

Understanding women micro-entrepreneurs' use of mobile phones for business

Evidence from 10 low-
and middle-income
countries





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Definitions



MICRO-ENTREPRENEUR

A self-employed individual working either full-time or part-time, with fewer than nine employees (paid or unpaid).¹ Micro-entrepreneurs may work formally or informally.



MOBILE GENDER GAP

The gender gap in mobile phone ownership and mobile internet use is calculated using the following formula:

$$\text{Gender gap in ownership / use (\%)} = \frac{\text{Male owners / users (\% of male population)} - \text{Female owners / users (\% of female population)}}{\text{Male owners / users (\% of male population)}}$$



MOBILE OWNER

“Mobile phone owner” and “mobile owner” are used interchangeably in this report to mean a person who has sole or main use of a SIM card or mobile phone that does not require a SIM and uses it at least once a month. The vast majority of SIM owners also have sole or main use of a handset (a median of 93% across the sample countries, ranging from 87% to 98%).



FEATURE PHONE OWNER

A mobile owner that has sole or primary use of a feature phone. A feature phone is an internet-enabled mobile phone with a small screen and basic keypad with several letters per button. A feature phone may have some preinstalled apps but does not have the ability to download apps from an online app store, such as Google Play or the App Store. Smart feature phones are a sub-group of feature phones and were not recorded as a separate category in the GSMA Consumer Survey.



SMARTPHONE OWNER

A mobile owner that has sole or primary use of a smartphone. A smartphone is a mobile phone with a touchscreen display, an advanced operating system (Android or iOS) and the ability to download apps from an online app store, such as Google Play or the App Store.

1. Khrystyna, K., et al (2010) [Micro, Small, and Medium Enterprises around the World: How Many Are There, and What Affects the Count?](#) IFC, World Bank Group.



MOBILE INTERNET USER

A person who has used the internet on a mobile phone at least once in the past three months. Mobile internet users do not have to personally own a mobile phone. Therefore, they can be non-mobile phone owners who use mobile internet by accessing it on someone else's mobile phone.



MOBILE-FOR-BUSINESS USER

A mobile-for-business user is a micro-entrepreneur who reports having used a mobile phone to support their business. This could be by using their own mobile phone or borrowing someone else's. Business use includes mobile use by both micro-entrepreneurs themselves and by any of their employees to support the business.



MOBILE MONEY

A mobile money service enables a user to transfer money and make and receive payments using a mobile phone.

- The service must be available to the unbanked, for example, people who do not have access to a formal account at a financial institution.
- The service must offer a network of physical transaction points, which can include agents (outside of bank branches and ATMs) that make the service widely accessible to everyone. The agent network must be larger than the formal outlets of the mobile money service.
- Mobile banking or payment services (such as Apple Pay and Google Pay) that offer the mobile phone as just another channel to access a traditional banking product are not included.
- Payment services linked to a traditional banking product or credit card, such as Apple Pay, Google Pay and Samsung Pay, are not included.



Introduction



Self-employment is the leading source of livelihoods in low- and middle-income countries (LMICs). The World Bank estimates that more than half (54%) of all workers in LMICs are self-employed,² with micro-, small- and medium-enterprises (MSMEs) employing 91% of private sector workers in lower middle-income countries and 81% in low-income countries. Most micro-enterprises³ operate informally with few or no employees, particularly those owned by women. In LMICs, female micro-entrepreneurs contribute substantially to household income and well-being, their communities and the national economy.^{4,5} Yet, they face greater barriers than male micro-entrepreneurs when it comes to accessing opportunities and resources to start, manage and grow their business.^{6,7} Gendered social norms and structural inequalities exacerbate these and other barriers to women's equal participation in the economy and society.

Empowering women micro-entrepreneurs can have significant economic and social impacts, from increasing incomes to creating jobs to strengthening household resiliency. Mobile phones can be a source of economic and social empowerment by providing access to information, services and resources that many women would not be able to access easily otherwise. Mobile phones are the primary way most people in LMICs connect to the internet, especially women.^{8,9} At the end of 2022, more than 3.4 billion people in LMICs were accessing the internet on a mobile phone,¹⁰ accounting for 85% of broadband connections that year.^{11,12}

Mobile money and digital financial services are also driving access to financial services. For micro-entrepreneurs, mobile technology can enable them to reach more customers, work more efficiently, access secure digital financial services and find the information they need more easily and from anywhere. For women, the use of a mobile phone can also enable them to combine responsibilities

more flexibly and efficiently, such as unpaid care and household work with business activities.

The use of mobile phones by women micro-entrepreneurs can lead to higher incomes and improved household welfare. Research in Tanzania, for instance, found that the use of smartphones and feature phones in business and mobile money transactions among poor women was correlated with a 16% to 24% increase in household consumption.¹³ In a pilot initiative in Ghana, 67% of participating women micro-entrepreneurs reported that using a mobile phone for business improved their profits by an average of 49%, and smartphone users had a larger profit increase compared to the total sample.¹⁴ The importance of connectivity for micro-entrepreneurs became clear during the COVID-19 pandemic, when selling online helped women micro-entrepreneurs in LMICs be more resilient, not only by keeping their businesses going but also by sustaining or increasing profits.¹⁵

“I can't stay without a phone. This is something that I am used to having and using. So some operations will not happen if I don't have it, I won't be able to even call my clients.”

**Female micro-entrepreneur,
urban, Nairobi, Kenya**

“Mobile is essential to running my business ...[if phone was taken away] that would be terrible. I would not be able to run my business as usual.”

**Female micro-entrepreneur,
rural, Nakuru, Kenya**

2. World Bank. (2021). [“Self employed, total \(% of total employment\) \(modelled ILO estimate\) - Low & middle income”](#).
3. According to the World Bank, micro-enterprises are defined as: 1-9 employees including the business owner. However, the local definition varies from country to country and is based not only on the number of employees, but also other variables such as turnaround and assets. See: Khrystyna, K., et al. (2010). [Micro, Small, and Medium Enterprises around the World: How Many Are There, and What Affects the Count?](#) IFC and World Bank Group.
4. Ge, T., et al. (2022). [“Women's Entrepreneurial Contribution to Family Income: Innovative Technologies Promote Females' Entrepreneurship Amid COVID-19 Crisis”](#). *Frontiers in Psychology*, 13, 828040.
5. GSMA. (2023). [Empowering Women Micro-entrepreneurs through Mobile](#).
6. UN-DESA. (2020). [Micro-, Small and Medium-sized Enterprises \(MSMEs\) and their role in achieving the Sustainable Development Goals](#).
7. Sawhney, S. et al. (July 2022). [“No Small Business: A Segmented Approach to Better Finance for Micro and Small Enterprises”](#). CGAP Focus Note.
8. GSMA. (2023). [The Mobile Gender Gap Report 2023](#).
9. For example, in all 12 LMICs surveyed in the GSMA [Mobile Gender Gap Report 2023](#), female internet users were more likely than male users to access the internet exclusively via a mobile phone.
10. GSMA Intelligence, Q4 2022.
11. International Telecommunication Union (ITU) estimates for 2022.
12. GSMA. (2023). [The Mobile Gender Gap Report 2023](#).
13. Roessler, P. et al. (2018). [Mobile Phone Ownership Increases Poor Women's Household Consumption: A Field Experiment in Tanzania](#).
14. NetHope. (8 July 2022). [“5 learnings for connecting women to smartphones”](#).
15. Center for Financial Inclusion/ACCION. (2022). [Digital Adoption of MSMEs during COVID-19](#).

However, across LMICs, women are still 7% less likely than men to own a mobile phone, 17% less likely to own a smartphone and 19% less likely to access the mobile internet. Women are also less likely than men to own a mobile money account.¹⁷

In this report, we focus on women's use of mobile phones for business and the mobile gender gaps experienced by women micro-entrepreneurs. For example, even when women micro-entrepreneurs own a mobile phone, they may not be aware of the ways in which it can be used for business. They may also lack the knowledge, digital skills and confidence to maximise the benefits of technology for the day-to-day management and potential growth of their business. Furthermore, the type of handset they own may not allow them to meet their business needs. For instance, their mobile phone may not be able to access the internet or have a good enough camera to share photos of merchandise with customers.

There is currently little data on the use of mobile phones by women micro-entrepreneurs, the challenges they face using mobile services or the opportunities to reach them with mobile products and services that support their businesses and accelerate income-generating activities and economic empowerment. This report aims to help fill this knowledge gap by providing data and insights on the use of mobile phones among women micro-entrepreneurs and the barriers they face in 10 LMICs.

This report outlines:

- ➔ The factors driving uptake and use of mobile for business among micro-entrepreneurs

- ➔ The mobile gender gaps among micro-entrepreneurs

- ➔ The current use of mobile for business by women micro-entrepreneurs

- ➔ The barriers to mobile use for women micro-entrepreneurs

- ➔ Opportunities to address the barriers and better reach women micro-entrepreneurs with mobile

Methodology

This report is based on quantitative face-to-face research in 10 LMICs across Asia, Africa and Latin America,¹⁸ as well as qualitative research in four countries (Kenya, Ghana, India and Pakistan). The research was conducted with both male and female micro-entrepreneurs, including those who currently use mobile phones to support their business and those who do not.

Micro-entrepreneurs were surveyed on their mobile phone use for business and the barriers they face as part of the annual quantitative GSMA Consumer Survey. This nationally representative survey of the adult population (aged 18 and over) was conducted between September and December 2022. The questions for micro-entrepreneurs were asked to any respondent who reported being self-employed (either full-time or part-time) and had no employees or fewer than nine (paid or unpaid).

An additional sample of micro-entrepreneurs was surveyed in Kenya, Ghana, India and Pakistan to support a deeper analysis of those markets. To minimise sample bias, the natural fall-out of micro-entrepreneurs in the Consumer Survey was used to weight the additional sample according to the gender and urbanity of micro-entrepreneurs. The total quantitative sample across the 10 survey countries was 7,989 micro-entrepreneurs (4,594 men and 3,395 women).

While we endeavoured to ensure that the micro-entrepreneurs surveyed were as nationally representative as possible, the lack of census data or other third-party data on micro-entrepreneurs means that it is not possible to validate. As such, the findings should be interpreted as representative of the sampled micro-entrepreneurs in each country.

Qualitative research in Ghana, Kenya, India and Pakistan was conducted to better understand the lived realities of micro-entrepreneurs and their use, or lack thereof, of mobile technology to support their business, address challenges and achieve their aspirations. This research was conducted with micro-entrepreneurs aged 18 or over who used a mobile phone for business (either one they owned or borrowed from someone else) and included 286 micro-entrepreneurs, plus interviews with gatekeepers¹⁹ and in-country experts on the mobile use and digital inclusion of women micro-entrepreneurs.

A detailed methodology is included in Appendix 1.

17. GSMA. (2023). [State of the Industry Report on Mobile Money 2023](#).

18. Ethiopia, Ghana, Kenya, Nigeria, Senegal, Bangladesh, India, Pakistan, Indonesia and Guatemala.

19. In this study, "gatekeepers" are defined as individuals (usually male or older family members, such as parents, husbands or in-laws) who may restrict or enable women's economic lives.

Key findings

1. **Women micro-entrepreneurs are less likely than men to use a mobile phone for business, even when they use one in their personal lives.** Women micro-entrepreneurs are also less likely than men to own a mobile phone, own a smartphone and use mobile internet and digital financial services, including mobile money. Even when women micro-entrepreneurs use a mobile phone for business, they tend to use it for fewer business activities than their male counterparts.
2. **Most micro-entrepreneurs own a mobile phone, but in certain countries a notable proportion of women borrow one for business use.** This was the case in Ethiopia, Pakistan and India. Overall, India has the highest rate of phone borrowing, with 25% of female micro-entrepreneurs borrowing a mobile phone for business compared to 19% of male micro-entrepreneurs.
3. **While a micro-entrepreneur’s “business drive” is the most important determining factor in whether and to what extent they use a mobile phone for business, women micro-entrepreneurs face more constraints to realising that drive.** Not only do gendered social norms and structural inequalities limit women’s access and use of mobile phones, but also their freedom and opportunities as a micro-entrepreneur more generally.
4. **The use cases driving business use of a mobile phone among micro-entrepreneurs are: communicating with customers and suppliers; marketing or promoting products or services; learning new skills or finding inspiration; and using digital financial services, particularly making and receiving payments and storing or saving money.** These are typically the initial and most common ways that micro-entrepreneurs use mobile for business. Yet, even for these use cases, there are gender gaps.
5. **Making network calls is the main way that micro-entrepreneurs in all the survey countries use a mobile phone to communicate with customers and suppliers, especially women. Other channels, including instant messaging and video calls, are used significantly less.** Making network calls is also the most common way that micro-entrepreneurs use mobile for marketing, advertising and promoting their business in most of the survey countries.
6. **All surveyed micro-entrepreneurs were aware that a mobile phone could be used to communicate with customers and suppliers, but a substantial proportion were unaware of other ways a mobile phone could be used to power their business, especially women.** In nine of the 10 survey countries, women micro-entrepreneurs are less likely than men to be aware of every mobile-related business use case beyond communication. Even among micro-entrepreneurs who already use a mobile phone for their business, gender gaps are evident.
7. **The main barriers preventing micro-entrepreneurs who own a mobile phone from starting to use it for business or from using it more are: not having the right kind of phone; preference for cash over digital transactions; lack of confidence or digital skills; and safety and security concerns.** While these barriers were similar for both male and female micro-entrepreneurs, women reported them more than men. For women, these barriers are compounded by social norms and structural inequalities.
8. **Mobile has the potential to help women micro-entrepreneurs circumvent some of the social norms that constrain them.** For instance, mobile phones can enable them to contact customers and pay suppliers remotely from home, which helps them balance household responsibilities and business needs without revealing their gender, location or identity. In contexts where women cannot move freely and unaccompanied, mobile phones provide a way to get jobs done, learn new skills or browse the internet for new ideas and inspiration.
9. **Most micro-entrepreneurs who use a mobile phone for business report that they could either not run their business without one or would find it more difficult to do so, although women are less likely than men to report this.** Encouragingly, once women micro-entrepreneurs start using a mobile phone for business, they are likely to use it for a range of business activities. This highlights the value of mobile for business and the importance of addressing the barriers preventing women micro-entrepreneurs from using mobile for business and realising this opportunity.

1. Key factors influencing the use of mobile for business



Women micro-entrepreneurs are not a homogeneous group. They have diverse motivations, capacities and challenges. To support their use of mobile for business, it is necessary to better understand the needs and challenges different segments of micro-entrepreneurs face to adopting mobile technology for business. This section outlines the key factors driving mobile uptake and use for business among micro-entrepreneurs, as well as the business needs that can prompt them to start using a mobile phone for business.

1.1 Business drive

The business drive of a micro-entrepreneur is a key factor influencing the use of mobile for business, but this drive can be curtailed by socio-economic constraints, especially for women. There are several useful frameworks for segmenting micro-entrepreneurs, including by business orientation,²⁰ stage of business growth²¹ and entrepreneurial mindset.²² Several factors undoubtedly influence whether a micro-entrepreneur starts using a mobile phone for business, including business sector, location and size, and their digital skills, age and other characteristics. However, our qualitative research found that business drive²³ was a significant contributor to their appetite to learn digital skills and embrace new mobile solutions for business. Micro-entrepreneurs with a higher business drive tend to use mobile more, and to be more open to new mobile-related innovations and services, than those with lower business drive.

However, business drive is about more than just ambition and is shaped by a range of factors. In our qualitative research, nearly all micro-entrepreneurs reported wanting to earn more income and be successful. For women micro-entrepreneurs, financial independence and supporting their children's education were important motivations for their business to do well. Many micro-entrepreneurs also recognised ways in which they could achieve their aspirations, such as buying better equipment

and tools, moving to larger commercial premises or hiring more employees. However, their ability to realise this ambition was often affected by a range of constraints, including limited resources, capacities and opportunities. Therefore, it is important to understand that one's level of business drive is not fully within their control, particularly for women.

For women micro-entrepreneurs, structural inequalities and social norms, including constraints imposed by gatekeepers, can limit their business drive and lead to a range of challenges, from lower levels of education and skills, to lack of mobility, the need to balance business and domestic responsibilities and lack of access to finance. Women micro-entrepreneurs may also face prejudice and may not be taken seriously, for example, in negotiations with suppliers.

All this can have a negative impact on women's time, freedom and capacity to grow their business and access the resources and opportunities to do so. Our qualitative research found that social norms and structural inequalities often cut short their ambitions and capacities to develop or exhibit high business drive. In Pakistan, for example, many women micro-entrepreneurs had to work late at night as their days were occupied by childcare, cooking, cleaning and hosting family guests. Due to modesty and mobility concerns, they also had to rely on the availability of male family members to transport their goods or accompany them to the market.

However, there were also women who were able to challenge restrictive social norms and drive their businesses and mobile usage forward by convincing gatekeepers to support them and refusing to comply with community-ascribed roles. Using a mobile phone can also help women micro-entrepreneurs circumvent some of the social norms that constrain them, for instance, by contacting customers and paying suppliers remotely from home while managing household responsibilities and business needs without revealing their gender, location or identity.

20. Salyanty, A. and Wahyudi Askar, M. (March 2022). *Economic Resilience and Digital Adoption among Ultra Micro Entrepreneurs in Indonesia*. Women's World Banking.

21. Sawhney, S. et al. (July 2022). "No Small Business: A Segmented Approach to Better Finance for Micro and Small Enterprises". *CGAP Focus Note*.

22. Ibid.

23. A micro-entrepreneur's business drive was measured based on several criteria: attitude towards their job, business goals, attitude towards barriers and other factors.



“My brother used to say, “No, don’t [work].” But he did not contribute his earnings to the household. I asked my parents and they said, “People will say that we are living off our daughter’s earnings.” But then I told my father that nothing will happen as I won’t go outside and students will come to our house.”

Female micro-entrepreneur, urban, Lahore, Pakistan

“People raise negative comments so if you’re not steadfast and resilient you won’t continue your journey. In the start you won’t be successful, so you need to be committed and consistent.”

Female micro-entrepreneur, urban, Lahore, Pakistan

Three broad types of micro-entrepreneurs emerged from our qualitative research. These varied by their level of business drive and the constraints they faced:²⁴

- **Subsistence-focused:** Aims to meet essential needs only to make ends meet
- **Business as usual:** Interested in advancing their business but constrained by multiple challenges
- **Highly driven:** Aims to grow their business and can exploit new opportunities with fewer constraints

Table 1 illustrates the characteristics of micro-entrepreneurs in each category, including the typical level of drive, the constraints they face and their use of mobile for business.²⁵ Micro-entrepreneurs with higher business drive tend to experience fewer constraints than those with lower drive and, therefore, are better able to use mobile for business, see the value in it and reach more customers, access resources and work more efficiently. Those with high business drive also tend to use mobile phones in more diverse ways to support their business.

24. A micro-entrepreneur’s business drive was measured based on several criteria: attitude towards their job, business goals, attitude towards barriers and other factors.

25. Although Table 1 captures the characteristics of many micro-entrepreneurs, the relationship between “drive” and “constraints” is not always linear.

Table 1
Segmentation of male and female micro-entrepreneurs by business drive

		Drive
Constraints		
Subsistence-focused	Business as usual	Highly driven
<ul style="list-style-type: none"> - Least motivated by their business; some may have inherited the business, are necessity-driven or have no alternative to self-employment - Likely to have lower business drive - Typically experience greater barriers to starting/running a business and using a mobile phone (e.g. due to lower education and income) - Learning how to use a mobile phone for business or doing things differently often feels too difficult 	<ul style="list-style-type: none"> - Likely to have strong business drive but face constraints to growth - Most aspire to grow their business - Often enthusiastic about their business and feel validated from doing a good job - Willing to explore new mobile solutions but face numerous barriers - High potential for increased use of mobile for business due to interest in mobile phones and learning 	<ul style="list-style-type: none"> - Find and exploit new opportunities for income and growth - Tend to face fewer constraints to growing their business - Women in this group tend to be from more liberal families and/or have gatekeeper support - Often see mobile as foundational to business success
Typical use of mobile for business among male and female micro-entrepreneurs		
<ul style="list-style-type: none"> - Limited mobile use for business - In some cases, smartphones are not affordable nor seen as a priority, particularly by women micro-entrepreneurs - Tend to have limited digital skills to use a mobile phone for personal or work reasons - Business use of mobile is likely limited to basic functions (e.g. communication) - Typically use a mobile phone to make or receive a call and, for some, WhatsApp or voice search to play a YouTube video 	<ul style="list-style-type: none"> - Moderate use of mobile for business, often fulfilling some simpler needs (e.g. communication, simple marketing, YouTube for skills development, making/receiving payments) - May have some digital skills for personal mobile use, but are less likely to apply these to their business - Struggle to advance their mobile usage - Typically use mobile to make or receive a call and SMS; use WhatsApp with images; search social media for business ideas or trends; watch YouTube videos; and, for some, to make and receive digital payments 	<ul style="list-style-type: none"> - Use mobile for business in multiple ways and more confidently (e.g. marketing their business on social media, making and receiving payments) - More likely to proactively seek out digital trainers to teach them new skills if needed - Are enthusiastic to learn more sophisticated ways to optimise and grow their business

1.2 Business needs driving mobile use

While several factors influence the uptake and use of mobile phones for business, including business drive, it is important to understand the business needs of micro-entrepreneurs and how they use mobile to support them.

The quantitative and qualitative research revealed 12 common business needs. Micro-entrepreneurs most commonly use mobile phones to meet five of these needs (see Figure

1), which drive most of their mobile usage. Although the quantitative research found that business needs that were met by using a mobile phone varied by sector, business type and other characteristics, and that some activities may be performed more frequently than others or not at all, the five starred needs in Figure 1 were generally applicable to micro-entrepreneurs. Examples of business activities that meet each of these business needs are provided in Table 2.

Figure 1
The Wheel of Business Needs



☆ = 'Starter' and most common need for mobile use

Certain business needs are more commonly met using a mobile phone than others. These are: communicating with customers, employees and suppliers; marketing and showcasing products or services; developing new skills and finding inspiration; and using digital financial services. The qualitative research found that these tended to be the “starter needs” or on-ramps to mobile use for business. They were also the most-reported activities among micro-entrepreneurs in the quantitative research in all survey countries. However, mobile use for

business differed quite substantially by gender, country, business type and other demographic factors (see *Use of mobile for business* section). Overall, communication is the main way micro-entrepreneurs use mobile to support their business. In contrast, given that most micro-entrepreneurs in LMICs operate informally, very few use mobile phones to engage with government services or pay taxes.

Table 2

Examples of activities performed using a mobile phone that meet business needs

Business need	Business activity				
Buy and sell	Communicate, coordinate and align with customers and employees <ul style="list-style-type: none"> - Communicate with clients (e.g. orders, pick-up times) 	Communicate with suppliers and obtain supplies <ul style="list-style-type: none"> - Check prices with suppliers - Purchase goods online 	Market or showcase products <ul style="list-style-type: none"> - Market and sell goods and services via online platforms - Offer deals and promotions 	Record commercial information <ul style="list-style-type: none"> - Record appointments, customer details, stock levels - Record sales information (e.g. kilograms sold and price information) 	Transport goods or people <ul style="list-style-type: none"> - Deliver goods to customers - Travel to sales premises or customer
Knowledge	Develop skills and find inspiration <ul style="list-style-type: none"> - Learn about new trends and innovations (e.g. hair designs) - Learn and develop new skills 	Find information and support <ul style="list-style-type: none"> - Gather functional information (e.g. weather information) or information about competitors - Search for help or support 			
Money	Make and receive payments <ul style="list-style-type: none"> - Receive client payments - Pay suppliers and employees 	Manage and save money <ul style="list-style-type: none"> - Save money - Track past and upcoming payments, profit and loss 	Obtain and repay funding/ insurance <ul style="list-style-type: none"> - Seek and repay money for new business activities - Insure business assets and operations 	Define pricing <ul style="list-style-type: none"> - Calculate pricing strategy or adjust pricing 	
Compliance	Engage with government and taxes <ul style="list-style-type: none"> - Register the business - Register and pay tax 				

2. The journey to mobile use for business



The research revealed four main stages in mobile adoption and use for business among micro-entrepreneurs (see Figure 2):

- 1) Owning a mobile phone
- 2) Using a mobile phone for personal reasons
- 3) Using a mobile phone for business
- 4) Using a mobile phone in more diverse ways to support their business²⁶

While mobile ownership is usually the first step in using a mobile phone for business, it is not a prerequisite since in some countries many micro-entrepreneurs borrow someone else's mobile phone for personal and/or business use, especially women.²⁷ However, owning their own

device gives micro-entrepreneurs more freedom and autonomy over when and how much they use it, and enables them to derive the full benefits of mobile.²⁸

The second stage is using a mobile phone in a personal capacity. Without owning, or at least accessing, a mobile phone for personal use it is unlikely that a micro-entrepreneur would start using one for business. Personal use of a mobile phone typically includes communicating with family and friends, such as calling or texting, instant messaging, sharing content on social media and perhaps listening to music or watching free videos online.

Figure 2

Journey to mobile use for business²⁹



The third stage is business use, when micro-entrepreneurs start using their mobile phone for one or two business activities and often in ways they are already familiar with, such as calling or messaging customers or for mobile money transactions.

The fourth stage is diverse business use, when micro-entrepreneurs use a mobile phone in three or more ways to support their business.

Women micro-entrepreneurs are less likely than their male counterparts to progress along the mobile-for-business journey. This is because they face greater barriers to mobile adoption and use (see *Barriers to using mobile for business or using it more* section). There were gender gaps in

almost all survey countries for mobile ownership and personal mobile use, which widened for business use of mobile. Two examples are provided in Figure 3 for Ghana and India. In Ghana, where the rate of mobile ownership was equal and personal mobile use almost universal among our sample of micro-entrepreneurs with no significant gender gap, women micro-entrepreneurs were 14% less likely than men to use a mobile for business and 17% less likely to use it for three or more business cases. In India, there were gender gaps at all stages and the gap in mobile use for business widened for diverse business use. Women micro-entrepreneurs were 34% less likely than men to use a mobile for business and 45% less likely to use it for three or more business cases.

