forum, and IFC Analysis Note: Micro, Small and Medium Enterprises – Economic Indicators; UNCTAD: The COVID-19 Pandemic Impact on Micro, Small and Medium Sized Enterprises.

[3] W OECD and ILO: Tackling Vulnerability in the Informal Economy – Most workers in the world still go without social protection.

[4] The membership includes 14 regional and international organizations, and the Steering Committee is made up of ITU, UNCTAD, and UN DESA. ITU: Partnership on Measuring ICT for Development.

[5] ITC: SME Competitiveness in Francophone Africa 2022: Fostering digital transformation. The 11 countries covered are Benin, Burkina Faso, Cameroon, Chad, Congo, Côte d'Ivoire, Gabon, Mail, Morocco, Togo, and Tunisia. The report is based on a survey of 4,973 businesses in those countries.

[6] There is no international approach for labelling companies by size. We have included companies labelled large, which here are defined to have more than 100 employees, because by some definitions medium-sized companies have up to 250 employees, and thus would be considered large by the definition used here.

[7] GSMA: Understanding Women Micro-entrepreneurs' use of Mobile Phones for Business – Evidence from 10 low- and middle-income countries. Based on surveys in 10 countries with 8,375 micro-entrepreneurs.

[8] For more information on these uses, see ILO: Small goes digital – How digitalization can bring about productive growth for micro and small enterprises.

[9] One factor that might help the use of websites (and e-mails addresses) is internationalized domain names (IDNs), which can use non-Latin scripts such as Arabic, making them accessible to those who cannot read the Latin scripts traditionally used in domain names. However, there is not universal acceptance of them in online applications, thus limiting their use. See ICANN: Universal acceptance.

[10] Examples being the Global Trade Desk implemented by ITC, WTO, UNCTAD and others and ITC's suite of e-commerce tools available under https://ecomconnect.org/page/tools.

[11] Interview with Emma Omany, founder and owner, 23 February 2023.

[12] https://bususkincare.co.ke.

2

MSME Connectivity Delivers Significant Benefits

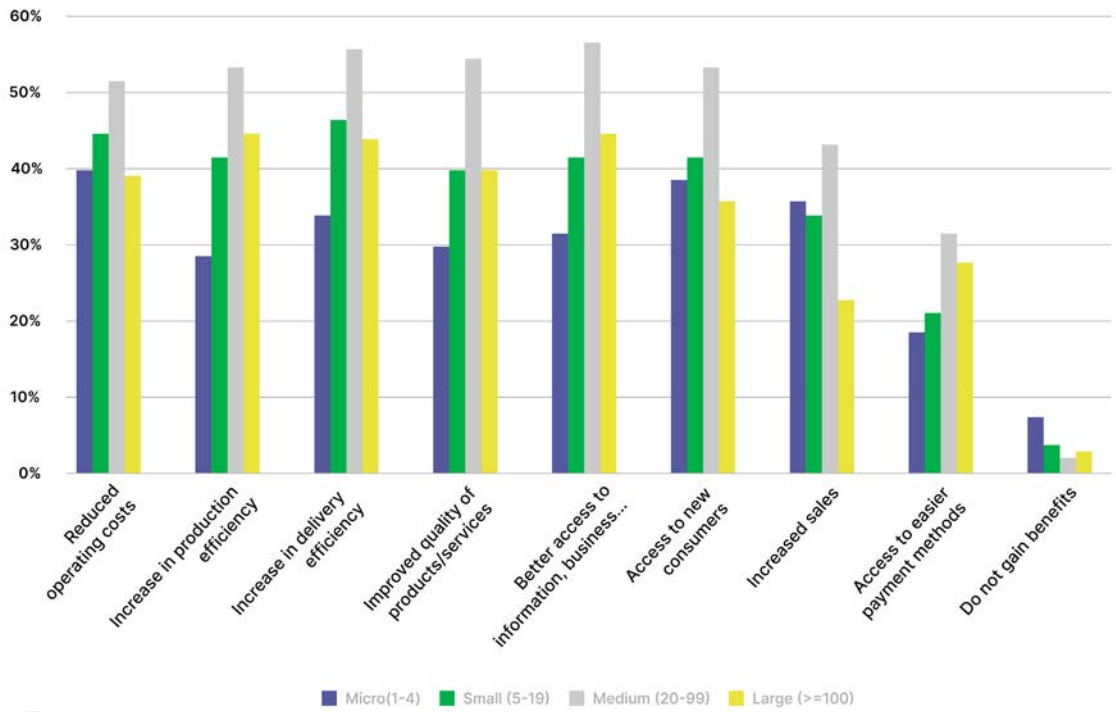
Section 2: MSME Connectivity delivers significant benefits

The benefits of connectivity are significant for MSMEs, and given that they constitute the majority of businesses in emerging regions, connected MSMEs stand to boost their economies significantly.

2.1 Benefits of connectivity for MSMEs

MSME connectivity can bring about a number of benefits, which broadly speaking can be divided into two categories: opportunities to increase revenues, and opportunities to reduce costs. As shown in Figure 9, digital technologies help to provide access to new consumers and increase sales, while reducing costs and increasing measures of efficiency. These benefits originate from connectivity, augmented by digital enablers.

Figure 9: What benefits do you gain from using digital technologies?



Source: ITC, 2022

At a basic level, the use of instant messaging, e-mail and social media can help to market the products or services of the MSME, helping to find new consumers and increase sales. A website or presence on online maps can further help the discoverability of the company beyond its existing customer base, as can an e-commerce platform. Digital tools can also help to provide better access to business information such as crop prices, to help increase revenues. And finally, digital access can help MSMEs to innovate, and encourage new entrepreneurial startups that can help to drive economic growth.[1]

Case Study: Farm pass

Agriculture is a crucial profession across the globe, vital to the SDGs of zero hunger and ending extreme poverty. Smallholder farmers face several challenges, including a lack of access to market prices, working capital, and the latest agricultural best practices. Online services could help, but some farmers are distanced from the benefits of digital connectivity. Digital hurdles to overcome include low levels of digital literacy, unreliable Internet access when available in rural areas, and unaffordability of smartphones. An additional hurdle is that many farmers lack a form of identification. Mastercard's Farm Pass digital platform provides one way to address these challenges and deliver benefits to farmers and their communities.

Built on the Mastercard Community Pass digital infrastructure, Farm Pass provides a digital marketplace for farmers to access reliable markets and fair prices for their produce. Farmers are given a functional digital identity that is tied to their harvest data and transaction history, which helps to build a digital profile for the farmer, making them more visible to financial service providers and helping them to better access credit and other financial services.

To overcome an initial lack of connectivity and digital skills, there is a network of agents and Farmer Producer Organizations (FPOs) who work with farmers to help them connect. The platform then connects the farmers to buyers and suppliers, enabling them to command better prices for their crops and find quality supplies including seeds and fertilizers, as well as transact online to mitigate the risks of cash. Agents with agricultural expertise can also provide vital information on weather forecasts and pest control to help farmers increase their yields.

The platform is now available in a number of African countries and in India, with over 3 million farmers now counted as users. In India, tomato and carrot farmers report that their output has increased by 20%, and in addition, farmers have been able to receive prices that are 20% higher than before. This case study highlights the significant benefits available to enterprises by embarking on the digital connectivity journey.[2]

MSME connectivity can also help to lower costs and increase business efficiency. For example, digital financial services can help lower transaction costs, e-government services can lower the cost of paying fees and reduce or eliminate paperwork, and connectivity allows deliveries to be efficiently scheduled and tracked online. In addition, remote workers can work online, which increases the resilience of the company and can lower operational costs. Many of these benefits can be efficiently delivered through digital platforms.

Box 1: Benefits of Digital Platforms

Digital platforms can help to deliver the benefits of connectivity for MSMEs with the possibility of increased sales and lower costs[3] By definition, a digital platform connects two or more sides in a transaction, with different types of platforms serving different roles.

- Social media platforms enable informal online commerce, when micro-enterprises sell goods over platforms typically used for social media. The platform is used to connect a buyer to a seller, with the rest of the transaction taking place offline. According to one study, many of these entrepreneurs are women, without access to more formal platforms, and many of the enterprises are informal.[4]
- E-commerce platforms go beyond informal online commerce to help complete transactions. These platforms can help sellers broaden their reach to customers, provide market information for MSMEs, and help digitalize the business operations of MSMEs. They can also assist MSMEs on how best to sell their products and provide upskilling for their employees.
- Specialized platforms can help arrange logistics and delivery, or access to workers for short-term work or specific tasks, to lower costs and improve productivity for the MSME.
- Digital Financial Service platforms can help MSMEs to make and receive payments at lower cost. In addition, platforms can help to provide capital and/or credit to MSMEs to enable them to grow their business.[5]
- E-government platforms can enable companies to interact with government services online rather than on paper or in an office, thereby increasing their efficiency.

Integrated platforms can provide multiple services in one place, and thereby help with most or all the functions needed by an MSME, leaving the MSME to focus on developing their products and services and positioning themselves within the platform for optimal sales. They can also provide the latest cybersecurity and data protection, helping to reduce risks for MSMEs and the need to invest resources in compliance.

