

E-commerce in Africa: Unleashing the opportunity for MSMEs

October 2023



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Contact us by email: centralinsights@gsma.com

This report, led by the Central Insights Unit at GSMA Mobile for Development, is the result of a collaboration between the GSMA and the UK Department for Business and Trade of the UK government. The study leverages surveys conducted with micro, small and medium enterprises on our behalf by D3 systems.



Department for Business & Trade

The UK's Department for Business and Trade (DBT) is a UK Government department for economic growth. It aims to secure UK and global prosperity by promoting and financing international trade and investment, and championing free trade, economic security, and resilient supply chains. It works with businesses based in the UK to ensure their success in international markets and encourages overseas companies to look to the UK as their global partner of choice. DBT offers expertise and contacts through its extensive UK network of specialists, and international network with global reach in 170 countries. The DBT network helps overseas businesses to source UK goods and services and connects them with the right UK partners.

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Authors and contributors

Lead Author: Nigham Shahid

Contributing authors: Daniele Tricarico, Eugenie Humeau, Lauren White, Tanvi Deshpande

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Acronyms

API	Application Programming Interface	NaPA	National Postcode and Addressing
B2B	Business to Business	NFC	Near Field Communications
B2C	Business to Consumer	NIBSS	Nigerian Inter-Bank Settlement System
B2G	Business to Government	NIP	Nigerian Interbank Payment
B2P	Business to Person	NIPOST	Nigeria Postal Service
C2C	Consumer to Consumer	P2B	Person to Business
COMESA	The Common Market for Eastern and Southern Africa	P2P	Person to Person
GDP	Gross Domestic Product	PCK	Postal Corporation of Kenya
GhIPSS	Ghana Interbank Payment and Settlement System	QR	Quick Response
GIP	Ghana Instant Pay	RTC	Real Time Clearing
IFC	International Finance Corporation	SMEs	Small and Medium Enterprises
ITU	International Trade Union	TIPS	Tanzania Instant Payment System
KII	Key Informant Interview	UN	United Nations
KYC	Know Your Customer	UNCTAD	United Nations Conference on Trade and Development
MMI	Mobile Money Interoperability	UPU	Universal Postal Union
MMP	Mobile Money Provider	VAT	Value Added Tax
MNOs	Mobile Network Operators	VC	Venture Capital
MSMEs	Micro, Small, and Medium Enterprises	VPAS	Virtual Postal Address Systems
		3PL	Third-party logistics

Glossary

Bilateral interoperability

Ability of two different payment scheme participants that have direct connections to one another to process payments seamlessly.

Clearing

The process of transmitting, reconciling, and confirming payment instructions prior to settlement.

Connectivity

Refers to connection to the internet or other communication networks.

Digital commerce

The use of digital technologies to interact with consumers, through buying and selling channels including mobile apps, chatbots, and social media platforms.¹

Digital financial services

Methods to electronically store and transfer funds; to make and receive payments; to borrow, save, insure, and invest; and to manage a person's or enterprise's finances.²

Digital payments

Any method of transferring e-money through digital technologies.

Digital skills/digital literacy

Skills needed to use digital devices, communication applications and networks to access and manage information, from basic online searching and emailing to specialist programming and development.

Digitalisation

Enabling or improving social, business and government processes by leveraging digital technologies and digitised data.

E-commerce

The sale or purchase of goods online.

E-commerce marketplace

A platform where different businesses can collectively sell their products or services to a pre-established consumer base. Marketplaces facilitate all aspects of an e-commerce sales process from taking orders to managing delivery.³

E-commerce platform

A software that enables the commercial process of buying and selling over the Internet.⁴

E-money

An electronically transactable currency instrument and claim against a licensed e-money issuer, supported by commercial bank deposits or a direct claim upon a commercial bank.⁵

Instant payments

Credit transfers that make funds available in a payee's account within ten seconds of a payment order being made.⁶

Micro-enterprise

Businesses that employ one to five people.

Mobile banking

The use of a mobile phone to access financial services provided by financial institutions such as banks or microfinance institutions.

Mobile internet

3G, 4G, or 5G technologies.

1 Cloudmore. (2023). [The Difference Between Digital Commerce and E-Commerce](#). (accessed 22 September, 2023)

2 International Telecommunication Union. (2018). [Digital Financial Services \(DFS\) - Glossary](#).

3 WebFx. (2023). [What is an Online Marketplace? Learn everything you need to know](#). (accessed 22 September, 2023)

4 [Adobe Experience Cloud Blog. \(2021\). E-commerce platforms](#). (accessed 22 September, 2023)

5 AfricaNenda. (2022). [The State of Instant and Inclusive Payment Systems in Africa SIIPS 2022](#).

6 European Central Bank. (2023). [What are instant payments?](#)

Mobile money

A service that includes transferring money and making and receiving 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 transactional points, which can include agents outside of bank branches and ATMs, making the service widely accessible to everyone. The agent network must be larger than the service's formal outlets. This does not include mobile banking or payment services (such as Apple Pay and Google Pay) or services linked to a traditional banking product or credit card.

Multilateral interoperability

Ability of payment instruments belonging to a given scheme to be used in platforms developed by other schemes, allowing for interoperability across multiple interconnected payments systems and platforms.

Payment channel

A channel through which payment instructions are issued and notifications received, such as ATMs, POS terminals, agents, or mobile phones.

Payment gateway

A technology solution that facilitates electronic transactions between a merchant and a payment processor, enabling the authorisation, authentication, and processing of payments for goods and services.

Payment instrument

An instrument enabling the holder to transfer funds, including cash, bank transfers, debit or credit cards, and e-money.

Payment scheme

A set of procedures, rules and technical standards governing the execution of payment orders.

Payment switch

A technology platform that checks and routes transactions between member financial institutions.

Payment system

Technical infrastructure used to perform payments and other financial transactions between financial service providers.

Product discovery

The process of becoming aware of products sold on e-commerce platforms and marketplaces.

Purchasing power

The amount of goods and services that can be purchased with one unit of currency.

Retail transactions

The sale of goods or services directly to individual consumers for personal use. They are typically carried out in physical stores or on online platforms.

Settlement

Settlement ensures that the funds from completed transactions are accurately transferred and credited to the appropriate accounts, completing the financial obligation between the parties involved in the transaction.

Small enterprise

Businesses that employ between five and 50 people.

Social commerce

The selling of goods via social media services.

Social media service

Websites or applications which enable users to create and share content.

Executive summary



E-commerce offers micro, small, and medium enterprises (MSMEs) the opportunity to operate more efficiently and increase sales and profitability.

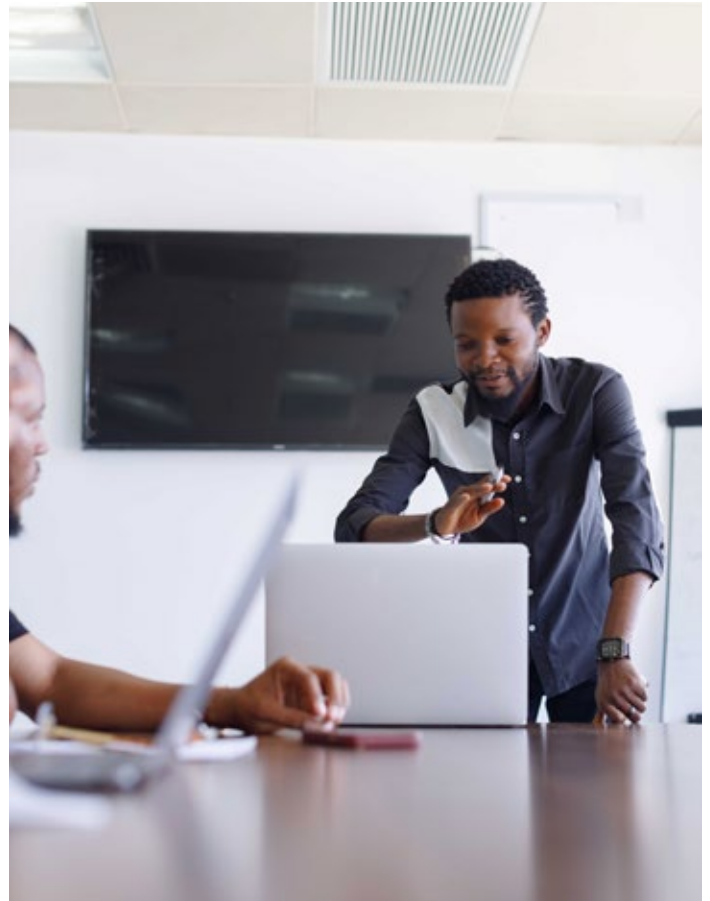
This is critically important in African markets where MSMEs play a central role in generating economic value and creating livelihoods. E-commerce can support MSMEs to scale by facilitating access to wider markets, lowering barriers to entry for micro and small firms, and enabling women to combine economic activity with other responsibilities more flexibly and efficiently.

There are three prevalent e-commerce channels: social commerce, the selling of goods via social media services such as Facebook, Instagram, X (previously known as Twitter) and WhatsApp; e-commerce marketplaces, which aggregate large numbers of sellers on a single platform; and own brand websites.

Each channel offers its own unique set of advantages and limitations. While social commerce is most accessible to MSMEs of all sizes due to low barriers to entry for even informal and micro businesses, exclusive use of social commerce, especially informally, limits the professionalisation of the business. Much of the sales process in informal social commerce may remain manual, from arranging payments to delivery offline. E-commerce marketplaces digitise the entire sales process for MSMEs, from receiving orders to processing deliveries, but this comes at the cost of commission charges as well as decreased visibility with competing sellers. Meanwhile, company websites create unique brand identities and trust with customers but require more capital and digital know-how.

While improving connectivity and the steady uptake of mobile phones is spurring e-commerce adoption by MSMEs, much of the e-commerce opportunity remains unexploited.

E-commerce adoption is growing, and market forecasts suggest that there will be almost 600 million online shoppers in the region by 2027. However, the number of e-commerce users in the region in 2022 was estimated at under 400 million⁷ out of a total population of over 1.4 billion people, a relatively small proportion. In addition, only five to seven per cent of retail payments were digital in 2020. There is therefore a vast opportunity for MSMEs to reach consumers via the trade of goods online.



⁷ Statista. (2023). [Number of users of e-commerce in Africa \(2017-2027\)](#).

This report highlights the challenges and opportunities for scaling e-commerce adoption by MSMEs in Africa.

The insights presented in this study are primarily based on surveys conducted with 1,500 MSMEs currently using e-commerce in over six African markets, comprising Egypt, Ethiopia, Ghana, Kenya, Nigeria, and South Africa. In addition, we have conducted an extensive literature review and interviews with over 40 experts in these six markets, as well as in three additional markets that form part of this analysis: Rwanda, Senegal, and Tanzania.

The report aims to inform a wide range of stakeholders on how MSMEs can be better supported in adopting e-commerce.

The report will enable organisations working with MSMEs (e.g. industry associations, non-government organisations) to support them with better informed strategies. National ministries of trade and digitalisation can use the report to inform evidence-based policymaking and address gaps in the enabling environment. The findings of this study will also help donor organisations and development partners identify key capacity-building interventions needed to support MSMEs in adopting e-commerce. Finally, private sector companies involved in e-commerce (e.g. tech providers, payment companies, e-commerce marketplaces) should find relevant information to help them tailor their services to local needs, preferences, and constraints.

The research identifies several barriers to scaling e-commerce for MSMEs in Africa. These include:

- **Limited financial resources and digital skills:** MSMEs lack access to capital and credit, restricting their growth, and do not have sufficient business and digital skills to fully leverage the opportunities e-commerce offers.
- **Regulatory gaps:** Where e-commerce related policies and regulations are absent, dated, or fragmented, they are leading to low business and consumer confidence in online trade. These policies include cybersecurity laws, personal privacy and data protection laws, consumer protection laws, e-transactions laws, and intellectual property laws.
- **Implementation of legislation:** Weak implementation of e-commerce related laws is contributing to low consumer trust and therefore limited consumer uptake of e-commerce.
- **Low uptake of digital payments:** Cash on delivery remains the preferred payment method in many markets, impacting MSMEs' cash flows, making them vulnerable to losses and saddled with high delivery costs for items returned on delivery.
- **Challenging logistics and delivery:** Poor road infrastructure, lack of national addressing systems, and fragmented delivery solutions make the delivery of e-commerce goods both expensive and unreliable, reducing the revenue MSMEs can generate from online sales.
- **Low consumer confidence and readiness:** There are limitations to consumer readiness for uptake, such as limited penetration of smartphones, low digital literacy and digital skills that deter consumers from online purchases and transactions, and low confidence in the quality of goods that might be received via e-commerce due to lack of consistency in product quality.