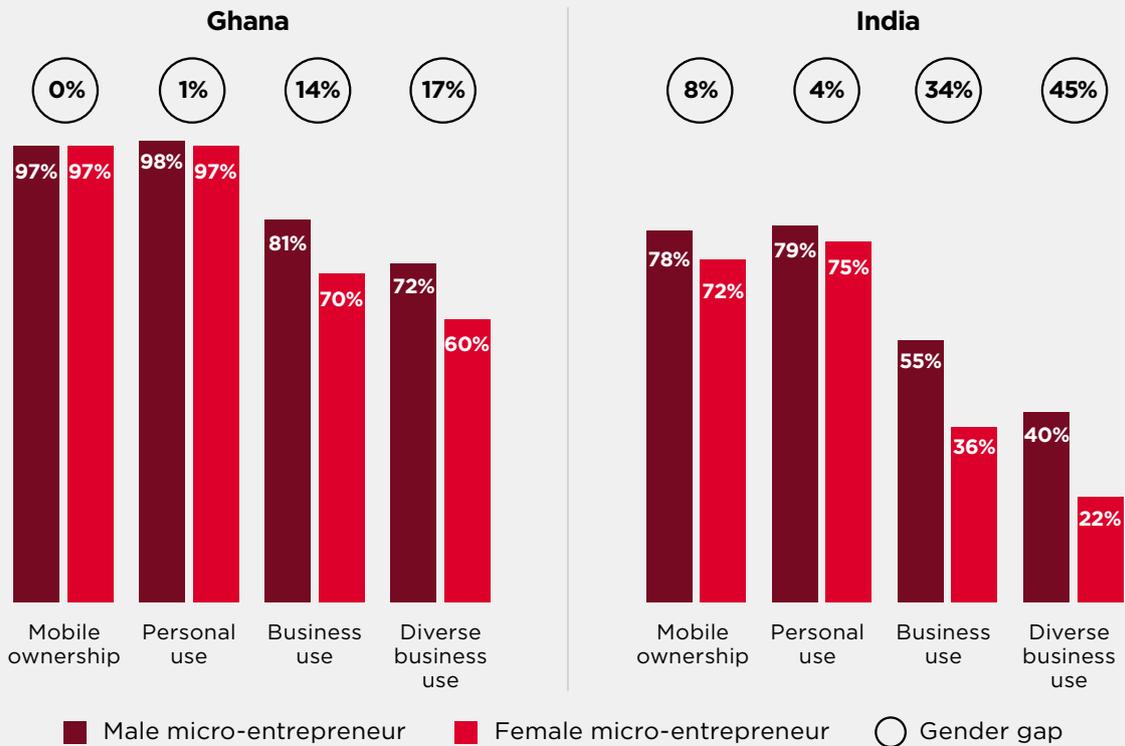
26. Refers to the use of mobile for personal, business or diverse business purposes in the past three months.

27. Most micro-entrepreneurs who use a mobile phone for business own a mobile phone. However, in Pakistan, India and Ethiopia, phone borrowing for business (as well as for personal use) is relatively more common than in other survey countries, particularly among female micro-entrepreneurs.

28. GSMA. (2023). [The Mobile Gender Gap Report 2023](#). See also: GSMA. (2021). [Addressing the Mobile Gender Gap in Pakistan](#).

29. "Personal use" is defined as using a mobile phone for personal reasons at least once in the past three months. "Business use" is defined as using a mobile phone to support their business at least once in the past three months. "Diverse business use" is defined as using a mobile phone to support their business in at least three different ways in the past three months.

Figure 3
Gender gaps in the journey to mobile use for business in Ghana and India
Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Personal use is defined as having used a mobile in the past three months. Business use is defined as having used a phone for business in at least one way.

Diverse business use is defined as having used a phone for business in at least three different ways.

n=526 to 661 for female micro-entrepreneurs, n=746 to 1,083 for male micro-entrepreneurs

Even when micro-entrepreneurs already use a mobile phone, a significant proportion only use it in their personal lives and not for business, especially women (see Figure 4). In nine of the 10 survey countries, women micro-entrepreneurs who were mobile users were more likely than their male counterparts to use it only for personal reasons (excluding Indonesia). For example, in Kenya, where mobile use for business is relatively high, 42% of women micro-entrepreneurs who use a mobile only use it for personal reasons and not for business, compared to 31% of their male counterparts. In half of the survey countries, less than 50% of women micro-entrepreneurs who use a mobile for personal reasons also use it for business. Conversely, the highest use of mobile for business was in Ghana and Nigeria, where 70% and 67% of women micro-entrepreneurs who were mobile users use it for business, respectively.

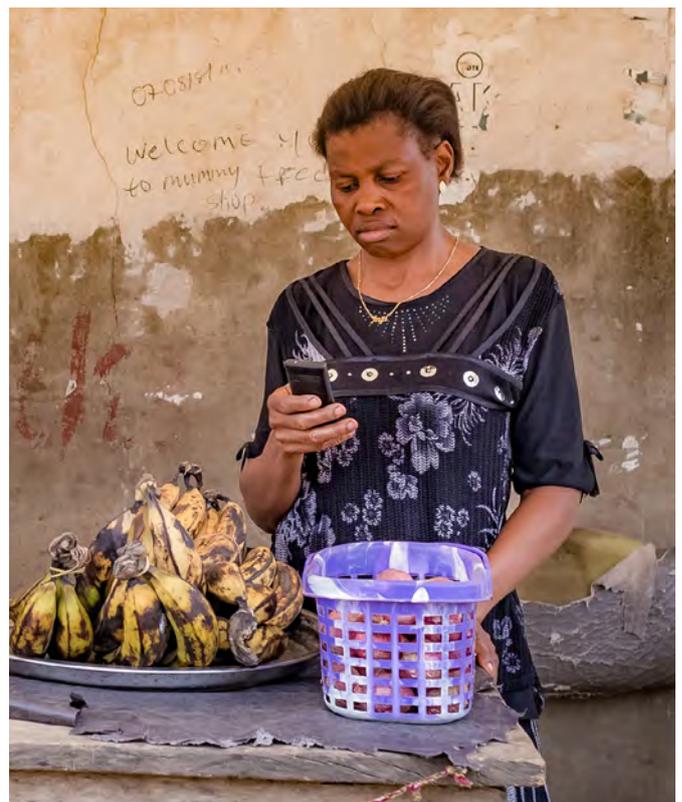
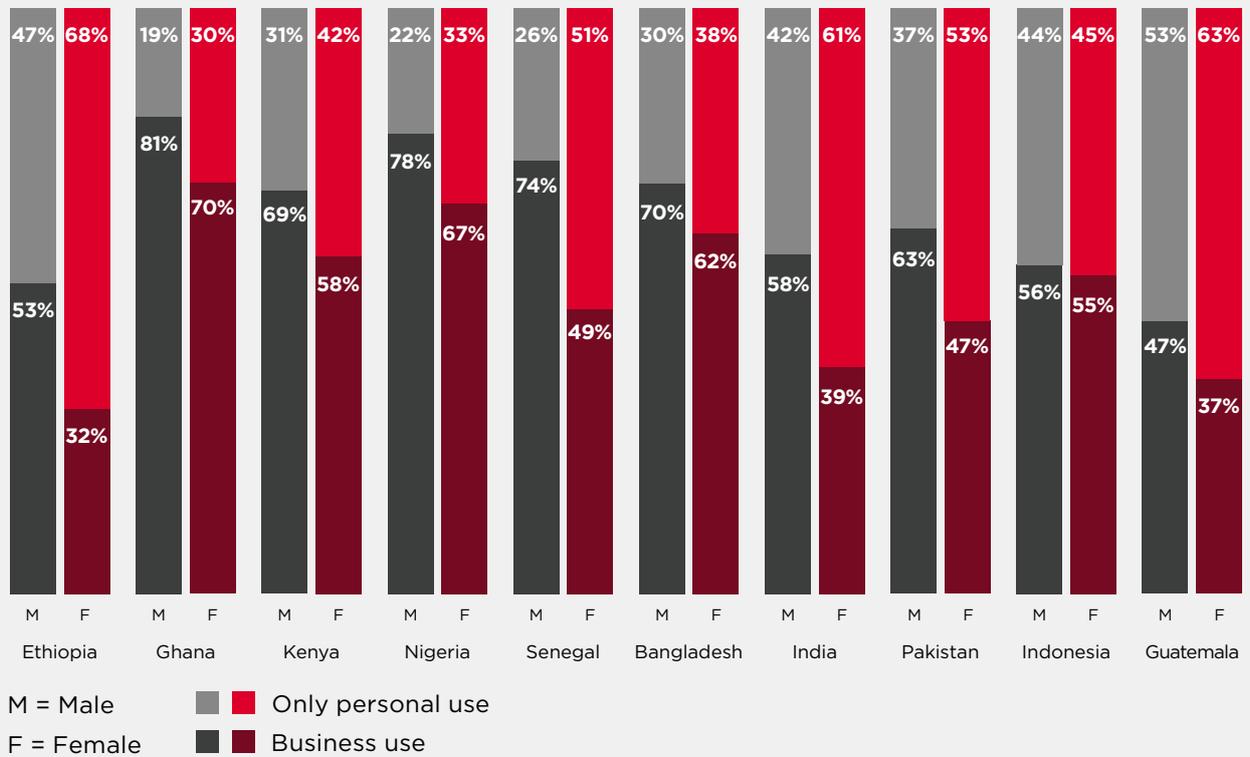


Figure 4
Mobile for business use among mobile users
 Percentage of micro-entrepreneurs surveyed that use mobile in general



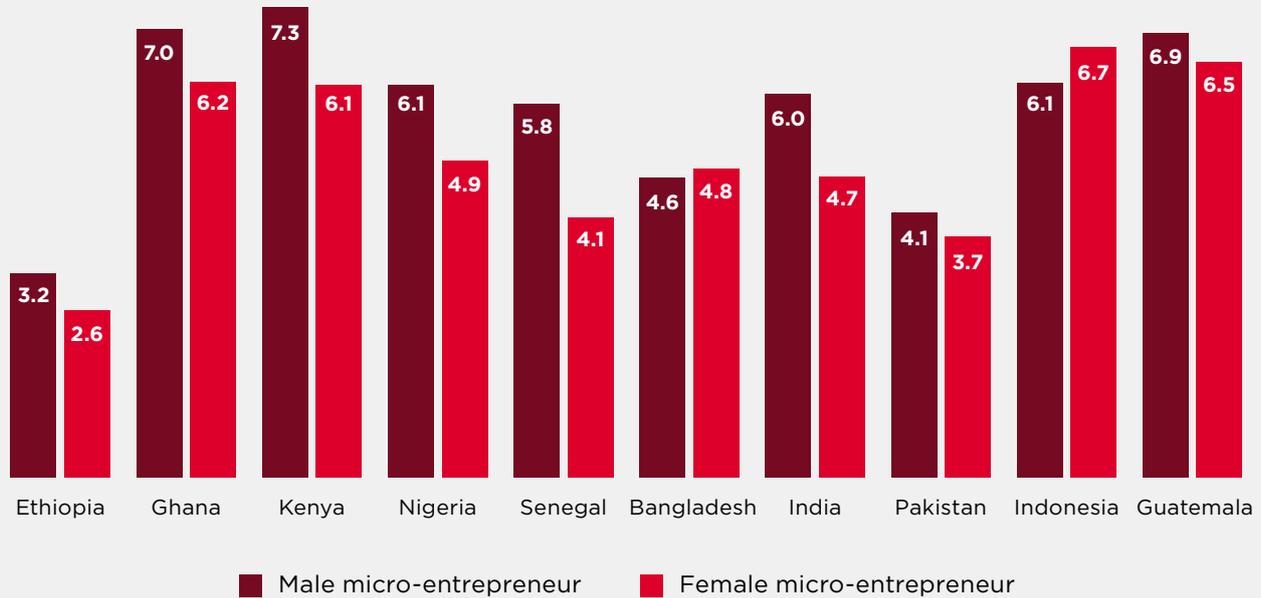
Source: GSMA Consumer Survey, 2022
Base: Micro-entrepreneurs surveyed who are mobile users
 Mobile users are defined as having used a mobile in the past three months.
 n=526 to 661 for female micro-entrepreneurs, n=746 to 1,083 for male micro-entrepreneurs

While most micro-entrepreneurs who start using mobile for their business are likely to use it for a diverse range of business activities, women micro-entrepreneurs tend to use it for fewer activities than their male counterparts. Even when they already use a mobile for business, women often use it for fewer activities than men in all countries except Bangladesh and Indonesia (see Figure 5). For example, male micro-entrepreneurs in India who already use a mobile for business used it for 6.0 types of activities, on average, in the past three months, compared to their female counterparts who used it for 4.7 activities, on average.

The biggest drop-offs in the transition from business use to diverse business use were in Ethiopia and Bangladesh. For example, in Bangladesh, 52% of surveyed female micro-entrepreneurs use a mobile phone for one to two business-related activities, while only 35% use it for three or more activities. In addition, in seven markets out of 10, women micro-entrepreneurs are less likely than men to transition from business use to diverse business use.

Figure 5

Average number of business activities performed by micro-entrepreneurs who use a mobile phone for business
 Among micro-entrepreneurs surveyed who use a mobile phone for business



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed who use mobile for business
 n=46 to 416 for female micro-entrepreneurs, n=72 to 629 for male micro-entrepreneurs

2.1 The mobile-for-business user journey by country and gender

Figure 6 captures the progress of micro-entrepreneurs along the mobile-for-business user journey by gender. In every survey country, most male and female micro-entrepreneurs own a mobile phone and use it for personal reasons. However, in almost all survey countries, women micro-entrepreneurs are less likely than men to own a mobile phone (see *Mobile gender gaps among micro-entrepreneurs* section) or use one for personal reasons, particularly in Ethiopia, Senegal, Bangladesh and Pakistan. Mobile ownership and personal mobile use are also low in India relative to other countries, but with fewer gender differences.

In some countries, such as Ethiopia, India, Pakistan and Guatemala, more micro-entrepreneurs use a mobile phone in their personal lives than own one, especially women.³⁰ This suggests that borrowing a mobile for personal reasons is relatively common. For example, in Ethiopia, there is a 33 percentage point difference between personal mobile use and mobile ownership among women micro-entrepreneurs, and an 18 percentage point difference for men (Figure 6).

The “Business use” column in Figure 6 shows the proportion of micro-entrepreneurs who use a mobile phone for one or two business activities. It highlights the large drop-off in every survey country from personal to business mobile use, especially for women. For instance, this is notable for women micro-entrepreneurs in Ethiopia, India, Pakistan and Guatemala. In contrast, women micro-entrepreneurs in Ghana, Nigeria and Bangladesh are more likely to transition from personal use to business use than those in other countries. The most popular business use case by far across survey countries is communicating with customers and suppliers (see *Use of mobile for business* section).

The “Diverse business use” column in Figure 6 shows the proportion of micro-entrepreneurs who use a mobile phone for three or more business activities. More than half of men and women micro-entrepreneurs in Ghana and Kenya use a mobile for three or more business activities. However, diverse business use is low among women micro-entrepreneurs, particularly in Ethiopia, India and Pakistan. There is a notable drop-off between

30. According to the GSMA Consumer Survey 2022, phone borrowing was also common among the general adult population in Ethiopia and Pakistan.

business use and diverse business use in most countries except Kenya, Ghana, Indonesia and Guatemala, where the vast majority of male and female micro-entrepreneurs who use mobile for business tend to use it in three or more ways. However, women micro-entrepreneurs are less likely than their male counterparts to use mobile for business in diverse ways, and gender gaps are

evident in all survey countries except Indonesia. For example, in Nigeria, 64% of women micro-entrepreneurs use a mobile phone for business, but the proportion who use it in diverse ways is 20 percentage points lower at 44% (compared to 77% and 63% of men, respectively – a 13 percentage point drop).

Figure 6
Progress on the mobile-for-business user journey, by country and gender
Percentage of micro-entrepreneurs surveyed

		Mobile ownership	Personal use	Business use	Diverse business use
ETHIOPIA	Men	74%	92%	51%	29%
	Women	51%	84%	29%	16%
GHANA	Men	97%	98%	81%	72%
	Women	97%	97%	70%	60%
KENYA	Men	93%	95%	69%	65%
	Women	87%	90%	57%	51%
NIGERIA	Men	93%	95%	77%	63%
	Women	89%	91%	64%	44%
SENEGAL	Men	91%	92%	73%	60%
	Women	74%	76%	46%	31%
BANGLADESH	Men	86%	91%	66%	46%
	Women	71%	74%	52%	35%
INDIA	Men	78%	79%	55%	40%
	Women	71%	76%	36%	22%
PAKISTAN	Men	84%	86%	59%	42%
	Women	57%	65%	34%	23%
INDONESIA	Men	86%	88%	52%	45%
	Women	82%	86%	50%	46%
GUATEMALA	Men	82%	84%	45%	40%
	Women	72%	78%	33%	29%

Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

A mobile owner is defined as a person who has sole or main use of a SIM card (or a mobile phone that does not require a SIM) and uses it at least once a month. Personal use is defined as having used a mobile phone in the past three months. Business use is defined as having used a mobile phone for business in one or two ways. Diverse business use is defined as having used a mobile phone for business in at least three different ways.
n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

3. Mobile gender gaps among micro-entrepreneurs

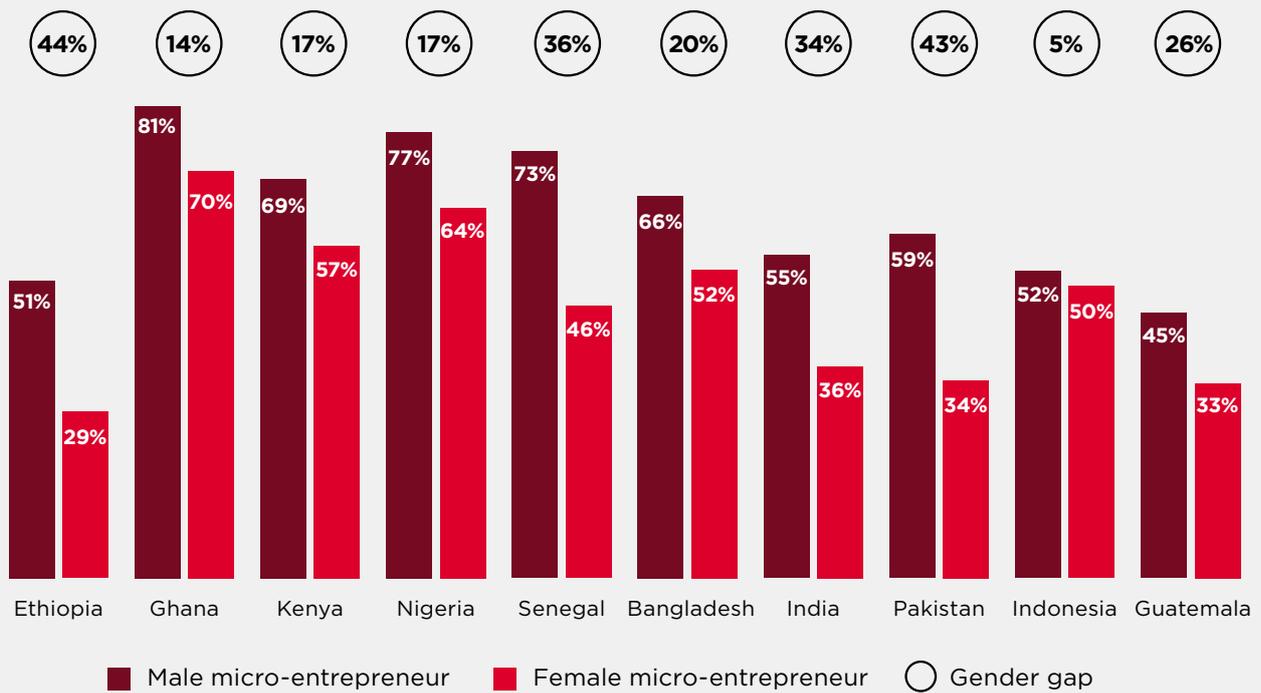


Women micro-entrepreneurs in LMICs are less likely than men to access and use mobile technology for their business or to even be aware of how using a mobile phone could help their business. Social norms and structural inequalities tend to limit their ability to use mobile for business to varying degrees and in often subtle ways. This puts women micro-entrepreneurs at a disadvantage, causing them to miss out on the substantial benefits of mobile, including promoting their business to a wider audience, finding important information, getting new ideas or accessing digital financial services. Drawing primarily on our quantitative research, this section explores gender gaps in mobile ownership and use by micro-entrepreneurs, including mobile use for business, in more detail.

3.1 Mobile use for business

Mobile use for business is lower among women micro-entrepreneurs than their male counterparts. In nine of the 10 survey countries, women micro-entrepreneurs are less likely to use a mobile phone for business than men (see Figure 7). Gender gaps are widest in Ethiopia and Pakistan, where women micro-entrepreneurs are 44% less likely than men to use a mobile phone for business. Gender gaps are also wide in India and Senegal, and substantial in all survey markets except Indonesia. For example, even in Ghana, Nigeria, Kenya and Bangladesh, where more than half of all micro-entrepreneurs use mobile for business, gender gaps are still evident, ranging from 14% to 20%.

Figure 7
 Mobile use for business among micro-entrepreneurs
 Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed
 n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

3.2 Mobile phone ownership

Women micro-entrepreneurs are less likely to own a mobile phone than their male counterparts. In all countries except Ghana, gender gaps in mobile phone ownership are evident (see Figure 8) among male and female micro-entrepreneurs. Pakistan had the widest gender gap in mobile phone ownership in our sample, with women 32% less likely than men to own a mobile phone (57% of female micro-entrepreneurs in our sample owned a mobile phone compared to 84% of their male counterparts). This is comparable to Ethiopia where only 51% of women micro-entrepreneurs own a mobile compared to 74% of men. Pakistan has a similar gender gap, and gender gaps in mobile phone ownership are also notable in Senegal and Bangladesh, where women micro-entrepreneurs are 18% less likely than men to own a mobile.

Women micro-entrepreneurs are more likely to borrow a mobile phone for business use than their male counterparts. Although most micro-entrepreneurs tend to own a handset (whether they use it for personal or business reasons), in some countries phone borrowing is more common, particularly among women. In Pakistan, 19% of female micro-entrepreneurs and 7% of male micro-entrepreneurs who report using a mobile phone for business do not own one. In Ethiopia, this applies to 23% of female micro-entrepreneurs and 15% of male

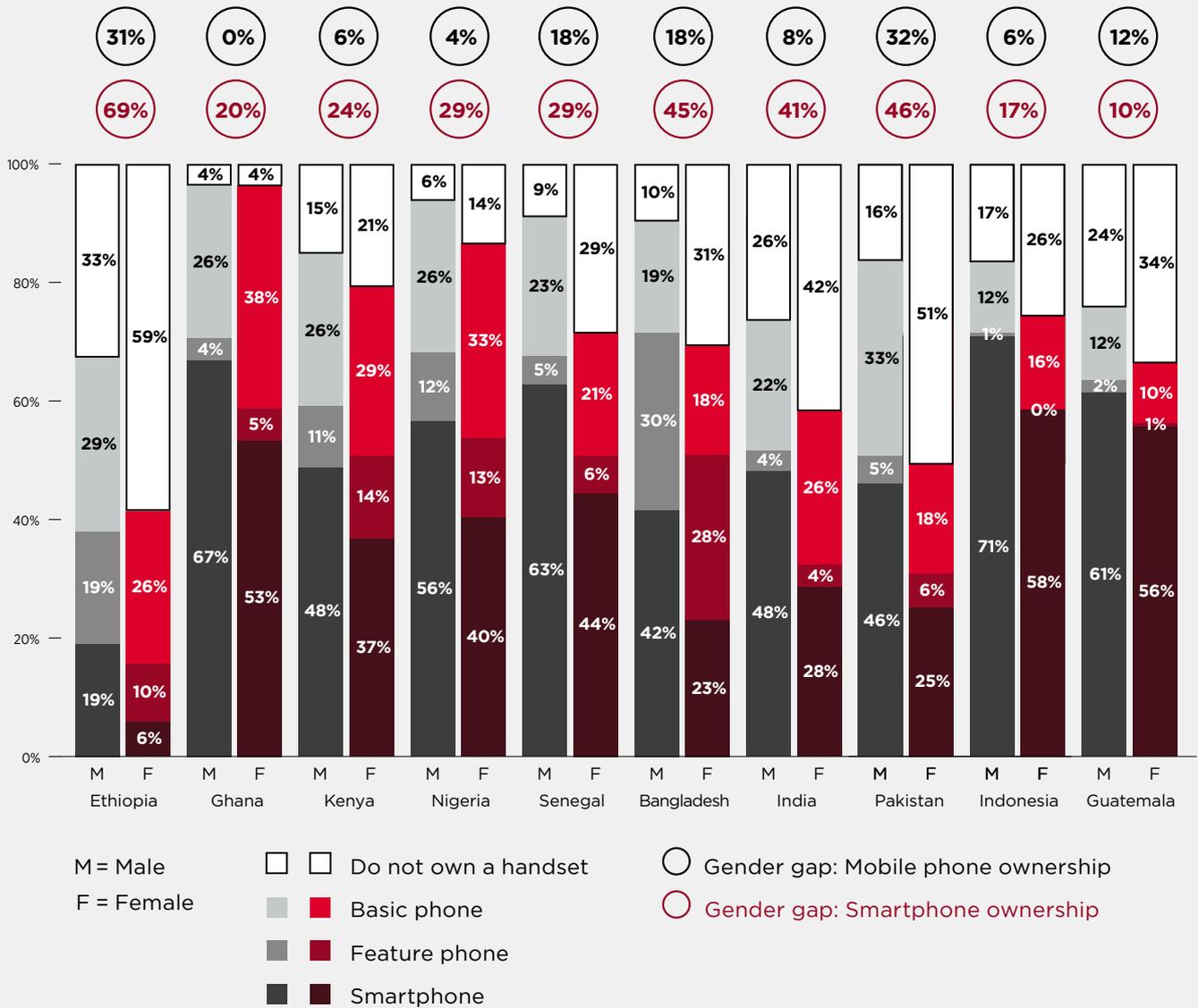
micro-entrepreneurs. India has the highest rate of phone borrowing for business overall, with 25% of women micro-entrepreneurs borrowing mobile phones compared to 19% of men. This demonstrates that mobile phone ownership remains a key barrier for women micro-entrepreneurs in Ethiopia, India and Pakistan.