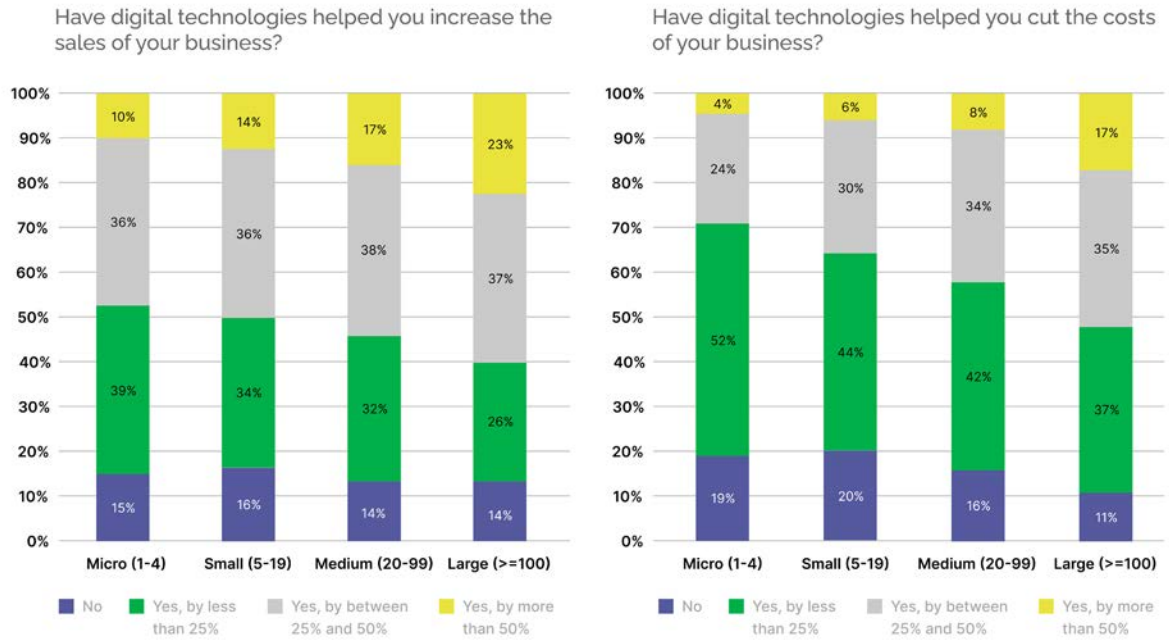
Finally, platforms can develop their own brand name that can help affiliated MSMEs to overcome customer concerns about trust and credibility.

While almost all enterprises benefit from digital technologies, as seen in **Figure 9**, the benefits are not uniform across the sizes of the companies. Less than half of companies of each size reported benefits in any individual category (except for medium-sized companies which were slightly higher), suggesting that there is significantly more that could be done to bring these benefits to all enterprises.

On the other hand, the benefits were large for those who reported them, as shown in **Figure 10**. Overall, 85% of enterprises using digital technologies said they increased sales as a result, and 81% said the digital technologies helped them cut costs. Further, a higher share of

large firms experienced sales increases or cost reductions of more than 50% compared to smaller firms, suggesting that larger firms were better placed to take advantage of these technologies.

Figure 10: The benefits of digital technologies for MSMEs



Source: ITC, 2022

These benefits, when aggregated together, can in turn bring benefits to the regional and national economy.

2.2 Benefits of connected MSMEs for their economies

There are multiple indicators of the significant economic benefit of MSME connectivity. First, many studies have highlighted the link between general broadband adoption and economic growth. For instance, a recent ITU-sponsored study showed that every 1% increase in mobile broadband penetration increased GDP by 0.20% in developing countries.[6] As mobile broadband is the predominant means of online access for the smallest enterprises, including those operated by one individual, this economic growth is driven in part by their use of connectivity. The same study shows that a development index of the digital ecosystem, which includes indicators beyond broadband adoption such as enterprise digitalization, is also positively associated with GDP growth.

This economic impact is built on the benefits of connectivity for the MSMEs that make up the majority of most economies worldwide. In particular, increased revenues along with lower costs indicate that companies are becoming more productive, which is a key factor driving economic growth. Increased trade is also an indicator of GDP growth, and the ITC Francophone study shows that digital technologies helped enterprises access international markets, ranging from 34% of micro-enterprises to 72% of the largest enterprises in the survey. Economic growth is also driven by entrepreneurs and innovation, and many startup companies are based on connectivity.

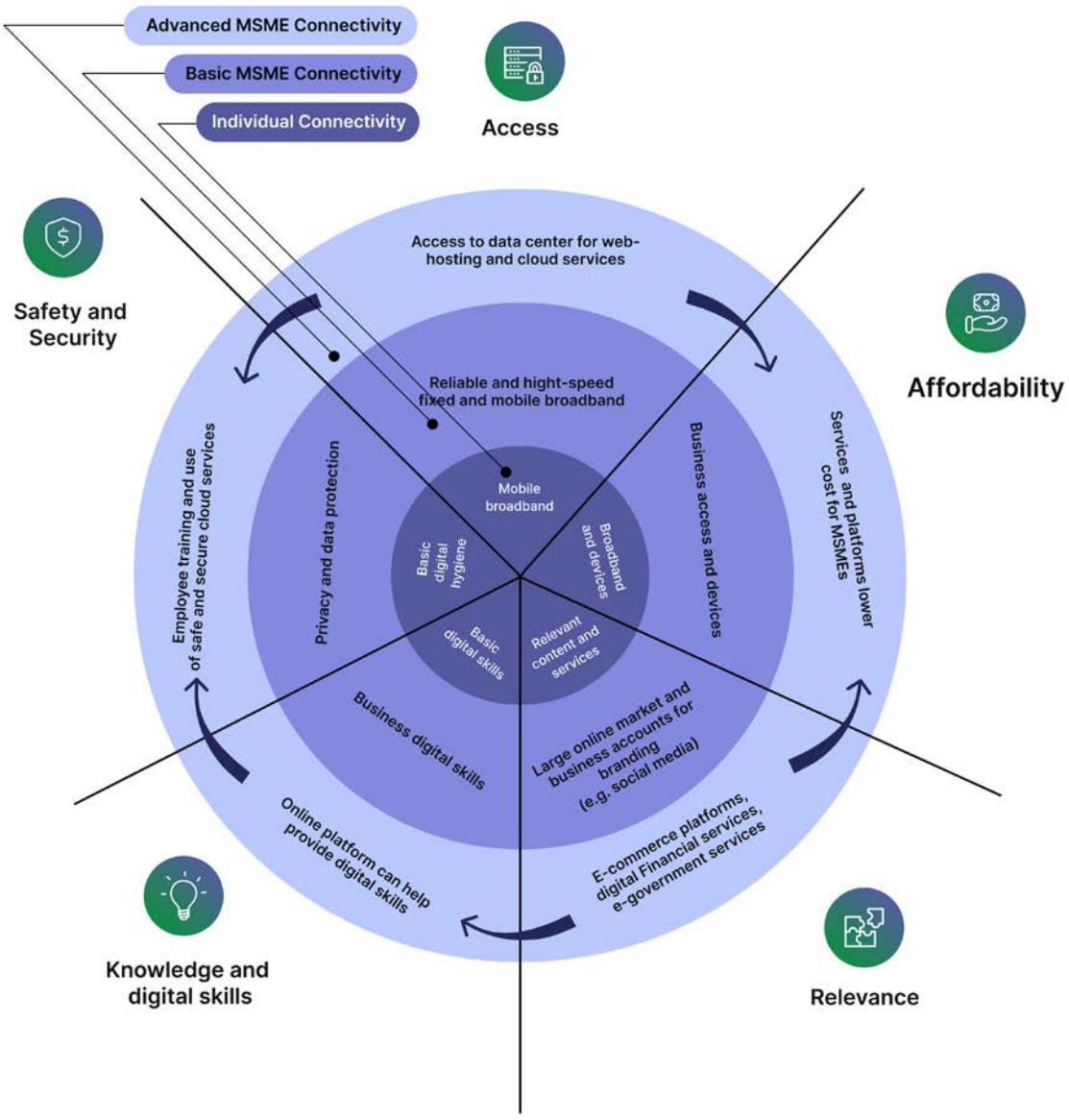
Further benefits to the economy are more indirect. Connectivity can enable skills training and research for MSME employees and provide

them with access to higher-value jobs. It can also provide economic inclusion, enabling women, people with disabilities, and minorities opportunities for employment with - or ownership of - an MSME from which they may otherwise have been excluded. Rural connectivity enables economic opportunity for those in areas that were otherwise under-developed within a country. Finally, connectivity can provide resilience and business continuity, as was highlighted during lockdowns related to COVID-19, but can also be relevant during natural disasters and other crises.

2.3 Drivers of connectivity benefits for MSMEs

The drivers of connectivity benefits for MSMEs can be conceived within the framework for MSME connectivity, and depend on the stages of online development, radiating outward, as shown in the following figure.

Figure 11: Drivers of MSME Connectivity Benefits



Source: Broadband Commission Working Group, 2023

This figure highlights the additional drivers of benefits at each stage of the MSME online journey, including the role of digital enablers, and the interdependence of those drivers across the framework.

- **Access:** While many individuals in LMICs rely on mobile connectivity, MSMEs may also use fixed broadband, and all require reliable connections to conduct their business.[7] Access to web-hosting and cloud services, located in a local data centre, can act as digital enablers, providing further functions and additional reliability for MSMEs who choose to use them.

- **Relevance:** Individuals require relevant online content and services, in the local language(s), which domestic MSMEs are well placed to deliver to users in their country or region. MSMEs in turn benefit from a large base of users as potential customers and access to business accounts for branding, such as for social media and e-mail. Platforms, including e-commerce, financial, and e-government services are digital enablers, making connectivity fully relevant and efficient for MSMEs.

- **Affordability:** Individuals and MSMEs require the connectivity, devices, and services that they use to be affordable. However, once connected, digital enablers including online services and platforms help lower costs for MSMEs and make them more efficient, driving economic benefit.