To address the challenges MSMEs face in adopting and advancing their use of e-commerce, we recommend the following actions:

Challenge	Action	Actor
<p>MSMEs are under-financed</p> <p>Tailored financial products are needed to address the needs of MSMEs in adopting e-commerce.</p>	<p>Fintechs, microfinance institutions and mobile money providers are well-placed to offer credit products tailored to the needs of MSMEs, but enabling financial sector regulations are needed.</p>	<ul style="list-style-type: none"> • Financial sector regulators • Fintechs • Mobile money operators • Microfinance institutions
	<p>Investments in established MSMEs in the form of equity or revenue sharing will facilitate greater access to finance and drive e-commerce expansion.</p>	<ul style="list-style-type: none"> • Governments • Private investors • Donors
	<p>Investments in e-commerce start-ups and fintechs that provide microcredit products to informal businesses can facilitate greater access to financial services, boost the resilience of micro-enterprises and generate greater e-commerce adoption.</p>	<ul style="list-style-type: none"> • Private investors
<p>MSMEs are under-skilled</p> <p>MSMEs require upskilling in both business and e-commerce related digital skills.</p>	<p>Partnerships between governments, e-commerce platforms and marketplaces, NGOs, and donors are needed to ensure that MSME upskilling programmes for e-commerce are more targeted, less fragmented and better coordinated.</p>	<ul style="list-style-type: none"> • Governments • Donors and development partners • Non-government organisations (NGOs) • E-commerce services providers
	<p>Investments in a more digitally skilled labour force are required so that MSMEs can recruit the right talent for scaling e-commerce operations.</p>	<ul style="list-style-type: none"> • Public and private sector education providers and digital upskilling programme providers
<p>Connectivity is unreliable</p> <p>MSMEs need higher quality and more reliable connectivity, as do consumers, to consistently adopt online retail. Rural areas need better connectivity infrastructure for e-commerce to expand beyond urban areas.</p>	<p>To encourage e-commerce uptake beyond cities, a commercial case for investments in 3G/4G sites is needed in rural and remote areas by scaling the demand for 3G/4G devices and broadband services.⁸</p>	<ul style="list-style-type: none"> • Mobile operators
	<p>The upload and download speeds provided by mobile networks, and therefore the quality of the network, is linked to the capacity of spectrum available. More and better spectrum allocation as well as reprioritisation of low-band spectrum is needed to improve internet quality beyond cities for rural e-commerce adoption.⁹</p>	<ul style="list-style-type: none"> • Governments

⁸ GSMA. (2022). [The State of Mobile Internet Connectivity Report 2022](#).

⁹ Tech Africa News. (2023). GSMA: [Closing Africa's Rural-Urban 5G Divide with low band spectrum expansion](#). (accessed 21 September 2023)

Challenge	Action	Actor
Mobile phones are expensive	The price of handsets needs to be reduced; one strategy is to improve efficiencies in the supply chain.	<ul style="list-style-type: none"> • Original equipment manufacturers
Consumers, who primarily use mobile devices to make online purchases, need affordable smartphones. Micro-enterprises, which form the bulk of African businesses, also conduct e-commerce primarily on mobile handsets.	Handset financing, such as buy now, pay later (BNPL) models can facilitate consumer access to devices.	<ul style="list-style-type: none"> • Partnerships between fintechs, micro-credit providers, and device sellers
	Local manufacturing of lower cost smart feature phones offers an opportunity to enable access.	<ul style="list-style-type: none"> • Regional and national technology manufacturers
	The affordability of mobile data can also be improved by balanced fiscal policy and a reduction in sector-specific taxes on mobile operators.	<ul style="list-style-type: none"> • Governments
E-commerce-related regulations are absent, dated, fragmented, or poorly implemented	Formulation of a unified e-commerce law tackling consumer protection, personal data privacy and protection, cybersecurity, electronic transactions, and intellectual property rights will provide clarity to MSMEs and build consumer confidence.	<ul style="list-style-type: none"> • Governments
Updated policies and laws related to e-commerce are needed to provide MSMEs with regulatory clarity and provide adequate consumer protection for online transactions as consumer confidence in online purchases is low.	Dated regulations need updating, and gaps in regulations linked to e-commerce need to be addressed so that MSMEs have clarity on regulations linked to online transactions.	<ul style="list-style-type: none"> • Governments
	The implementation of regulations, especially cybersecurity laws and redress mechanisms, needs strengthening due to the increasing number of cyber-attacks and persistent risk of financial fraud in the region, which deters the use of e-commerce.	<ul style="list-style-type: none"> • Governments
	Educating and guiding MSMEs on the legislation as well as implementation of relevant cybersecurity, consumer protection and data privacy laws will improve consumer protection measures and help build trust in e-commerce.	<ul style="list-style-type: none"> • Government Departments of Trade • Private sector e-commerce services providers • NGOs

Challenge	Action	Actor
<p>Uptake of digital payments for online sales is low</p> <p>MSMEs need a shift from cash on delivery as a prominent payment method to digital payments to improve cash flow, reduce revenue losses and ease financial management, as well as enable data-driven business planning.</p>	<p>Reassessment of taxation on mobile money services and digital transactions to reduce the costs of digital payments for consumers and businesses will encourage uptake.</p>	<ul style="list-style-type: none"> • Governments
	<p>Scaling the adoption of innovative payment channels such as digital cards, QR codes and NFCs will help make digital payments more convenient for merchants and customers.</p>	<ul style="list-style-type: none"> • Financial sector innovators in partnership with central banks
	<p>Improving interoperability for instant settlements from a range of payment methods, and supporting the development of fintechs such as payment aggregators and gateways will facilitate instant and reliable digital payments.</p>	<ul style="list-style-type: none"> • Payment system providers in partnership with technology providers
<p>Delivery infrastructure needs improving; logistics and delivery services are inadequate</p> <p>MSMEs need reliable, accessible, and affordable logistics and delivery services and transport infrastructure to deliver e-commerce purchases to buyers.</p>	<p>Investment via public-private partnerships in transportation infrastructure will improve both safety and access as well as reduce delivery costs and times.</p>	<ul style="list-style-type: none"> • Public and private sector investors
	<p>Reducing fragmentation, improving the reliability and quality of third-party delivery services providers, and facilitating integration between e-commerce businesses and delivery providers will ease delivery challenges.</p>	<ul style="list-style-type: none"> • Third party logistics (3PL) and delivery companies in partnership with e-commerce businesses and technology companies
	<p>Scaling national addressing systems will enable accurate, timely and more cost-effective delivery.</p>	<ul style="list-style-type: none"> • Governments • National posts • Public-private partnerships with support from technology providers

1. Evolution of e-commerce in Africa



In many low- and middle-income countries, MSMEs play a critical role in providing livelihoods and generating economic value. This is particularly true in Africa. The World Bank estimated that in 2018, there were over 44 million formal MSMEs in sub-Saharan Africa alone. Over 90 per cent of these were micro and small, and only a third of them were women-owned. The number of MSMEs in the region is much higher when including informal businesses. MSMEs create almost 80 per cent of employment in Africa, and in markets such as Ghana, for example, contribute as much as 70 per cent of the total gross domestic product (GDP).

Despite their relative importance to the economy, MSMEs in Africa face several challenges to growth, including insufficient financing and digitalisation.

Furthermore, in 2021, the International Finance Corporation (IFC) reported that the COVID-19 pandemic had negatively impacted over 90 per cent of MSMEs in sub-Saharan Africa, with women-led MSMEs particularly impacted by revenue losses due to their informal status, small size, and concentration in sectors that were disproportionately affected.¹⁰

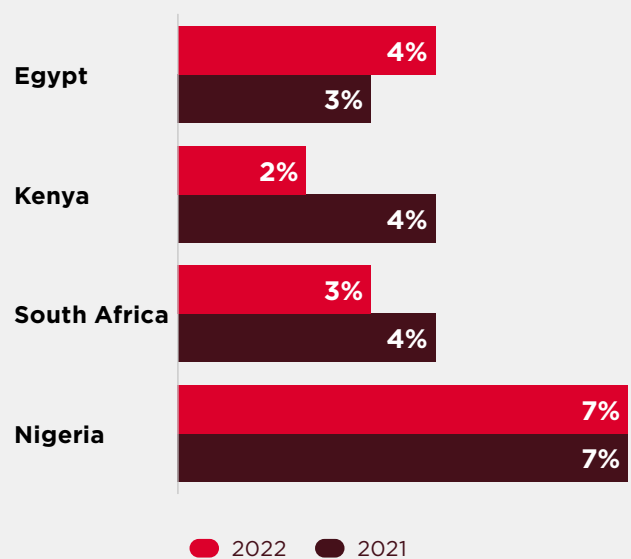
E-commerce¹¹ offers many benefits to MSMEs, including reducing barriers to entry by lowering the capital needed to launch enterprises, enhancing productivity by easing the procurement of quality supplies, making the sale of goods easier, and increasing productivity.¹² It can improve the economic inclusion of women by offering more flexibility in running an enterprise while juggling caring and household responsibilities. It can also improve access to goods and the quality and value of products purchased by consumers, due to increased competition.

Globally, the share of goods purchased online is increasing, creating incremental value for MSMEs from increased productivity and innovation. It was estimated that in 2021, retail e-commerce sales amounted to approximately \$5.2 trillion worldwide, and are expected to grow by 56 per cent to over \$8 trillion by 2026.¹³ E-commerce saw a sharp increase during the COVID-19 pandemic, when social distancing measures necessitated a shift from in-person to online shopping. As MSMEs around the world struggled to survive under lockdown conditions, many pivoted to e-commerce to sell their goods. E-commerce sales increased significantly from 16 per cent to 19 per cent of retail between 2019

and 2020.¹⁴ As a result of the pandemic, the share of consumers that reported shopping more online in some of the largest African markets in 2021 was 81 per cent in Nigeria, 79 per cent in Kenya and Ghana, 72 per cent in Egypt and Tanzania, and 68 per cent in South Africa.¹⁵

Despite this increase in e-commerce uptake in Africa during COVID-19, African MSMEs have not shifted as rapidly to e-commerce as MSMEs in other regions, and overall adoption has remained comparatively low (Figure 1).

Figure 1
E-commerce as a share of total retail sales in selected African markets, 2020-2021



Source: Statista¹⁶

While e-commerce is expected to grow globally due to improved connectivity and internet use, African MSMEs risk being left behind if they do not accelerate the use of e-commerce to sustain and expand their businesses. With increasing internet penetration and mobile adoption in Africa, MSMEs have a notable opportunity to leverage online sales to build more profitable enterprises, generate employment, and create more economic value. According to the United Nations Conference on Trade and Development (UNCTAD), digital commerce in Africa could add \$180 billion to the region's GDP by 2025 if leveraged effectively.

10 IFC. (2021). [COVID-19 and Women-Led MSMEs in sub-Saharan Africa](#).

11 According to the OECD, e-commerce refers to "the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders." Therefore, whether a commercial transaction qualifies as e-commerce depends on the ordering method rather than the characteristics of the product purchased, the parties involved, the mode of payment or the delivery channel (e.g., the payment and delivery of goods do not necessarily have to be conducted online. See OECD.(2021): [Unpacking e-commerce: Business models, trends and policies](#).

12 World Bank. (2023). [Boosting small businesses through E-Commerce and integration into value chains](#).

13 Statista. (2022). [Retail e-commerce sales worldwide from 2014 to 2026](#).

14 UN News. (2021). [Global e-commerce jumps to \\$26.7 trillion, fuelled by COVID-19](#). (accessed 21 September 2023)

15 Statista. (2023). [Share of consumers shopping more online since the beginning of the coronavirus \(COVID-19\) pandemic in selected African countries in 2021](#).