There is a substantial gender gap in smartphone ownership among micro-entrepreneurs, with women substantially less likely to own a smartphone than men.

Smartphones offer a range of value-added business uses, yet a substantial proportion of men and women micro-entrepreneurs only own a basic or feature phone. Among the micro-entrepreneurs surveyed, those in Ethiopia are least likely to own a smartphone (19% of men vs 6% of women). The gender gap in smartphone ownership is also widest in Ethiopia (Figure 8). Women micro-entrepreneurs in South Asian survey countries are much less likely than their male counterparts to own a smartphone, with a gender gap in smartphone ownership of 46% in Pakistan, 45% in Bangladesh and 41% in India. Substantial gender gaps are also evident in Nigeria and Senegal, where women micro-entrepreneurs are 29% less likely to own a smartphone than their male counterparts. The smallest smartphone gender gap is in Guatemala, which at 10% is still notable.



Figure 8
 Mobile ownership among micro-entrepreneurs, by handset type
 Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Respondents are categorised according to the most advanced device they own and can only be included in one category. Smartphone owners that also own a basic or feature phone are counted only as smartphone owners.

Note that the gender gap in mobile phone ownership is related to the people who have sole or main use of a SIM card whereas the percentages in this figure and the gender gap in smartphone ownership represent people who have sole or main use of a smartphone handset.

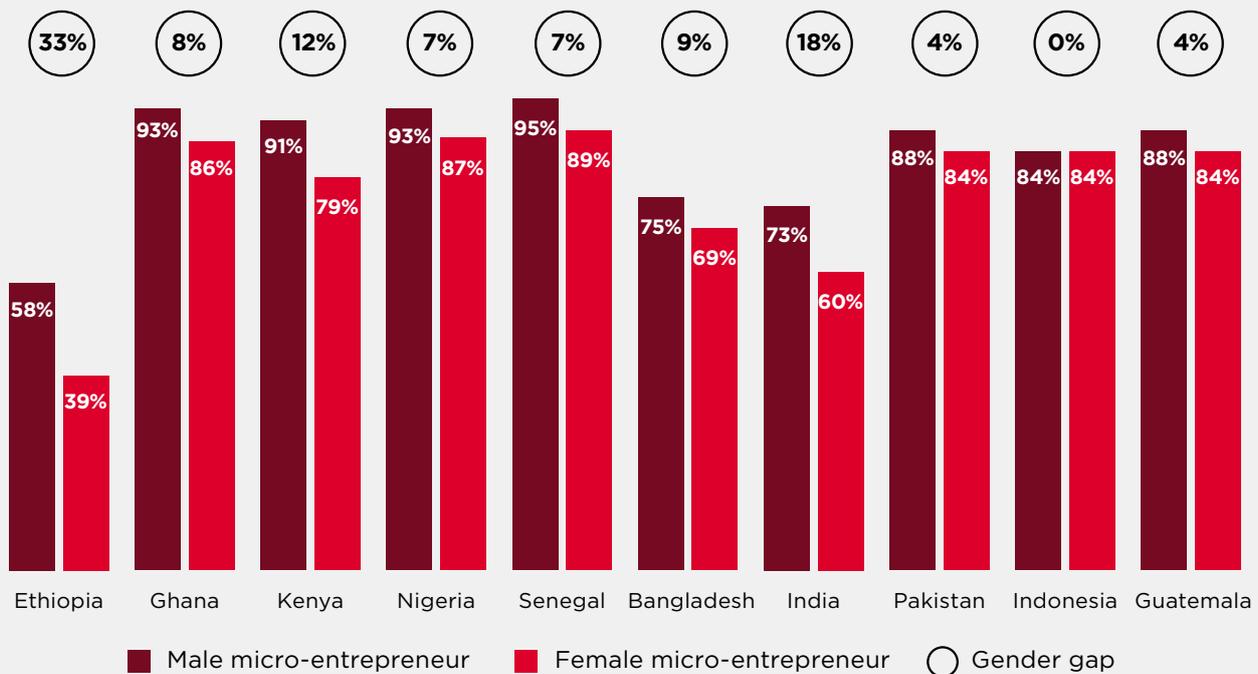
n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

3.3 Mobile internet awareness and use

In most countries, there are relatively high levels of awareness of mobile internet among micro-entrepreneurs, but women are less likely than men to be aware of it. For micro-entrepreneurs to begin using mobile internet and reap all the benefits, they first need to be aware of it. In seven of the 10 survey countries, close to 80% or more of men and women in our sample were aware of mobile internet (see Figure 9). A person is considered aware of mobile internet if they have either used mobile internet before

or have not used mobile internet but are aware they can access the internet on a mobile phone.³¹ The highest levels of awareness were in Senegal, Nigeria and Ghana, where more than 85% of men and women micro-entrepreneurs were aware of it. Mobile internet awareness is low in Ethiopia, India and Bangladesh, especially among women micro-entrepreneurs. In nine of the 10 survey countries, women were less likely than men to be aware of mobile internet.

Figure 9
Mobile internet awareness among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

A person is considered aware of mobile internet if they have either used mobile internet before or have not used mobile internet but are aware they can access the internet on a mobile phone. The gender gap in mobile internet awareness refers to how much less likely a woman is to be aware of mobile internet than a man.

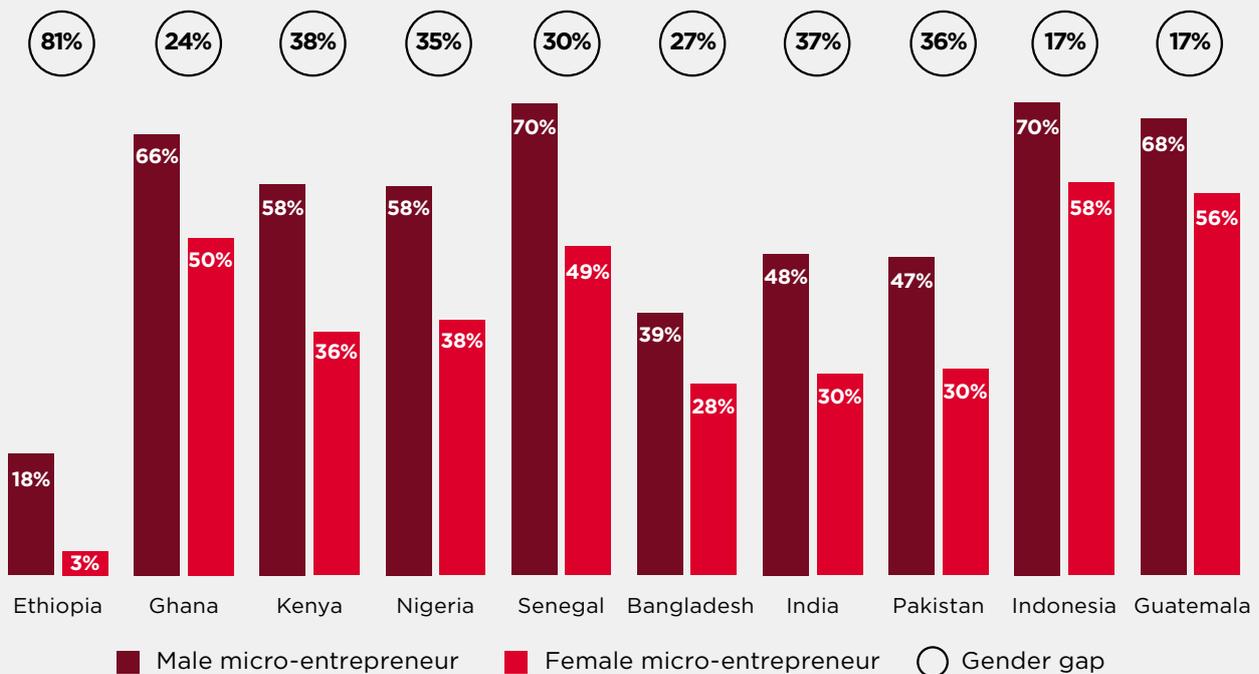
n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

31. Respondents were asked the question: "Have you ever used the internet on a mobile phone? Please think about all the different ways of using the internet on a mobile phone. Just to confirm, people are using the internet on their mobile phones when they do any of the following: visit internet websites (e.g. Google or Amazon), visit social networking websites (e.g. Facebook, Twitter, YouTube, Weibo), send emails or instant messages (e.g. WhatsApp, Snapchat, WeChat, LINE) or download apps." Mobile internet users are those who answered, "Yes, I have used the internet on a mobile phone in the last three months."

Despite relatively high levels of awareness of mobile internet in many countries, usage is low among micro-entrepreneurs, especially women. In all survey countries, women micro-entrepreneurs are less likely than their male counterparts to use mobile internet (see Figure 10). In our sample, mobile internet use was lowest among micro-entrepreneurs in Ethiopia, where 18% of men and only 3% of women reported using it. Mobile internet use was also low in the South Asian survey countries, where less than

half of all micro-entrepreneurs use it and there are substantial gender gaps. Although usage is higher among women micro-entrepreneurs in the African survey markets (except Ethiopia), there were still substantial gender gaps. For example, in Kenya, women micro-entrepreneurs are 38% less likely than their male counterparts to use mobile internet. The highest level of mobile internet use among women micro-entrepreneurs is in Indonesia and Guatemala, where gender gaps are smallest but still notable at 17%.

Figure 10
 Mobile internet adoption among micro-entrepreneurs
 Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022
Base: Micro-entrepreneurs surveyed

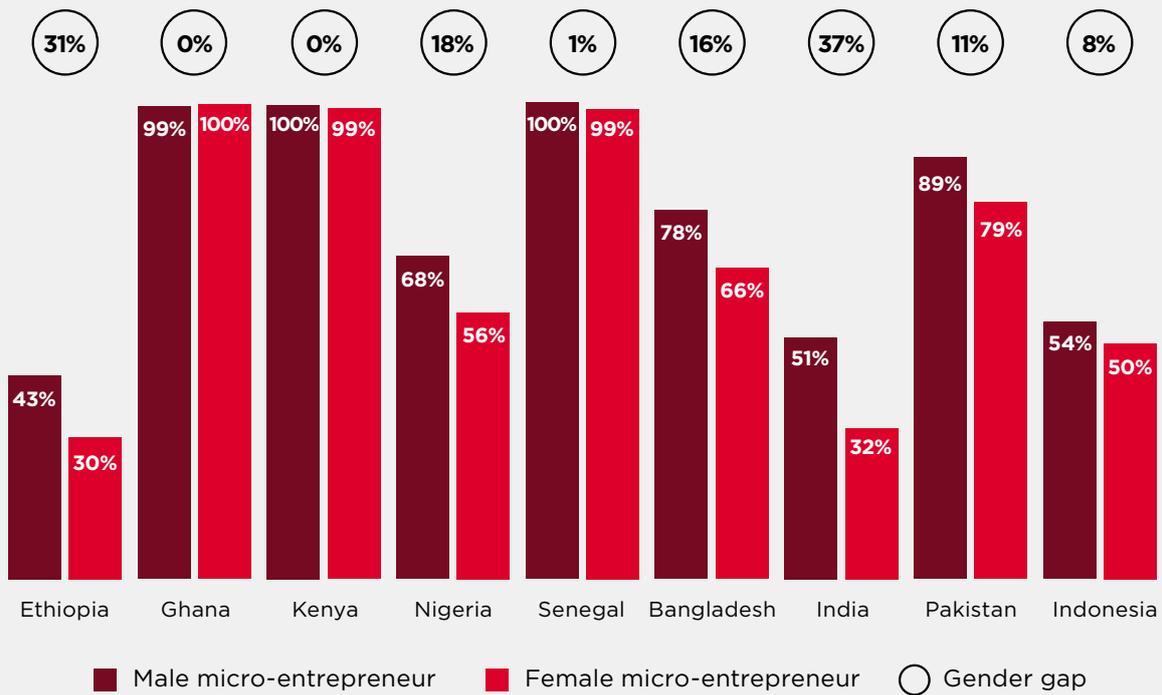
Mobile internet use is defined as having used the internet on a mobile phone at least once in the past three months. Mobile internet users do not have to personally own a mobile phone. The gender gap in mobile internet use refers to how much less likely a woman is to use mobile internet than a man. n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

3.4 Mobile money awareness and use

Outside more mature mobile money markets, women micro-entrepreneurs are less likely than men to be aware of mobile money. In the more mature mobile money markets of Ghana, Kenya and Senegal, awareness of mobile money among

men and women micro-entrepreneurs is almost universal (see Figure 11). However, in the other survey countries, women micro-entrepreneurs are less likely to be aware of mobile money than their male counterparts.

Figure 11
Mobile money awareness among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed



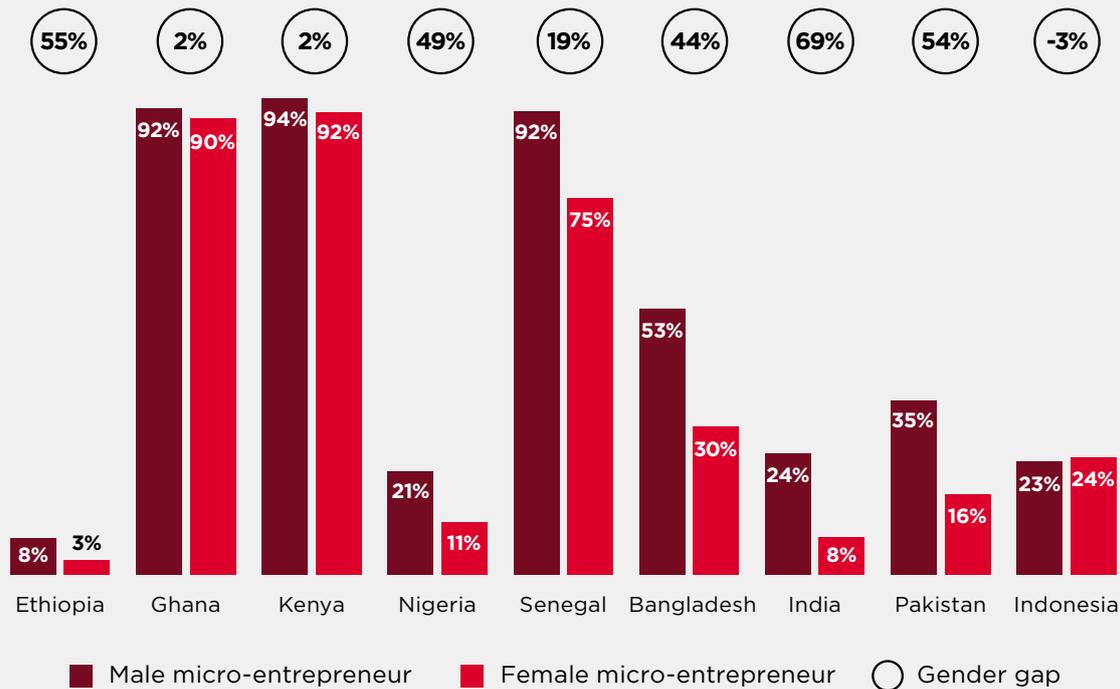
Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed
 The gender gap in mobile money awareness refers to how much less likely a woman is to be aware of mobile money than a man. Mobile money questions were not asked in Guatemala due to low penetration of mobile money.
 n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs.



Women micro-entrepreneurs are less likely than their male counterparts to own a mobile money account in all survey countries except Kenya and Ghana, both of which are mature mobile money markets. In Senegal, despite high levels of mobile money awareness, there is a substantial gender gap in mobile money account ownership (see Figure 12). In other markets, account ownership is lower and there are large gender gaps (except Indonesia). For example, despite relatively high levels of awareness in Pakistan, only 35% of male micro-entrepreneurs and 16% of female micro-entrepreneurs own a mobile money account, resulting in a gender gap of 54%.

Once micro-entrepreneurs start using mobile money, most use it on a weekly basis, but there are gender gaps. The fact that most micro-entrepreneurs who use mobile money use it weekly shows the importance and convenience of mobile money for them. However, even in more mature mobile money markets, women micro-entrepreneurs report using it less frequently than their male counterparts. For example, in Ghana, 67% of male micro-entrepreneurs report using mobile money at least once a week compared to only 55% of female micro-entrepreneurs (see Appendix 2). Even in Kenya where mobile money has reached near ubiquity, 74% of male micro-entrepreneurs report using it weekly compared to 65% of female micro-entrepreneurs.

Figure 12
 Mobile money account ownership among micro-entrepreneurs
 Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed

The gender gap in mobile money account ownership refers to how much less likely a woman is to have a mobile money account than a man. Mobile money questions were not asked in Guatemala due to low penetration of mobile money.
 n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs



3.5 Demographic and business characteristics shaping the mobile gender gap among micro-entrepreneurs

Overall, mobile use for business is lower among women micro-entrepreneurs who live in rural areas and are less educated.

There are gender gaps in mobile use for business in both urban and rural areas but, in most markets, women micro-entrepreneurs in urban areas tend to have higher rates of diverse mobile use for business than rural women (with a few exceptions where the rate is similar or slightly higher in rural settings).³² Women micro-entrepreneurs in rural areas primarily run agricultural-related businesses and report lower mobile use (see Figure 13). Similarly, male and female micro-entrepreneurs with only a primary education are less likely to use mobile for diverse business activities than those with a secondary education or higher. Gender gaps are also apparent among micro-entrepreneurs with only a primary education or less.

Mobile use for business differs by size and type of business, with evident gender differences.

Micro-entrepreneurs with employees reported higher rates of mobile use for business than individual entrepreneurs in most countries.³³ However, the vast majority of micro-entrepreneurs in our sample had no employees, particularly women-owned businesses (see Figure 28, Appendix 1). The type of business a micro-entrepreneur owns also has a bearing on mobile use. Across all survey countries, the sectors with the highest proportion of male and female micro-entrepreneurs using a mobile phone for business tend to be those that “sell products to customers purchased from others” (e.g. retail), “fix or repair things” or “sell or offer

services to customers” (grouped together as “Services” in Figure 13). It is interesting to note that in six of the 10 survey countries, more than half of all male and female micro-entrepreneurs work in these sectors (see Figure 27, Appendix 1).

In contrast, in most survey countries,³⁴ the use of mobile for business was lowest among male and female micro-entrepreneurs who “fish, farm, collect or grow things to sell” (e.g. agriculture) – a sizeable sector for micro-enterprises in some countries. Most of these micro-entrepreneurs also live in rural areas. Figure 13 shows mobile use for business by sector in four of the survey countries, reflecting the overall distribution of business types among surveyed micro-entrepreneurs in each country (see also Figure 27, Appendix 1).

In all survey countries, the proportion of women in almost every sector who use a mobile for their business is lower than men.

For example, in Kenya, 43% of all women micro-entrepreneurs work in the retail sector and most (28%) use a mobile phone to support their business. While fewer men micro-entrepreneurs work in retail in Kenya (26%), almost all use mobile for their business (20%). Meanwhile, 28% of all women micro-entrepreneurs in Kenya work in agriculture and less than half (12%) use a mobile phone for their business. A similar number of male micro-entrepreneurs in Kenya work in agriculture (30%), but more than half (17%) use mobile for their business.

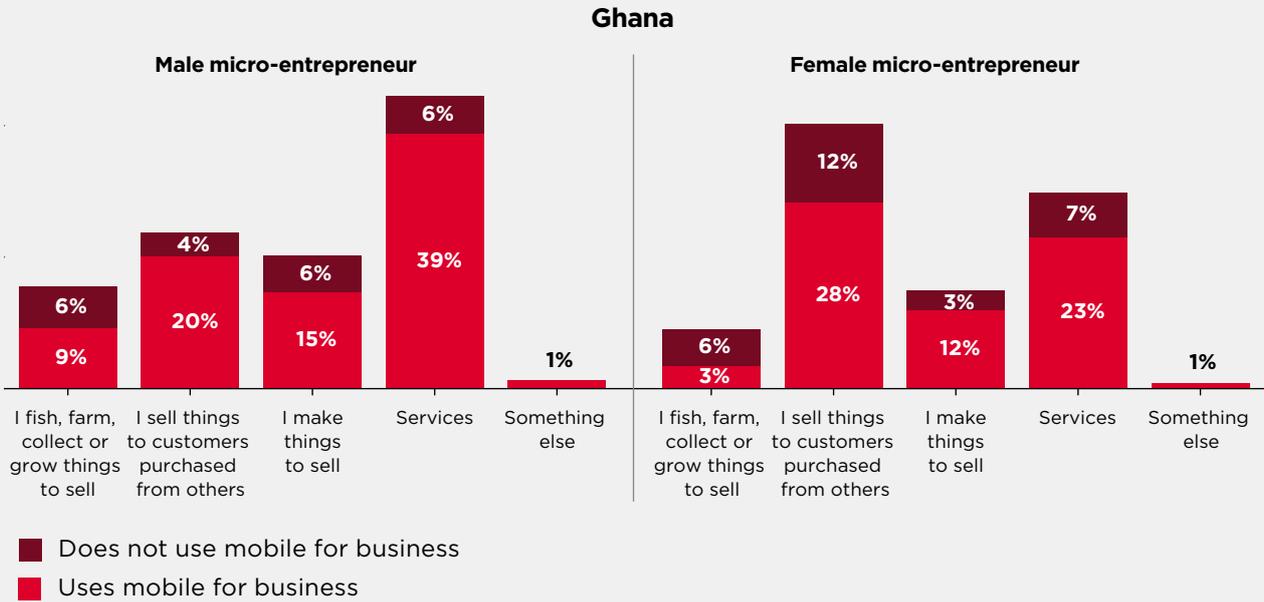
32. In Kenya, the use of mobile for communication and taking out loans/insurance products was higher among women micro-entrepreneurs in rural areas than in urban areas.

33. Except in Ethiopia, Pakistan and Bangladesh, where mobile use for business is low in general.

34. The exceptions were Nigeria for male micro-entrepreneurs and Bangladesh for female micro-entrepreneurs.

Figure 13a

Use of mobile for business among micro-entrepreneurs, by business type
Percentage of micro-entrepreneurs surveyed



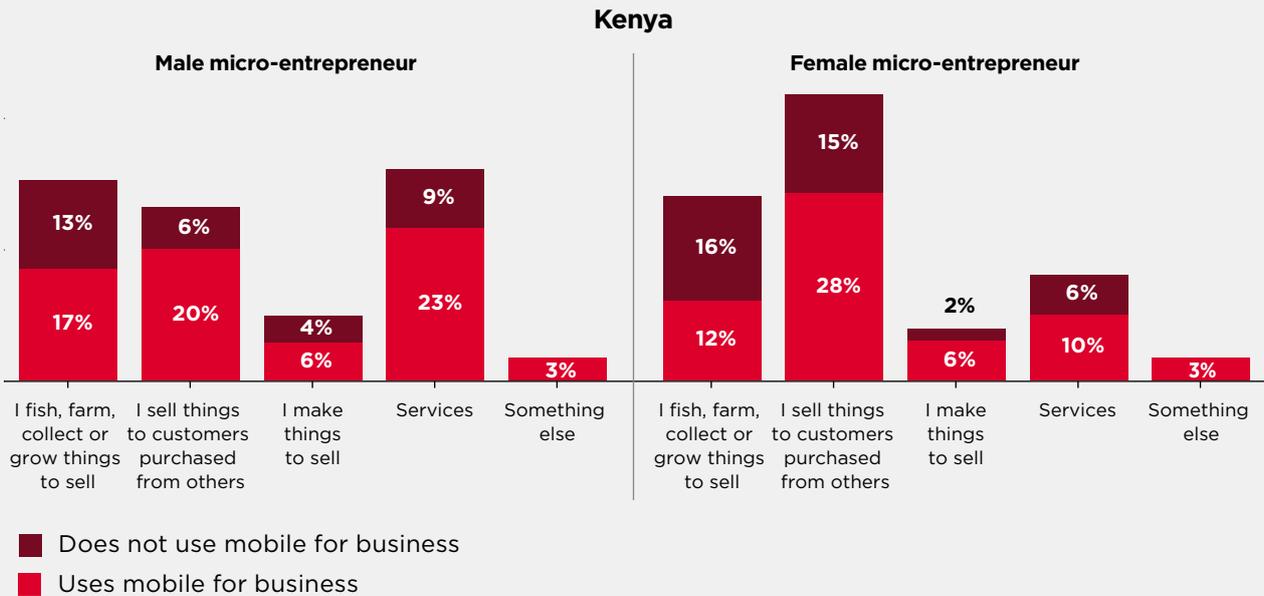
Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Micro-entrepreneurs working in the "Services" business category responded to the question, "Which one of the following best describes the main business or the work you do?" with either "I fix or repair things" or "I sell or offer services to customers".
n=38 to 281 for female micro-entrepreneurs, n=50 to 369 for male micro-entrepreneurs

Figure 13b

Use of mobile for business among micro-entrepreneurs, by business type
Percentage of micro-entrepreneurs surveyed



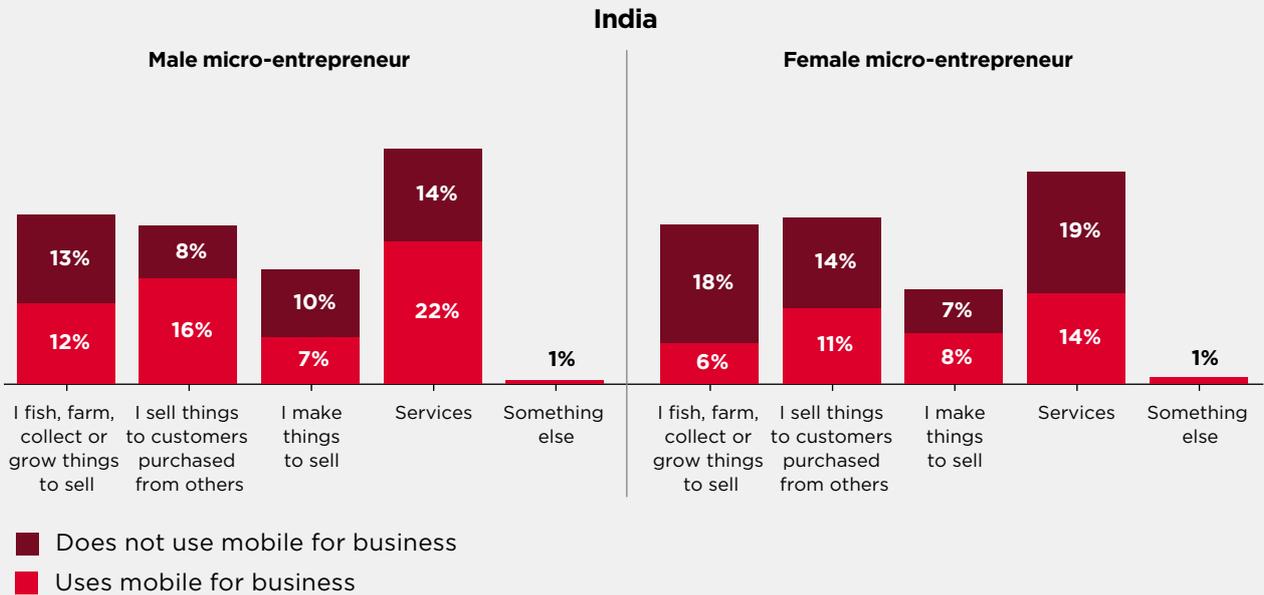
Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Micro-entrepreneurs working in the "Services" business category responded to the question, "Which one of the following best describes the main business or the work you do?" with either "I fix or repair things" or "I sell or offer services to customers".
n=38 to 281 for female micro-entrepreneurs, n=50 to 369 for male micro-entrepreneurs