- **Knowledge and Digital Skills:** Individuals require the skills needed to go online and navigate online services, including those provided by MSMEs, to create a large online market. MSMEs require further skills to use digital technologies that help to enable their online business. Online platforms can help to make it easier for customers and MSMEs to interact, and can provide skills training.

- **Safety and Security:** Individuals benefit from awareness of how to deal with online safety and security risks, as well as cybersecurity for their infrastructure and services, while MSMEs become trustworthy by providing privacy and data protection. Cloud services and platforms can help to provide trustworthy environments with state-of-the-art data protection tools, and can help provide skills training for employees to help prevent attacks.

These drivers can increase adoption and business activity; their absence can result in barriers to uptake, both for individuals as well as MSMEs. Given the interdependence of these drivers, it is important to address all barriers to promoting MSME connectivity.

Endnotes

[1] See Broadband Commission Working Group Report: Digital Entrepreneurship.

[2] For more details, see Mastercard: How to turn farmers from price takers to price makers.

[3] See for instance GSMA: Scaling digital platforms through partnerships.

[4] Consultative Group to Assist the Poor (CGAP): Business her Own Way: Creating Livelihoods Through Informal Online Commerce.

[5] See for instance, Mastercard: Mastercard Expands its Jaza Duka Micro-Credit Program with Kasha and Surpasses 1 Billion Kenyan Shilling in Loans to MSMEs in Africa and VISA: Empowering Participation in Commerce: New Strategies for Digitization of Micro and Small Businesses.

[6] Katz and Callorda, The economic contribution of broadband, digitization and ICT regulation. This relationship is true for countries with per capita GDP less than $12,000, which includes LMIC countries.

[7] Micro-enterprises may start their connectivity journey without a smartphone or Internet access, using a feature phone without mobile broadband connectivity. This enables basic services including calls, and even mobile money payments using USSD. See CGAP: What is USSD and Why Does it Matter for Mobile Financial Services.

3

The Barriers to MSME Uptake and Usage of Connectivity

Section 3: The Barriers to MSME Uptake and Usage of Connectivity

Although the benefits of online connectivity are significant for both individuals and MSMEs, there are a number of barriers to overcome. There has already been extensive study of the reasons individuals go online, including surveys of those not online to identify the primary barriers.

While the barriers for MSMEs are more extensive, we build on the barriers for individuals for two reasons. First, because of the extensive existing study of the issues, and second, because these barriers are still relevant for MSMEs, since individuals are customers of MSMEs as well as employees, and can start their own micro-enterprises which can grow into larger enterprises. Without individuals online, there is little ability and less incentive for MSMEs to go online.

There are several factors that create additional barriers preventing enterprises from adopting connectivity. Furthermore, connectivity is necessary but not sufficient for MSMEs to fully leverage digital opportunities. These factors require targeted attention, which we address in Section 4, in order to provide opportunities for all MSMEs to adopt and benefit from connectivity.

The first factor is that certain groups face structural inequalities and social norms that negatively impact their adoption and usage of connectivity. For instance, there is a significant gender digital divide across LMICs, and this limits the ability of female entrepreneurs to incorporate Internet use in their business, or more generally for women to have the opportunity to work for digital MSMEs. In Box 2 below, we address the causes of the gender gap and the need to focus on addressing it while increasing MSME connectivity.[1]

The second factor is the informality of many enterprises. Informal companies may be excluded from certain enablers such as digital financial services and e-government services, or feel that there may be a risk of exposing themselves to taxes and regulation from going online. Below, we address the benefits of formality and make recommendations on how to promote formality.

3.1 The barriers to connectivity uptake for individuals

The assessment of barriers to Internet uptake has changed over time, as conditions have evolved, and goals have shifted. In the early days of the Internet, access was a critical factor, when fixed networks were the only way of going online and coverage was poor in many countries. Today, mobile networks are almost ubiquitous, and satellite networks can help supplement coverage in areas that remain unconnected, to the point that attention has turned to the usage gap – defined as those who could go online but have not yet done so. This gap must be filled by increasing demand – making Internet access more affordable, and ensuring that it is relevant to users, who must also have the skills to go online..

We focus on the following barriers across the framework that we presented above:

Table 1: Barriers to uptake for individuals

	Barrier	Explanation
	Access	Access to connectivity and other enablers including handsets. The coverage gap – where there is no coverage – is now outweighed by the usage gap – those who could go online but have not. Addressing the usage gap is now the biggest issue, which is caused by the following barriers that are limiting demand..
	Affordability	The Broadband Commission Advocacy Target 02 states that entry-level broadband should cost less than 2% of the average monthly income in LMICs by 2025.[2] However, in low-income countries, the average is still 9.3% of the average monthly income, and in lower middle-income countries it is still 2.8%.[3] The affordability of devices such as smartphones is also increasingly a critical barrier. According to the Alliance for Affordable Internet (A4AI), in some regions, the cheapest available smartphone can cost upwards of 50% of the average monthly income.[4]
	Knowledge and Digital	Individuals must have an awareness and understanding of the Internet and its benefits, as well as having the digital skills and literacy to be able to go online and reap the benefits.
	Relevance	To be relevant for users, digital content and services must be fit for purpose and in the local language and script, and individuals must be aware of those services and be able to access them. Today, more than 50% of web content is in English, much of which is relevant for high-income countries, and no other language has more than 5%, restricting the relevance of the connectivity for many.[5]
	Safety and Security	Concerns about negative aspects and risks of the Internet are rising, including mis- and dis-information, hate speech and harassment, data breaches, and fraud, and these concerns must be addressed to provide a safe environment for new and vulnerable users.

Source: ITU, GSMA, Working Group, 2023

These barriers are all relevant for MSME connectivity, although MSMEs have a need for additional digital enablers, the lack of which presents further barriers.

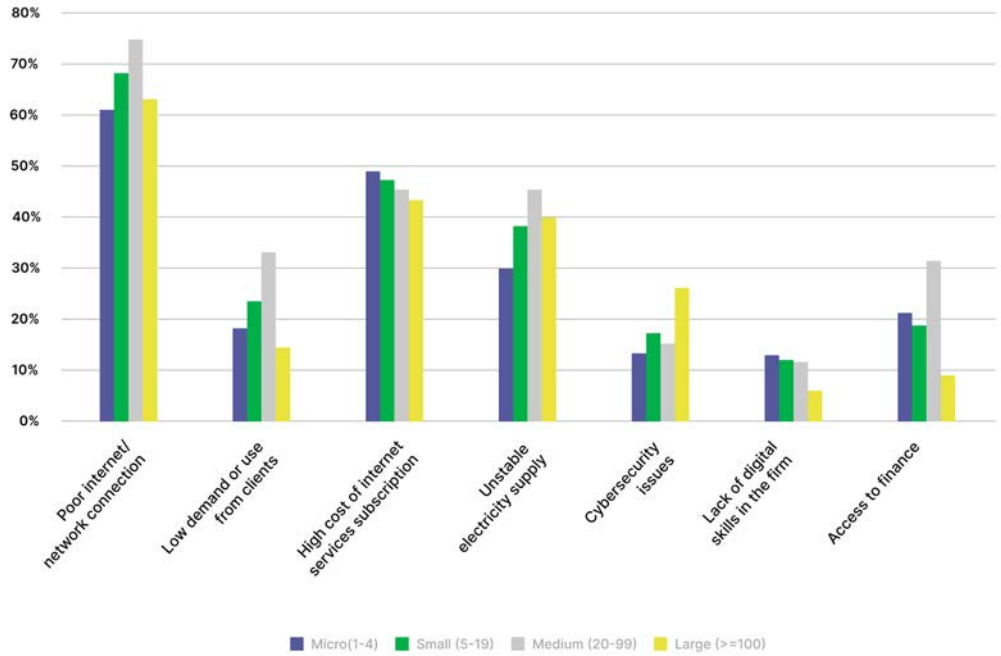
3.2 The barriers to connectivity uptake for MSMEs

The barriers to MSME connectivity impact the willingness of companies to go online, as well as the ability of companies that are already online to take full advantage of their Internet access. The ITC survey of Francophone African MSMEs indicates that the majority would go online under more favourable conditions, specifically relating to affordability and availability. This suggests a general openness to going online among MSMEs, which is encouraging. However, the following two figures show a more nuanced view of the barriers to connectivity.

When all the MSMEs in the ITC survey were asked to rank their obstacles, the issues were spread across all five of the barriers described above, as shown in Figure 12. The most significant barrier for all sizes of companies surveyed was a poor Internet or network connection, suggesting that availability is necessary but not sufficient, as the connection must be reliable. This finding was bolstered by the significance of having an unstable electricity supply. The second most significant barrier was affordability, which limits both adoption and usage. This limit was reinforced by a lack of access to finance, which could be used for access as well as the adoption of other complementary digital technologies.

Other barriers also present obstacles for the MSMEs surveyed. The relevance of online access can be seen in the concerns about low demand or use from clients; cybersecurity issues are another concern related to safety and security, and there is some concern about a lack of digital skills.