16 Statista. (2023). [E-commerce retail as share of total retail in selected African countries from 2020 to 2021](#).

2. Objectives and methodology



The main objective of this report, which is the result of a collaboration with the UK Department for Business and Trade, is to provide insights on MSMEs' experience with e-commerce in selected African markets and offer recommendations to scale its adoption to improve their productivity and profitability.

Specifically, the report aims to:

- Identify the enablers and barriers to e-commerce and assess MSMEs' readiness to adopt and leverage it more effectively;

Methodology

The research takes a mixed-methods approach, including:

- A literature review of resources such as industry reports, academic articles, and market research to evaluate the current state of play of e-commerce in the region;
- Key informant interviews with 40 experts including regulators, payments and logistics players, delivery solutions providers and e-commerce marketplaces based in the region to understand e-commerce trends, challenges, and emerging solutions; and
- A survey conducted with over 1,500 MSMEs across six African markets to understand pain points and opportunities from the MSMEs' perspective.

The survey (henceforth referred to as the GSMA e-commerce survey 2023) was carried out between February and April 2023. It consisted of 1,591 survey interviews conducted with MSMEs in Egypt, Ethiopia, Ghana, Kenya, Nigeria, and South Africa. Local field teams working in local languages administered the questionnaire.

The markets in the study represent the wide variety of e-commerce use and availability across the continent. Based on GSMA's research into e-commerce in Africa, the countries in this study include examples of comparatively more and less advanced adoption of e-commerce channels as well as varying levels of e-commerce regulation.

Deep-dive desk research on the technological, regulatory, and business environments was

- Capture the experience of MSMEs currently using e-commerce and highlight opportunities to better support them in selling online; and
- Provide recommendations on how MSMEs using e-commerce can build effective partnerships to scale their businesses.

conducted to determine the sampling strata for this study. Through this process, our survey partners, D3, identified e-commerce use by MSME size and sector to designate a sample allocation in each of the six markets in the study. The goal was to survey at least 250 qualifying businesses in every country across key e-commerce sectors, including fashion and apparel, electronics, toys and DIY, furniture and appliances, food and beverage, personal care, agricultural products, and automotive industries.

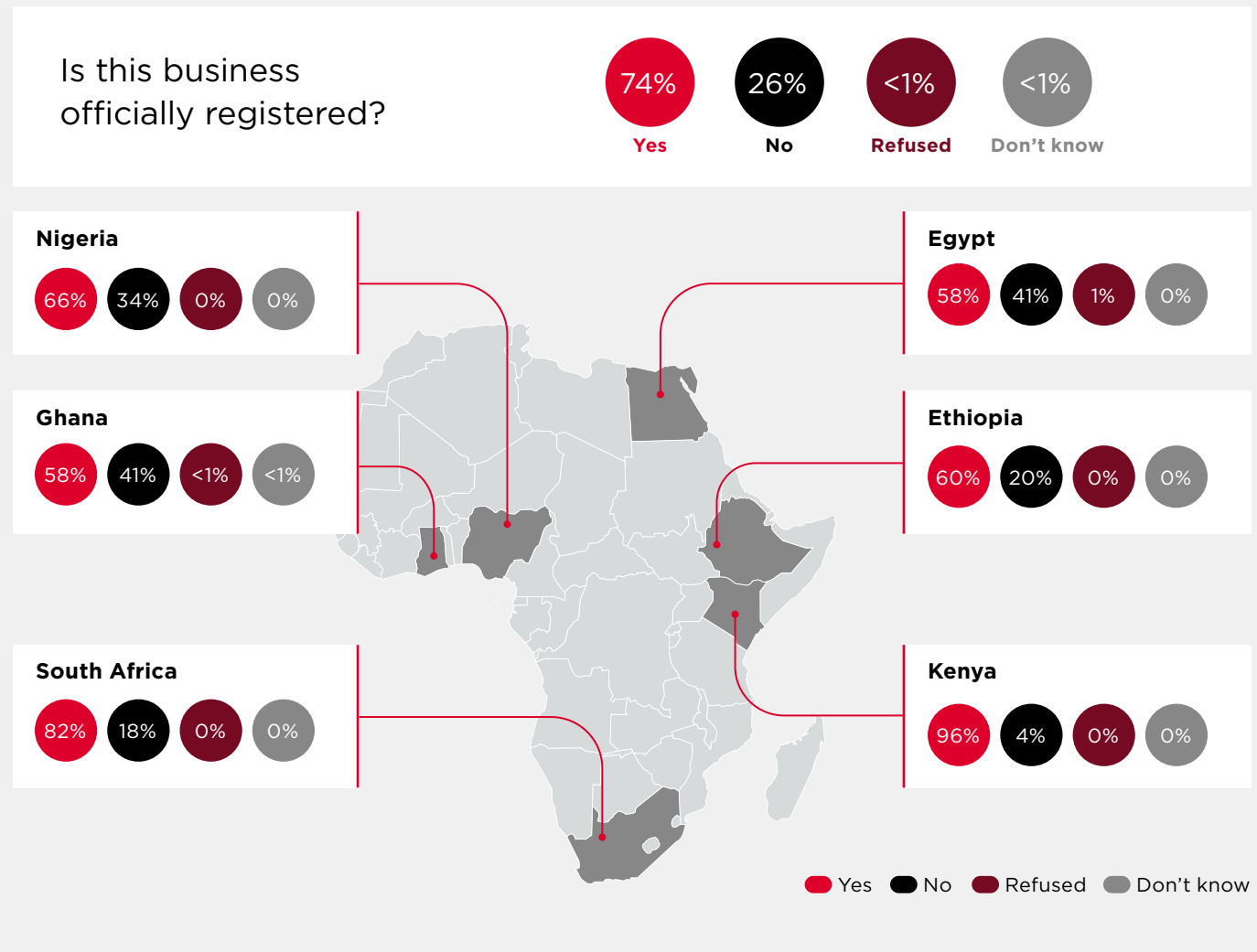
Local field teams identified qualifying businesses in the target urban and peri-urban zones that corresponded to the sample allocation for their market, using online searches, existing contacts from previous studies, and snowball sampling methods to identify and recruit participants. The teams then scheduled and conducted survey interviews with a representative from each participating business.

Reflective of the composition of micro versus small versus medium-sized businesses in the markets, over 70 per cent of surveyed MSMEs were micro, approximately 20 per cent were small, and 10 per cent were medium-sized. The survey includes some unregistered, and therefore informal MSMEs (Table 1).

For this research, micro-businesses are defined as those that employ one to five people, small businesses as those that employ between five and 50 people, and medium businesses as those that employ between 50-250 people (see Annex for further details on methodology).

Table 1

Number of formal versus informal MSMEs in survey



Scope

The research focuses primarily on our surveyed markets, Egypt, Ethiopia, Ghana, Kenya, Nigeria, and South Africa, as well as observations from three additional markets, Rwanda, Senegal, and Tanzania.

In this assessment, three types of e-commerce prevalent in the selected markets were considered, including:

- Social commerce, which refers to the sale of goods using popular social media services such as Facebook, Instagram, X (previously known as Twitter), TikTok, and WhatsApp. Social commerce may be formal, using the specific e-commerce features provided by social media services, or informal, using online personal and community forums to promote and sell goods without deploying e-commerce-specific solutions offered by the services;

- The sale of goods mediated by e-commerce marketplaces and platforms. While both aggregate buyers and sellers on a website, marketplaces facilitate all aspects of an e-commerce sales process from taking orders to managing delivery, while platforms simply bring buyers and sellers together online; and
- Online sales via own company websites.

E-trade services such as tourism and travel, food delivery and ride-hailing, as well as digital goods such as gaming and entertainment are excluded from this analysis. The report focuses on the trade of physical goods, which generates the most value from e-commerce in the selected markets.

Furthermore, while e-commerce can be conducted through a variety of relationships, including business to consumer (B2C), business to business (B2B), consumer to consumer (C2C) and business to government (B2G), this assessment focuses on the most prevalent forms of e-commerce used by MSMEs in the region, which are B2B and B2C.

3. The e-commerce landscape in Africa



3.1 Drivers and benefits of e-commerce

Steadily increasing mobile penetration and internet connectivity in Africa over the last decade has increased peer-to-peer social media interactions, leading to informal vendors and micro-businesses using popular global social media platforms to promote their goods, while bigger, more established businesses have begun to sell through a wide

variety of online channels, including e-commerce marketplaces and their own company websites.

GSMA's e-commerce survey 2023 found that MSMEs of all sizes reported an increase in customers, an increase in revenue, and ease of doing business as their top three motivations for adopting e-commerce (Figure 2).

Figure 2
Top three reasons for e-commerce adoption¹⁷

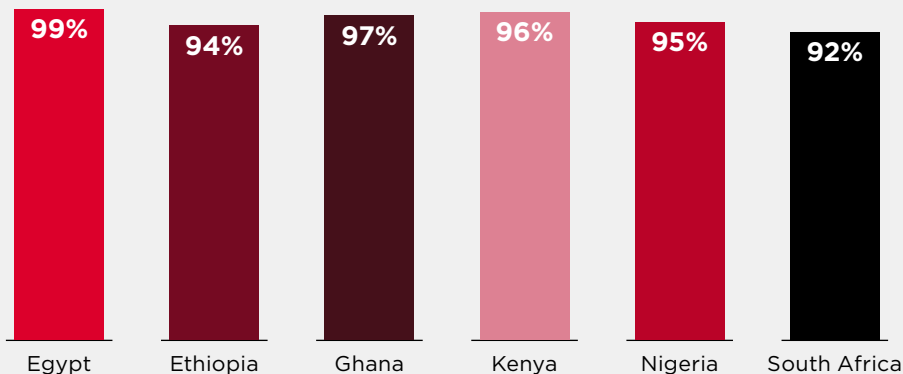


Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

The data also shows that MSMEs in all markets saw an increase in sales due to the adoption of e-commerce, with over 90 per cent reporting improved sales in all markets (Figure 3).

“Selling online has improved my sales, and it has also boosted the awareness of my brand.”
Micro-enterprise, Nigeria

Figure 3
MSMEs reporting an increase in sales after adopting e-commerce, by market¹⁸

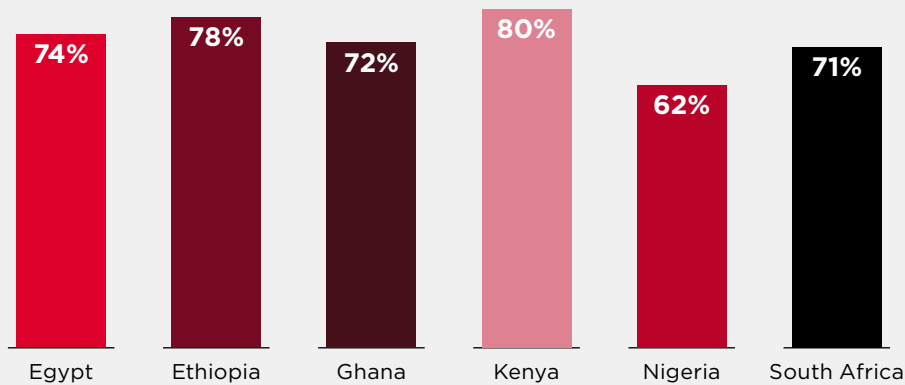


Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

17 Survey Question: Why did you initially decide to go online to sell goods or services?
18 Survey Question: Has selling goods or services online helped increase the sales of your business?

Approximately two-thirds of MSMEs surveyed also indicated that e-commerce had reduced the cost of running their business (Figure 4).

Figure 4
MSMEs reporting cost-savings from e-commerce adoption, by market¹⁹



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

These statistics suggest that there is a clear opportunity to build the resilience and profitability of MSMEs by scaling e-commerce in the region. Yet while adoption is growing, the broader environment poses several challenges to e-commerce growth. MSMEs face challenges related to connectivity and affordability of devices and mobile services. They have low business and digital skills, and they need access to capital to scale up and digitise their operations. These factors also impact consumer readiness to adopt e-commerce; poor affordability of devices and mobile services, low digital literacy and limited purchasing power restricts the addressable market size for e-commerce for MSMEs to smaller, more urban, better educated, and higher income segments in many African markets.