Figure 13c

Use of mobile for business among micro-entrepreneurs, by business type
Percentage of micro-entrepreneurs surveyed



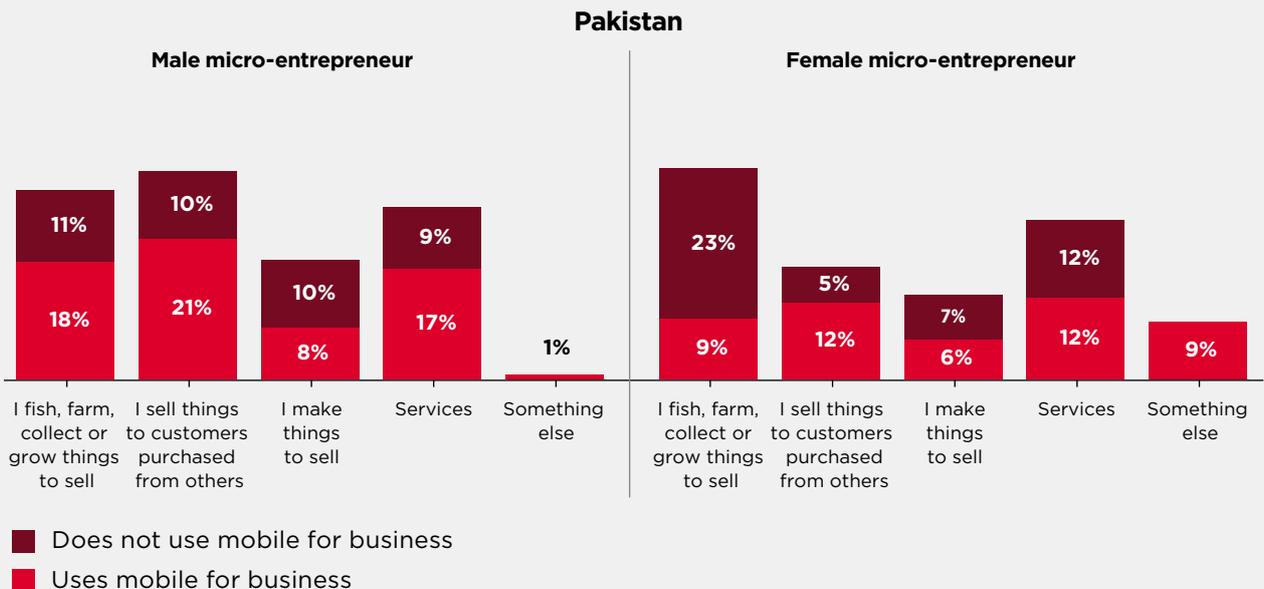
Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Micro-entrepreneurs working in the "Services" business category responded to the question, "Which one of the following best describes the main business or the work you do?" with either "I fix or repair things" or "I sell or offer services to customers".
n=38 to 281 for female micro-entrepreneurs, n=50 to 369 for male micro-entrepreneurs

Figure 13d

Use of mobile for business among micro-entrepreneurs, by business type
Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Micro-entrepreneurs working in the "Services" business category responded to the question, "Which one of the following best describes the main business or the work you do?" with either "I fix or repair things" or "I sell or offer services to customers".
n=38 to 281 for female micro-entrepreneurs, n=50 to 369 for male micro-entrepreneurs

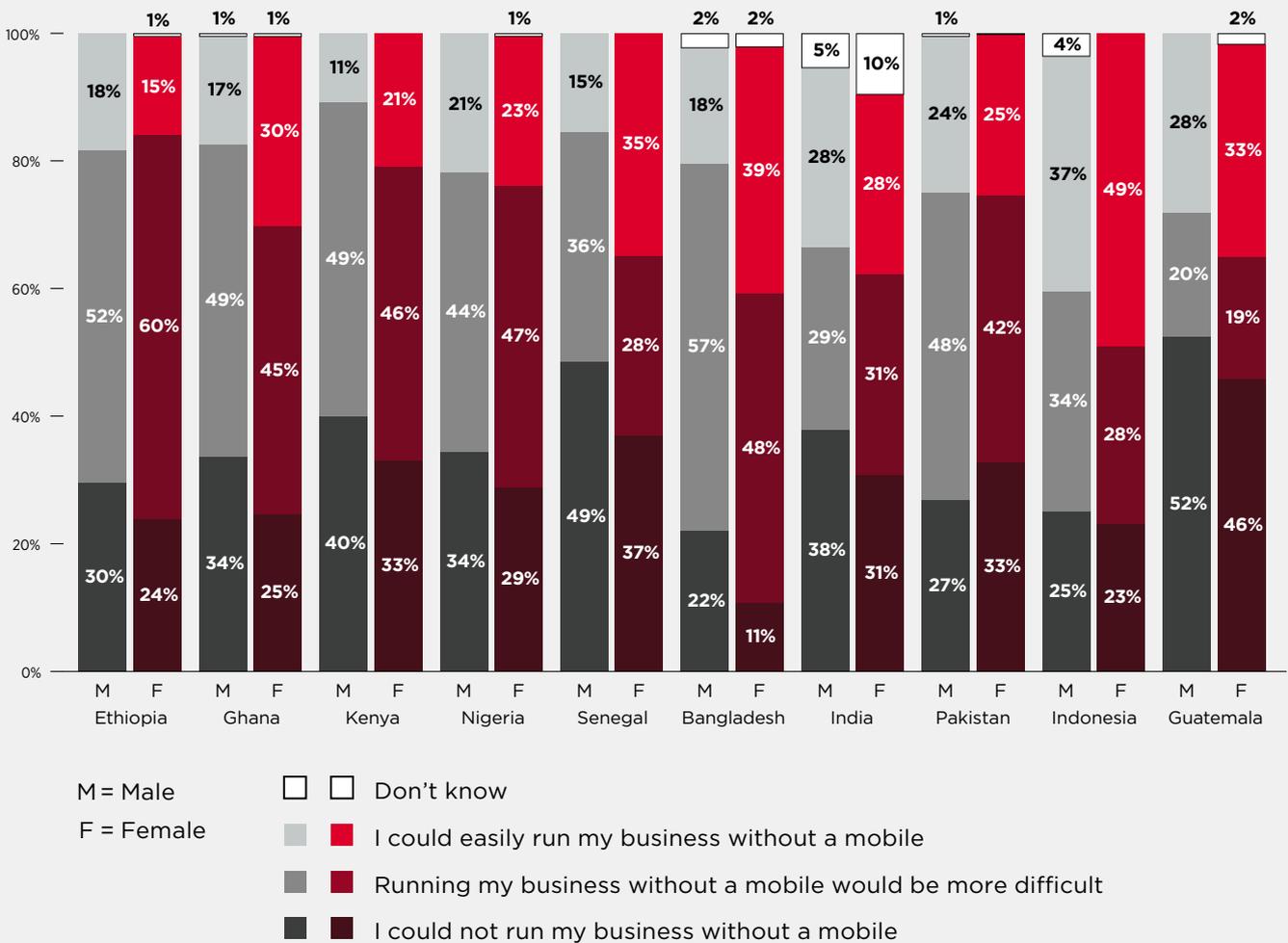
BOX 1

The perceived value of mobile among micro-entrepreneurs

Once micro-entrepreneurs start using a mobile phone for business, most consider it crucial to running their business. In all 10 survey countries, most male and female micro-entrepreneurs who use a mobile phone for their business report they could not run their business without one or that it would be more difficult to do so (see Figure 14). However, women micro-entrepreneurs were less likely

to report this than their male counterparts in most markets, likely due to multiple barriers preventing them from maximising the benefits of mobile for business (see *Barriers to using mobile for business or using it more* section). For example, in Senegal, 65% of women micro-entrepreneurs reported the importance of using mobile for their business, but an even higher proportion of men reported this (85%).

Figure 14
Perceived value of mobile for business among micro-entrepreneurs who use it for business
Percentage of micro-entrepreneurs surveyed who use a mobile phone for business



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed who use mobile for business
 n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

4. Use of mobile for business



This section explores the most popular use cases for mobile among micro-entrepreneurs, with insights by country and gender. To understand what micro-entrepreneurs currently use a mobile phone for, our survey asked whether they had performed any of the listed business activities on a mobile phone in the past three months. For activities they were not doing, they were first asked whether they were aware a mobile phone could be used for that business activity (see Box 2). Second, if they were aware of it, they were asked whether they thought using mobile for that activity

could be helpful for their business. This section presents both a snapshot of current uses of mobile for business and the use cases with the greatest potential to support women micro-entrepreneurs.

In both our quantitative and qualitative research, the most-reported use cases of mobile for business were communication; digital financial services; storing information and files; marketing and promotion; and learning new skills or getting new ideas (see Box 2). Each of these use cases is analysed in more depth.³⁵

BOX 2

Five most-reported use cases among micro-entrepreneurs using mobile for business



- **Communication with customers, employees and suppliers**
- **Digital financial services, especially making and receiving payments**
- **Storing information and files**
- **Marketing, advertising or promoting their business**
- **Learning new skills or getting new ideas and inspiration**

In almost all survey countries and for most use cases, fewer women micro-entrepreneurs than men report engaging in these mobile-related activities to support their business. In nine of the 10 countries,³⁶ women micro-entrepreneurs are less likely than their male counterparts to report performing the use cases listed in Figure 15. The widest gender gaps for most use cases were in Senegal where, for example, 47% of men reported making or receiving payments via mobile while only 20% of women reported this. There are also notable gender gaps for most use cases in India, Kenya, Nigeria and Ghana.

Among micro-entrepreneurs who already use mobile for business, some gender gaps narrow, and in some cases more women than men report using mobile for specific business activities. Among micro-entrepreneurs in Guatemala and Indonesia who use mobile for business, certain use cases were reported more frequently by women

than men. For example, among those using a mobile phone for business in Indonesia, 71% of women micro-entrepreneurs use it for marketing, advertising or promoting their business, compared to only 50% of male respondents. Similarly, in Pakistan, women micro-entrepreneurs who use mobile for business are more likely to use a mobile phone to learn skills or get new ideas (35% of women vs 24% of men). In Bangladesh and Indonesia, of those using mobile for business, more women than men micro-entrepreneurs reported making or receiving digital payments.³⁷ This suggests that, in certain countries, some mobile-related use cases may be disproportionately benefitting women. It is possible that higher use of mobile for certain business activities by women micro-entrepreneurs, particularly in more conservative settings, is due to restrictive social norms that make other avenues less accessible (e.g. limitations on mobility or interacting with men outside the family).

35. While storing information and files was commonly reported as a use of mobile for business in the research, it is not explored in further detail in this report.

36. Except Indonesia.

37. It is worth noting that gender gaps in some countries (e.g. Bangladesh and Pakistan) or for certain use cases may be lower than expected, as the questions on mobile use for business were only asked of men and women micro-entrepreneurs who used a mobile phone to support their business. As such, it is likely that the women in this group represent a demographic that experience relatively lower barriers to mobile use (e.g. higher income, higher educated, more liberal families).



4.1 Use of mobile for business among different demographics of micro-entrepreneurs

Micro-entrepreneurs who have lower levels of education and live in rural areas are less likely to use mobile for business activities, particularly women. For each of the top use cases in this section, in most countries, rural micro-entrepreneurs used mobile phones for business less than those in urban areas. For example, in six of the seven countries with sufficient sample size,³⁸ urban micro-entrepreneurs are significantly more likely than their rural counterparts to use a mobile phone to make or receive payments.³⁹ In India and Senegal, where mobile use for business is similar between male micro-entrepreneurs in urban and rural areas, there are significantly fewer rural women micro-entrepreneurs using digital financial services than their urban counterparts. This points to a rural gender divide in many countries, with rural women most disadvantaged when it comes to using a mobile phone for business activities.

In four of the seven countries with sufficient sample sizes, women micro-entrepreneurs in urban areas were at least twice as likely as their rural counterparts to report using mobile to learn new skills and find business ideas. In Nigeria, for example, this mobile use case drops from 32% for women micro-entrepreneurs in urban areas to 13% for women in rural areas. Urban micro-entrepreneurs also use mobile phones more for

communication, the most common use case. In Pakistan, Ethiopia, Indonesia and Nigeria, micro-entrepreneurs in rural areas are significantly less likely than their urban counterparts to use mobile to communicate with customers and suppliers, particularly women. In Nigeria, 65% of urban women micro-entrepreneurs use mobile to communicate with customers compared to only 34% of their rural counterparts.

Education level is another important factor influencing the use of mobile for business. In all countries with sufficient sample size and across all use cases, the use of mobile for business was higher among micro-entrepreneurs with a secondary education or above than those with a primary education or below. For example, in all seven markets with sufficient sample size, more micro-entrepreneurs with at least a secondary education use mobile for marketing and promoting their business. In Ghana, 46% of women micro-entrepreneurs with a secondary education or above report this use case compared to 16% of women with only a primary education.

The next section explores the different ways in which micro-entrepreneurs use mobile for business, based predominantly on the quantitative research.

38. Excluding Kenya.

39. Bangladesh, Indonesia and Guatemala were excluded from this analysis due to insufficient sample size.



Figure 15
Mobile use cases performed by micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed

		Communicate with customers	Communicate with suppliers	Make or receive payments	Store information and files	Market, advertise or promote my business	Learn new skills or get new ideas for my business	Find information to help with business	Plan business activities	Save or store money in account	Manage or track my business finances	Access maps or location services	Take out loans, credit, insurance products	Issue invoices or receipts for my business	Any other way
ETHIOPIA	M	35%	30%	6%	18%	7%	12%	19%	15%	4%	10%	1%	3%	1%	1%
	F	18%	17%	3%	7%	2%	3%	9%	6%	2%	4%	0%	1%	1%	0%
GHANA	M	71%	67%	61%	53%	44%	40%	38%	35%	57%	37%	22%	17%	17%	2%
	F	56%	59%	53%	41%	33%	28%	27%	23%	46%	25%	11%	15%	11%	1%
KENYA	M	61%	56%	62%	37%	31%	39%	34%	34%	52%	37%	20%	27%	12%	1%
	F	50%	45%	46%	30%	19%	21%	20%	21%	37%	25%	7%	18%	6%	2%
NIGERIA	M	65%	63%	44%	48%	36%	29%	38%	32%	41%	25%	17%	10%	14%	3%
	F	49%	45%	32%	31%	24%	21%	22%	26%	21%	17%	9%	5%	10%	2%
SENEGAL	M	57%	56%	47%	34%	34%	31%	30%	34%	34%	24%	12%	12%	17%	1%
	F	32%	30%	20%	15%	17%	10%	10%	16%	12%	11%	3%	5%	5%	1%
BANGLADESH	M	43%	42%	28%	18%	24%	23%	26%	18%	21%	22%	13%	14%	13%	2%
	F	33%	30%	24%	17%	20%	19%	20%	16%	15%	18%	12%	11%	14%	2%
INDIA	M	37%	37%	27%	26%	25%	26%	25%	20%	23%	25%	21%	18%	18%	1%
	F	22%	21%	14%	13%	13%	13%	13%	12%	11%	14%	7%	10%	8%	0%
PAKISTAN	M	40%	40%	19%	17%	16%	14%	18%	17%	15%	17%	12%	8%	8%	1%
	F	20%	20%	11%	8%	9%	12%	10%	8%	7%	8%	4%	3%	5%	1%
INDONESIA	M	46%	41%	15%	32%	26%	32%	26%	29%	16%	16%	24%	6%	8%	2%
	F	43%	40%	20%	37%	36%	33%	22%	31%	19%	21%	17%	7%	9%	2%
GUATEMALA	M	35%	36%	18%	27%	31%	27%	23%	26%	14%	23%	23%	12%	16%	4%
	F	28%	22%	13%	19%	21%	22%	18%	17%	12%	16%	11%	7%	8%	2%

Source: GSMA Consumer Survey, 2022
Base: Micro-entrepreneurs surveyed
 Percentages indicate the proportion of micro-entrepreneurs who answered that they have performed each use case in the past three months. Use cases were only asked of micro-entrepreneurs who reported using mobile for business. However, the percentages still represent the proportion of micro-entrepreneurs overall who used that mobile use case. n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs



4.2 Using mobile to communicate

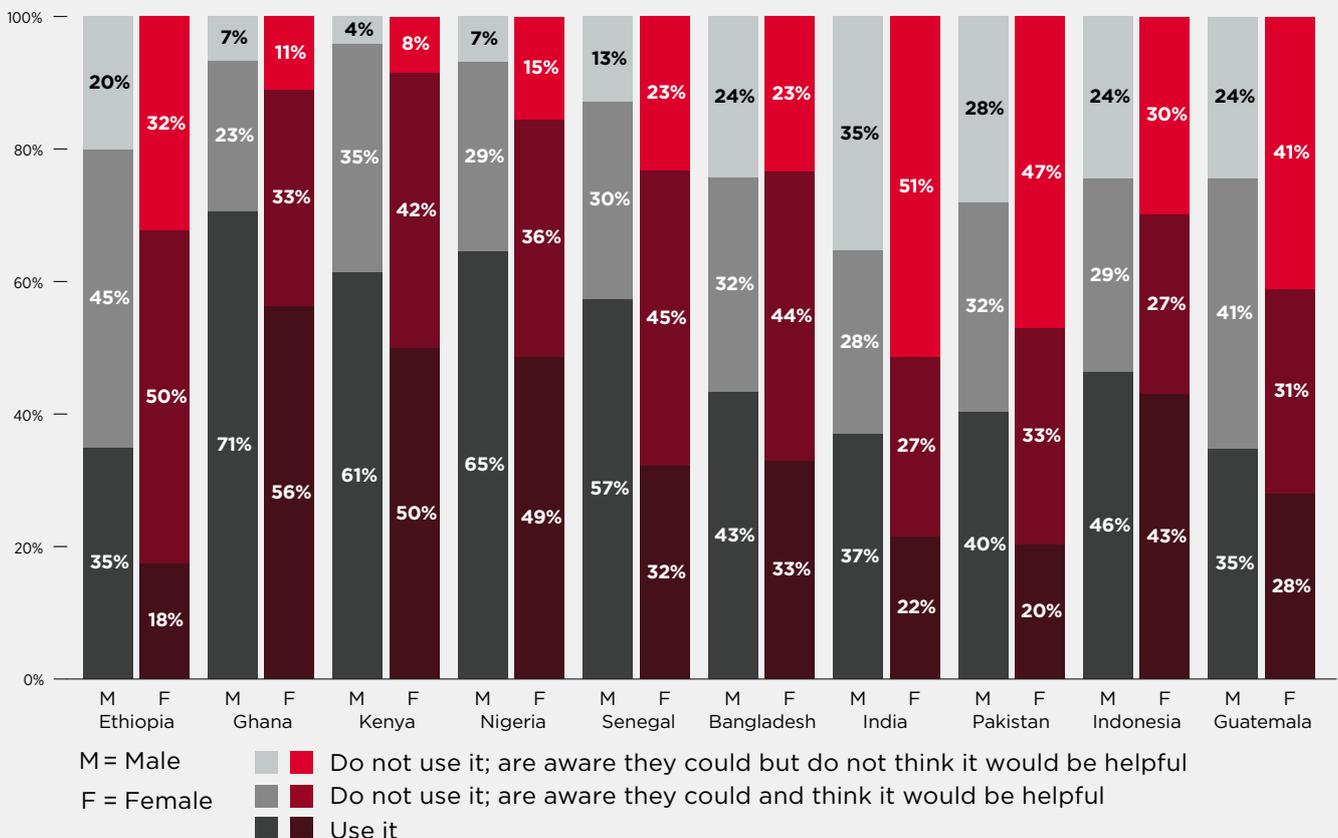
Communicating with customers and suppliers is the most common way micro-entrepreneurs use mobile for business. Communication is a key function of almost all micro-enterprises, and in six of the 10 survey countries, at least 30% of men and women micro-entrepreneurs reported using a mobile phone to communicate with their customers and suppliers. The highest rate was among micro-entrepreneurs in Ghana, where 71% of men and 56% of women used mobile to communicate with customers, followed by Nigeria and Kenya (Figure 16). With the exception of Ethiopia, using mobile to communicate with customers and suppliers was more commonly reported by micro-entrepreneurs in survey countries in Africa⁴⁰ (ranging from 30% to 71%) than in South Asia (ranging from 20% to 43%).

While all micro-entrepreneurs surveyed reported knowing they could use a mobile phone to communicate with customers and suppliers, not all do, especially women. Despite being the most

common business activity performed on mobile, communicating with customers and suppliers has some of the largest gender gaps overall. For example, in Pakistan and Ethiopia, the share of women respondents who use mobile to communicate with customers is half that of their male counterparts. In Pakistan, 40% of men report using mobile to communicate with customers while only 20% of women report this use case. In Ethiopia, these figures are 35% and 18%, respectively.

In most countries, a significant portion of male and female micro-entrepreneurs are not using mobile to communicate, but think it would be useful. In Senegal, for instance, 68% of women micro-entrepreneurs and 43% of men do not use mobile to communicate with customers, but most reported that they think this would be helpful (Figure 16). This suggests they face other barriers, such as the affordability of a mobile phone or network/data services.

Figure 16
Using a mobile phone to communicate with customers: awareness, use and perception among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Percentages of those who considered this use case helpful reflect respondents who reported that it would be "very helpful" or "fairly helpful" with the running or management of their business.

n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

40. In Ethiopia, mobile use by female micro-entrepreneurs is 17% to 18%, compared to 30% to 35% of male micro-entrepreneurs.

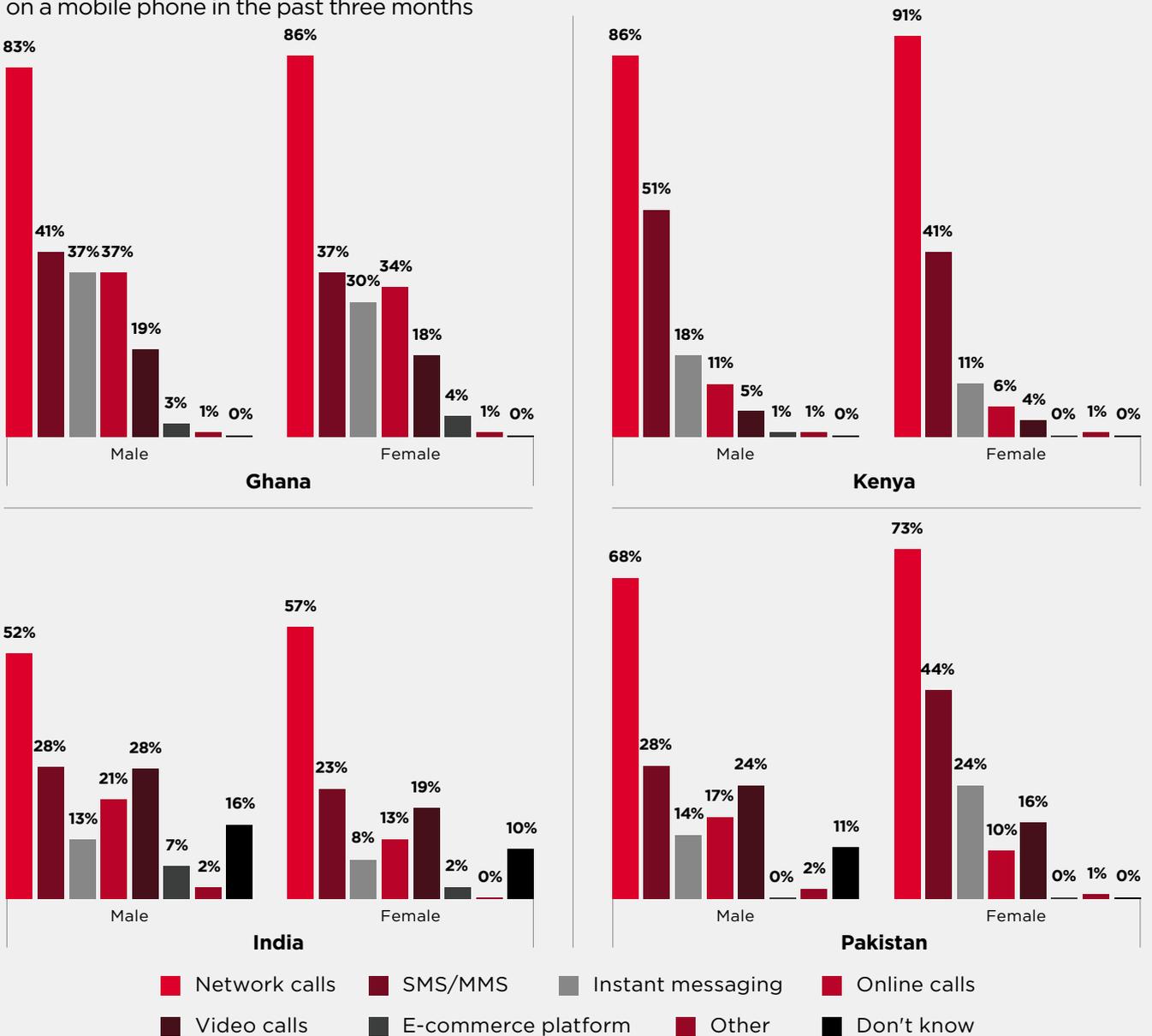
Calling via a mobile network is by far the dominant channel for micro-entrepreneurs who use mobile to communicate with customers and suppliers, especially women. Other channels, such as instant messaging, SMS and video calls, are also used but to a much lesser extent (see Figure 17). As illustrated by the four countries in Figure 17, communicating via network calls is reported more frequently by micro-entrepreneurs in African survey countries than in South Asian countries and by women respondents than men. Women micro-

entrepreneurs who use mobile phones for business may rely on network calls due to their working styles and personal preferences or the barriers they experience to using other channels. For example, lower levels of digital skills, confidence or functional literacy to use text or internet-based channels; lower incomes or financial independence that make data or internet-enabled handsets less affordable; or social norms that prevent them from going online (see *Barriers to using mobile for business or using it more* section).