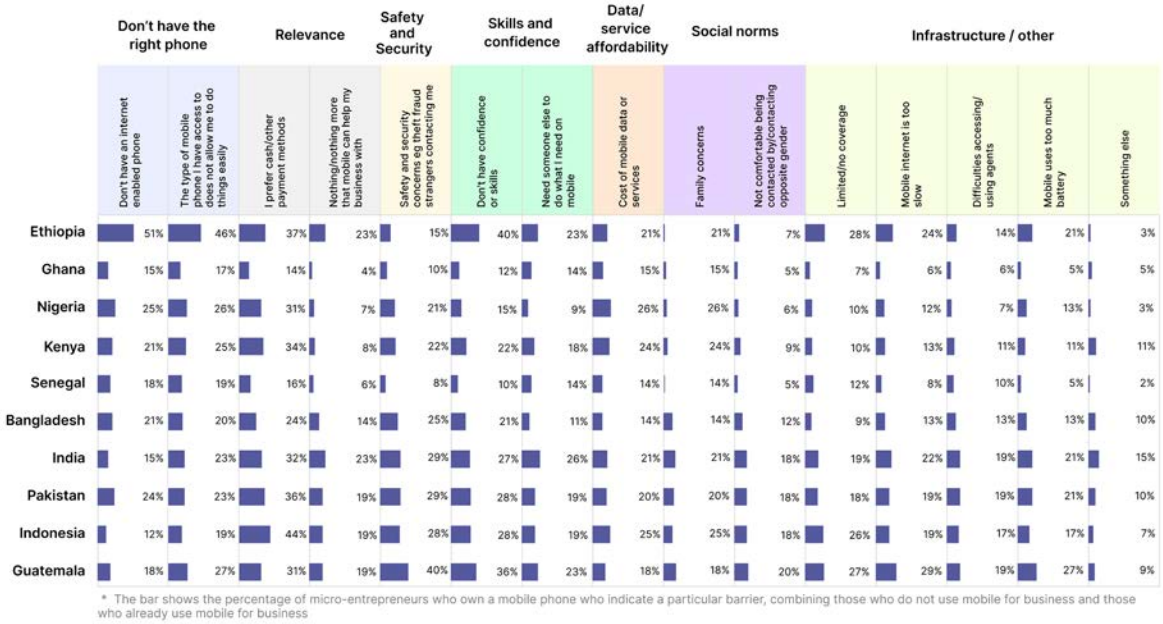
Figure 12: ITC survey - What are the main obstacles to using the Internet and adopting digital solutions for your business?



Source: ITC, 2022

When looking in more detail at micro-entrepreneurs, the GSMA's research in Figure 13 shows that for those with a mobile device, the main reported barriers to using a mobile for business - or using it more - were not having the right kind of phone and a lack of perceived relevance. This was followed by safety and security concerns, and not having the necessary confidence or digital skills, in addition to the lack of awareness of the potential ways that mobile could be used for business.[6] All these obstacles may be more daunting to overcome for all enterprises, and in particular female-led enterprises.

Figure 13: Barriers to mobile use and adoption in business among micro-entrepreneurs who own phones*



* The bar shows the percentage of micro-entrepreneurs who own a mobile phone who indicate a particular barrier, combining those who do not use mobile for business and those who already use mobile for business

Source: GSMA, 2023

Box 2: Gender Divide for MSME Connectivity

Connectivity is bringing significant benefits to users, communities and society as a whole. It is transforming lives and helps empower women with unprecedented access to information, services, and business opportunities. However, a significant digital gender divide persists, negatively affecting women's agency and well-being while hampering progress toward achieving the SDGs.

According to the ITU, in 2022 63% of the global female population was online, compared with 69% of the male population. The level of gender parity is correlated to overall internet use, which is lower in LMICs.[7] According to the GSMA, women in LMICs are 19% less likely than men to use mobile internet, and 17% less likely than men to own a smartphone.[8] This is significant as across LMICs, mobile phones are the primary and often only way people get online, especially women.

The barriers to digital adoption among women are the same as those for men but tend to negatively impact women more acutely, due to social norms and structural inequalities, including lower levels of education and income, as well as family pressures. This clearly impacts connectivity for female-led MSMEs, since many micro-entrepreneurs rely on their personal devices and connectivity for their business.

It is important, for many reasons, to better understand and address the barriers to female MSME connectivity.[9] The use of mobile and digital technology can provide better access to key business resources, from customer connections to new markets and access to financial services. Online tools also enable women to have the flexibility to address family commitments while in a position to grow their enterprises and income. Moreover, online tools that do not reveal gender may help female micro-entrepreneurs overcome gender bias and social norms that would prevent them from conducting business in the physical world.

The recent GSMA study on micro-entrepreneurs in ten countries in Africa, Asia, and Latin America highlighted the challenges facing female micro-entrepreneurs compared with their male counterparts (see Figures 4, 7, 13, and 16).[10] The study also looks at how mobile is being used and identifies opportunities to address barriers to uptake. In every country surveyed, female awareness and use of mobile internet is lower than male awareness and use, respectively. In addition, awareness is always significantly higher than usage, although awareness of different use cases beyond communicating with customers and suppliers (such as issuing invoices or planning business activities) remains low.

The lack of mobile internet use among female micro-entrepreneurs is due to a multitude of reasons, which are also covered in the report. According to the GSMA research, among female micro-entrepreneurs who own a phone, the main reported barriers to using mobile for business - or using it more - were: not having the right kind of phone and a lack of perceived relevance. This was followed by safety and security concerns, not having the necessary confidence or digital skills, and the affordability of handsets and data. Further, social norms, resulting in family concerns about going online and comfort in being in contact with the opposite gender also contribute to the gender gap in many of the countries. Infrastructure and other access barriers tend to vary more by country than by gender, with a few exceptions, and are more commonly reported by micro-entrepreneurs in rural areas.

There is evidence that COVID restrictions had a greater impact on sectors where female micro-entrepreneurs are more predominant, such as hospitality, retail and informal trade, and these are also sectors that can benefit significantly from connectivity[11]

The gender divide in MSME connectivity is concerning and is an urgent call to take steps to not just increase MSME connectivity but to engage in targeted efforts to close the gender gap while doing so.

We examine each of the barriers in turn.

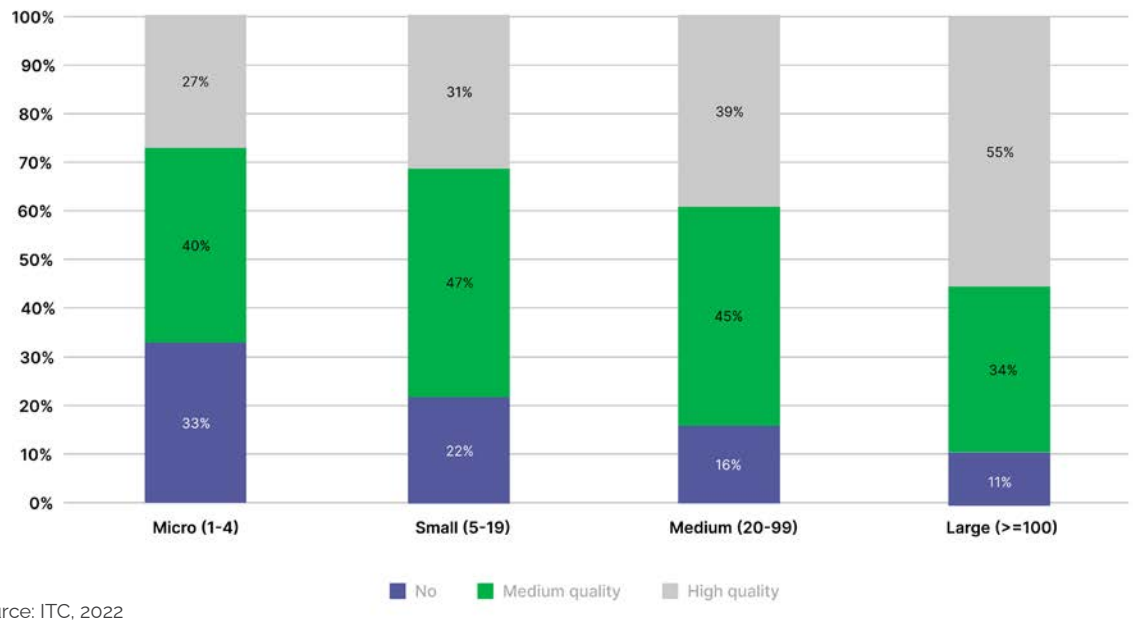
3.2.1 Access to connectivity is necessary for digital MSMEs

The world is more connected than ever before, with 95% of the population living in areas covered by mobile broadband. This shows that barriers other than infrastructure are most critical in addressing the digital divide for MSMEs. Nonetheless, there are still some areas where there are coverage gaps to be filled to ensure universal MSME connectivity, and even within the covered areas, connectivity may be improved.

According to the GSMA, in 2022 this gap in Sub-Saharan Africa impacted 17% of the population on average, in the Middle East and North Africa it was 6%, in East Asia it was 2%, and it was 3% in Latin America and the Caribbean.[12] Uncovered areas are typically characterized by high investment costs and low returns, due to one or more factors including low population density, distance from population centres, difficult topography to deploy networks, and low-income levels of habitants. Regulations may also raise the cost of deploying to these areas. Addressing these gaps is challenging, requiring innovative investment and operational models.

In addition, even in the areas where there is coverage, the quality of connectivity can be an issue for those companies online, as seen in Figure 14. It is difficult to conduct online business without being able to rely on a stable connection. Most of the smaller enterprises report low or medium quality – it is only among the largest enterprises that more than 50 % report high-quality access. Access quality is impacted by the amount of bandwidth available, along with the distance to relevant data centres in or outside the country, the reliability of devices, and the dependability of the power supply, with larger enterprises being better able to afford access to stable power and connectivity than smaller ones.