Furthermore, a thriving e-commerce ecosystem requires three essential building blocks:

- Enabling e-commerce policies, regulations and their implementation;
- The uptake of digital payments and a mature digital payments infrastructure; and
- The availability of reliable logistics and delivery infrastructure and services.

Section four of this report examines business and consumer readiness for e-commerce adoption. Section five offers a detailed assessment of the status of the above building blocks for e-commerce in the region, identifying gaps and providing recommendations to address them.

¹⁹ Survey Question: Has selling goods or services online helped reduce the costs of running your business?

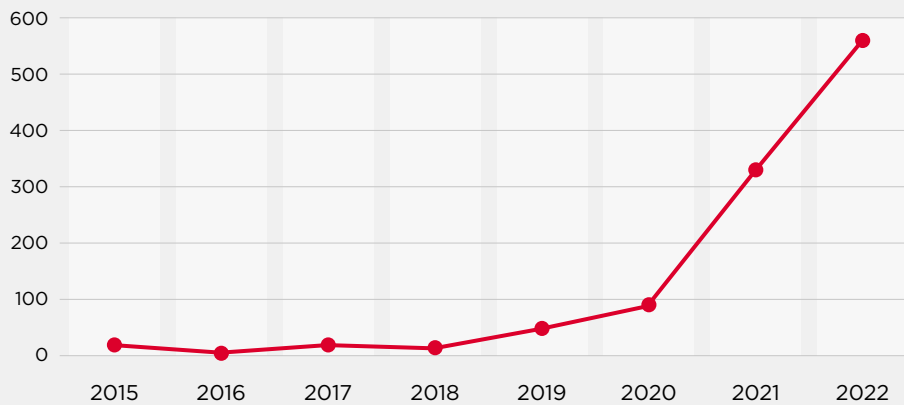
3.2 Venture capital funding to e-commerce

E-commerce gained visibility in African markets after 2010, when marketplaces such as Jumia²⁰ and Konga²¹ launched with significant investments to enable retailers and consumers to transact goods online under a B2C model.

Between 2015 and 2022, over \$4.2 billion was invested in e-commerce and digital retail across Africa, 80 per cent of which came from foreign investment (Figure 5).²²

Figure 5

Value of funding raised by e-commerce and retail tech start-ups in Africa, 2015-2022 (million USD)



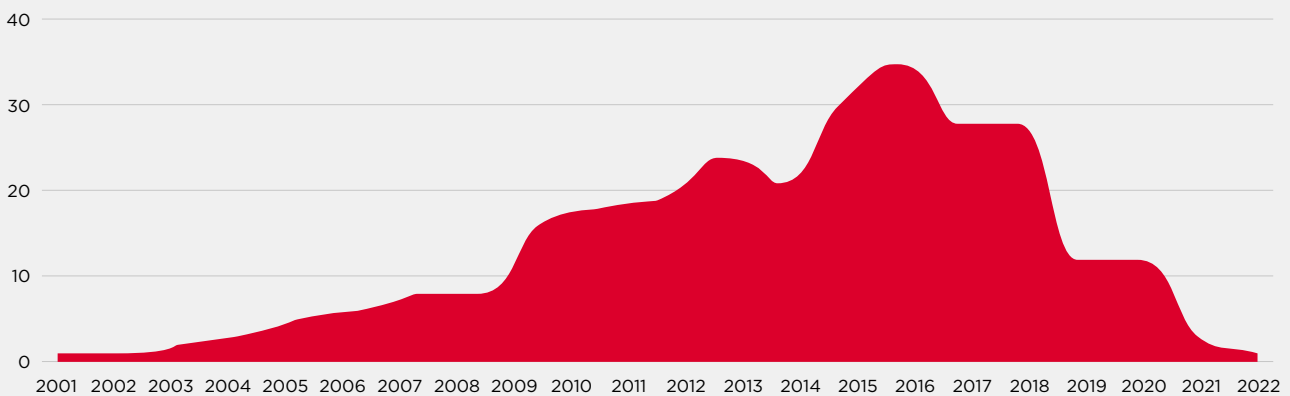
Source: Statista (2023)

More than 330 e-commerce and digital retail companies have been funded in the region as of 2022 (Figure 6)²³ and over 20 per cent of these were in the retail sector, more than double any other category

of products (Figure 7).²⁴ While fintech remained the most funded sector, e-commerce was the third most funded sector in 2022, accounting for 13 per cent of total funds invested.²⁵

Figure 6

Number of e-commerce start-ups founded in Africa, by year



Source: Briter Bridges (2023)²⁶

²⁰ See Jumia group [website](#).

²¹ See Konga [website](#).

²² Briter Bridges. (2023). [At a glance series: Investment & innovation in digital commerce & retail in Africa](#).

²³ Ibid.

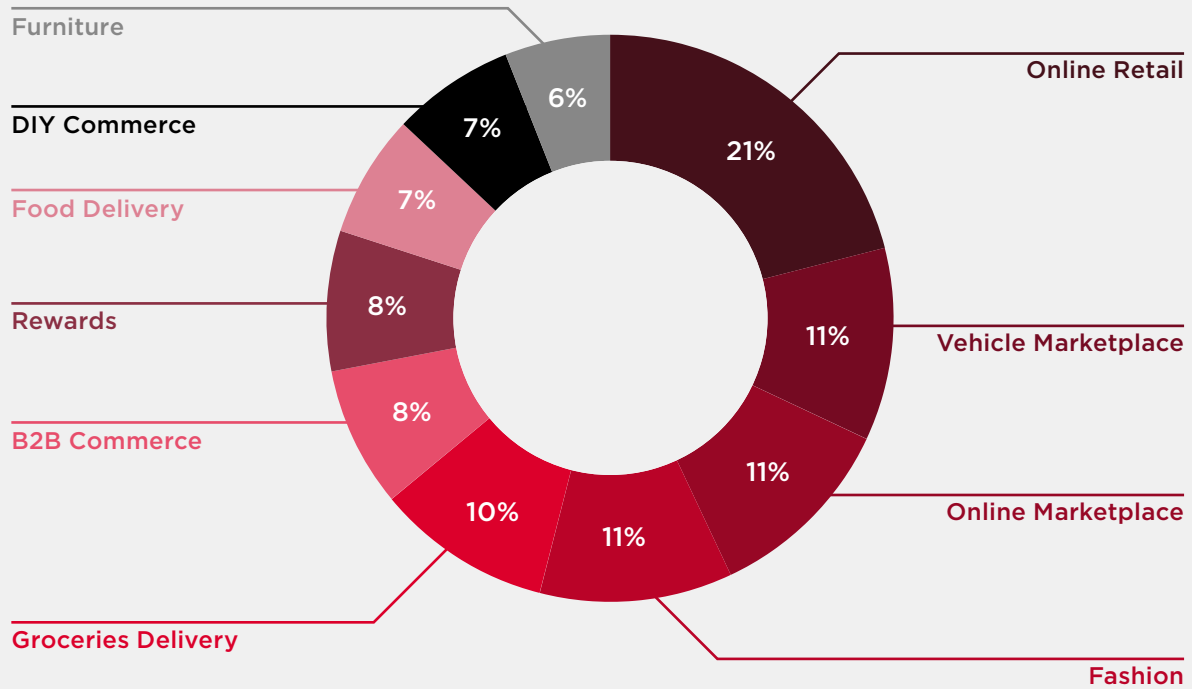
²⁴ Jumia (operating in 12 African markets, including Nigeria, South Africa, Kenya, Egypt, Ghana and Senegal) is the most funded company in Africa as of 2022.

²⁵ Partech. (2022). [Africa Tech Venture Capital Report](#).

²⁶ Briter Bridges. (2023). [At a glance series: Investment & innovation in digital commerce & retail in Africa](#).

Figure 7

Funding to e-commerce sectors, by number of deals

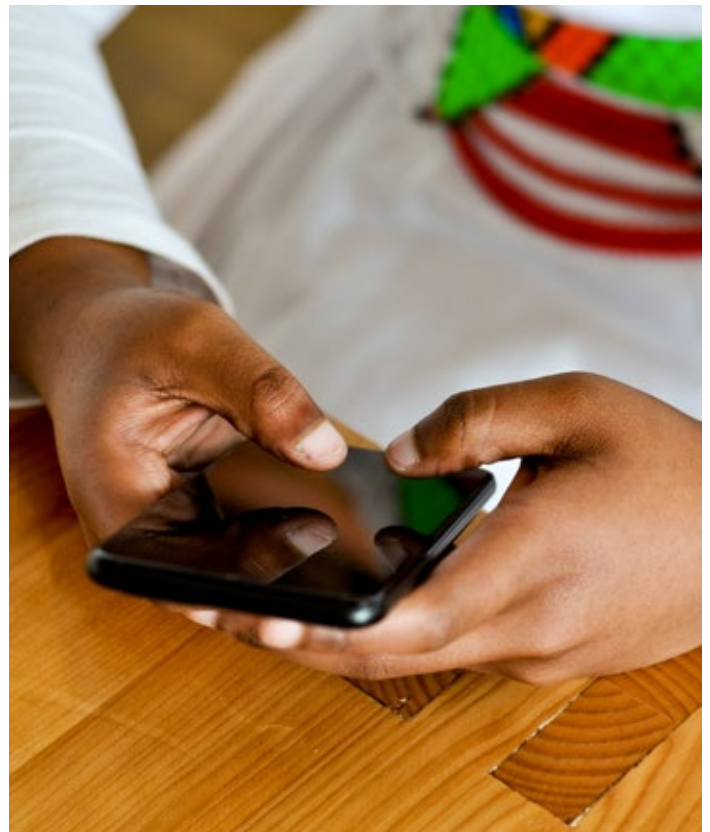


Source: Briter Bridges (2023)²⁷

The top funded markets in the region in 2022 were Nigeria, South Africa, Egypt, Kenya, and Ghana. Senegal and Tanzania ranked eighth and ninth, respectively. Rwanda ranked 20th and Ethiopia 23rd.²⁸ While Nigeria secured over \$1.2 billion spread over 190 deals, there was a 36 per cent year-on-year drop in equity funding.

Of the top funded markets, e-commerce funding contributed to the largest proportion of investment in Kenya (35 per cent) and the second largest proportion of funding in Egypt (26 per cent), which saw 37 per cent year-on-year funding growth in 2022.²⁹ In Nigeria and South Africa, fintech dominated investments and a relatively small proportion was invested in e-commerce.

Despite the growing investment in e-commerce, Africa only received one per cent of total global venture capital funding, and more recently, investments were concentrated in a few start-ups rather than spread more widely across companies.



²⁷ Ibid.

²⁸ Partech Partners. (2022). [2022 Africa Tech Venture Capital](#).

²⁹ Ibid.