Figure 17

Channels used by micro-entrepreneurs to communicate with customers or suppliers on a mobile phone

Percentage of micro-entrepreneurs surveyed who reported communicating with customers or suppliers on a mobile phone in the past three months



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs who reported communicating with customers or suppliers with a mobile phone in the past three months. Respondents could select multiple answers. Percentages represent the channels that respondents tend to use to communicate via mobile. n=136 to 390 for female micro-entrepreneurs and n=298 to 588 for male micro-entrepreneurs.

Beyond network calls, the most-used channels for communicating with customers and suppliers vary by country and gender.

For example, for male and female micro-entrepreneurs in Ghana, SMS, online calls and instant messaging are the next most-used channels for communicating with customers and suppliers. However, internet-enabled communication channels were less common in Kenya, with particularly low usage among women, potentially because of data affordability. In India and Pakistan, after network calls and SMS, video calls were more commonly used by men to communicate with customers and suppliers, almost on par with SMS. This was not the case for women, however. In Pakistan, women micro-entrepreneurs who communicate via mobile reported using SMS and instant messaging substantially more than their male counterparts. Previous research⁴¹ has shown that in conservative settings, SMS and instant messaging allow women micro-entrepreneurs to interact with customers of the opposite gender in a more culturally appropriate manner, as text-based messaging does not expose their gender via voice or image. This may go some way towards explaining these findings in Pakistan.

“All my clients have accounts on WhatsApp and I, on a regular basis, follow up with them. I connect with them and take appointments through WhatsApp.”

**Female micro-entrepreneur,
urban, Kolkata, India**

“My brother has a mobile. It helps, people message on the mobile and say we need this amount of milk.”

**Female micro-entrepreneur,
rural, Lahore, Pakistan**

4.3 Marketing, advertising and promotion

Micro-entrepreneurs use a range of mobile channels for marketing, advertising and promotion. In six of the 10 survey countries, at least a quarter of micro-entrepreneurs reported using a mobile phone for this purpose. The highest rate among women micro-entrepreneurs was in Indonesia (36%) and Ghana (33%), while the lowest rate was in Ethiopia (2%) and Pakistan (9%).

In most survey countries, there is a gender gap in the use of mobile for marketing, advertising and promotion. In nine of the 10 survey countries, women micro-entrepreneurs are less likely than men to use a mobile phone to market, advertise or promote their business.⁴² The widest gender gap is in Senegal, where 34% of men and 17% of women micro-entrepreneurs use mobile for this business activity.

Many micro-entrepreneurs are either unaware that they could market and promote their business via mobile, or are aware that they

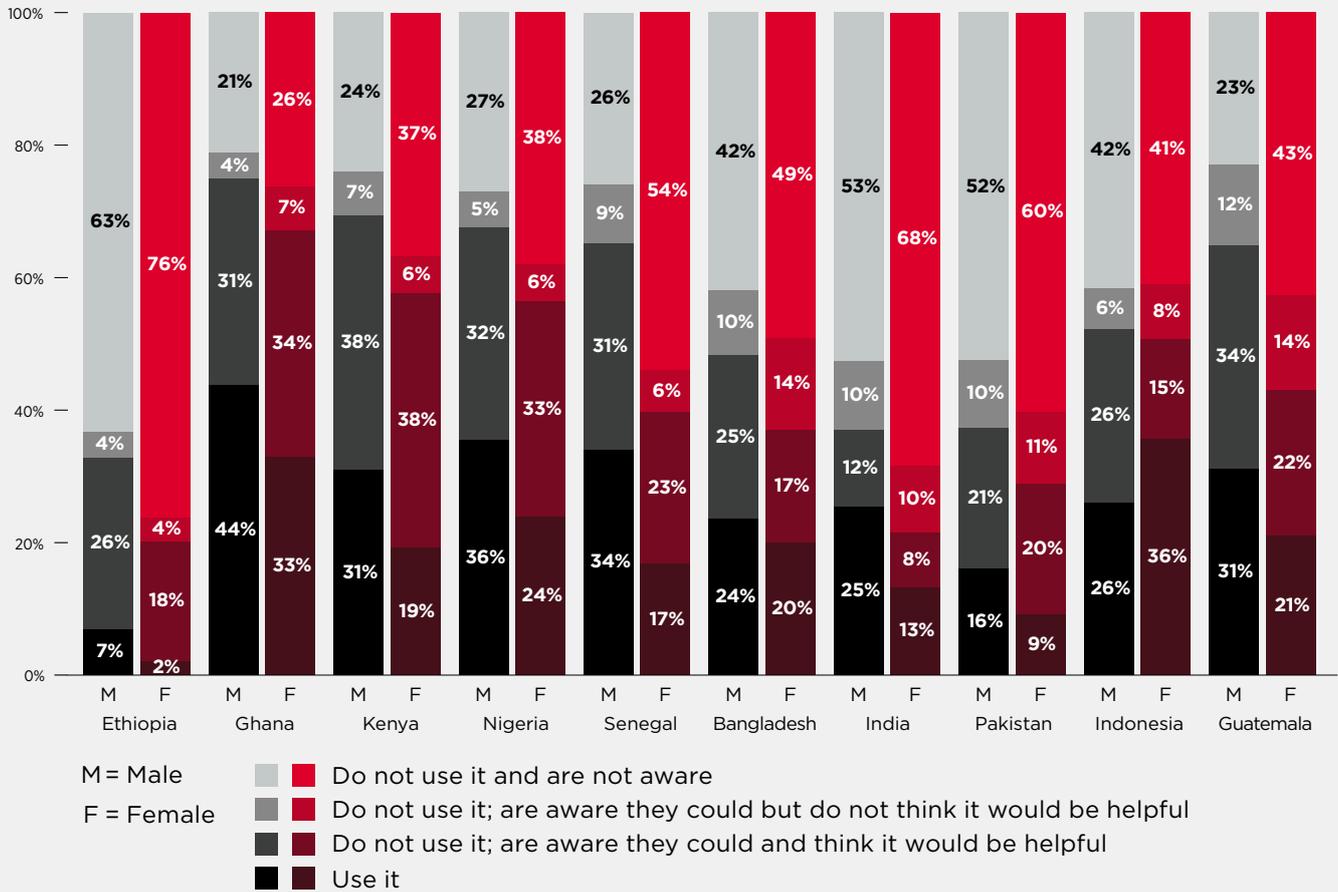
could but do not, even though they think it could help. In almost all survey markets, fewer women micro-entrepreneurs are aware of this use case than men (see Figure 18). For example, in Senegal, 54% of women micro-entrepreneurs are not aware that they could use a mobile phone to market or advertise their business compared to 26% of their male counterparts. Awareness is also substantially low in India and Ethiopia, especially among women. However, in most survey markets, a similar proportion of men and women micro-entrepreneurs who do not use mobile to promote their business, but are aware that they could, think that it would be useful. In Kenya, for example, 38% of men and women who are aware they could use a mobile phone to market or promote their business, but do not, think that it would be useful. This suggests that other barriers may be preventing them from adopting this use case for business, such as digital skills or handset functionality.

41. GSMA. (2023). *Empowering Women Micro-entrepreneurs with Mobile*.

42. Except Indonesia.

Figure 18

Using a mobile phone to market, advertise or promote a business: awareness, use and perception among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Percentages of those who considered this use case helpful reflect respondents who reported it would be "very helpful" or "fairly helpful" with the running or management of their business.

n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

Most micro-entrepreneurs who use a mobile phone to market and promote their business report using network calls to do so, with little difference by gender. In Ghana, Nigeria, Senegal and Kenya, more than 50% of both male and female micro-entrepreneurs who use mobile to market or promote their business reported using network calls to do so (see Figure 19). However, beyond network calls, there are notable differences by country. For example, in Ghana, instant messaging and Facebook are more widely used than SMS, especially among women. In Indonesia, SMS and instant messaging are most common after network calls, with little difference by gender. In Pakistan, both men and women use video calls more than SMS to market and promote their business.

In some countries, certain social media channels are more popular among women micro-entrepreneurs who use mobile phones to market their businesses than men. For example, in Nigeria and Pakistan, more women than men reported using instant messaging for marketing and promotion. In Nigeria, 25% of women micro-entrepreneurs who use mobile to market and promote their business reported using Instagram compared to 17% of men. Women also reported using this more frequently than their male counterparts in Ethiopia and Indonesia. Overall, TikTok was not commonly reported, but in Senegal, 25% of women who use mobile to market and promote their business reported using this channel compared to 18% of men. It was also reported somewhat more frequently by women respondents in Ghana and Indonesia.

43. This is based on data from seven of the 10 countries with sufficient sample sizes (excludes Guatemala, Ethiopia and Bangladesh).

Figure 19
Channels used to market, advertise or promote business
Percentage of micro-entrepreneurs surveyed who reported marketing, advertising or promoting their business with mobile in the past three months

		Network calls	Instant messaging	SMS/MMS	Video calls	Facebook	Online calls	YouTube	Instagram	TikTok	E-commerce platform	Online platform to offer services or find work	Twitter	Other
GHANA	M	55%	46%	38%	32%	40%	23%	13%	13%	10%	5%	5%	7%	1%
	F	52%	42%	26%	31%	39%	18%	14%	16%	14%	3%	3%	6%	1%
KENYA	M	59%	27%	16%	36%	27%	7%	8%	3%	5%	3%	4%	3%	2%
	F	59%	23%	13%	30%	24%	7%	4%	5%	3%	1%	0%	1%	2%
NIGERIA	M	51%	50%	35%	47%	47%	21%	15%	17%	5%	8%	3%	4%	0%
	F	53%	61%	35%	53%	44%	23%	15%	26%	9%	4%	0%	2%	0%
SENEGAL	M	58%	54%	56%	7%	17%	29%	8%	8%	18%	1%	0%	2%	0%
	F	60%	43%	54%	9%	15%	36%	3%	6%	25%	0%	0%	0%	0%
INDIA	M	36%	13%	14%	25%	13%	22%	17%	9%	0%	6%	3%	2%	1%
	F	33%	8%	14%	21%	7%	14%	9%	4%	1%	6%	7%	4%	1%
PAKISTAN	M	46%	13%	19%	33%	14%	28%	22%	1%	11%	0%	4%	0%	3%
	F	43%	29%	10%	34%	19%	16%	16%	5%	2%	5%	1%	1%	0%
INDONESIA	M	31%	47%	50%	18%	28%	36%	14%	12%	3%	3%	2%	0%	5%
	F	29%	48%	50%	21%	32%	30%	10%	17%	11%	4%	0%	4%	0%

Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs who reported marketing, advertising or promoting their business with mobile in the past three months
 Respondents could select multiple answers.
 n= from 31 to 208 for female micro-entrepreneurs and n= from 46 to 370 for male micro-entrepreneurs



“I have WhatsApp that I use to pass the information if I have a new product... I am still being taught the thing for the ads [for Facebook and Instagram]. I still have not done it. I think that in 2018 there was a time that I did it but I hear that there is a new way of getting better reviews so I am still working on it.”

Female micro-entrepreneur,
urban, Nairobi, Kenya

“[I prefer to put my business on WhatsApp] because most people from the area I come from are able to see whenever I post because most of them are my friends and 99% of them are in WhatsApp.”

Female micro-entrepreneur,
rural, Nakuru, Kenya

4.4 Digital financial services

Across survey countries, two digital financial services were reported by micro-entrepreneurs most: making or receiving payments and saving or storing money in an account (Figure 20). Using a mobile phone to manage or track business finances was more common in Ghana and Kenya than other survey markets, and there were substantial gender gaps in all markets. Using a mobile phone to take out loans, credit or insurance products was reported least, although somewhat more in Kenya and Ghana.

Making and receiving payments is an important mobile use case for micro-entrepreneurs, but is reported less by women. In the African survey markets (excluding Ethiopia), this use case was reported by at least one in five micro-entrepreneurs, ranging from 20% of women in Senegal to 62% of men in Kenya. In South Asia, usage is highest among micro-entrepreneurs in Bangladesh and lowest in Pakistan. There are notable gender gaps in all survey markets, except Indonesia where 20% of women micro-entrepreneurs reported making or receiving payments via mobile compared to 15% of men. This use case is notably lower among micro-entrepreneurs in Ethiopia (see Figure 20).

Saving and storing money is reported more in mature mobile money markets, but women micro-entrepreneurs are being left behind. In Ghana and Kenya, saving or storing money via mobile is commonly reported by micro-entrepreneurs, but less so by women. For example, in Kenya, 52% of men reported using their mobile phone to save and store money, compared to only 37% of women. The same trend was evident in the other survey countries (with the exception of Indonesia). For example, in

India, 23% of male micro-entrepreneurs reported this use case compared to 11% of female micro-entrepreneurs. In Nigeria, the figures are 41% and 21%, respectively.

Using a mobile phone to take out loans or insurance is generally less common than other digital financial services, and there are gender gaps in most countries. Rates are highest among male micro-entrepreneurs in Kenya (27%) compared to 18% of female micro-entrepreneurs. In all other survey countries, there is significantly lower use of mobile phones to take out loans and, with the exception of Indonesia and Ghana, there are gender gaps. In our qualitative research, women micro-entrepreneurs were often more cautious about using digital loans, with many expressing significant fears about missing loan payments. In many contexts, micro-entrepreneurs, and women in particular, tend to reach out to family for business financing rather than use formal (including digital) financial services, which may help to explain low uptake. This may be due to lower levels of trust in formal financial services, lower levels of financial literacy or concerns about missing a payment.

Micro-entrepreneurs who use a mobile phone for digital financial services for their business highlighted specific apps and services. In Kenya, where this use case was more frequently reported in the quantitative data, commonly reported apps and services for loans and credit included M-Shwari, Fuliza, Tala, Zenka and Branch. In Ghana, our qualitative research found that loans were often avoided where possible, and both women and men who had already taken out digital loans reported finding loan conditions unfavourable. In Pakistan, there were some who

perceived the concept of interest loans as “haram” (forbidden by Islamic law), therefore, there is lower demand for these products. Loans are instead sought from family members or NGOs that provide interest-free loans, such as Akuwat or Barwaqt mobile loans.

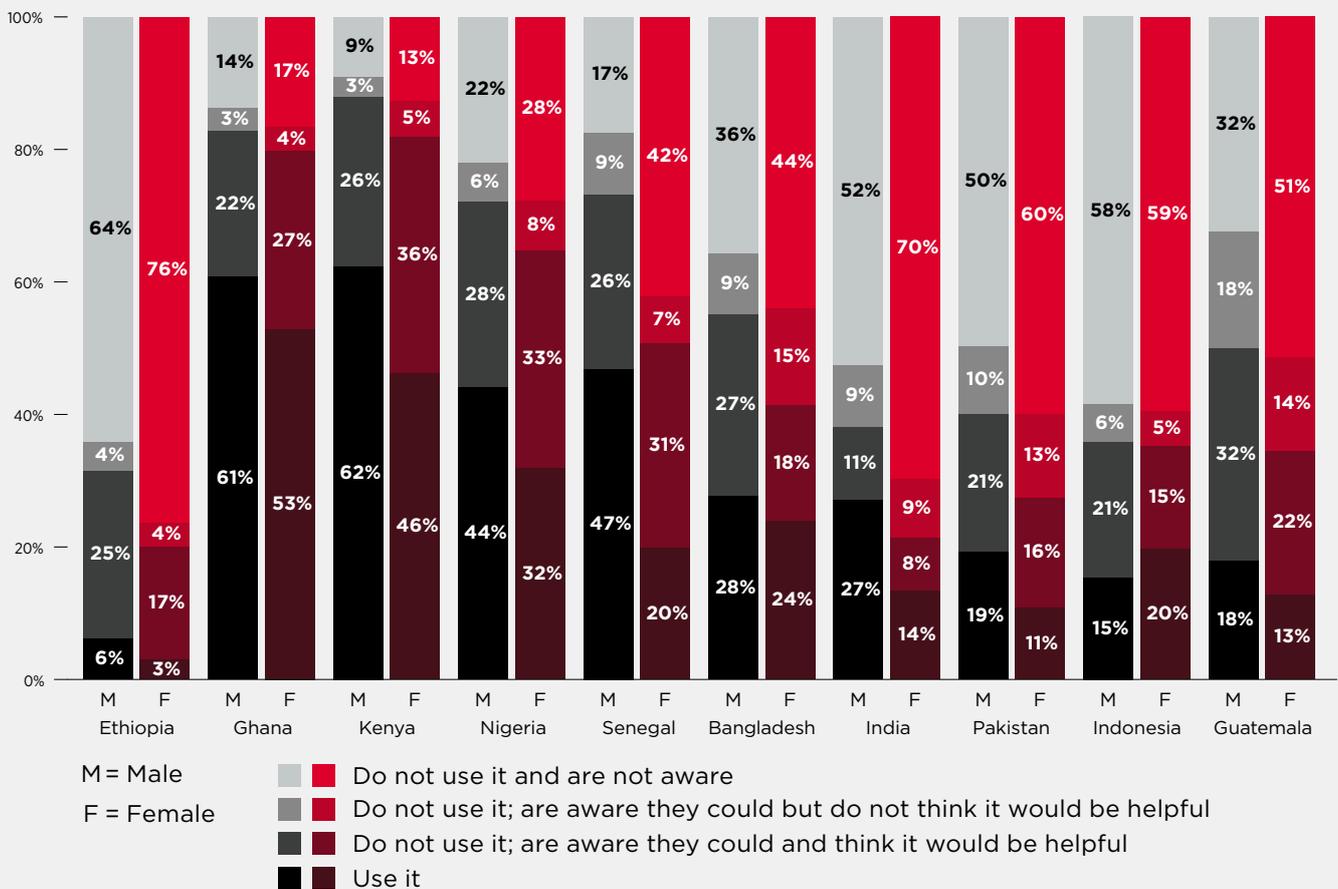
Despite growth in digital financial services, a substantial proportion of micro-entrepreneurs are unaware that they could use a mobile phone to make and receive payments, especially women. Awareness is particularly low in Ethiopia, India, Pakistan and Indonesia, where more than half of micro-entrepreneurs are not aware of this business use case and there are wide gender gaps. In India, for example, 52% of men and 70% of women are unaware of this use case. Awareness levels are high in markets with more developed mobile money ecosystems, such as Kenya and Ghana, but gender gaps remain.

A significant share of micro-entrepreneurs is aware that they could use a mobile phone to make and receive payments but do not, even though they feel it would be useful for their business. In all markets except India, most micro-entrepreneurs who are aware of this use case but were not making or receiving payments felt that it would be useful for their business. This suggests there is an opportunity to help them overcome barriers to adoption (Figure 20). Notably, in the African survey countries (excluding Ethiopia), women who were not using mobile to make or receive payments, but were aware of it, were more likely than men to perceive this as potentially helpful for their business. However, the reverse was true for the other six markets in our sample, where fewer women than men perceived this use case as helpful, suggesting there may be greater, gender-specific barriers influencing their perceptions.

Figure 20

Using a mobile phone to make or receive payments: awareness, use and perception among micro-entrepreneurs

Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Percentages of those who considered this use case helpful reflect respondents who reported it would be “very helpful” or “fairly helpful” with the running or management of their business.

n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

“Customers were asking why I don’t use Google Pay. If it is Google Pay, they can send it through easily, so, I thought I should keep this.”

Female micro-entrepreneur, urban, Chennai, India

“Some people do delivery through JazzCash. Like if they make big orders then I do ask them to send me money through JazzCash, then I get the raw materials and prepare their order... It’s fast and easy to use.”

Female micro-entrepreneur, urban, Lahore, Pakistan

4.5 Learn new skills and find new ideas

Mobile and mobile internet enable micro-entrepreneurs to find inspiration and new ideas for their business and learn new skills online.

In four of the 10 survey countries, more than a quarter of micro-entrepreneurs reported using a mobile phone for this activity. Among women micro-entrepreneurs, the highest usage was in Indonesia (33%) and Ghana (28%), while lowest usage was in Ethiopia (3%), Senegal (10%), India (13%) and Pakistan (12%) (see Figure 21).

Gender gaps are evident in most of the survey countries.

In eight of the 10 survey countries, women micro-entrepreneurs are less likely to use mobile to learn new skills or find business ideas (with the exception of Indonesia and Pakistan). For example, in Senegal, 31% of men and only 10% of women reported this use case. Similarly, in India, 26% of men and 13% of women did so. Given that skills and ideas are often acquired by watching videos online, which tends to consume more data and require searching skills to navigate results, women micro-entrepreneurs may be more disadvantaged (see *Barriers to using mobile for business or using it more* section). For example, this may be related to women’s lower rates of smartphone ownership (which they could use to view videos and images clearly), lower digital skills and data affordability challenges, as well as social norms in some conservative contexts where there are concerns about accessing inappropriate content or mobile phones interfering with women’s household “duties”.

A large proportion of micro-entrepreneurs are not aware that they could use a mobile phone to learn a new skill or find new ideas, especially women.

In all survey countries, women micro-entrepreneurs are less likely than their male counterparts to be aware that they could use mobile to learn a new skill or get new ideas (Figure 21). For example, in Guatemala, 27% of men were not aware of this use case compared to 50% of women. However, among micro-entrepreneurs who are aware of this use case but were not performing it, most thought it would be helpful for their business. For example, in Kenya, 39% of women were aware of this use case but did not use it, and 34% thought it would be helpful (only 5% did not think it would be helpful). It is worth noting that 40% of women micro-entrepreneurs in Kenya were not aware of this use case at all (compared to 26% of men).

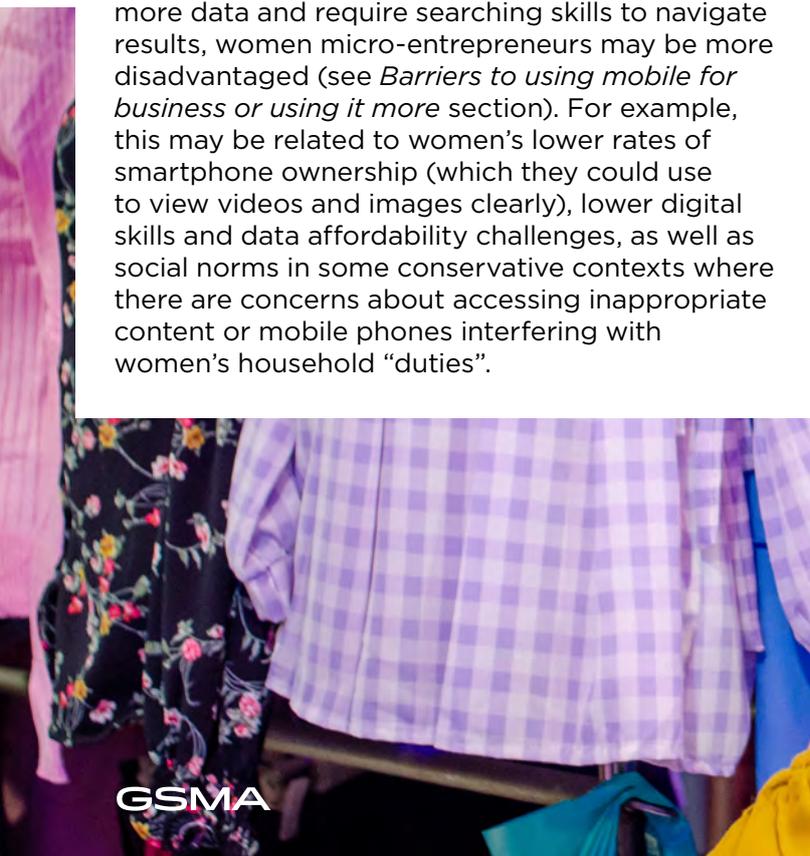
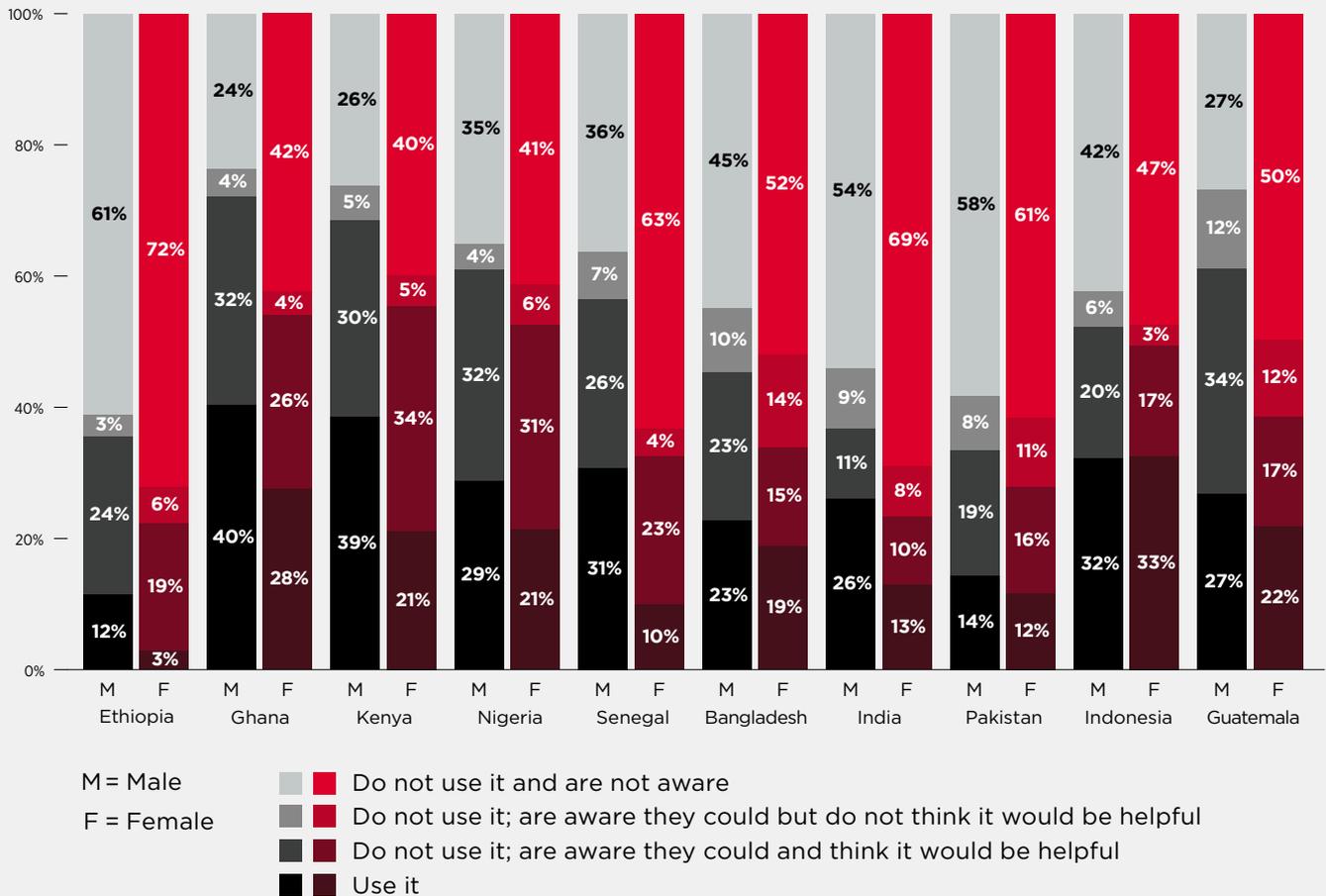


Figure 21

Using a mobile phone to learn new skills or get new ideas for business: awareness, use and perception among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed

Percentages of those who considered this use case helpful reflect respondents who reported it would be "very helpful" or "fairly helpful" with the running or management of their business.

n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

The qualitative research indicates that micro-entrepreneurs who use a mobile phone to learn new skills or find new business ideas primarily used YouTube, Facebook and Instagram, although women were less likely to do so. YouTube was often mentioned by micro-entrepreneurs as a source of online training videos, for example, to learn a new hairdressing style or stitching technique. However, the women who reported this tended to be more digitally savvy with a high business drive and fewer constraints. In Pakistan and India, those who use mobile to learn new skills or get ideas are often in the beauty, fashion or catering industry. In India, some micro-entrepreneurs use mobile

phones to check what competitors are offering via apps such as Meesho, Amazon and Flipkart, or to check the WhatsApp status of other micro-entrepreneurs in their network.⁴⁴ In Kenya, more digitally engaged micro-entrepreneurs use mobile phones to approach well-known influencer peers or mentors for business advice directly via digital platforms. However, the qualitative research also highlighted that the cost of watching a video or downloading images can be prohibitive for many micro-entrepreneurs, especially women, although data affordability tended to be more commonly cited as a barrier in African markets.