Figure 14: Please rate the quality of your Internet connection



Source: ITC, 2022

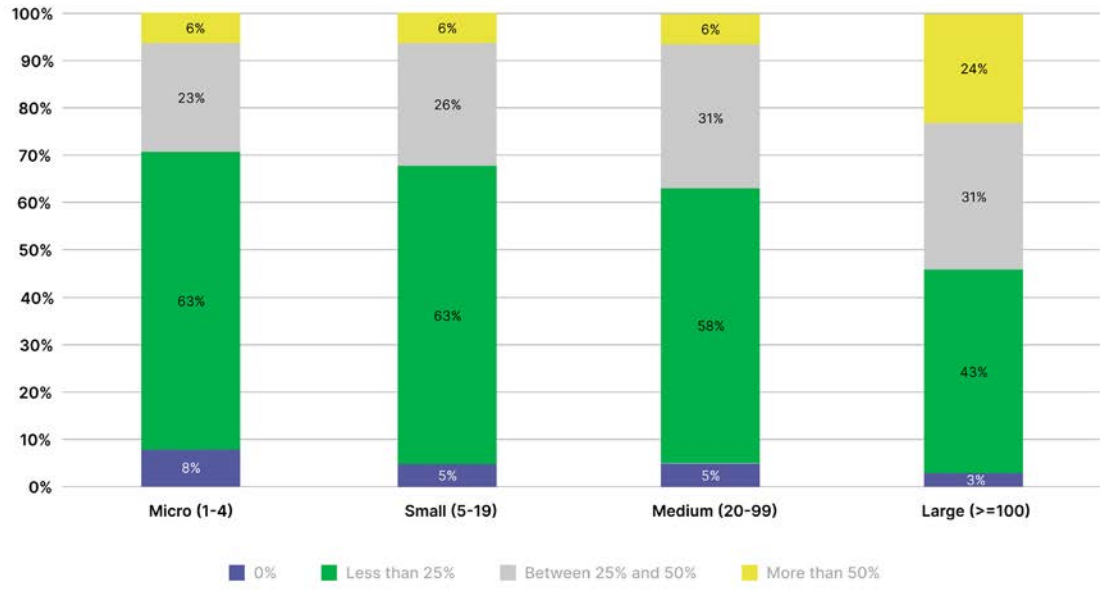
3.2.2 Affordability of connectivity is a barrier to adoption

While an MSME owner or entrepreneur may be able to start a micro-enterprise using their existing connectivity and devices, that may not be sufficient to grow. For instance, a basic inexpensive smartphone may not have enough memory to power a small business, and an online retailer may need a more advanced phone with a better camera to take the quality of pictures needed to sell their goods. As companies grow, and begin to access online platforms - developing their own tools such as a website - their costs begin to grow.

For enterprises that are online, spending on connectivity, including complementary digital technologies, can be significant. In Figure 15 below, the percentage of all firms spending at least 25% of their expenditures on digital solutions goes from 29% for micro-enterprises to 55% for large enterprises. Among large enterprises, 24% spend more than 50% of their expenditures on digital solutions. While it is clear that digital solutions can increase revenues, these levels of expenditure may squeeze other necessary expenditures.

Access to finance to fund connectivity and digital technologies is a significant issue, particularly for up-front costs of equipment. Initiatives that allow equipment to be financed over time can help spread the costs, while accessing cloud services results in operating expenses to access hardware and software, rather than capital expenditures. Further, the use of digital financial services can help enterprises establish a credit history, giving them the ability to borrow to finance further expenses. More broadly, however, access to capital for startups and growing enterprises is an issue in LMICs that goes beyond the need for connectivity.

Figure 15: Of the total operational expenditure of your business, what percentage is spent on digital solutions?

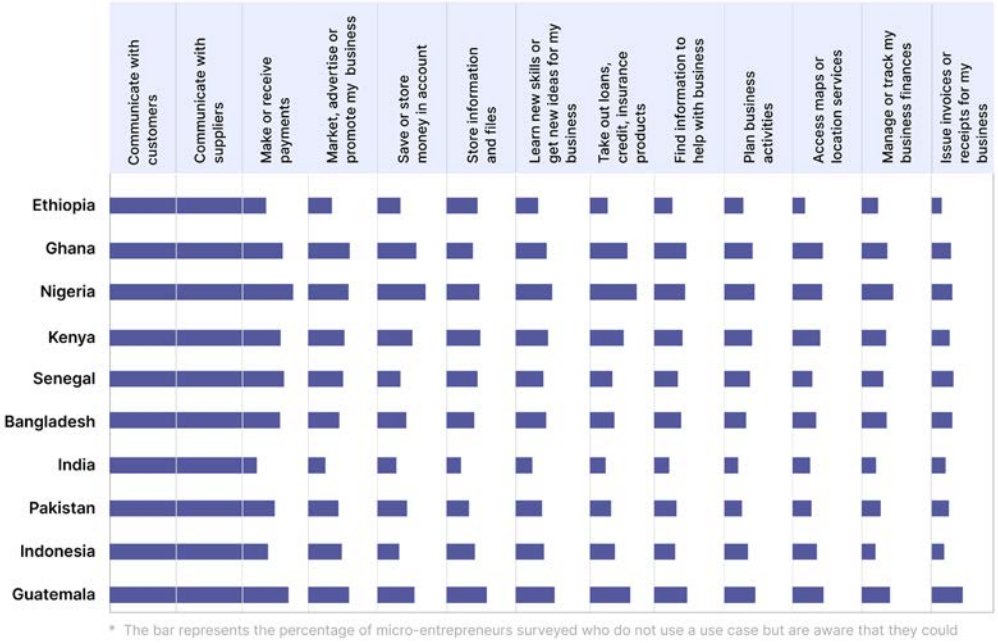


Source: ITC, 2022

3.2.3 MSMEs must be aware of the relevance of connectivity

Connectivity is a means to an end, for anyone going online. For MSMEs, the first step to being willing to make the investments to go online is awareness of the benefits. The GSMA's research shows that for micro-enterprises, awareness of various uses of mobile for business is a challenge, as seen in Figure 16. Women micro-entrepreneurs, in particular, were significantly less likely than men to be aware of the different use cases beyond communicating with customers and suppliers. For example, awareness of using mobile for location services (maps), or for issuing invoices is very low.

Figure 16: Awareness of mobile use cases for business*



Source: GSMA, 2023

Even with awareness, however, connectivity is only relevant if it offers access to at least one of the following, but preferably more: customers, suppliers, remote workers, e-government services, or platforms. The addressable market size is critical for online services such as e-commerce. According to the GSMA, in 2022 in Sub-Saharan Africa only 22% of the population was using mobile broadband; in the Middle East and North Africa 46%; in East Asia 68%, and in Latin America and the Caribbean 62%.[13] Low numbers online limit the accessible market for online goods and services, as well as the likely pool of workers with digital skills (examined further in the next sub-section). Further, while the take-up of digital financial services has been growing, particularly as a result of the restrictions resulting from COVID-19,[14] there is still a preference among many consumers to use cash, which creates risks of theft and limits the incentives for MSMEs to accept digital payments.[15]

As discussed, platforms can help MSMEs overcome a wide variety of barriers to make connectivity relevant. For example, one simple solution to get enterprises started with connectivity is to help companies develop a simple online presence so that they are discoverable on search or map platforms, so they can start seeing the benefits.[16] Going further, according to a recent GSMA report, there are thousands of digital platforms in the world – over

8,000 in South and South East Asia, with a focus on e-commerce, food delivery, and ride-hailing, and 1,500 in Africa with a similar focus, along with a concentration of digital financial services platforms.[17] However, platforms can add to costs due to their high transaction fees, and platform algorithms may favour some enterprises over others, with little transparency. [18]

In terms of e-government platforms, the UN conducts an annual E-Government Survey, which shows that services aimed at businesses are among the most prevalent offered by governments in 2022. For instance, 177 out of the 193 UN Member States allow registration of a new business, 167 allow them to apply for a business license, and 153 allow them to file business taxes online.[19] These measures are part of an Online Services Index (OSI) put together by UN DESA, the results of which are strongly correlated with country income levels, suggesting significant improvement could be made to increase access and efficiency in LMIC countries.[20] E-government services can also help enterprises to formalize.

Box 3: MSME formalization

As noted above, SDG 8.3 encourages the formalization of MSMEs alongside their growth. Why? The ILO provides evidence that informal companies hamper workers' rights, company productivity, and resilience.[21] Formalization can generate benefits such as the ability to access formal funding sources, and with digitalization can provide access to digital financial services for more efficient transactions and access to credit, which is critical for growth. However, formalizing with the government can incur costs and efforts, along with taxes and other potential fees. This can be addressed with e-government services that facilitate registration and lower the cost of compliance, along with targeted incentives to formalize, which can be tiered depending on the size of the enterprise.[22]

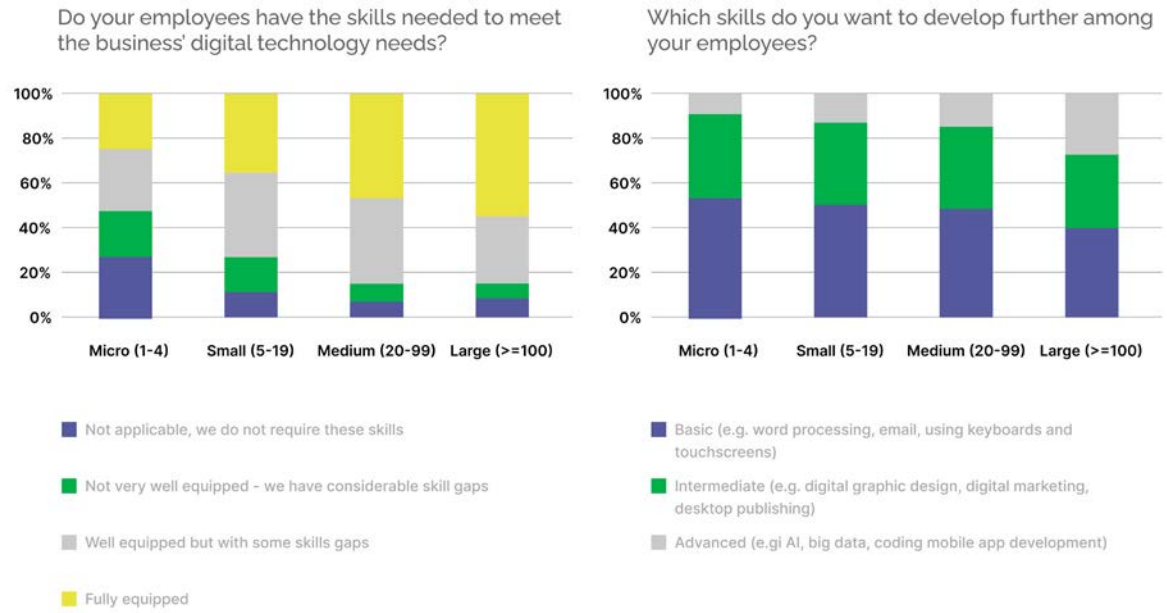
Even if all the enablers are in place, there must be readiness to adopt. This is more likely when the owners and employees are aware of the benefits and have digital skills, or the willingness to learn and adapt to online business, and are convinced about the business case to do so.