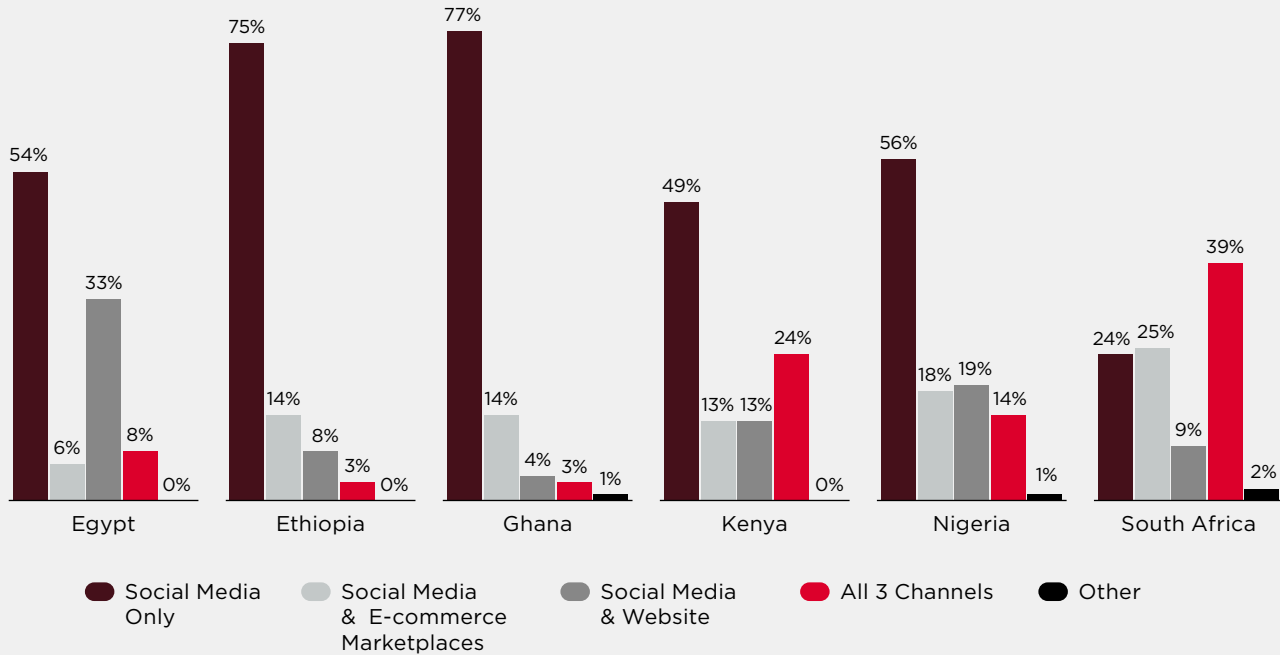
3.3 E-commerce channels

Findings from the GSMA e-commerce survey 2023 indicated that social commerce was the most widely used e-commerce channel by MSMEs in all markets except South Africa, where the use of multiple e-commerce channels including social media services,

e-commerce marketplaces and own brand websites was predominant (Figure 8). In Egypt, almost a third of MSMEs surveyed used a combination of social media and websites, while in Kenya, a quarter used a combination of all three channels.

Figure 8

Use of e-commerce channels, by market³⁰



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

This finding was consistent regardless of the size of the business, although exclusive reliance on social media as a sales channel decreased as businesses got larger. 60 per cent of micro versus 33 per cent

of medium enterprises relied exclusively on social commerce, while only 11 per cent of micro versus almost a quarter of medium-sized MSMEs used all three channels (Figure 9).

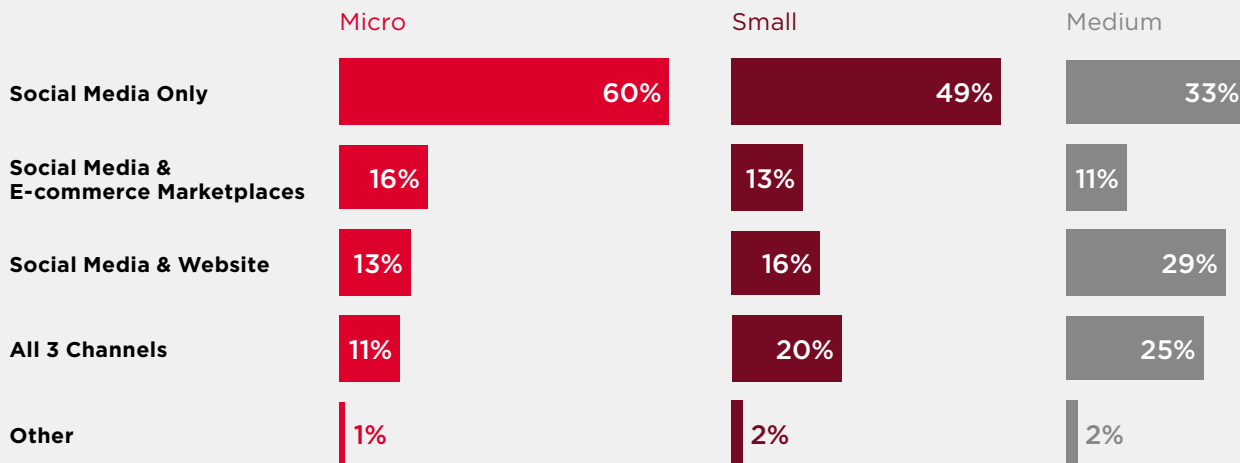
³⁰ Survey Question: Does your website include an online store, meaning that you sell goods or services on your website?

Survey Question: Do you use any of the following e-commerce sites or marketplaces to sell goods or services? (Options provided top five e-commerce sites or marketplaces by market with the option to provide another response).

Survey Question: Do you use any of the following social media or chat applications to advertise or sell goods or services? (Options provided top five social media and chat services by market, with the option to provide another response).

Figure 9

Use of e-commerce channels, by MSME size³¹



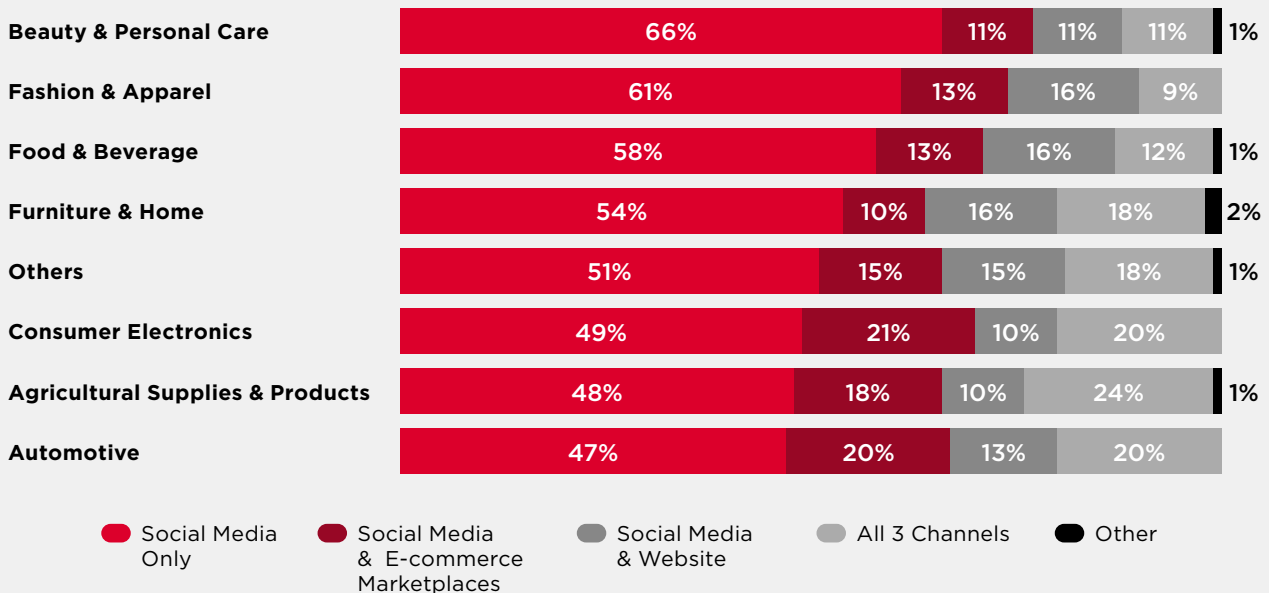
Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

Across all key e-commerce retail product categories, social commerce was the most prevalent form of e-commerce (Figure 10).

Figure 10

Use of e-commerce channels, by product categories³²



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

31 Survey Question: Do you use any of the following e-commerce sites or marketplaces to sell goods or services? (Options provided top five e-commerce sites or marketplaces by market with the option to include another response).
 Survey Question: Do you use any of the following social media or chat applications to advertise or sell goods or services? (Options provided top five social media services and chat apps by market, with the option to include another response).
 Survey Question: Does your website include an online store, meaning that you sell goods or services on your website?

32 Survey Questions: As above.

Social commerce

Social commerce may be conducted entirely informally, whereby users of social media services primarily use them to advertise their products on personal accounts or shared interest and community groups, and then negotiate and arrange prices, payments, and exchange offline. There are several benefits to MSMEs of selling goods via informal social commerce. Unregistered businesses, which form the bulk of African MSMEs, can sell online on social media without undertaking potentially complex registration processes. In Nigeria, for example, there were over 38 million informal enterprises in 2020, with 80 per cent of people working in the informal economy. Kenya is estimated to have five million informal MSMEs versus 1.5 million formal ones.³³ Similarly, it is estimated that of approximately 5.78 million MSMEs in South Africa, only 14 per cent are formalised.³⁴

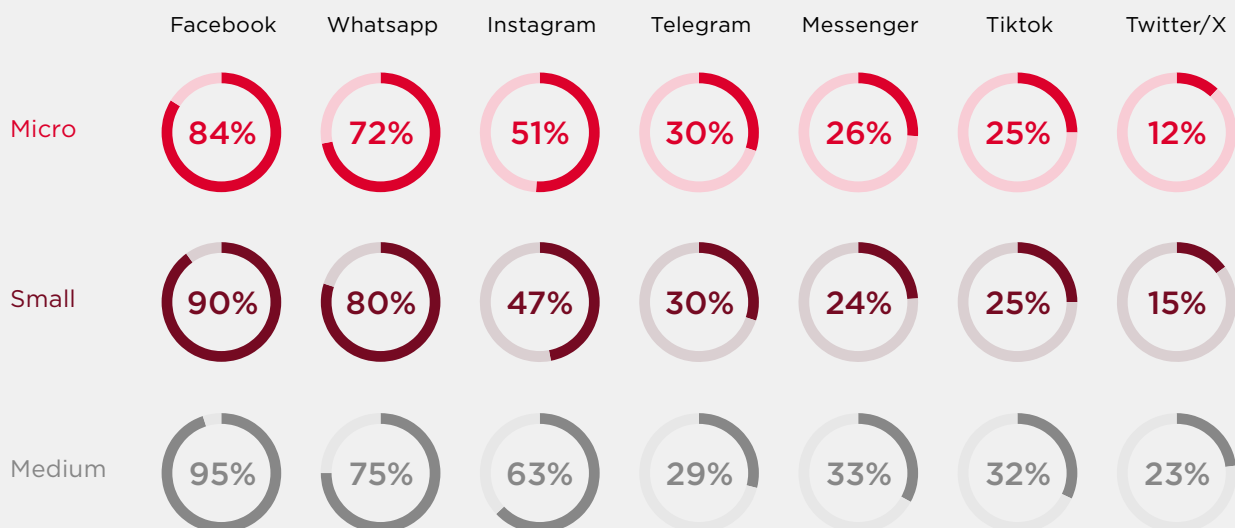
Micro-enterprises can leverage the sense of trust stemming from being either personally known within the social media network or being a trusted member of the online community, to extend their customer base.

However, convenience and efficiency remain limited as the seller must then arrange payment and delivery for each individual sale via non-digital channels.

The social messaging app WhatsApp and social media platforms Facebook and Instagram are the leading social commerce options in the region (Figure 11). While Facebook and Instagram offer dedicated social commerce tools in other regions, these are not yet supported in Africa and social media services are generally used informally, though WhatsApp business tools are more readily available. The social messaging app Telegram is also popular, specifically in Ethiopia, reportedly because it requires less data to upload and download and enables better encryption and auto-deletion of messages, making users feel secure about their privacy. Approximately a quarter of MSMEs also reported using TikTok, a primarily mobile-based video-sharing app for short-form videos. While TikTok Shop is a dedicated e-commerce service that facilitates purchases and payments within the app for registered e-commerce businesses, TikTok is also frequently used informally to market products.

Some of these services also offer opportunities for paid advertising and event marketing to boost MSMEs' reach.

Figure 11
Social media use for e-commerce, by MSME size³⁵



Base: MSMEs using social commerce
Source: GSMA e-commerce survey 2023

³³ USAID. (2023). [Kenya Small Business Development Centers](#).