44. This is a common way for micro-entrepreneurs to stay up to date on the activities of their peers.

“

“I get that information from YouTube. If it is something I don't understand, I go through YouTube to see if I can get it then learn how to get the thing done.”

Female micro-entrepreneur,
urban, Tamale, Ghana

“I am always on the lookout for new hairstyles so I use my phone to do that. I also use my phone for taking pictures of my work and pictures of hairstyles that interest me.”

Female micro-entrepreneur,
rural, Nairobi, Kenya

“I wanted to know everything like sewing, beautician works... I mostly learned from YouTube, and I had Videoder.”

Female micro-entrepreneur,
rural, Karachi, Pakistan

“I have learnt stitching nauvari sarees through YouTube. In the city, this one [is] a popular trend so I wanted to learn this method to sell it here.”

Female micro-entrepreneur,
rural, Nashik, India

”

BOX 3

Apps used most frequently by micro-entrepreneurs

Men and women micro-entrepreneurs who used mobile for business were asked which apps they used most frequently for business use. The top-reported apps are listed in Figure 22 for selected countries. Although

the most frequently used apps are similar for men and women, it is important to note there are gender gaps in usage levels. There are also fewer women than men using mobile for business overall.

Figure 22

Top three reported apps or services used in the past three months
Among micro-entrepreneurs surveyed who use a mobile phone for business

	Micro-entrepreneurs in Ghana		Micro-entrepreneurs in Kenya	
	Men	Women	Men	Women
1	Mobile money	Mobile money	Mobile money	Mobile money
2	Instant messaging	Instant messaging	Instant messaging	Instant messaging
3	Internet browsing	Facebook	Internet browsing	Facebook

	Micro-entrepreneurs in India		Micro-entrepreneurs in Pakistan	
	Men	Women	Men	Women
1	YouTube	YouTube	Mobile money	Instant messaging
2	Internet browsing	Instant messaging	Instant messaging	YouTube
3	Instant messaging	Internet browsing	YouTube	Facebook

Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed who use mobile for business
n=118 to 416 for female micro-entrepreneurs and n=365 to 629 for male micro-entrepreneurs



“For the mobile phone, I don’t use it for anything unless someone calls me and I talk to them. I know the mobile phone is for business [but] because I have not used it before, I don’t know anything about that. I only thought about it for fun and meeting new people.”

Female micro-entrepreneur,
urban, Tamale, Ghana



BOX 4

Awareness of mobile use cases for business beyond communication

All micro-entrepreneurs we surveyed were aware that a mobile phone could be used to communicate with customers and suppliers, but awareness of other ways it could support a business was low.

In Ghana, Kenya and Nigeria, micro-entrepreneurs are more likely to be aware of digital financial services than in other survey countries, but women less so than men.

Awareness of other use cases is lower across all survey countries and, with the exception of Indonesia, women micro-entrepreneurs are less likely than their male counterparts to be aware of every use case (Figure 23).

These gender gaps in awareness are notable in Ethiopia, Senegal, India and Pakistan. For example, in almost all countries, women micro-entrepreneurs are less likely than men to be aware of the more popular uses of mobile for business beyond communication, such as marketing, promoting or advertising their business. In Senegal, only 46% of women

micro-entrepreneurs were aware of this use case, compared to 74% of men. Similarly, in India, 32% of women micro-entrepreneurs were aware they could use a mobile for this purpose compared to 47% of men. This suggests that many women may not be using mobile for business or using it in more diverse ways, primarily because they are unaware that a mobile can support these business needs.

Even women micro-entrepreneurs who are already using mobile for business are less likely than their male counterparts to be aware of ways that mobile phones can support businesses beyond communicating with customers and suppliers. For example, they might be using a mobile phone to call customers but are unaware that they could use it to send or receive payments (see *Use of mobile for business* section) or learn new business skills. This highlights how crucial it is to raise awareness of the range of mobile uses for business, especially among women micro-entrepreneurs.



Figure 23
Awareness of mobile use cases for business
Percentage of micro-entrepreneurs surveyed

		Communicate with customers	Communicate with suppliers	Make or receive payments	Store information and files	Market, advertise or promote my business	Learn new skills or get new ideas for my business	Find information to help with business	Plan business activities	Save or store money in account	Manage or track my business finances	Access maps or location services	Take out loans, credit, insurance products	Issue invoices or receipts for my business
ETHIOPIA	M	100%	100%	36%	53%	37%	39%	44%	44%	36%	36%	26%	26%	22%
	F	100%	100%	24%	37%	24%	28%	32%	28%	23%	22%	11%	18%	12%
GHANA	M	100%	100%	91%	76%	76%	74%	68%	65%	88%	70%	59%	82%	40%
	F	100%	100%	87%	65%	63%	60%	54%	57%	78%	58%	46%	74%	33%
KENYA	M	100%	100%	86%	77%	79%	76%	71%	67%	84%	62%	63%	68%	44%
	F	100%	100%	83%	69%	74%	58%	61%	53%	80%	54%	47%	63%	34%
NIGERIA	M	100%	100%	78%	78%	73%	65%	67%	62%	74%	54%	54%	55%	40%
	F	100%	100%	72%	66%	62%	59%	54%	56%	64%	47%	45%	47%	31%
SENEGAL	M	100%	100%	83%	68%	74%	64%	63%	68%	64%	55%	48%	46%	50%
	F	100%	100%	58%	42%	46%	37%	32%	37%	42%	30%	20%	27%	28%
BANGLADESH	M	100%	100%	64%	50%	58%	55%	57%	47%	55%	54%	46%	46%	43%
	F	100%	100%	56%	47%	51%	48%	54%	39%	49%	46%	42%	34%	35%
INDIA	M	100%	100%	48%	45%	47%	46%	46%	39%	46%	45%	45%	37%	37%
	F	100%	100%	30%	30%	32%	31%	28%	26%	29%	29%	29%	27%	24%
PAKISTAN	M	100%	100%	50%	40%	48%	42%	48%	41%	48%	42%	40%	32%	32%
	F	100%	100%	40%	34%	40%	39%	36%	32%	31%	31%	29%	24%	29%
INDONESIA	M	100%	100%	42%	59%	58%	58%	51%	57%	42%	35%	52%	35%	26%
	F	100%	100%	41%	56%	59%	53%	46%	54%	38%	36%	47%	32%	27%
GUATEMALA	M	100%	100%	68%	70%	77%	73%	69%	68%	61%	65%	65%	62%	63%
	F	100%	100%	49%	52%	57%	50%	50%	49%	43%	43%	46%	43%	42%

Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed
 A person is considered aware of a particular activity if they have either performed that activity for their business before or have not performed that activity but are aware they could do so.
 n= from 117 to 661 for female micro-entrepreneurs and n= from 160 to 1,083 for male micro-entrepreneurs



5. Barriers to using mobile for business or using it more



Both men and women micro-entrepreneurs face a range of barriers that prevent them from progressing on the mobile-for-business user journey and reaping all the benefits of mobile. First, they cannot start using a mobile phone to support their business if they do not own or have regular access to one. This is a significant barrier that has a disproportionate impact on women micro-entrepreneurs because they are less likely than men to own a mobile phone, especially a smartphone (see *Mobile gender gaps among micro-entrepreneurs* section). In seven of the 10 survey countries, more than a quarter of female micro-entrepreneurs do not own a handset. This is as high as 59% in Ethiopia, 51% in Pakistan and 42% in India (see Figure 24).

Even when a micro-entrepreneur owns a mobile phone, there are other barriers preventing them from starting to use it for business or from using it more if they already do so. These barriers are in addition to the low awareness among micro-entrepreneurs (especially women) of the different ways mobile can be used for business (see Box 4). This section explores these barriers in more detail.

Although reported barriers vary by country, gender and other demographic characteristics

(Figure 24), the main barriers preventing mobile-owning micro-entrepreneurs from using a mobile for business, or from using it more, were not having the right kind of phone and lack of perceived relevance, such as preference for cash or other payment methods. This was followed by safety and security concerns and not having the necessary confidence or digital skills. These were the most-reported barriers for both mobile-owning micro-entrepreneurs who already used a mobile phone for business and those who did not, although existing users typically reported fewer barriers. For this reason, the barriers for both groups have been combined into one heat map (Figure 24) but are shown separately in Appendix 3. These barriers are explored in more detail towards the end of this section.

Across survey countries, men and women micro-entrepreneurs who own a mobile phone reported the same barriers, but the proportion of women reporting these barriers was often higher. Women tend to experience these barriers (see Figure 24) more acutely than men due to structural inequalities and underlying social norms, including gender disparities in education and income.



Figure 24
Barriers preventing mobile-owning micro-entrepreneurs from starting to use it for business or using it more
Percentage of micro-entrepreneurs surveyed who own a mobile

		DON'T HAVE THE RIGHT PHONE		RELEVANCE		SAFETY AND SECURITY	SKILLS AND CONFIDENCE		DATA/SERVICE AFFORDABILITY	SOCIAL NORMS		INFRASTRUCTURE / OTHER				
		No internet enabled phone	Phone not allowing to do things easily	Prefer cash/ other payment type	Mobile can't help my business (more)	Safety and security concerns	Lack confidence or skills	Need help using mobile	Cost of mobile data or services	Family concerns	Uncomfortable connecting with other gender	Limited/no coverage	Slow connection	Agent access/ service	Limited battery	Something else
ETHIOPIA	M	48%	45%	36%	22%	14%	36%	20%	21%	2%	5%	33%	30%	13%	25%	2%
	F	57%	49%	40%	25%	15%	46%	30%	23%	2%	10%	20%	14%	15%	14%	4%
GHANA	M	14%	14%	11%	3%	10%	9%	10%	14%	2%	4%	7%	6%	6%	5%	3%
	F	16%	21%	17%	5%	11%	15%	18%	15%	5%	5%	7%	6%	7%	4%	6%
KENYA	M	23%	24%	29%	6%	21%	13%	9%	25%	4%	6%	11%	12%	8%	13%	3%
	F	28%	29%	33%	9%	22%	18%	10%	27%	5%	7%	8%	11%	5%	12%	2%
NIGERIA	M	19%	21%	32%	7%	21%	20%	15%	21%	5%	9%	10%	10%	10%	9%	9%
	F	25%	31%	37%	9%	22%	26%	22%	28%	6%	9%	10%	16%	12%	13%	13%
SENEGAL	M	14%	16%	16%	3%	6%	10%	11%	12%	2%	5%	11%	8%	12%	5%	2%
	F	24%	25%	17%	11%	12%	11%	19%	18%	1%	5%	13%	6%	8%	4%	3%
BANGLA-DESH	M	18%	19%	25%	12%	23%	19%	10%	14%	10%	9%	9%	10%	13%	12%	9%
	F	28%	23%	20%	19%	28%	27%	13%	15%	24%	23%	9%	23%	14%	13%	11%
INDIA	M	15%	24%	34%	24%	30%	27%	26%	23%	17%	18%	20%	24%	20%	22%	17%
	F	15%	19%	28%	20%	26%	25%	25%	18%	15%	18%	18%	18%	18%	19%	12%
PAKISTAN	M	25%	23%	37%	19%	28%	29%	19%	19%	12%	17%	19%	19%	19%	21%	10%
	F	21%	23%	30%	16%	30%	23%	20%	21%	24%	23%	16%	16%	18%	22%	10%
INDONESIA	M	10%	18%	44%	17%	25%	25%	20%	24%	10%	18%	27%	19%	18%	18%	6%
	F	15%	19%	45%	22%	31%	32%	17%	25%	16%	17%	24%	18%	16%	15%	8%
GUATEMALA	M	21%	27%	31%	20%	40%	38%	25%	20%	18%	19%	28%	27%	20%	27%	9%
	F	15%	27%	31%	18%	40%	33%	19%	17%	18%	22%	24%	32%	17%	27%	9%

Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed who own a mobile phone
 Percentages indicate the proportion of respondents who answered, "Yes, this is something that stops me from starting to use a mobile in my business, or using it more if I already do so."
 n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

M F

Male Female

Most reported barrier in that country

Least reported barrier in that country

The barriers reported by micro-entrepreneurs vary by both country and gender. For example, barriers related to social norms, such as family approval and discomfort with being contacted by someone of the opposite gender, were reported more frequently in the South Asian survey countries and in Guatemala, but were reported by 10% or less of micro-entrepreneurs who own a mobile phone in the African survey countries (see Figure 24). In addition, not having the right handset was reported somewhat more frequently in the African survey countries relative to other barriers, while safety and security concerns were more pronounced in the South Asian survey countries and Guatemala, relative to other barriers. In all cases, these barriers tended to be reported more by women micro-entrepreneurs who owned a mobile phone than their male counterparts.

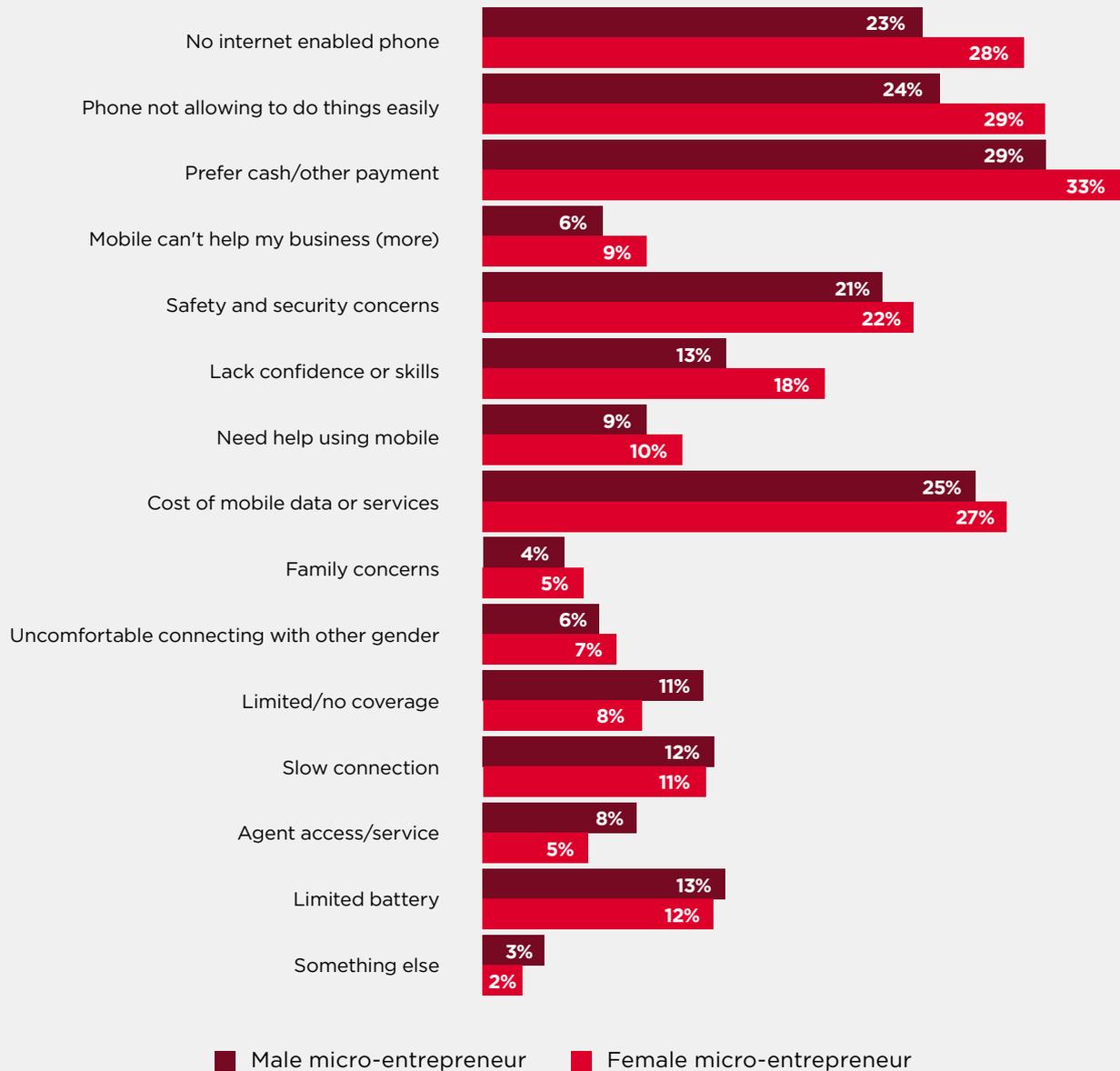
Figures 25 and 26 compare two countries, Kenya and Bangladesh, to highlight the country and gender differences in the barriers preventing mobile-owning micro-entrepreneurs from starting to use a mobile for business or using it more. While not having the right kind of phone, a preference for cash or other payment types and safety and security concerns all rank highly in both countries, other differences are evident. There are more substantial gender gaps in Bangladesh than in Kenya, especially for barriers related to social norms. For example, in Kenya, only 5% of women micro-entrepreneurs who own a mobile phone reported family concerns as a barrier, while 24% in Bangladesh reported this. In Bangladesh, lack of confidence or skills was reported as a barrier by 27% of women micro-entrepreneurs who own a mobile phone, while in Kenya only 18% reported this. In both cases, these barriers were reported more by women than by men (Figures 25 and 26).



Figure 25

Barriers preventing mobile-owning micro-entrepreneurs in Kenya from starting to use it for business or using it more

Percentage of micro-entrepreneurs surveyed who own a mobile phone



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed who own a mobile phone

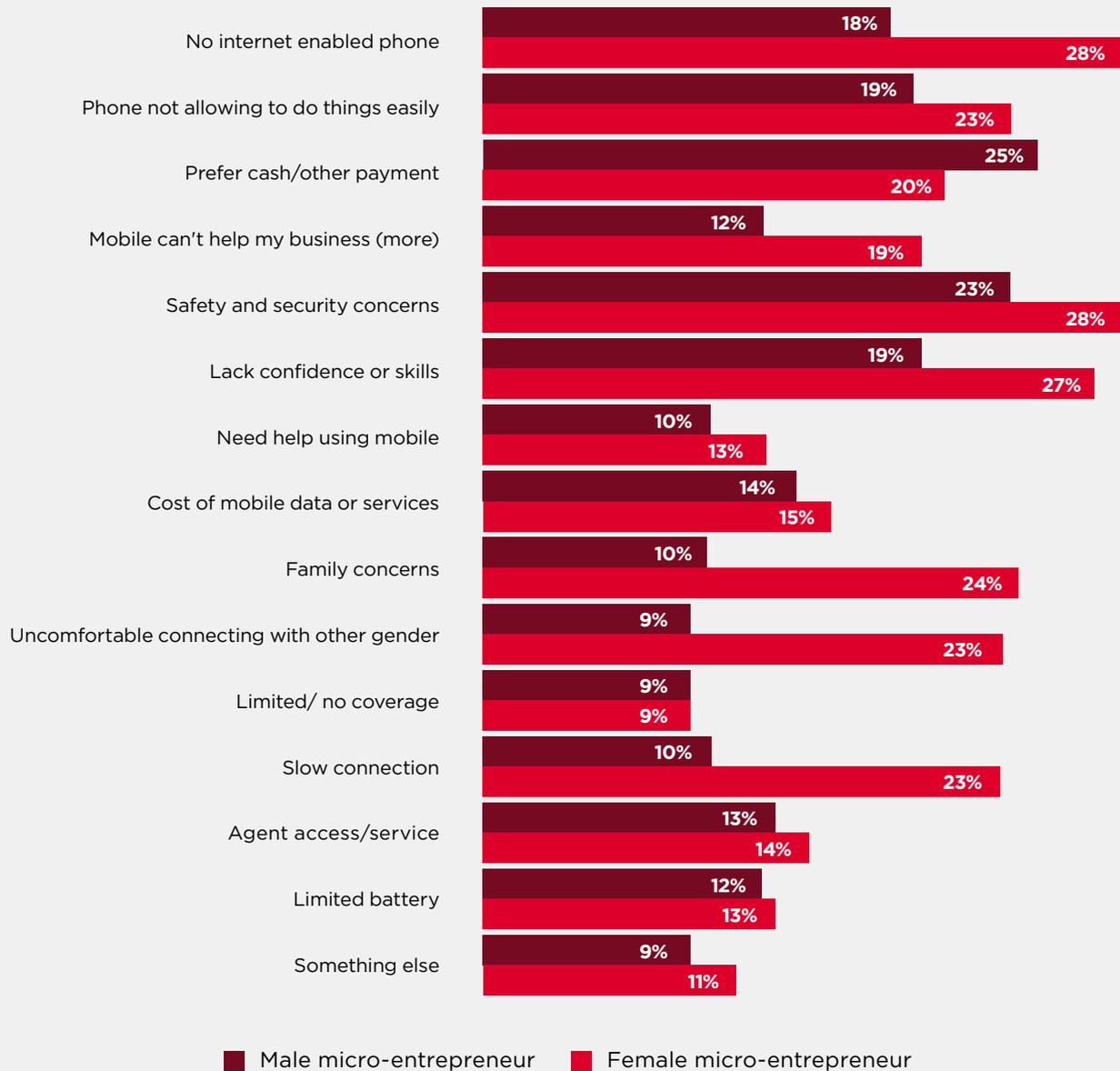
Percentages indicate the proportion of respondents who answered, "Yes, this is something that stops me from using mobile phones [more] in my business" to each barrier.

n=570 for female micro-entrepreneurs, n=577 for male micro-entrepreneurs

Figure 26

Barriers preventing mobile-owning micro-entrepreneurs in Bangladesh from starting to use it for business or using it more

Percentage of micro-entrepreneurs surveyed who own a mobile phone



Source: GSMA Consumer Survey, 2022

Base: Micro-entrepreneurs surveyed who own a mobile phone

Percentages indicate the proportion of respondents who answered, "Yes, this is something that stops me from using mobile phones [more] in my business" to each barrier.

n=85 for female micro-entrepreneurs, n=256 for male micro-entrepreneurs

In almost all survey countries, women micro-entrepreneurs who lived in rural areas reported more barriers than both their male counterparts and women micro-entrepreneurs who lived in urban areas. Other demographic factors can also increase the number of barriers reported

by micro-entrepreneurs, including owning an agricultural-related micro-enterprise (which tends to overlap with those living in rural areas) or having only a primary education or less. Conversely, those who owned a smartphone reported the fewest barriers overall.

5.1 Handset limitations

Not having the right kind of phone is preventing micro-entrepreneurs who already own a mobile from using it for business or using it more, particularly women. Not having an internet-enabled handset and/or owning a mobile phone that does not allow them to get things done easily and does not meet their needs (e.g. a low-quality or old handset) is a key barrier. In most survey countries, micro-entrepreneurs who own a mobile phone but do not yet use it for business were more likely to report this as a barrier than those who already use a mobile for business. These barriers are also reported more frequently by rural women than both rural men and urban women micro-entrepreneurs in most survey countries.⁴⁵

Not having an internet-enabled handset is a substantial barrier for micro-entrepreneurs, especially women. This was reported as a barrier by 60% of women micro-entrepreneurs in Ethiopia who own a mobile phone and 49% of their male counterparts – the greatest barrier for both men and women in all survey countries. Women in Kenya, Nigeria, Senegal and Bangladesh were also much more likely to report this barrier. For example, for micro-entrepreneurs in Senegal who own a mobile phone, not having an internet-enabled phone was the most-reported barrier by women (24%) compared to just 14% of men. However, this barrier was reported to a lesser extent in India, Indonesia and Guatemala, relative to other barriers.