3.2.4 Knowledge and skills will help MSMEs leverage connectivity

Skills are needed for MSMEs to fully benefit from connectivity. The starting point is the ability to navigate the Web or use mobile apps, which is relatively basic for all users. However, reaching the full benefits of connectivity requires more advanced skills, such as the ability to create a website, run applications, engage in online marketing, and even develop mobile apps. This is in addition to the 'traditional' business skills needed, which must be well-executed to develop a positive reputation with customers who judge based on online presence and delivery.

Figure 17 highlights the skills gaps, particularly for smaller enterprises, and identifies the skills MSMEs want to develop further among their employees. In addition to current skills gaps, over 90% of all enterprises surveyed expected that their company will need more employees with digital skills over the next five years.

Figure 17: MSME employee digital skills



Source: ITC, 2022

The results of the ITC survey show that the largest companies tend to have better skilled employees, while also wanting to develop their more advanced skills further. This reflects that it may be harder for smaller companies to compete for more skilled workers, and once trained, skilled employees may leave for larger companies. Furthermore, skilled workers can take advantage of online labour platforms to offer their talents to foreign companies.

Training and retaining skilled workers may be one of the most significant barriers to reaping the full benefits of MSME connectivity in LMICs. Training programmes should extend to all workers, of all ages, and require a willingness to learn, confidence, and the ability to overcome the resistance to change on the part of some workers.

3.2.5 Safety and Security must be assured for MSMEs and their customers

It is also important that MSMEs provide safety and security for their customers and suppliers to generate the trust needed to conduct business online. At the most basic level, customers may not be willing to make payments online, resulting in risky 'cash on delivery' orders, for which the payment is only made when the product is delivered, cancelling orders before payment is easy, and the cash is at risk throughout the transaction. Furthermore, a data breach can result in the loss of private data or enable fraud or theft, while a ransomware attack can freeze the company operations, all of which would reduce customer trust and impact the viability of the enterprise.

The challenges of providing safety and security and generating online trust are significant. Online trust is partly based on experience, and partly based on perception. There are few statistics available on cybersecurity in many countries, as not all countries require breaches to be reported, and in any case, all breaches may not be detected. Further, companies may not fully assess their own risks, and even if they do, they may not be able to afford to adequately protect themselves. For MSMEs in particular, cybersecurity is difficult as it relies on trained staff to avoid human error and implement cybersecurity protection, which can be expensive.[23]

Governments can help to generate online trust, with relevant laws that are well-enforced. UNCTAD has developed a Global Cyberlaw Tracker on e-commerce legislation.[24] Consumer protection laws help to generate confidence in e-commerce – of the countries where data are available, 59% have legislation, with Africa and Asia Pacific below this average. With regards to data protection and privacy legislation, 71% of countries have such legislation, but least developed countries lag at 48%. Finally, 80% of countries have cybercrime legislation, including 70% of LDCs. These laws are needed to provide an incentive and framework for additional consumer protection.

The following section provides recommendations for all stakeholders to help overcome the barriers for MSME connectivity and development, in order to provide benefits for the MSMEs, their employees, and economies.

Endnotes

[1] See GSMA: Empowering women micro-entrepreneurs through mobile.

[2] Broadband Commission: 2025 Broadband Advocacy Target 2 - Make Broadband Affordable.

[3] ITU: Affordability of ICT services.

[4] A4AI: The cost of smartphones falls, but they remain unaffordable for billions around the world.

[5] W3Techs: Usage of statistics of content languages for websites.

[6] GSMA: Understanding Women Micro-entrepreneurs' use of Mobile Phones for Business – Evidence from 10 low- and middle-income countries.

[7] ITU: The gender digital divide.

[8] See GSMA: The Mobile Gender Gap Report 2023.

[9] See GSMA: Empowering women micro-entrepreneurs through mobile.

[10] GSMA: Understanding Women Micro-entrepreneurs' use of Mobile Phones for Business – Evidence from 10 low- and middle-income countries. The report is based on a survey in 10 countries (Ethiopia, Ghana, Kenya, Nigeria, Senegal, Bangladesh, India, Pakistan, Indonesia, and Guatemala) and additional qualitative research in four of these countries (Kenya, Ghana, India and Pakistan).

[11] UNCTAD: The COVID-19 Pandemic Impact on Micro, Small and Medium Sized Enterprises and APEC Business Advisory Council: Survey on Digital Solutions used by MSMEs' Women in Response to COVID-19.

[12] GSMA: The State of Mobile Internet Connectivity Report 2022.

[13] Idem.

[14] World Bank: The Global Findex Database 2021.

[15] Dalberg: Small Merchants, Big Opportunity – the forgotten path to financial inclusion.

[16] For instance, Africa118 helps MSMEs develop an online presence, developing a Google business profile to show up on search and maps.

[17] This is based on Tacxn data for January 2021. GSMA: Scaling Digital Platforms Through Partnerships.

[18] ILO: Small goes digital – How digitalization can bring about productive growth for micro and small enterprises. Scrutiny by competition authorities can help to ensure platforms are beneficial for MSMEs.

[19] However, this does not tell the full story, as only 93 enable business registration to be fully completed online, and 81 to apply for a business license. UN DESA: E-Government Survey 2022.

[20] The average OSI in low-income countries is 0.3025, in lower-middle income countries .4562, in upper-middle income countries 0.5725, and in high income countries 0.7542 out of a possible score of 1. Idem.

[21] ILO: Small goes digital – How digitalization can bring about productive growth for micro and small enterprises.

[22] UN DESA: Best Practices: Formalization of Micro-, Small, and Medium-sized Enterprises in Africa.

[23] OECD: Digital Security in SMEs.

[24] UNCTAD: Global Cyberlaw Tracker.

4

Recommendations to Increase MSME Connectivity

Section 4: Recommendations to Increase MSME Connectivity

In this section, we provide recommendations to address barriers to uptake and help achieve Broadband Commission Advocacy Target 3 to increase MSME connectivity. Given the broad range of barriers identified in our MSME connectivity framework, a full range of stakeholders are needed in order to address the challenges.

National governments play a leading role in many of the issues facing MSMEs because many actions to remove barriers and increase digital enablers are at the national level. Connectivity is provided at the national or regional level in each country, under license from the national regulator. Further, government laws, programmes, or services may be needed on a number of issues. These and other activities can be assisted by international organizations, operators, Internet companies, and NGOs, each of which can play a role in helping to create the conditions and remove obstacles to MSME connectivity. At the same time, every initiative should account for the gender digital divide and foster digital inclusion, to close gaps while increasing MSME connectivity overall.

4.1 Recommendations to address barriers to connectivity uptake among MSMEs

The Broadband Commission has been publishing policy recommendations in its annual State of Broadband Reports toward helping to meet its advocacy targets.[1] These recommendations create a foundation for universal connectivity, both to close the connectivity gap and to address the usage gap. The recommendations below go further to focus on MSME connectivity. The Broadband Commission will continue to advocate for the importance of MSME connectivity and for the implementation of these recommendations.

4.1.1 Governments must play a leading role in promoting MSME connectivity

Governments have been taking a number of steps to achieve the goal of universal and meaningful connectivity across the entire MSME connectivity framework. Where governments are not taking action in a particular category, they may be able to learn a good practice from another government that has addressed the issue. This is true for all five of the categories in the MSME connectivity framework.

Access: Where commercial infrastructure deployment is not viable, government support or other financing models are required.[2] The Broadband Commission Advocacy Target 1 is that all countries have a funded National Broadband Plan or strategy to increase connectivity.[3] As of 2022, 155 countries had such a plan, which often also addressed digital inclusion overall. Other recommendations of the Broadband Commission include the development of public access points, and a focus on lowering costs of deployment of connectivity with improved right-of-way regulations, consideration of open access or infrastructure sharing approaches, and new frameworks for spectrum allocations.