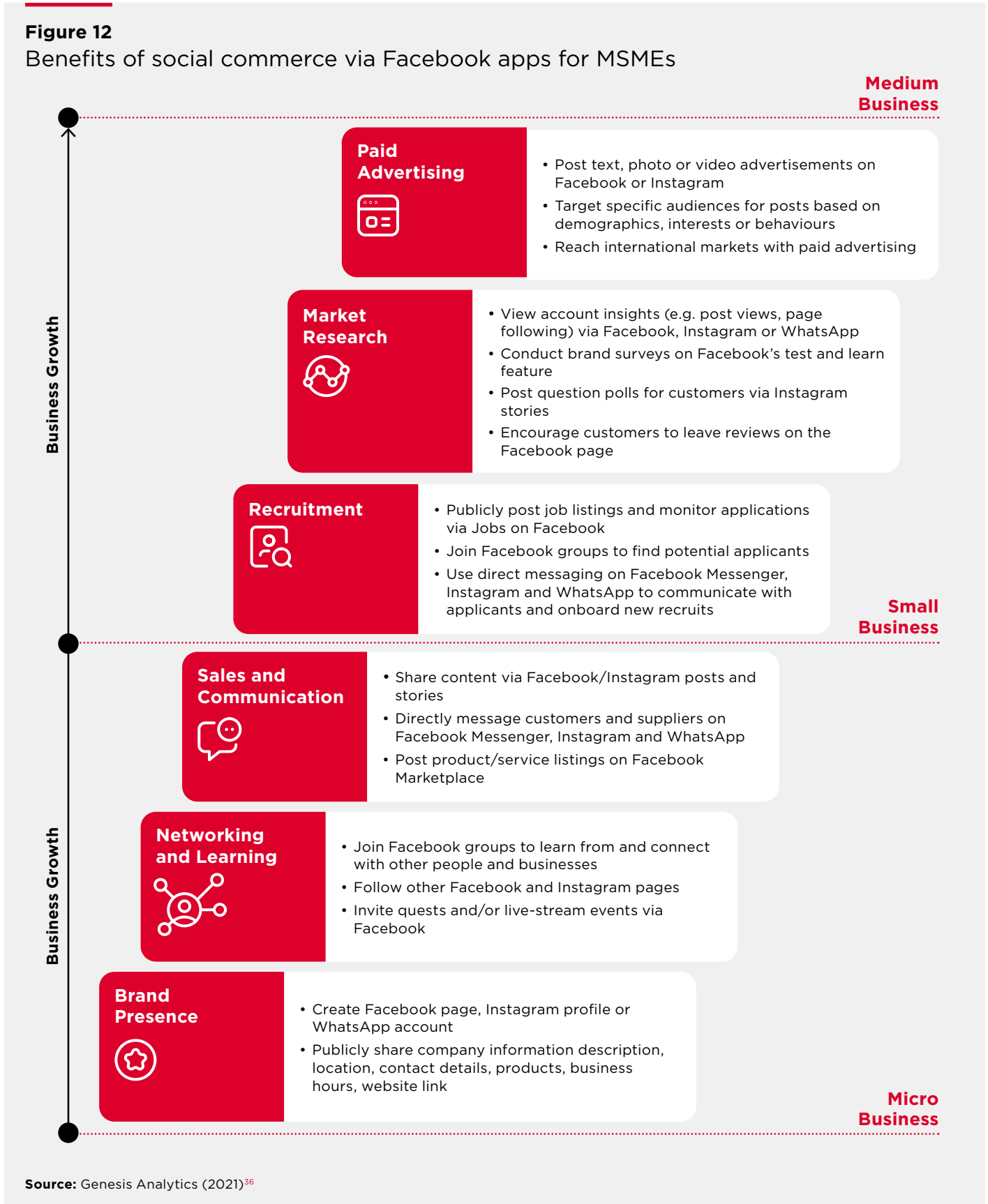
³⁴ IFC. (2018). [The Unseen Sector: A Report on the MSME Opportunity in South Africa](#).

³⁵ Survey Question: Do you use any of the following social media or chat applications to advertise or sell goods or services? (Options provided top five social media services and chat apps. by market, with the option of another response).

Key informant interviews conducted for this report indicate that MSMEs tend to use several social media apps in tandem to advertise goods and complete sales, starting with advertising on Facebook and Instagram, for instance, and then interacting with customers through social media messaging apps

such as WhatsApp to finalise payments and delivery arrangements. Figure 12 highlights how Facebook apps enable MSMEs to establish brand presence, interact with customers and even conduct basic business data analytics.

Figure 12
Benefits of social commerce via Facebook apps for MSMEs



36 Genesis Analytics. (2021). [Unlocking Africa's Potential: How social media is powering small business in Africa.](#)

Numerous recent studies corroborate findings that social commerce has enabled a majority of MSMEs to expand their market reach and is the most accessible channel for product advertising. Most importantly, social commerce lowers the barriers to retail, allowing more micro and small businesses to compete.

Innovative approaches in social commerce are emerging, such as community-based social commerce. In one such example, the Asaba business community in Nigeria was brought together by a local resident via a WhatsApp community. The community administrator carries out an initial vetting of locally

Own brand websites

Own brand websites offer more opportunity to MSMEs to build a unique brand identity and gain the trust of their customers. There is a paucity of data on the number of MSMEs with their own websites in African markets, though the trend of adopting websites is increasing as markets digitalise. In our surveyed markets, only a negligible number of MSMEs sold exclusively on websites (Figure 8).

There are numerous reasons for low adoption of own brand websites, including the relatively high capital cost to set them up, compared to selling via social commerce. Informal enterprises tend to be smaller and significantly more capital constrained. To put these capital constraints in context, most informal Nigerian MSMEs had a start-up funding of

E-commerce marketplaces

As noted earlier, the rise of B2C e-commerce marketplaces and platforms in Africa, supported by venture capital investments over the last 10 years, has brought attention to the potential of Africa as an e-commerce market. E-commerce marketplaces Jumia and Konga set out to onboard Nigeria's MSMEs, drive customers to their websites, facilitating each element of the sales process for registered merchants, from taking orders to processing payments, and arranging delivery. These were the first e-commerce marketplaces in the region, catering to the needs of informal, micro, and small vendors in enabling better market access while providing value to the customer by eliminating middlemen in the sales process.

based traders before allowing them to participate in the WhatsApp community, connecting them to online buyers. The administrator also provides basic training on how to market products and hosts in-person trade fairs to promote traders in the community. More than 60 per cent of the traders participating in informal social commerce via the Asaba WhatsApp community are women.

Though offering increased market access is a notable advantage, businesses using social commerce informally and exclusively may struggle to formalise their operations, limiting their growth and investment opportunities.

approximately \$120 in 2020, putting the construction, launch and maintenance of a website out of reach.³⁷ Similarly, according to the Central Bank of Kenya, the average size of loan obtained by a micro-enterprise in Kenya from a micro-finance institution in 2022 was just under \$200.

Building and maintaining a website also requires a high level of digital skills and without adequate search engine optimisation, may not pay dividends. Therefore, while selling through own brand websites is desirable in terms of the professionalisation and growth of a business, it also presents the most challenges in terms of skills and investment, with relatively more unpredictable outcomes.

These B2C e-commerce marketplaces were followed by B2B start-ups, that facilitated the supply of fast-moving consumer goods from manufacturers to small merchants and mom-and-pop shops. Wasoko³⁸ (previously Sokowatch), launched in Kenya in 2015, and has expanded to six markets, while Twiga Foods, another B2B start-up linking food retailers with agricultural producers, launched in 2014 and currently serves 140,000 retailers in Kenya and Uganda.

Despite notable investments, these e-commerce marketplaces, as relatively new entrants into the retail landscape a decade ago and offering an unfamiliar digital retail model, have needed to invest significant resources in gaining the trust of enterprises, onboarding them via field staff, providing training on how to use the platforms effectively and providing ongoing support.

37 Statista. (2023). [Number of informal micro enterprises \(MEs\) in Nigeria in 2017 and 2020](#).

38 See Wasoko [website](#).

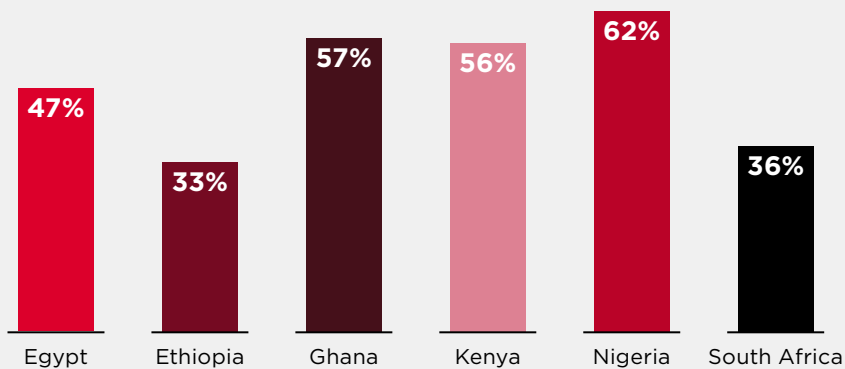
“Uptake of platforms is low because the technology is novel. When you bring something new to a country it needs to be relevant, you need to raise awareness and run campaigns to show its benefits.”

Key Informant Interview, Tanzania

E-commerce marketplaces and platforms increase the reach of and simplify the sales process for MSMEs. However, for small and in particular micro-enterprises that might be subsistence businesses, the cost of selling online can act as a deterrent. On average, half of MSMEs surveyed that sell on e-commerce marketplaces indicated that fees or commissions charged served as a deterrent to selling online. This finding was consistent across countries (Figure 13).

Figure 13

Marketplace fees or commissions as a challenge to e-commerce, by market³⁹



Base: MSMEs that sell on e-commerce marketplaces

Source: GSMA e-commerce survey 2023

E-commerce marketplaces have expanded into offering MSMEs adjacent services, in particular enabling access to financing through micro-credit. Marketplaces can carry out credit risk assessments for MSMEs selling on their website to offer tailored loan products. These loans can be acquired quickly and without collateral, making them a much more accessible short-term financing option than banks for subsistence enterprises and small retailers.

E-commerce marketplaces have had to contend with several ecosystem challenges in African

markets, such as low uptake of digital payments and under-developed payment systems, as well as poor transport infrastructure and insufficient delivery solutions to deliver goods ordered online, impacting their operational costs. B2B e-commerce marketplaces have been better able to overcome these challenges than B2C, because they can undertake bulk payments and deliveries, reducing effort and cost,⁴⁰ however, the B2C market size is much larger, presenting a greater opportunity for growth. These challenges also impact MSMEs selling via social media and via own brand websites.

³⁹ Survey Question: Have fees or commissions charged by e-commerce marketplaces been a big problem, a small problem, or not a problem at all for you when selling online?

⁴⁰ Churn on B2B platforms is also much lower than B2C e-commerce, at approximately 40 per cent versus 80 per cent, which means B2B platforms are much better able to retain their sellers.



BOX 1

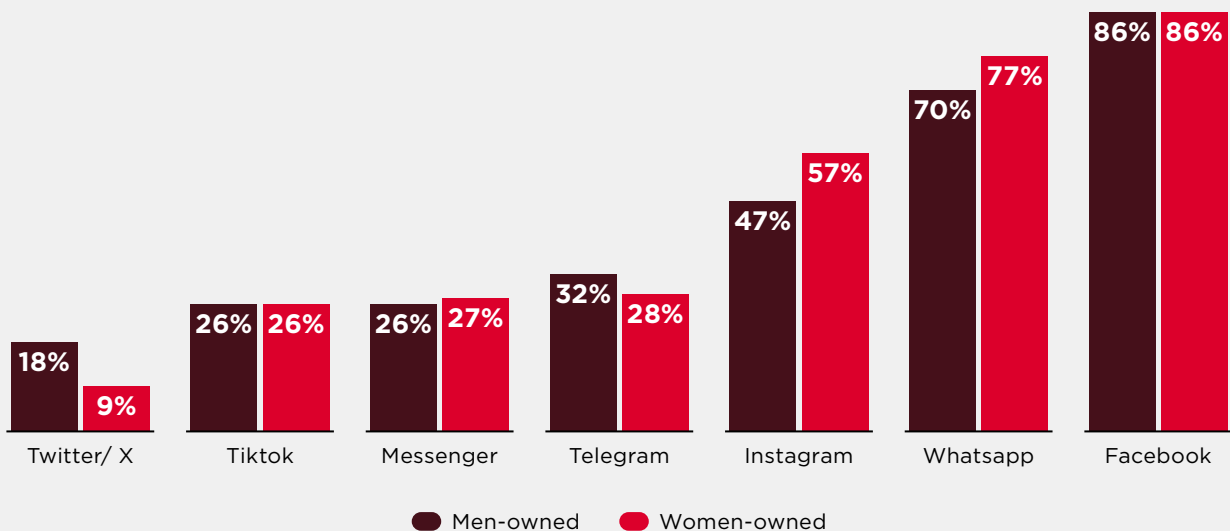
Women and social commerce

Women-owned businesses play a key role in many African economies. For example, women own 41 per cent of micro-businesses in Nigeria and over 37 per cent of all businesses in Ghana.⁴¹ More women-led enterprises are likely to be informal; for example, 61 per cent of Kenya’s informal enterprises are led by women.