The limited functionalities of existing handsets prevent many micro-entrepreneurs from using mobile for business or using it more.

Not being able to get things done easily on a mobile phone was also reported as a substantial barrier. This might include not having a good camera, insufficient storage space, a battery that does not last or a cracked screen. This was a key challenge reported by women micro-entrepreneurs who own a mobile phone in all 10 survey countries, ranging from 19% in India to 49% in Ethiopia. In the African survey countries, women micro-entrepreneurs were more likely than men to report this barrier.

The affordability of an internet-enabled handset is another challenge for micro-entrepreneurs, especially in African countries.

While there are various reasons why a micro-entrepreneur may not own an internet-enabled handset, including social norms and lack of perceived relevance, affordability is a substantial barrier. Affordability of an internet-enabled handset was reported by both male and female micro-entrepreneurs as a key reason for not adopting mobile internet for personal or business reasons, even though they were already mobile users and aware of mobile internet. This was the case in all countries that had a sufficient sample, ranging from 30% in India to 64% in Kenya. In the African survey countries, affordability of an internet-enabled handset was reported as the top barrier to adoption by at least a quarter of micro-entrepreneurs who were mobile users and aware of mobile internet. Among women micro-entrepreneurs in Senegal and Kenya, it was 50% or more.

Not having a smartphone is a key barrier for women micro-entrepreneurs.

The qualitative research found that those without a smartphone were unable to access the apps they wanted to use for business, such as social media for marketing or instant messaging for communication. For many women micro-entrepreneurs, profits are marginal and living in low-income households mean they must prioritise income for essentials. Purchasing a handset, especially an internet-enabled one, was not always seen as a priority relative to other household needs, especially in contexts where social norms often limit women's access and use of mobile phones. In India, some women micro-entrepreneurs felt that a smartphone was an unjustifiable cost and felt guilty spending money on themselves instead of their children. In Pakistan, some women micro-entrepreneurs chose to spend money on other business needs instead, for example, purchasing tools and equipment such as a sewing machine.

45. Except in Ghana, where both handset limitations were reported somewhat more by urban women micro-entrepreneurs than their rural counterparts.

“I get fear if I buy smartphone and I can't operate it properly then I will be facing a loss. Because the smartphone prices are very high, so it needs to be worth it.”

Female micro-entrepreneur,
urban, Lucknow, India

“I want to be able to download these business apps once I get a smartphone, so then I could watch videos on how to advance my business and be able to learn from there.”

Female micro-entrepreneur,
urban, Nakuru, Kenya

“I [would like to] open a YouTube channel under the name of Jamba Beauty Parlour and post all our daily activities. This is not possible in my current phone, and I have tried already.”

Female micro-entrepreneur,
urban, Kolkata, India



5.2 Perceived relevance

In this section, “perceived relevance” is both a perception by micro-entrepreneurs that there is no value or no additional value to using a mobile phone for their business, and a preference for payment channels other than digital financial services via mobile (such as cash).

Many micro-entrepreneurs do not perceive the benefits of using a mobile phone to make or receive payments and prefer cash or other non-digital payment methods instead.

Preference for other payments such as cash was reported as a more substantial barrier than the perception that using a mobile phone could not do anything or anything more to support their business. Although the use of digital financial services and mobile money is on the rise in many countries, payment methods such as cash still dominate the financial transactions of many micro-entrepreneurs. This barrier was reported in all survey markets, including mature mobile money markets like Kenya where 33% of women micro-entrepreneurs who owned a mobile and 29% of their male counterparts reported this as a barrier. In seven of the 10 survey countries, it was reported by more than a quarter of micro-entrepreneurs who owned a mobile phone, ranging from 28% to 45%. There was little difference by gender, except in African survey countries where women were somewhat more likely to report this barrier than men.

In most survey markets, those who already use a mobile phone for business reported a preference for other payment methods (such as cash) less frequently. For example, this barrier was around 14 percentage points lower for mobile-owning women micro-entrepreneurs who already use a mobile phone for business in Kenya and Nigeria, compared to their female counterparts who are not yet using a mobile for business, and 11 percentage points lower in Senegal. This suggests that once micro-entrepreneurs start using a mobile phone for business, the benefits of using digital financial services, such as mobile money, become more apparent.

Micro-entrepreneurs have a preference for cash, particularly women. The qualitative research found that this included a preference for cash over digital transactions, and that this was due to the fees incurred, especially for micro-entrepreneurs operating on low margins. Where customer demand for digital payments services is low, there is less incentive for micro-entrepreneurs to offer them. Some women micro-entrepreneurs perceived that storing money digitally would make it less accessible than cash, particularly in rural and remote areas where there are fewer mobile money agents. In Kenya, the qualitative research also revealed a concern among micro-entrepreneurs, particularly more informal ones, that customers could cancel their mobile money payment. These micro-entrepreneurs therefore preferred to receive payments in cash.

The perception among mobile owners that their phone could do little to help their business varied by country and gender, and was reported more frequently in the Asian survey markets, but also in Guatemala and Ethiopia.

In these countries, this barrier was reported by 17% to 25% of micro-entrepreneurs who owned a mobile phone. In the remaining African countries, this was one of the least-reported barriers relative to others, ranging from 3% to 11%. Gender differences were noted in Senegal (albeit with low reporting levels), Bangladesh and Indonesia, where women micro-entrepreneurs who own a mobile phone are more likely than men to report this barrier. For example, in Bangladesh, this was reported by 19% of women micro-entrepreneurs who already own a mobile phone compared to 12% of their male counterparts. In Senegal, the figures were 11% for women and only 3% for men. Low awareness of the different business use cases for mobile may play a substantial role in the lack of perceived relevance, especially for women (see Box 4). This barrier was reported much less frequently by micro-entrepreneurs who are already using a mobile phone for business than those who are not (see Appendix 3). This suggests that the perceived value of using mobile for business may increase as micro-entrepreneurs begin to use it.

There was a common perception that using mobile and mobile internet is only for larger businesses, especially among women micro-entrepreneurs and rural residents. The qualitative research revealed perceptions among micro-entrepreneurs that the internet is more for entertainment than for business, that it may distract women from their household and business responsibilities and that it risks exposure to inappropriate content. Older or rural micro-entrepreneurs were less likely to be interested in digitising or changing the way they do things, as they felt comfortable running their business in traditional ways and perceived mobile as less relevant.

“I feel like the business is not big enough to be advertising it on the internet.”

Female micro-entrepreneur, urban, Tamale, Ghana

“Mobile is used when you get orders from other cities. We get orders from nearby areas. So we don’t use mobiles.”

Female micro-entrepreneur, urban, Karachi, Pakistan

“I use cash to pay my suppliers, most of the time the suppliers do not want you sending the money on the phone because of transaction costs.”

Female micro-entrepreneur, rural, Nairobi, Kenya



5.3 Safety and security concerns

In most survey countries, safety and security concerns about mobile use, such as theft, fraud and being contacted by strangers, are a substantial barrier to using mobile for business or using it more. In seven of the 10 countries, at least 20% of micro-entrepreneurs who own a mobile phone reported this as a barrier, with women in Bangladesh and Indonesia reporting this more than men. In Guatemala, this was the most frequently reported barrier, with 40% of both men and women micro-entrepreneurs who owned a mobile phone reporting this. This barrier was reported more frequently in Asian survey countries than African countries, and was notably lower in Senegal, Ethiopia and Ghana. The qualitative research also revealed concerns about theft, damage or fraud and the cost incurred as a result. In more conservative contexts, such as India and Pakistan, other safety and security concerns emerged as a barrier to women's use of mobile for business. This included concerns that public exposure through digital channels, such as social media, may lead to reputational damage or that women may be exposed to harmful or inappropriate content online.

In most survey countries, safety and security concerns are reported less frequently by micro-entrepreneurs who already use a mobile phone for business. This was notable among women micro-entrepreneurs in Ethiopia, Kenya, Senegal, India and Pakistan. For example, in Pakistan, 43% of mobile-owning women micro-entrepreneurs who are not using a mobile phone for business report safety and security concerns as a barrier, compared to 18% of their female counterparts who already use a mobile for business. Findings were similar in Kenya, where 29% of women micro-entrepreneurs who own a mobile but are not using it for business reported this as a barrier compared to 18% of those who are already using a mobile for business (see Appendix 3). Further research is needed to understand whether perceptions of safety and security improve once women micro-entrepreneurs start using a mobile phone for business, or whether those who use it for business simply have fewer concerns about safety and security and potentially fewer constraints.



“The phone can get damaged at any time and when it does, you would not get all that information back unless you save it somewhere.”

**Female micro-entrepreneur,
urban, Accra, Ghana**

“I don't usually leave huge amounts of money on my mobile wallet, because somebody can easily go in to your accounts.”

**Female micro-entrepreneur,
rural, Kumasi, Ghana**

“In Google Pay, if we enter any wrong number then money will be transferred to the wrong person. Because of this fear, I avoid it.”

**Female micro-entrepreneur,
urban, Chennai, India**

“My parents say there are a lot of bad things on the mobile which will corrupt your mind. I know there are good things there, when I used to watch stitching videos... I just look at what my brother opens for me”

**Female micro-entrepreneur,
rural, Lahore, Pakistan**

“At first, I made the page on Facebook, but Facebook has a lot of fake people. It happened to me that someone asked me to pick up their suits from a certain location, but it was a prank. I was furious.”

**Female micro-entrepreneur,
urban, Lahore, Pakistan**





5.4 Digital skills and confidence

Low levels of digital skills and confidence, or needing someone's assistance to use a mobile phone, are both significant barriers to using a mobile for business, particularly for women micro-entrepreneurs. In seven of the 10 survey countries, at least one in five micro-entrepreneurs who owned a mobile reported lack of confidence or digital skills as a barrier. In six of the survey countries, this was reported more by women micro-entrepreneurs than men. For example, in Ethiopia, 36% of male micro-entrepreneurs who owned a mobile reported lack of digital skills and confidence as a barrier compared to 46% of women. Similarly, in Bangladesh, this was reported by 27% of women micro-entrepreneurs who owned a mobile versus 19% of men, highlighting a substantial gender gap in digital skills and confidence among micro-entrepreneurs who used mobile for business. Overall, this barrier was reported more in the Asian survey countries and less in the African survey countries (except Ethiopia), yet gender gaps are still evident. For example, in Kenya, digital skills and confidence was reported as a barrier by 18% of women and 13% of men micro-entrepreneurs who owned a mobile phone.

In African survey countries, women micro-entrepreneurs who own a mobile are more likely than men to report that needing assistance with mobile-related tasks is a barrier to using mobile for business or using it more (except in Kenya). For example, in Ghana, this barrier was reported by 18% of women micro-entrepreneurs who owned a mobile compared to 10% of men. It is also one of the most frequently reported barriers for women micro-entrepreneurs who own a mobile in both Ghana and Senegal, relative to other barriers and compared to men. A quarter of all micro-entrepreneurs who own a mobile in India reported this barrier, but there was little difference by gender.

These barriers are most pronounced among micro-entrepreneurs in rural areas and those with only a primary education, especially women. For example, in seven of the 10 survey

countries, rural women who own a mobile phone are more likely than urban women to report digital skills and confidence as a barrier to using mobile for business or using it more. They are also more likely to report this barrier than rural men. For example, in Bangladesh, 36% of rural women micro-entrepreneurs who own a mobile phone reported lack of digital skills or confidence as a barrier, compared to 10% of their urban women counterparts (and 19% of their rural male counterparts). Similarly, in Ghana, 26% of women micro-entrepreneurs who own a mobile and have a primary education or less reported needing someone else to assist them, compared to 11% of their counterparts with at least a secondary education (and 17% of male micro-entrepreneurs with primary education or less). The qualitative research also highlighted that low literacy or lack of English language skills deter many micro-entrepreneurs from using mobile for business.

Women micro-entrepreneurs often fear making mistakes and lack confidence in their ability to apply their digital skills to their business. The qualitative research highlighted that, while some women were comfortable using social media to post personal content, they did not feel equipped to apply these skills to promote their business. For example, not knowing how to take good-quality photos of their work and create appropriate marketing messages meant that they avoided using their social media skills. Women micro-entrepreneurs were more likely to seek assistance with using mobile for business, particularly for financial transactions. Some women micro-entrepreneurs did not feel they had sufficient skills to use digital financial services and worried what would happen if they made a mistake. This often resulted in gatekeeper “take over” of their mobile phone when a transaction or task needed to be performed. Rather than showing them how to do it and supporting them to try it themselves, gatekeepers would complete the tasks for them. As a result, women micro-entrepreneurs were missing out on an opportunity to learn and become more confident using mobile for business.

“What if I market my business online but I’m not perfect? I fear some comments. I remember someone posted something she had knitted on Facebook and she was getting very negative comments.”

Female micro-entrepreneur,
urban, Nakuru, Kenya

“Actually I am not much familiar with mobile usage. I know that [you can make payment on phone] but I don’t know how to do it. My daughter knows all those things.”

Female micro-entrepreneur,
rural, Durgapur, India



“Customers tell me designs they want me to stitch. So I ask my children to get that on the internet.”

Female micro-entrepreneur,
urban, Karachi, Pakistan

5.5 Affordability of data and services

Affordability of mobile data and services is a barrier for micro-entrepreneurs in some markets. In four of the 10 markets, this was reported by at least 20% of both men and women micro-entrepreneurs who owned a mobile phone. This is a particular barrier in Sub-Saharan Africa, and especially for women, where data costs are

high relative to average monthly incomes.⁴⁶ This was reported most by mobile-owning micro-entrepreneurs in Kenya (27% for women and 25% for men) and Nigeria (28% for women and 21% for men). It was also reported by almost a quarter of micro-entrepreneurs in Indonesia who owned a mobile phone, with no difference by gender.

5.6 Social norms

Even when micro-entrepreneurs own a mobile phone, social norms still prevent them from using it for business or using it more, especially women.

A women micro-entrepreneur’s ability to adopt and use mobile for business is shaped and influenced by the social norms and structural inequalities she faces. These barriers take many forms, and women respondents in all survey countries experienced social norms-related barriers to some extent, although to different degrees, and women in some contexts were affected more overtly. Two social norms-related barriers to using mobile for business or using it more were included in the survey. These barriers were family concerns with using a mobile for business and discomfort with being contacted or contacting someone of the opposite gender on a mobile phone.

The extent to which social norms-related barriers affect women micro-entrepreneurs varies by country and region. Family concerns and not feeling comfortable being contacted or contacting someone of the opposite gender were reported more by mobile-owning micro-entrepreneurs in the Asian survey countries and Guatemala, and substantially more by women in Pakistan and Bangladesh. For example, in these two countries, 24% of women micro-entrepreneurs who owned a mobile phone reported family concerns as a barrier to starting to use a mobile for business or to using it more (compared with 10% and 12% of their male counterparts, respectively). Similar proportions of respondents reported discomfort with contacting or being contacted by someone of

46. GSMA. (2022). *The State of Mobile Internet Connectivity 2022*.

the opposite gender. However, in the African survey countries, social norms-related barriers were low for micro-entrepreneurs who owned a mobile phone and there was less difference by gender (Figure 24).

While social norms play an explicit role in South Asia, in Africa they are more subtle.

The qualitative research showed that in India and Pakistan, social norms and gatekeepers play a more prominent role in the business activities of women micro-entrepreneurs, limiting their mobility and ability to work outside the home and access and use mobile phones. This was especially evident in Pakistan where women micro-entrepreneurs may be required to ask permission to use a mobile or only be allowed to use it at certain times or for certain purposes. Both gatekeepers and women micro-entrepreneurs often feared exposure to harmful content or reputational damage from using mobile internet. Furthermore, the social norms that require women to do the bulk of domestic work and childcare leaves them with limited time to learn new skills or engage with the internet.

In Kenya and Ghana, women micro-entrepreneurs are often supported by their gatekeepers to work, and many had financial independence, but other social norms lie beneath the surface. For example, there were subtle limitations on women freely investing in a better handset or more data, expectations that their handset should not be more expensive than their husband's and expectations that household and childcare duties would be prioritised. Several women also highlighted not being treated as equals in business by men, including not being taken seriously and, in some cases, men refusing to do business with them or pay them fairly.

These social norms often did not actively limit women's use of mobile for business, but rather created subtle additional barriers to developing their skills and growing their businesses. In addition, women reported sexual harassment as a general safety concern, as well as facing inappropriate behaviour and advances from male customers and suppliers. In some instances, when unable to make a loan payment, they were faced with demands for sexual favours instead.

“I want to [use my mobile more for work], but I am not much involved in mobile because have to look after my daughter and the household.”

**Female micro-entrepreneur,
urban, Peshawar, Pakistan**

“I tell her there is no need for Facebook... Here we don't do all this social media, that is OK in the city, but not here. People can talk.”

**Gatekeeper,
rural, Nashik, India**

5.7 Other barriers

Overall, 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.

These barriers, which were not among the most-reported barriers, cover a range of challenges such as limited or no mobile coverage, mobile internet being too slow, difficulties accessing agents or mobile phones using too much battery. Limited coverage was reported more in Ethiopia, Indonesia and Guatemala, especially in rural areas. Slow mobile internet was reported as a barrier by more women micro-entrepreneurs who owned a mobile phone than their male counterparts in Nigeria, Bangladesh and Guatemala. This may be related to women having lower quality handsets or men having greater mobility to access areas with better connectivity. It is also worth noting that where micro-entrepreneurs are not using mobile internet, this will not be reported as a barrier to using mobile for business. Conversely, where micro-entrepreneurs are using, or want to use, mobile for business, including mobile internet, limited coverage and slow internet are likely to be perceived as greater barriers in locations where that is an issue.

6. Recommendations



Mobile has the potential to help empower women micro-entrepreneurs and provide them with access to valuable information, services and opportunities for their business. However, the barriers they face are complex, diverse and interrelated, and cannot be addressed by one organisation alone. Targeted action and multistakeholder collaboration are needed to realise this opportunity. These stakeholders include mobile network operators (MNOs), fintechs and other private sector players, as well as policymakers, NGOs, development partners, research institutions and other ecosystem players.

Our recommendations are based on the findings of this report, as well as insights from other GSMA research. Although they are not intended to be comprehensive or exhaustive, they highlight some important areas for stakeholders to consider when attempting to reach and better support women micro-entrepreneurs with mobile. It is important to recognise there is no one-size-fits-all solution and that women micro-entrepreneurs are not a homogeneous group. Products or interventions that are designed and implemented to reach and support women micro-entrepreneurs with mobile should consider their diversity, their different needs and circumstances, as well as the impact that social norms can have on women micro-entrepreneurs in different settings.

The following are recommendations for increasing digital and financial inclusion for women micro-entrepreneurs through mobile and addressing the key barriers they face.

Understand how women micro-entrepreneurs are using mobile for business, as well as their needs and barriers, to inform strategies and policies that will reach and support them with mobile.

For example:

- **Research institutions** could conduct and publish research on the ways in which women micro-entrepreneurs use mobile for business, as well as their needs and the barriers they face
- **Implementers** of products and services relevant to micro-entrepreneurs could seek to understand how effective they are at reaching and meeting the needs of women micro-entrepreneurs and how this could be improved
- **Governments** could collect gender-disaggregated data on women micro-entrepreneurs and their mobile use

- **Donors and development partners** could support and conduct research on women micro-entrepreneurs' mobile use, their needs and barriers

Each stakeholder group is likely to play a direct or indirect role in actions that could include:

- Collecting, analysing and tracking gender-disaggregated data on women micro-entrepreneurs' use of mobile for business (e.g. national surveys or customer data)
- Conducting and supporting robust research to better understand the needs, circumstances and preferences of women micro-entrepreneurs in different contexts, and the factors that both enable and limit their access to, and use of, mobile for business (including cultural and social norms)
- Evaluating existing products, services and initiatives to assess their effectiveness in reaching and supporting women micro-entrepreneurs and how they can be improved

Increase awareness and understanding among women micro-entrepreneurs and their families of how mobile (including mobile internet and digital financial services) can be useful for their business and the potential benefits it can provide.

For example:

- **Implementers** of products and services relevant to micro-entrepreneurs could ensure that women micro-entrepreneurs are targeted in their marketing or awareness-raising campaigns
- **Governments and other stakeholders** could help raise awareness of the potential benefits of mobile for women micro-entrepreneurs and the relevant mobile-enabled content, apps and services that are available (e.g. through awareness-raising campaigns and digital literacy initiatives)
- **Donors and development partners** could support awareness-raising initiatives and communicate the importance of these to their stakeholders

Each stakeholder group is likely to play a direct or indirect role in actions that could include:

- Undertaking or supporting awareness-raising and/or marketing campaigns. These should feature women micro-entrepreneurs as active

users of mobile services for their businesses. When implementing these campaigns, consider:

- Showcasing women micro-entrepreneurs as role models
 - Promoting the use of mobile to communicate with customers and suppliers as a first step in using mobile for business (e.g. via network calls, apps)
 - Raising awareness of the ways in which mobile can be used for business beyond communications
 - Highlighting how women micro-entrepreneurs can use their existing mobile device and apply their digital skills to their business
- Appointing local female micro-entrepreneurs as “advocates” (e.g. when delivering marketing, awareness-raising or training campaigns)
 - Delivering “taster” sessions on how mobile can support micro-entrepreneurs. These can highlight:
 - The flexible use of mobile (e.g. how it can support women micro-entrepreneurs to get things done from home or between other tasks)
 - How their current use of mobile in their personal lives can be applied to their businesses
 - Offering free trials of mobile products and services to female micro-entrepreneurs
 - Considering the role of gatekeepers in facilitating women’s use of mobile for business (e.g. marketing and awareness-raising campaigns that demonstrate the value of women engaging in micro-entrepreneurship and how using a mobile can benefit a woman’s business – and the rest of the family – through improved household income)
 - Promoting socially acceptable uses in contexts where social norms hinder women’s access to and use of mobile, as well as their mobility (e.g. using mobile to learn new business skills or engage with customers or services in more socially acceptable ways, such as from home or without having to reveal their identity)

Build the knowledge, confidence and digital skills of women micro-entrepreneurs to use mobile for business (e.g. how to use key apps and services and stay safe online)

For example:

- **Implementers** of products and services relevant to micro-entrepreneurs could invest in customer education initiatives that target women micro-entrepreneurs (e.g. using agent networks)
- **Governments** could invest in digital skills training initiatives that include a focus on women micro-entrepreneurs and embed mobile digital skills training in existing training initiatives that target micro-entrepreneurs
- **NGOs** could invest in capacity-building programmes that pay particular attention to increasing the mobile digital skills of women micro-entrepreneurs
- **Donors and other development partners** could support digital skills training initiatives that target women micro-entrepreneurs

Each stakeholder group is likely to play a direct or indirect role in actions that could include:

- Providing and/or supporting training to improve the confidence and digital skills of women micro-entrepreneurs, paying attention to their needs, interests, pain points and circumstances.
 - Consider focusing on relevant mobile apps and services that women micro-entrepreneurs already use in their personal lives, but not yet for business (e.g. network calling, WhatsApp)
 - Consider offering tips on staying safe, identifying fraud and reporting fraud and any associated losses to help build trust and confidence in the service
 - Ensure training content is appropriate and accessible to women micro-entrepreneurs with limited literacy, language and mobile-related skills and confidence
 - Ensure that women micro-entrepreneurs, including those with lower literacy levels, are included in the pilots and user testing of the training

- Increasing the number and accessibility of trainers, especially women trainers.
 - Consider the timing and location of the training to ensure it meets the needs and circumstances of the targeted women micro-entrepreneurs (e.g. roving female agents or trainers to visit micro-entrepreneurs where they work or live)
 - Consider developing partnerships with organisations that already offer training and/or are already familiar to, and trusted by, women micro-entrepreneurs
 - Consider appointing local female “advocates” as trainers
 - Consider how trainers are incentivised to deliver the training
- Involving and engaging gatekeepers to obtain buy-in and support, particularly in more conservative settings (e.g. invite them to attend training sessions to help them feel comfortable with what is covered)

Ensure women micro-entrepreneurs can access suitable handsets (e.g. an internet-enabled handset, and/or a handset with suitable features, such as a camera).

The private sector, policymakers, development community and other stakeholders all have a role to play in actions that could include:

- Offering handset subsidies to the most underserved segments (e.g. from governments, donors)
- Providing handset financing options (e.g. service providers and other ecosystem payers)
- Reviewing and removing sector-specific taxes and fees on handsets to lower costs for consumers (e.g. governments could consider removing import taxes that treat handsets as luxury items)

Design services that are relevant, reliable, easy to use, safe and affordable (including mobile internet and digital financial services).

For example:

- **The private sector, governments and NGOs** could invest in developing apps and services that better meet the needs of women micro-entrepreneurs
- **Governments and the development community** also have an important role in encouraging and supporting the development of an ecosystem of apps and services relevant to women micro-entrepreneurs

Each stakeholder group is likely to play a direct or indirect role in actions that could include:

- Making business apps and services easy to use, particularly for those who are less literate and lack digital skills or confidence. For example:
 - Clear user menus with fewer steps
 - Simple terminology and sign-up process
 - Use of icons, symbols or pictures in addition to (or instead of) text
- Using terminology that micro-entrepreneurs already use and can relate to (avoiding business jargon that may not be understood, e.g. “balance”, “transaction”)
- Offering services in local languages
- Considering service features that enhance the confidence and trust of women micro-entrepreneurs in using the service. For example:
 - Services and apps set to higher privacy settings by default
 - Messages confirming transfers, refunds or reversals for digital financial services
- Considering creative data pricing (e.g. relatively low cost for basic use)
- Testing approaches with women micro-entrepreneurs to ensure the offerings are responsive to their skills, pain points and needs
- Encouraging the development of an ecosystem of apps and services that meet the needs, preferences and capabilities of women micro-entrepreneurs, tailored to different segments

Appendices



Appendix 1: Methodology

1.1 Quantitative research

This report is based on an analysis of the results of face-to-face surveys conducted in 10 LMICs in 2022 as part of the annual GSMA Consumer Survey. Fieldwork was conducted between September and December 2022.