Further efforts must be made to ensure an enabling environment for MSMEs. In terms of connectivity, governments can begin to survey MSMEs to determine their needs and issues, and Universal Service and Access Fund (UASF) programmes can focus on fostering connectivity

for MSMEs in addition to individuals. Further to this, governments can help to promote the deployment of Internet exchange points (IXPs) to enable the exchange of local traffic in the country, thereby lowering the cost and increasing the resilience of traffic exchange.[4]

In addition, governments can support the development of data centres to host content and cloud services locally, by enabling a free flow of data and passing and enforcing appropriate privacy and data protection laws. Governments can also adopt 'cloud-first' policies for their own services, to help create demand and signal acceptance of cloud services. Furthermore, access to affordable and reliable energy sources is required to power networks and data centres and ensure that MSMEs have stable connectivity to run their businesses.

Affordability: As noted above, affordability of broadband has been a long-standing advocacy target for the Broadband Commission, and this will directly benefit MSMEs. Lowering the cost of deployment of broadband, and service taxes, will help to lower the price of broadband. Furthermore, the cost of smartphones has recently come into increased focus.[5] Strategies to lower taxes and import duties would help make them affordable. Policies and regulations that enable access to innovative financing models - helping to spread the cost of a device and avoid having to pay a large amount upfront - also help to improve affordability. These considerations are the subject of a recent Broadband Commission Working Group report, and should also extend to all devices needed by MSMEs including personal computers, servers, and other business devices.[6]

These actions may still leave connectivity and devices unaffordable for some enterprises. National Broadband Plans and strategies can help on the demand-side, to make connectivity affordable. For instance, a conditional cash transfer – in the form of a connectivity coupon or a device subsidy – could help get enterprises started and begin to realize the benefits and increase revenues.[7] National Broadband Plans can also help with other demand-side issues, to provide an incentive to adopt broadband, once it is affordable.

Relevance: Many of the platforms and services that make the Internet relevant for users – both individuals and enterprises – are provided by the private sector, including by the domestic MSMEs themselves, who are the target of this report. However, government can help to create an enabling environment for MSMEs to go online and to enable the offering of digital enablers such as digital financial services. Governments can also develop e- government services that enable MSMEs to more efficiently interact with government, which can also provide incentives for MSMEs to formalize, so that they can benefit fully from digital connectivity.[8] Finally, governments can help to increase awareness of the benefits of MSME connectivity, as in the example of Rwanda in the case study below.

Knowledge and Digital Skills: Digital skills training can begin as early as primary school, to help youth go online responsibly, and in turn, they can often help their families go online. The foundation for MSME connectivity is training in basic business skills, upon which digital skills must be built. Digital skills training relevant to MSMEs, including using online business tools as well as teaching students how to develop online applications, can be introduced in secondary and tertiary education, including vocational training. Additional training can take place at public access points, community centres, and in tech hubs, which aim to help startups, many of which are digital companies. Governments should ensure that all training helps to advance gender equality and include all marginalized communities in all regions of their country, to provide equal opportunity.

Safety and Security Governments can help to develop digital confidence with efforts to prevent

cybercrime and cybersecurity incidents. Privacy and data protection laws will help MSMEs develop trust, and consumer protection laws will promote e-commerce. Additional support is required to create awareness and help MSMEs implement and comply with these laws. All digital skills training should help consumers protect themselves online, and help MSMEs protect their online assets and develop trust.

Finally, developing a digital ID for users will enable them to authenticate themselves and protect their digital assets. Likewise, a digital 'economic ID' could help MSMEs to demonstrate their credibility and creditworthiness to grow their businesses, and could be a step toward formalization for informal businesses.[9] Such an ID could also help the MSMEs to verify their identity

Case Study: MSMEs Go Digital[10]

MSMEs Go Digital was a project in Rwanda to support MSMEs in finding digital solutions to address the challenges of conducting business during COVID-19 restrictions. The project was administered by the UN Capital Development Fund, the Rwanda Ministry of ICT & Innovation, and the Rwanda ICT Chamber, and was part of the Government of Rwanda's broader goal of promoting ICT as a driver for growth.

The focus of the project was on MSME retailers, and the goal of the project was to onboard at least 1,000 of these retailers to e-commerce platforms. Actions included subsidizing platform costs that may have kept businesses from going online, promoting awareness of e-commerce through radio, television, and social media campaigns, and developing a network of startups for mutual support and networking. The outcome surpassed its target, with over 1,200 new MSMEs onboarded. The iHuzo Project continues these efforts with significant results, onboarding a further 3,938 MSMEs to platforms.[11]

In exceeding its goal, the project uncovered and addressed several challenges. First, digital literacy was a challenge for MSMEs to be able to work with platforms and market their products online, so the project leveraged a Digital Ambassadors Programme [12] and iWorkers to provide digital skills training to enable MSMEs to get started. Issues included the need to digitize their stock with professional photos of their products and clear product descriptions and labels, and the need to understand digital marketing channels such as Facebook and Instagram.

There is still work to be done. Some MSMEs need more targeted digital skills training to be active online. Further, more users need to be made aware of online sales, and trust in online sales and payments needs to be further developed.

More broadly, governments can help to create markets for their MSMEs. Within the country, this can be achieved by stimulating adoption by individuals and households as potential customers of MSMEs, and also through their own government procurement policies. Further afield, harmonizing regulations on data flows and financial payments with neighbouring countries creates a larger addressable market. This can be achieved by pursuing a single digital market approach within a region such as in Europe,[13] and can be extended to shipments of goods through free trade agreements such as the African Continental Free Trade Area (AfCFTA).[14]

4.1.2 International Organizations assist governments in creating an enabling environment

International organizations play a significant role in issues relevant to MSME connectivity, across three main domains. First, promoting universal and meaningful connectivity, second helping to enable MSMEs to conduct their business online, and third, helping to foster digital enablers. We outline the role of those organizations today and provide some recommendations for future work.

Connectivity: The ITU is the United Nations' specialized agency for information and communication technologies (ICTs), covering many relevant areas of connectivity.[15] The ITU partnered with UNESCO to create the Broadband Commission and act as the secretariat, and more recently launched the Partner2Connect Digital Coalition to advance universal meaningful connectivity, which has already received pledges worth a total of nearly USD 30 billion.[16] The ITU also chaired a Working Group on meaningful connectivity as a follow-up to the United Nations Secretary-General's Roadmap for Digital Cooperation that covered business connectivity.[17] The regional UN bodies are also all addressing digital connectivity issues.[18] Finally, the World Bank has a Digital Development Global Practice[19] which helps governments with regulatory reform and financing for broadband infrastructure, while the International Finance Corporation invests in companies providing digital infrastructure.[20]

Digitalization: The UN Conference on Trade and Development (UNCTAD) has a strong focus on e-commerce with an initiative on e-trade for all and e-trade for women,[21] while the International Trade Centre (ITC) helps to grow trade opportunities for MSMEs in a variety of sectors, including e-commerce, food and agriculture, and goods and services, with a focus on digitalization.[22] In addition, issues of digital trade and e-commerce are being addressed at the World Trade Organization (WTO).[23] The UN Capital Development Fund (UNCDF) works to create inclusive digital economies including MSME programmes such as MSMEs Go Digital in Rwanda (see **case study**).[24] The World Bank works to help small businesses access finance and unlock sources of capital.[25] And finally, the International Labour Organisation (ILO) examines issues impacting workers in the digital economy and the future of work.[26]

Digital Enablers: The Universal Postal Union (UPU) helps postal services to digitalize for cross-border e-commerce and helps to facilitate trade, with the goal in particular of enabling MSMEs in LMICs to export their goods more easily.[27] As post offices are in rural areas, they can provide an important link for unserved MSMEs. The UN Commission on International Trade Law (UNICTRAL) also helps to support e-commerce with a series of model laws on issues such as electronic signatures.[28] Further, the UN Department of Economic and Social Affairs (UN-DESA) helps governments with e-government services and highlights progress through a survey. The UN Development Programme (UNDP) has a Digital in Motion solution to help MSMEs develop digital skills. [29] ITU also has numerous cybersecurity initiatives to help build confidence in the use of ICTs.[30] And

finally, the World Bank has a programme to help governments with digital financial inclusion.[31]

Recommendations: All these international organizations help create the enabling environment for MSMEs to adopt connectivity and digital technologies, and some of them already focus specifically on MSME connectivity. We recommend that these organizations further cooperate and share their activities and best practices, and that their connectivity programmes include a focus on MSMEs if they are not already doing so. Further, while digital connectivity is included as one of the elements of the Global Digital Compact to be agreed upon at the Summit of the Future in September 2024, including a specific reference to MSME connectivity would be beneficial to raise awareness and focus efforts.[32]

There is one further area where international organizations can play a significant role, and that is concerning data gathering. The Partnership on Measuring ICT for Development consists of 14 partner international organizations to improve the availability and quality of ICT data.[33] The Partnership has already identified several indicators for business usage of the Internet, but as noted by UNCTAD, only a few developing countries, and no least developed countries, regularly collect such data.[34] The Partnership can work to help develop definitions of MSMEs and relevant indicators and work with governments to stress the benefits of gathering such data for helping to grow their digital economies and achieve the SDGs.

4.1.3 Companies provide the connectivity and services for MSMEs

Companies provide broadband connectivity, devices to access the Internet, and many of the digital platforms that can assist MSMEs. As such, companies can play a significant role toward increasing MSME connectivity.