While men and women sell on social media services at a similar rate (Figure 14), more women sell exclusively using social commerce than men, indicating that fewer women-owned enterprises are maximising online sales channels for revenue generation (Figure 15).

Figure 14

Use of social media services; women-owned versus men-owned MSMEs



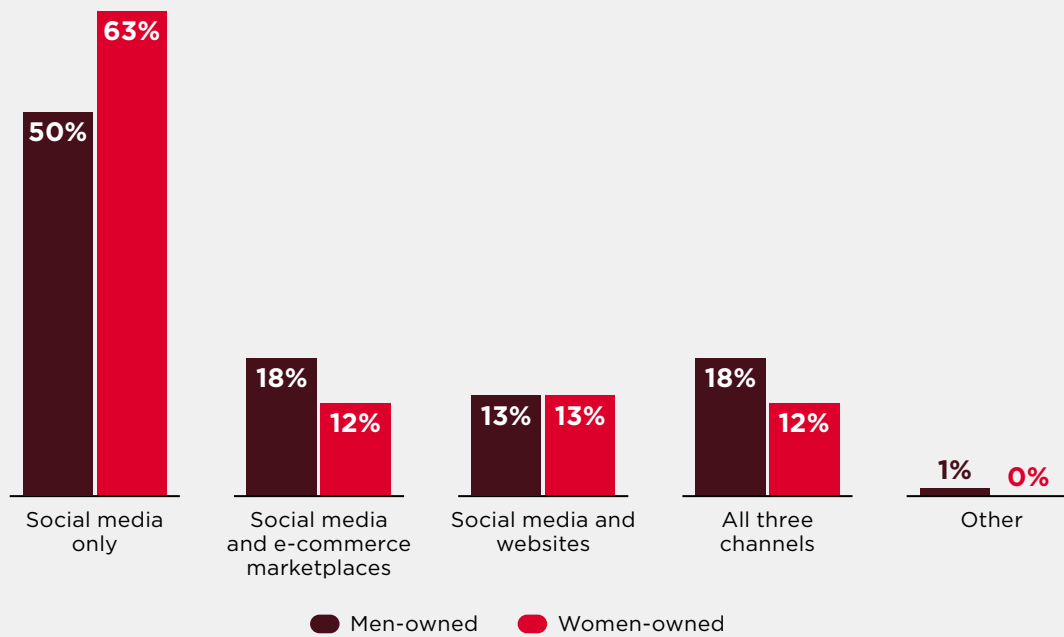
Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

⁴¹ Mastercard. (2021). [Mastercard Index of Women Entrepreneurs 2021](#). The index ranks Ghana as one of the top countries for female-owned businesses and also ranks Nigeria and Ghana at the top in women’s entrepreneurial activity.

Figure 15

Use of e-commerce channels; women-owned versus men-owned MSMEs



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

Previous research by the GSMA shows that women tend to use ‘low-stakes’ tools for their businesses that are affordable and easy to use, for example WhatsApp for communication or social media services for marketing.⁴² We found that in Ghana, for example, informal women micro-entrepreneurs primarily used social media on their mobile phones for marketing and connecting with customers, followed by calling and messaging customers.⁴³ The use of social commerce has low barriers to entry and allows for greater flexibility in arranging sales and payments, as well as enabling ongoing communication between buyer and seller.⁴⁴

The use of social media for business, which accelerated further during COVID-19, has led to business growth for women. Previous research by GSMA indicates that women-led MSMEs using

social media have better business performance than those that are not. In Nigeria, for example, the use of social media marketing for business by women’s micro and small enterprises was associated with higher enterprise performance, wider market reach and more sales.⁴⁵

Social commerce, however, does not offer the seller any protection should buyers refuse to complete the sale, or if goods are damaged in the delivery process. There is also greater susceptibility to online harassment versus other online sales channels.⁴⁶ In addition, when women heavily rely on social commerce to sell their goods, they forgo the gains that selling via a wider range of channels is likely to bring. Women need to use more channels to further scale their businesses. The adoption of these channels requires targeted strategies to support and upskill women-led MSMEs.⁴⁷

42 GSMA. (2023). [Empowering women micro-entrepreneurs through mobile](#).

43 Ibid.

44 Ibid.

45 Ibid.

46 Ibid.

47 Ibid.



BOX 2

Cross-border e-commerce

MSMEs engaging in cross-border e-commerce have a significant opportunity to expand their customer base, increase sales and profits, create employment, and build resilience. African governments have supported the growth of cross-border e-commerce through the establishment of regional economic communities, such as the Common Market for Eastern and Southern Africa (COMESA), which has 19 member states, the Economic Community of West African States (ECOWAS), which has 15 members, the East African Community (EAC), which has seven members, the South African Development Community (SADC) with 16 members, and the Economic Community of Central African States (ECCAS), with 11 members.

The African Union has established the African Continental Free Trade Area (AfCFTA) as the largest free trade area in the world, aimed at enhancing cross-border trade within Africa for the growth of African economies, leveraging the common markets already in the region are working towards adopting AfCFTA protocols for cross-border trade. AfCFTA has a specific protocol on e-commerce and the African Union is currently drafting a regional e-commerce policy.

However, cross-border e-commerce remains low. In our survey only 12 per cent of MSMEs reported selling to buyers in other countries. Interviews with MSMEs and e-commerce marketplaces suggest that when MSMEs sell products abroad, they either sell to neighbouring African countries or export outside the region rather than within it. According to the survey, 12 per cent of MSMEs selling abroad from Kenya reported making sales to Tanzania and 15 per cent to Uganda. Of MSMEs selling abroad from Nigeria, 17 per cent reported making sales to buyers in Ghana while 23 per cent sold products to buyers in the UK, 13 per cent to buyers in the US and nine per cent to buyers in Canada. Key informant interviews with MSMEs engaging in e-commerce also indicated that most international sales are generated from the diaspora in other continents.

Challenges to cross-border e-commerce are related to the regulatory environment, digital payments, and delivery infrastructure, and are as such not dissimilar to the barriers MSMEs face in domestic e-commerce, but are significantly more complex to address. These are discussed in section five.

4. Business readiness



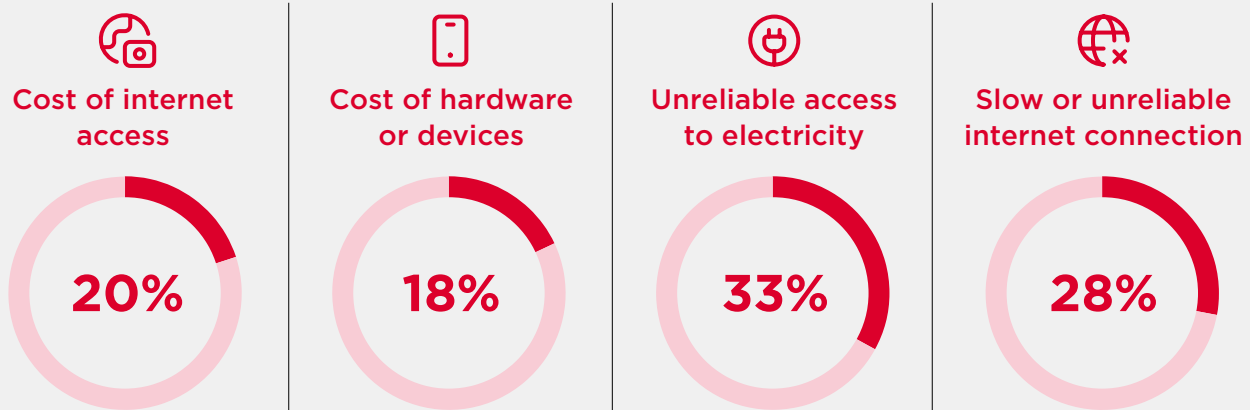
MSMEs in African markets are impacted by several constraints at the firm level, related to connectivity, skills gaps, and access to capital, that limit their ability to adopt e-commerce and leverage it effectively.

Reliable mobile internet and affordable handsets and mobile services are a prerequisite for MSMEs to adopt and scale the use of e-commerce. While connectivity across Africa is improving, challenges continue to persist in most markets. Rural and remote areas in

many markets remain unconnected and the quality of connections and internet speeds can be poor, slowing down online trade and transactions. Between a quarter and 30 per cent of MSMEs surveyed in all six markets identified an unreliable or slow internet connection and over a third identified electricity challenges as a barrier. The costs of devices and access to the internet were also identified as considerable pain points by approximately a fifth of MSMEs when selling online (Figure 16; Table 2).

Figure 16

Key pain points when selling online⁴⁸



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

Table 2

Top two cited barriers to selling online, by market⁴⁹

Egypt	Ethiopia	Ghana	Kenya	Nigeria	South Africa
Slow or unreliable internet connection	Slow or unreliable internet connection	Slow or unreliable internet connection	Slow or unreliable internet connection	Slow or unreliable internet connection	Unreliable access to electricity
Unreliable access to electricity	Cost of hardware or devices	Cost of internet access/cost of hardware or devices	Unreliable access to electricity	Unreliable access to electricity	Slow or unreliable internet connection

Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

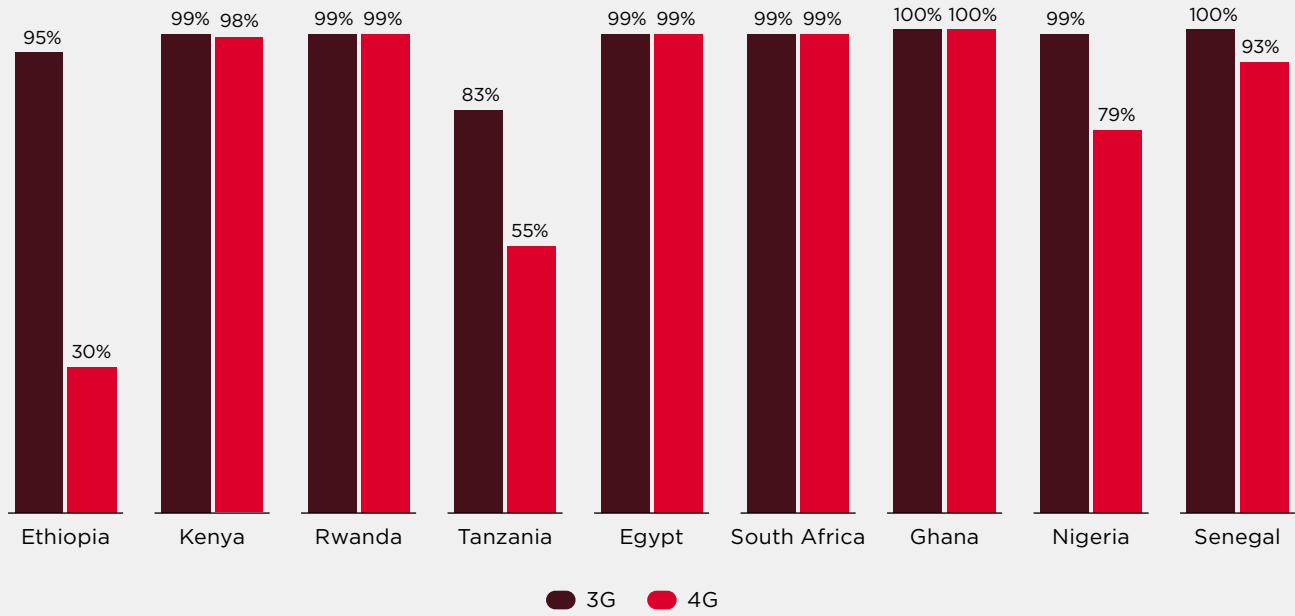
48 Survey Question: Has slow or unreliable internet connection been a big problem, a small problem, or not a problem at all for you when selling online?
 Survey Question: Has unreliable access to electricity been a big problem, a small problem, or not a problem at all for you when selling online?
 Survey Question: Has the cost of internet access been a big problem, a small problem, or not a problem at all for you when selling online?
 Survey Question: Has the cost of hardware or devices you use for business been a big problem, a small problem, or not a problem at all for you when selling online?
 49 Survey Questions: As above.