The sample of micro-entrepreneurs was identified in two ways: 1) from the natural fall-out from the core sample of the nationally representative GSMA Consumer Survey, and 2) from a booster sample in four of the 10 countries (Ghana, Kenya, India and Pakistan). The questions for micro-entrepreneurs were asked of respondents who reported being self-employed (either full- or part-time) and worked alone in the business or had fewer than nine employees (paid or unpaid).

The core sample

In all countries surveyed in 2022, a core sample of approximately 1,000 male and female adults aged 18 and over were surveyed, except in India where the sample was approximately 2,000. The core samples were nationally representative, except in Ethiopia where no interviews were conducted in the Tigray region and six other zones⁴⁷ due to local conflict and security concerns. These areas represent 12% of the population of Ethiopia, thus the core sample was representative of the remaining 88% of the population who live outside these areas.

To achieve a nationally representative sample, quotas were applied in line with census data (or other appropriate sources) on the following metrics:

- Age category by gender
- Urban and rural distribution by gender
- Region/state
- Socio-economic class (SEC) to ensure a representative segment of lower income respondents was included

While a quota was not applied to education (other than where it contributed to SEC classification), it was tracked regionally and nationally during and after the fieldwork as an important indicator of a representative sample.

Sampling points where interviews were conducted were distributed proportionately between urban and rural areas in accordance

with census data and national statistics offices. To achieve wide geographical coverage and reduce the effects of clustering, a minimum of 100 sampling points were used in each country (200 in India).

The entire survey was delivered via interviewer-administered computer-assisted personal interviewing (CAPI). Survey interviews were conducted in the local language(s) by both female and male interviewers. Interviews were conducted at respondents' homes. Within sampling points, systematic random routes were used for residence selection.

This research used a mix of purposive and random sampling approaches. Depending on the country, sampling points were either randomly distributed – with an administrative area's probability of selection proportionate to the size of its population (random sampling) – or selected to reflect the linguistic, cultural and economic variations of each country (purposive sampling). Local experts and national statistics offices checked the sampling frames to ensure they were valid and representative.

The sampling approach was designed to achieve full national representation in the core sample where practical; however, some more remote rural areas or regions with ongoing unrest or security concerns were excluded from sampling. This may have had an impact on results, especially since mobile phone coverage, access and use will be different, and likely most limited, in these areas, particularly for women.

The booster sample

To achieve a larger sample size of micro-entrepreneurs for further analysis in selected countries, a booster sample of micro-entrepreneurs was included. As with the core sample, micro-entrepreneurs were identified as those who reported being self-employed (either full- or part-time) and employing fewer than nine employees (paid or unpaid), including no employees. An additional 500 boost interviews of micro-entrepreneurs were conducted in Ghana, Kenya and Pakistan, and 1,000 in India. These were conducted in the same sampling points as the main survey, in both urban and rural locations, with equal proportions of men and women.

47. Metekel-Zone (Benishangul Gumz), Zone 2 (Afar), West Wellega-Zone (Oromia), Guji-Zone (Oromia), Kelem Wellega Zone (Oromia) and Horo Gudru Wellega-Zone (Oromia).

Weights were applied to the data using a random iterative method (RIM) whereby several non-interlocking quotas were applied in an iterative sequence and repeated as many times as needed for the quotas to converge. This corrected any imbalances in the profiles, although weightings (and the resulting impact on effective sample sizes) were minimised as much as possible by controlling key quota variables over the course of the fieldwork. Due to a lack of national census data on “micro” entrepreneurs, the booster sample interviews were weighted to the natural fall-out of micro-entrepreneurs observed in the core interviews for the following variables:

- Gender (male/female)
- Locality (urban/rural)
- Age (18-34/35-54/55+)
- Size of micro-enterprise (0/1-8 employees)
- Use of mobile phones (used at all/not used)
- Education (primary/secondary/university)

While every effort was made to ensure a range of micro-entrepreneurs were surveyed in the booster sample, without census data on the number, location and gender of micro-entrepreneurs, a nationally representative sample could not be verified. As such, the sample of micro-entrepreneurs in this report represents the natural fall-out of micro-entrepreneurs in the nationally representative core sample and those in the booster sample in four countries and should be interpreted as such.

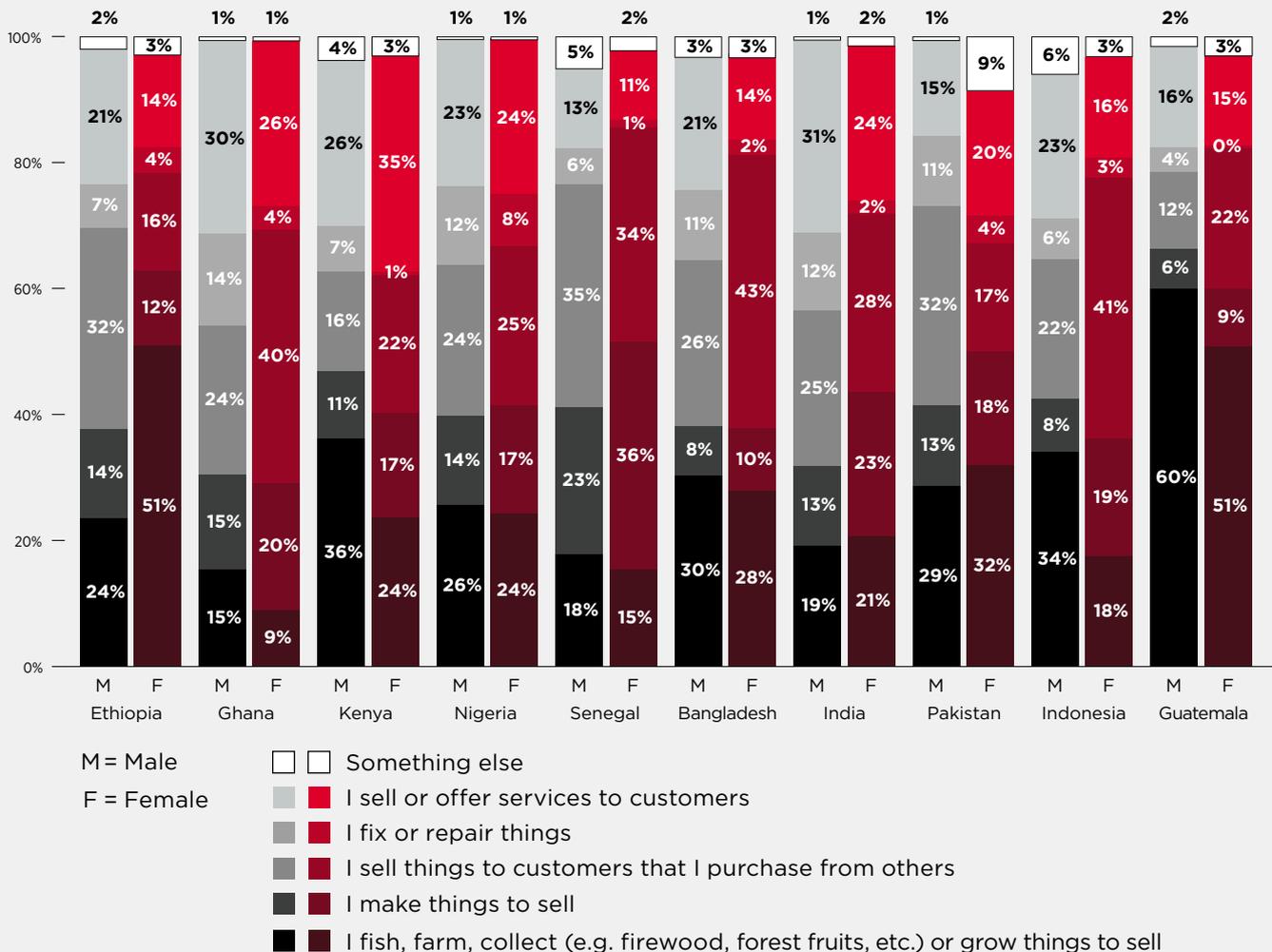
Table 3
Total unweighted sample size

		Total sample of micro-entrepreneurs	Mobile used for business	Mobile not used for business
ETHIOPIA	Male	432	208	224
	Female	338	239	99
GHANA	Male	746	117	629
	Female	526	129	397
KENYA	Male	616	143	473
	Female	637	221	416
NIGERIA	Male	324	76	248
	Female	252	92	160
SENEGAL	Male	217	58	159
	Female	173	93	80
BANGLADESH	Male	291	97	194
	Female	117	56	61
INDIA	Male	1083	472	611
	Female	661	423	238
INDONESIA	Male	177	84	93
	Female	177	87	90
PAKISTAN	Male	548	183	365
	Female	372	184	188
GUATEMALA	Male	160	88	72
	Female	142	96	46
TOTAL		7,989	4,843	3,146



Composition of quantitative sample by business type

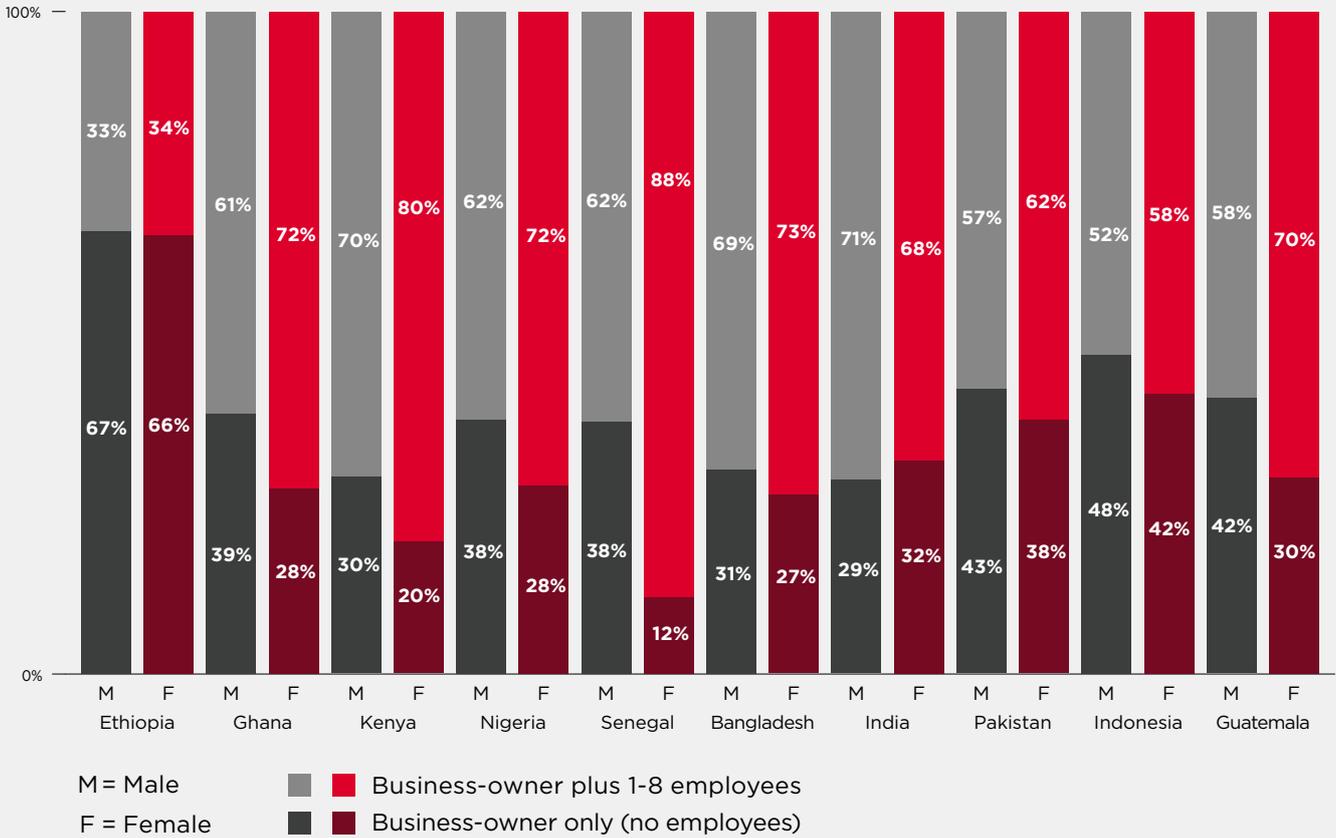
Figure 27
 Type of business owned by micro-entrepreneur
 Proportion of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed
 n=526 to 661 for female micro-entrepreneurs, n=746 to 1,083 for male micro-entrepreneurs

Composition of quantitative sample by size of micro-enterprise

Figure 28
 Proportion of micro-entrepreneurs with no employees vs with employees
 Percentage of micro-entrepreneurs surveyed



Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed
 n=526 to 661 for female micro-entrepreneurs, n=746 to 1,083 for male micro-entrepreneurs



1.2 Qualitative research

This report is also based on qualitative research conducted in Ghana, Kenya, India and Pakistan to better understand the lived realities of micro-entrepreneurs. The research was conducted between November and December 2022 with micro-entrepreneurs aged 18 or over who used a mobile phone for business (either one

they owned or borrowed from someone else) and included 286 micro-entrepreneurs across the four countries, plus 26 interviews with gatekeepers and 10 interviews with in-country experts on mobile use by women micro-entrepreneurs and their digital inclusion (see Table 4).

Table 4

Qualitative research sample sizes, by type of approach

Approach type	Sample size per market	Sample outline	Total
In-depth interviews with micro-entrepreneurs	26 in India	<ul style="list-style-type: none"> – 75% female; 25% male – Handset ownership split according to the market 	86 micro-entrepreneurs
	20 in Pakistan, Ghana and Kenya		
Business ethnographies	18 in India	<ul style="list-style-type: none"> – 75% female; 25% male – Handset ownership split according to the market 	60 business ethnographies
	14 in Pakistan, Ghana and Kenya		
Micro-entrepreneur mini-groups	10 in India	<ul style="list-style-type: none"> – Majority female groups of 5 people – One male mini-group per market – One more digitally savvy female mini-group per market – Handset ownership split according to the market 	140 micro-entrepreneurs
	6 in Pakistan, Ghana and Kenya		
In-depth interviews with gatekeepers	8 in India	<ul style="list-style-type: none"> – Male family members (husbands, fathers) and/or older female parents of female micro-entrepreneurs 	26 gatekeepers
	6 in Pakistan, Ghana and Kenya		
In-depth interviews with in-country experts	4 in India	<ul style="list-style-type: none"> – All had regular on-the-ground contact with female micro-entrepreneurs via local NGOs or business associations 	10 in-country experts
	2 in Pakistan, Ghana and Kenya		

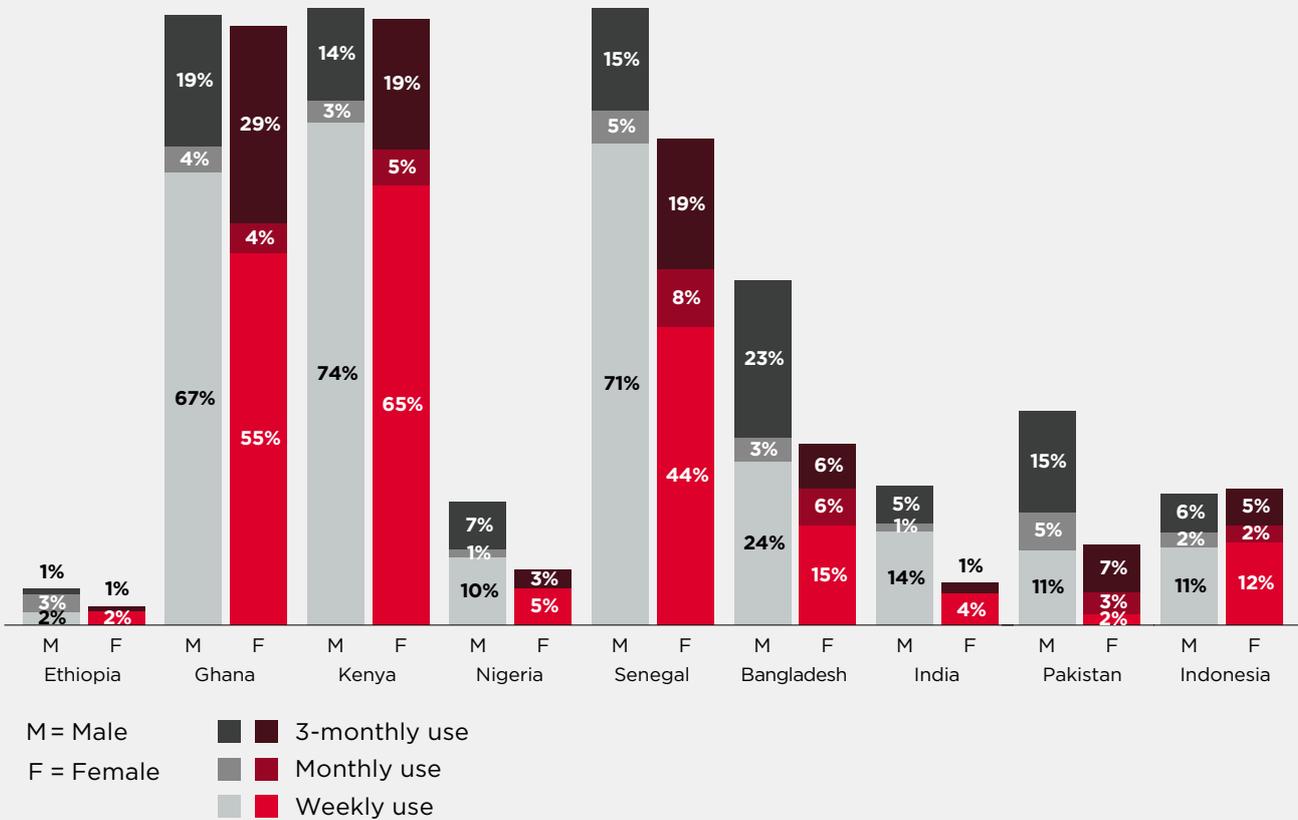
The fieldwork was conducted in local languages and in urban and rural areas in each market across various research locations (see Table 5).

Table 5
Research locations for qualitative research, by country

India	Pakistan	Kenya	Ghana
<ul style="list-style-type: none"> - Uttar Pradesh - Tamil Nadu - West Bengal - Maharashtra 	<ul style="list-style-type: none"> - Lahore - Karachi - Peshawar 	<ul style="list-style-type: none"> - Nairobi - Nakuru - Eldoret 	<ul style="list-style-type: none"> - Accra - Tamale - Kumasi

Appendix 2: Mobile money use

Figure 29
Frequency of mobile money use among micro-entrepreneurs
Percentage of micro-entrepreneurs surveyed who own a mobile money account



Source: GSMA Consumer Survey, 2022
Base: Micro-entrepreneurs surveyed
n=117 to 661 for female micro-entrepreneurs and n=160 to 1,083 for male micro-entrepreneurs

Appendix 3: Barriers preventing use of mobile for business

In each of the 10 survey countries:

1. Micro-entrepreneurs who owned a phone but did not yet use a mobile for business were asked to identify barriers preventing them from doing so.
2. Micro-entrepreneurs who owned a phone and already used a mobile for business were asked to identify barriers preventing them from using it more in their business.



Figure 30
Barriers preventing mobile-owning micro-entrepreneurs from starting to use it for business
Percentage of micro-entrepreneurs surveyed who own a mobile phone but do not use mobile for their business

		DON'T HAVE THE RIGHT PHONE		RELEVANCE		SAFETY AND SECURITY	SKILLS AND CONFIDENCE		DATA / SERVICE AFFORDABILITY	SOCIAL NORMS		INFRASTRUCTURE / OTHER				
		No internet enabled phone	Phone not allowing to do things easily	Prefer cash/ other payment type	Mobile can't help my business	Safety and security concerns	Lack confidence or skills	Need help using mobile	Cost of mobile data or services	Family concerns	Uncomfortable connecting with other gender	Limited/ no coverage	Slow connection	Agent access/ service	Limited battery	Something else
ETHIOPIA	M	50%	40%	34%	29%	12%	31%	17%	17%	2%	5%	31%	28%	16%	25%	3%
	F	54%	44%	39%	27%	18%	47%	33%	24%	0%	12%	17%	9%	18%	15%	7%
GHANA	M	24%	21%	13%	3%	12%	19%	18%	11%	1%	2%	9%	7%	6%	5%	3%
	F	21%	27%	19%	5%	13%	19%	15%	17%	2%	3%	6%	5%	4%	4%	8%
KENYA	M	32%	35%	33%	11%	23%	20%	13%	26%	5%	7%	11%	7%	12%	11%	3%
	F	35%	37%	42%	13%	29%	26%	16%	29%	7%	10%	6%	8%	5%	10%	2%
NIGERIA	M	20%	20%	27%	4%	22%	17%	18%	21%	2%	8%	9%	5%	8%	2%	7%
	F	30%	34%	47%	11%	23%	29%	26%	31%	9%	13%	17%	26%	15%	15%	23%
SENEGAL	M	20%	25%	23%	6%	16%	19%	17%	4%	5%	5%	15%	7%	11%	5%	3%
	F	26%	24%	23%	17%	15%	13%	22%	15%	3%	9%	15%	7%	6%	3%	2%
BANGLADESH	M	20%	8%	17%	14%	19%	17%	11%	17%	8%	5%	6%	10%	8%	7%	13%
	F															
INDIA	M	25%	34%	39%	32%	35%	36%	33%	27%	20%	21%	23%	27%	27%	26%	25%
	F	20%	22%	33%	21%	29%	29%	29%	20%	17%	20%	21%	19%	20%	21%	13%
PAKISTAN	M	25%	23%	35%	19%	31%	26%	17%	23%	23%	21%	18%	22%	24%	24%	14%
	F	29%	23%	24%	14%	43%	27%	20%	27%	29%	27%	15%	19%	18%	22%	12%
INDONESIA	M	14%	23%	56%	29%	31%	33%	22%	37%	11%	17%	35%	26%	23%	26%	11%
	F	22%	22%	49%	30%	34%	44%	18%	26%	20%	21%	24%	21%	19%	15%	10%
GUATEMALA	M	22%	28%	29%	24%	44%	42%	28%	26%	27%	23%	24%	24%	19%	27%	11%
	F	19%	29%	35%	23%	43%	39%	22%	22%	24%	24%	25%	30%	21%	30%	14%

Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed who own a mobile but do not use mobile for business
 Percentages indicate the proportion of respondents who answered, "Yes, this is something that stops me from using mobile phones in my business" to each barrier.
 n=58 to 288 for female micro-entrepreneurs and n=41 to 333 for male micro-entrepreneurs



Figure 31
Barriers preventing mobile-owning micro-entrepreneurs from using it for business more
Percentage of micro-entrepreneurs surveyed who own a mobile and already use mobile for business

		DON'T HAVE THE RIGHT PHONE		RELEVANCE		SAFETY AND SECURITY	SKILLS AND CONFIDENCE		DATA / SERVICE AFFORDABILITY	SOCIAL NORMS		INFRASTRUCTURE / OTHER				
		No internet enabled phone	Phone not allowing to do things easily	Prefer cash/ other payment type	Mobile can't help my business	Safety and security concerns	Lack confidence or skills	Need help using mobile	Cost of mobile data or services	Family concerns	Uncomfortable connecting with other gender	Limited/ no coverage	Slow connection	Agent access/ service	Limited battery	Something else
ETHIOPIA	M	46%	48%	36%	18%	15%	38%	21%	23%	2%	5%	33%	31%	11%	25%	1%
	F	59%	54%	41%	24%	13%	45%	27%	21%	4%	8%	22%	18%	13%	12%	3%
GHANA	M	12%	12%	10%	3%	9%	7%	9%	14%	2%	4%	7%	6%	5%	5%	3%
	F	14%	19%	16%	4%	11%	13%	19%	15%	7%	6%	7%	7%	8%	5%	5%
KENYA	M	19%	19%	27%	4%	20%	10%	7%	25%	4%	5%	11%	14%	6%	14%	3%
	F	24%	25%	27%	6%	18%	13%	7%	26%	4%	6%	9%	13%	6%	13%	2%
NIGERIA	M	19%	21%	33%	8%	21%	20%	14%	21%	6%	9%	10%	11%	10%	11%	9%
	F	23%	30%	33%	8%	22%	24%	20%	27%	5%	7%	7%	12%	10%	11%	9%
SENEGAL	M	13%	13%	13%	2%	4%	7%	9%	14%	1%	4%	10%	9%	12%	5%	2%
	F	22%	26%	12%	6%	9%	9%	16%	20%	0%	2%	12%	6%	10%	5%	3%
BANGLADESH	M	17%	23%	28%	12%	25%	19%	10%	13%	11%	10%	10%	10%	14%	15%	8%
	F	29%	23%	20%	14%	27%	25%	15%	13%	22%	24%	13%	26%	13%	17%	11%
INDIA	M	9%	18%	31%	19%	27%	22%	23%	21%	15%	17%	18%	22%	16%	19%	12%
	F	10%	17%	24%	19%	22%	20%	21%	15%	14%	15%	15%	17%	14%	16%	10%
PAKISTAN	M	8%	14%	35%	9%	21%	19%	20%	15%	10%	18%	22%	14%	16%	13%	2%
	F	10%	18%	42%	15%	30%	23%	17%	25%	13%	15%	24%	16%	14%	15%	6%
INDONESIA	M	25%	23%	39%	19%	27%	30%	19%	17%	7%	15%	19%	18%	17%	20%	7%
	F	14%	22%	36%	18%	18%	20%	21%	16%	19%	18%	16%	14%	17%	21%	8%
GUATEMALA	M	20%	25%	32%	16%	36%	35%	23%	14%	10%	16%	32%	30%	21%	27%	7%
	F	9%	24%	25%	12%	35%	24%	15%	10%	10%	18%	23%	33%	12%	23%	2%

Source: GSMA Consumer Survey, 2022
 Base: Micro-entrepreneurs surveyed who own a mobile and already use mobile for business
 Percentages indicate the proportion of respondents who answered, "Yes, this is something that stops me from using mobile phones more in my business" to each barrier.
 n=42 to 401 for female micro-entrepreneurs and n=67 to 630 for male micro-entrepreneurs



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