Telecom operators are of course the key provider of connectivity in their countries of operation, and many mobile operators offer mobile money solutions. Internet companies offer social media, web hosting, cloud services, and e-commerce platforms. Vendors create the devices and equipment necessary to power the networks and bring users online. Many of these companies work on new technologies to promote access and usage, including satellite access for rural areas,[35] and lower-cost equipment.[36] Other companies provide digital financial solutions including online payments, capital, access to credit, and capacity building.[37] A portion of these companies already work toward achieving universal connectivity and the SDGs. For instance, the GSMA, which unites mobile operators and businesses across the ecosystem, has teams focused specifically on digital inclusion, mobile money, the digital gender gap, and supporting startups.[38]

All companies can further assist MSMEs in LMICs with targeted offerings that are fit for purpose. Telecom operators, both fixed and mobile, can develop offers that target MSME connectivity, with ancillary services such as equipment and hosting that simplify access for MSMEs. At the same time, Internet companies can also provide services geared toward MSMEs. To be optimal, these services would be affordable, provide necessary skills training, and include up-to-date cybersecurity features to help protect MSMEs and their customers. These offerings should aim to help address the challenges facing MSMEs

whose employees may have less digital training or live in areas with lower-quality coverage.

4.1.4 NGOs and the technical community can leverage other stakeholders

NGOs can play a significant role in MSME connectivity, for instance, by helping at the community level. As an example, the Internet Society and the Association for Progressive Communications assist in developing complementary access networks and solutions, to help connect people who reside in areas that remain under- or un-served because of barriers to deploying or improving coverage.[39] This could help to get MSMEs online in those regions, and MSMEs can also develop their own networks at the community level. The Digital Opportunity Trust helped to develop the Digital Ambassadors programme in Rwanda, which is helping train MSMEs as discussed in the **case study** above.[40]

The technical community also has an important role to play. The Internet Engineering Task Force (IETF) which develops core Internet standards, is continuously working on improving cybersecurity, among other technologies, to increase online safety.[41] Standards for new generations of fixed and mobile broadband are also continuously being developed which improve the quality and can lower the cost of delivering connectivity.[42] ICANN developed internationalized domain names (IDNs) so that websites and e-mail addresses can be written in any script, and is working on improving universal acceptance so that they can be fully used, helping MSMEs in relevant countries to reach users with limited or no understanding of English or other languages using Latin scripts.[43]

These and other efforts help to create an enabling environment for MSME connectivity, and the Working Group encourages NGOs to specifically consider how their efforts can target MSME connectivity in their areas of operation.

4.2 Actions must be taken to implement the recommendations

A significant number of efforts have been undertaken toward universal and meaningful connectivity for individuals, and a lot of work has been done to help support MSMEs. However, the existential threat of COVID-19 restrictions for MSMEs highlighted the gaps in addressing MSME connectivity needs that must be filled. This report highlights that more could be done to promote MSME connectivity, given its role in economic growth and achieving the SDGs.

Although the general barriers to MSME connectivity have been identified, research is required to determine the barriers to connectivity for different-sized MSMEs in individual LMICs, to better target government actions. Many organizations within the UN system have examined elements of MSME connectivity, but more efforts could be made to bring together the organizations and coordinate actions. Further efforts made by companies and NGOs to focus on MSME connectivity, in partnership with international organizations and national governments when relevant, will also be helpful.

Finally, this report has highlighted the benefits that platforms can deliver for MSMEs as digital enablers. A platform would also be beneficial to highlight the work that has already been conducted on MSME connectivity within the UN system, by governments, companies, and NGOs. It could highlight data sources tracking online connectivity, reports on MSME connectivity by region, and studies highlighting different critical areas, including connectivity, digital financial services, the role of platforms, government best practices, and solutions to issues facing MSMEs,

including cybersecurity. This would act as a one-stop shop for information, to provide for cross-organization learning, the development of partnerships, capacity building for national governments, and training for MSMEs.

Endnotes

[1] Broadband Commission: Policy Recommendations.

[2] See Broadband Commission Working Group: 21st Century Financing Models for Bridging Broadband Connectivity Gaps.

[3] Broadband Commission: Make Broadband Policy Universal.

[4] See Internet Society: Internet Exchange Points.

[5] See A4AI: Device Pricing 2022, and GSMA: Making internet-enabled phones more affordable in low-and middle-income countries.

[6] Broadband Commission: Strategies Towards Universal Smartphone Access. See also World Bank: Affordable Devices for All: Innovative Financing Solutions and Policy Options to Bridge Global Digital Divides.

[7] For instance, cash transfers were part of the package to help micro and small businesses in Indonesia address the COVID-19 crisis. UN Women: Leveraging Digitalization to cope with COVID-19 – An Indonesia Case Study on Women-Owned Micro and Small Businesses.

[8] ILO: Small goes Digital.

[9] GSMA: Economic Identities for Small Business Owners – Insights from Nigeria.

[10] Interviews with Jessica Massie, Financial Capability Specialist, UN Capital Development Fund on 16 March 2023 and Angelos Munezero, Public Sector Digitization Analyst, Rwanda Ministry of ICT & Innovation on 24 March 2023. See also UNCDF: MSMEs Go Digital: Expanding E-commerce in Rwanda during COVID-19.

[11] Access to Finance Rwanda: iHuzo Project.

[12] MINICT: Digital Ambassadors Programme.

[13] European Union: EU Digital Strategy.

[14] Cross-border payments will be a key element of the AfCFTA, according to WEF: Why paytech is the key to unlocking Africa's new free trade zone.

[15] ITU: Key Areas of Action.

[16] ITU: Partner2Connect Digital Coalition.

[17] United Nations Office of the Secretary-General's Envoy on Technology: Achieving universal and meaningful connectivity – Setting a baseline and targets for 2030.

[18] These are the UN Economic Commission for Africa (ECA), UN Economic Commission for Europe (UNECE), UN Economic and Social Commission for Asia and the Pacific (ESCAP), and the UN Economic Commission for Latin America and the Caribbean (ECLAC).

[19] World Bank: Digital Development.

[20] IFC: IFC's Impact in Digital Infrastructure.

[21] UNCTAD: eTrade for all initiative.

[22] ITC: Digital transformation and e-commerce.

[23] WTO: Digital technologies and trade.

[24] UNCDF: Sustainable Development Goals.

[25] World Bank: Small and Medium Enterprises (SMEs) Finance.

[26] ILO: Digital labour platforms.

[27] UPU: Digital Services.

[28] UNICTRAL: Electronic Commerce.

[29] UNDP: Digital in Motion.

[30] ITU: Cybersecurity Activities.

[31] World Bank: Financial Inclusion.

[32] UN Office of the Secretary-General's Envoy on Technology: Global Digital Compact.

[33] ITU: Partnership on Measuring ICT for Development.

[34] UNCTAD: UNCTAD data highlights need to strengthen business ICT statistics.

[35] See for instance Intelsat: Bridging the Connectivity Gap to a Better World.

[36] See, for instance, Telecom Infra Project: OpenRan.

[37] Visa: Visa to Digitally Enable 50 Million Small Businesses to Power Recovery in Communities Worldwide; Mastercard: Mastercard launches Strive – a global small business initiative to accelerate economic recovery.

[38] See for example GSMA and GSMA Mobile for Development

[39] Internet Society: Connecting the Unconnected and Association for Progressive Communications: Connecting the Unconnected: Supporting community networks and other community-based connectivity initiatives.

[40] Digital Opportunity Trust: What We DO Rwanda.

[41] IETF: Security & privacy.

[42] See, for instance, 3GPP: About 3GPP.

[43] ICANN: Internationalized Domain Names.

Conclusion

Increasing MSME connectivity in LMICs is an important advocacy target of the Broadband Commission that would benefit from increased efforts on the part of all Internet stakeholders. MSMEs form the largest share of their economies and are critical to helping to achieve the SDGs. Digital technologies are also critical to helping to achieve the SDGs. Thus, increasing the number of MSMEs that are online and able to fully benefit from connectivity will not just benefit those companies, but also deliver broader social and economic benefits.

The journey of digital connectivity for MSMEs

Digital connectivity for MSMEs is a journey that can depend not only on the size of the company, but its awareness of the benefits, and willingness to transform. The smallest micro-enterprises can use their owners' or employees' personal connectivity, devices, and services such as e-mail. These companies benefit from the universal and meaningful connectivity that is the focus of UN agencies including ITU, which is the starting point for MSME connectivity.

The framework for universal connectivity includes making access available, affordable, and relevant, teaching necessary digital skills to use it, and making access safe and secure. Larger enterprises require higher-speed connectivity, more advanced devices, access to digital enablers and the skills to use them, and tools to protect their online business and users' data and privacy, all of which are continually evolving. Achieving full connectivity for MSMEs is a journey, not a destination.

We each have a role to play

All stakeholders have a role to play in increasing MSME connectivity and delivering the enabling environment in order to facilitate the journey to advanced digital connectivity. Networks must be deployed and upgraded, they must be reliable, and broadband offers must be targeted at MSMEs. Any fees on connectivity and devices must be balanced against the benefits of connectivity, and subsidies should be considered to help enterprises go online when needed. Digital enablers should be supported to help create services to help MSMEs, and relevant skills training should be supplied. Finally, all these efforts must be inclusive, to close the digital gender divide and provide opportunities for all marginalized communities to participate in the digital economy.

Building awareness and strategic action toward MSME connectivity

There are already studies and programmes to help to achieve the goal of MSME connectivity. However, gaps remain, with few policies that specifically address the digital inclusion of MSMEs. First, more data is needed on MSME connectivity to be able to measure the status quo and track progress, including further study of the barriers facing MSMEs, to help remove them. Second, many of the efforts would benefit from coordination, within groups of stakeholders and among different groups, to learn from best practices and avoid duplication. And last, but not least, awareness of the importance of MSME connectivity should be raised, to drive a sustained effort to fill the gaps.

The Broadband Commission intends this report as a means to create awareness and inspire action to address the issue of MSME connectivity. The issue should be highlighted in the advocacy to reach the sustainable development goals; in the consultations leading up to the Global Digital Compact; and in actions by all stakeholders to achieve universal and meaningful connectivity.

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