4.1 Connectivity

Across Africa, mobile operators have invested heavily to expand digital infrastructure to improve connectivity. Between 83 and 100 per cent of the population in the selected markets are covered by

a 3G network. In some countries, including Kenya, Rwanda, Egypt, South Africa, and Senegal, 4G coverage is almost equal to that of 3G (Figure 17).⁵⁰

Figure 17
Mobile network coverage, by market



Source: GSMA Intelligence

However, as Figure 16 indicates, over a quarter of surveyed MSMEs reported that a slow or unreliable internet connection was a key pain point in using e-commerce, compounded by lack of reliable electricity provision.

The GSMA Mobile Connectivity Index measures the performance of 170 countries against four key enablers of mobile internet adoption, including infrastructure, affordability, consumer readiness and content and services. Five of the six countries included in this study scored below 50 out of 100, which means they perform somewhat well on only one or two of the enablers but require significant improvement in others (Table 3).⁵¹

Given that reliable connectivity is a prerequisite to e-commerce, poor network significantly limits the e-commerce opportunity in Africa.

Table 3
Connectivity performance scores, by market

→ Egypt	51
→ South Africa	48
→ Senegal	41
→ Ethiopia	40
→ Kenya	37
→ Nigeria	36
→ Ghana	35
→ Rwanda	35
→ Tanzania	33

Source: GSMA Mobile Connectivity Index 2022

⁵⁰ Several countries, including South Africa, Kenya, Nigeria, and Tanzania, have also launched commercial 5G in recent months.

⁵¹ GSMA. (2022). *GSMA Mobile Connectivity Index 2022*. In the GSMA Mobile Connectivity Index, markets are ranked as leaders if they score above 80 points, advanced, with scores above 65 points, transitioners, with scores above 50 points, emerging, with scores above 35 points and discoverers, with scores below 35 points. Leaders generally perform very well across all enablers and have very high levels of mobile internet penetration. Advanced countries perform well on three enablers and usually have high penetration rates. Transitioners perform well on at least two enablers. Emerging countries perform fairly well on one or two enablers but show room for improvement on others. Discoverers show room for improvement across all four enablers and have correspondingly low levels of mobile internet penetration.



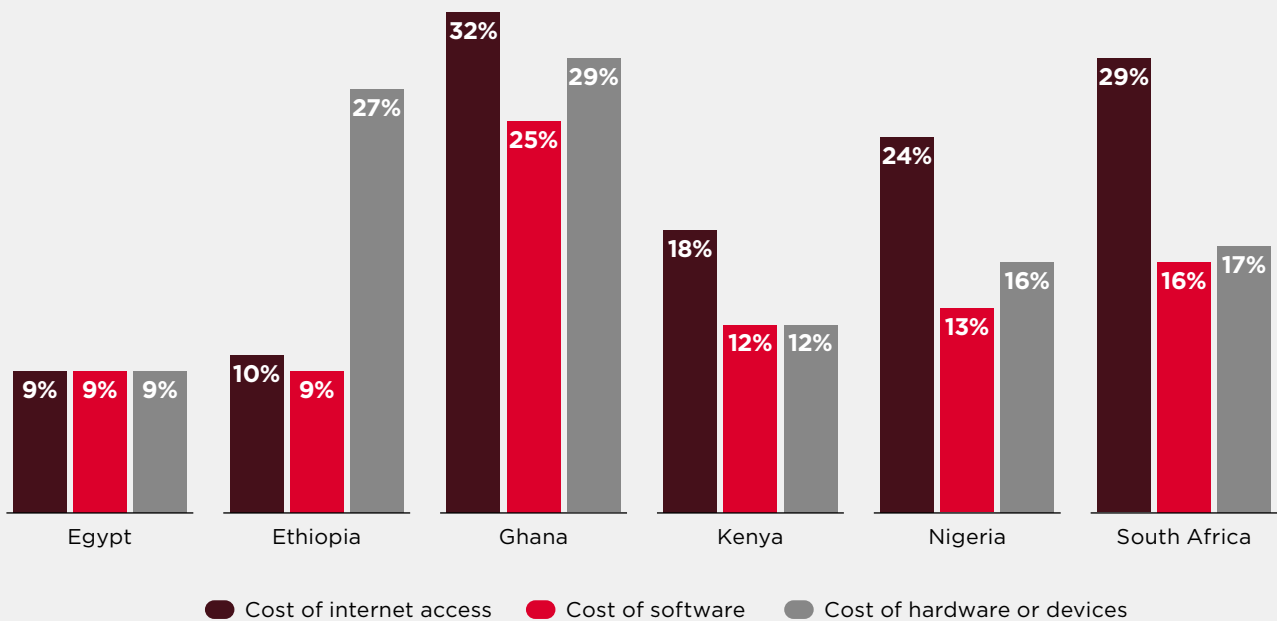
Affordability of handsets and mobile services

Between 25 and 30 per cent of MSMEs in Ghana and Ethiopia noted the high cost of devices, and over 30 per cent of MSMEs in Ghana and just under that

number in South Africa reported the cost of internet as a challenge to e-commerce adoption (Figure 18).

Figure 18

Affordability as a key challenge to e-commerce adoption, by market



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

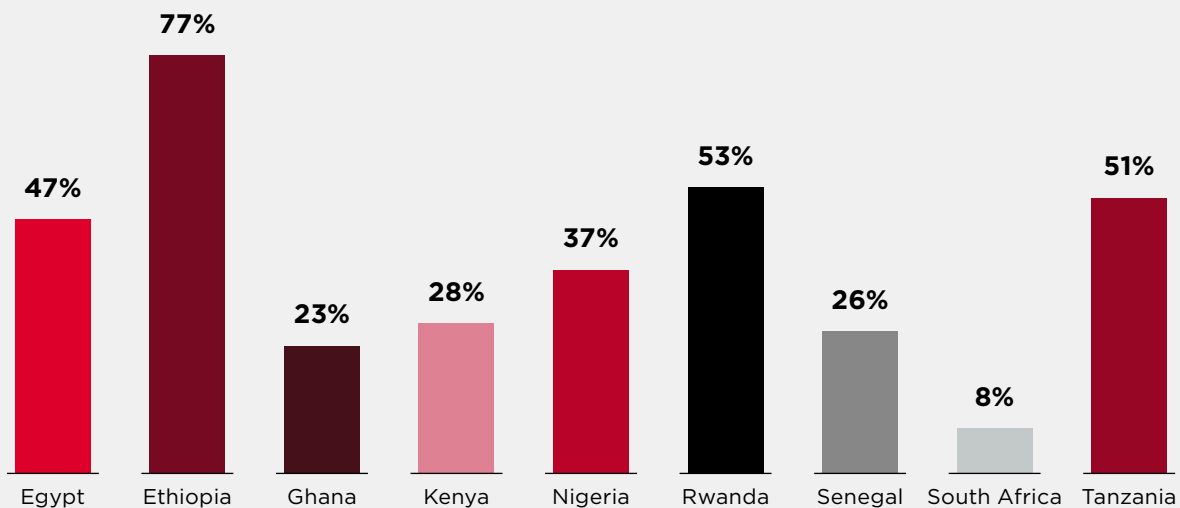
Affordability of devices

E-commerce across Africa is conducted primarily using mobile phones. While smart feature phones may enable social commerce, smartphones and other devices are needed for platform e-commerce and direct sales via websites. Affordability of smartphones is a concern in many markets, with

the price being as much as almost 80 per cent of the average monthly income in Ethiopia⁵², for example, while in Tanzania and Rwanda, the cost of a smartphone represents approximately 50 per cent of the average monthly income, respectively.

Figure 19

Price of a smartphone as a percentage of average monthly income, by market



Source: A4AI⁵³

Despite this affordability challenge, smartphone penetration in the region is expected to rise from 51 per cent in 2022 to 87 per cent by 2030, as average selling prices for smartphones continue to decline. Some strategies that can help to make smartphones more accessible include device financing, the

provision of more affordable smart feature phones, and local production of mobile devices on the continent.⁵⁴ Mobile handset manufacturers can also seek to increase efficiencies in the supply chain to reduce the costs of manufacturing, albeit to a limited extent.⁵⁵

⁵² Alliance for Affordable Internet. (2021). [The Affordability Report 2021](#).

⁵³ Alliance for Affordable Internet. (2022). [2022 prices and affordability of smartphones and feature phones](#).

⁵⁴ GSMA. (2022). [Making internet-enabled phones more affordable in low- and middle-income countries](#).

⁵⁵ Ibid.

Affordability of mobile services

20 per cent of MSMEs surveyed indicated the cost of mobile internet as a challenge (Figure 16). Data consumption requirements for e-commerce are high, as MSMEs need to manage and execute most business processes online, such as uploading product images and descriptions, tracking purchases, processing payments, carrying out fulfilment processes and customer engagement.

Table 4 shows the cost of mobile services by market.⁵⁶ Egypt has the most affordable data, with the International Telecommunication Union (ITU) placing the cost of 500MB of data at less than one per cent of the average monthly income.⁵⁷ Tanzania and Rwanda have the least affordable data, with 500MB of data equating to seven per cent and eight per cent of the average monthly income, respectively. For the remaining six markets, the cost of data lies between one per cent and five per cent of the average monthly income.

Table 4
Cost of mobile services

Market	Low consumption basket (\$ PPP)	High consumption basket (\$ PPP)	Tax (%)
Egypt	10.05	18.6	43
Ethiopia	4.44	9.72	15
Ghana	4.98	19.88	26.5
Kenya	11.4	23.21	31
Nigeria	9.94	14.07	7.5
Rwanda	16.03	16.03	28
South Africa	19.29	42.32	15
Tanzania	8.8	18.85	35

Region	Mobile Cellular low usage basket (70 min + 20 SMS)	Mobile data and voice low consumption basket (70 min + 20 SMS + 500 MB)	Mobile data and voice high-consumption basket (140 min + 70 SMS + 2 GB)
Africa	3.3	6.2	9.3
Europe	0.4	0.5	06
Asia and Pacific	0.8	1.5	2.2

Source: ITU (2022).⁵⁸

The higher price baskets range from just under 1.5 per cent of the gross national income/capital in Egypt, to over 17 per cent of the gross national income in Rwanda. While there is a wide variation in cost between markets, mobile services prices in Africa are on average much higher as a percentage of income

than in any other region. To scale e-commerce for MSMEs, especially micro-enterprises for whom the proportional cost of mobile services can be difficult to absorb, regulators and mobile network operators (MNOs) need to work together to offer services that are both commercially viable and socially beneficial.

⁵⁶ Mobile data packages specifically for businesses vary widely between markets and service providers and are difficult to compare; hence we have used the cost of mobile services for individuals rather than businesses as an indicator.

⁵⁷ ITU. (2021). [Policy Brief – The affordability of ICT services 2021](#).

⁵⁸ Ibid. Baskets based on bundles by leading operators in the market.

Key insights

Connectivity

The commercial case for investment in upgrades to 3G and 4G sites in Africa to improve connectivity, especially in rural and remote areas, remains low as operators generate revenue primarily from 2G enabled voice/SMS and mobile money. Investments in network infrastructure would make commercial sense once uptake of 3G/4G devices and broadband services increases.⁵⁹

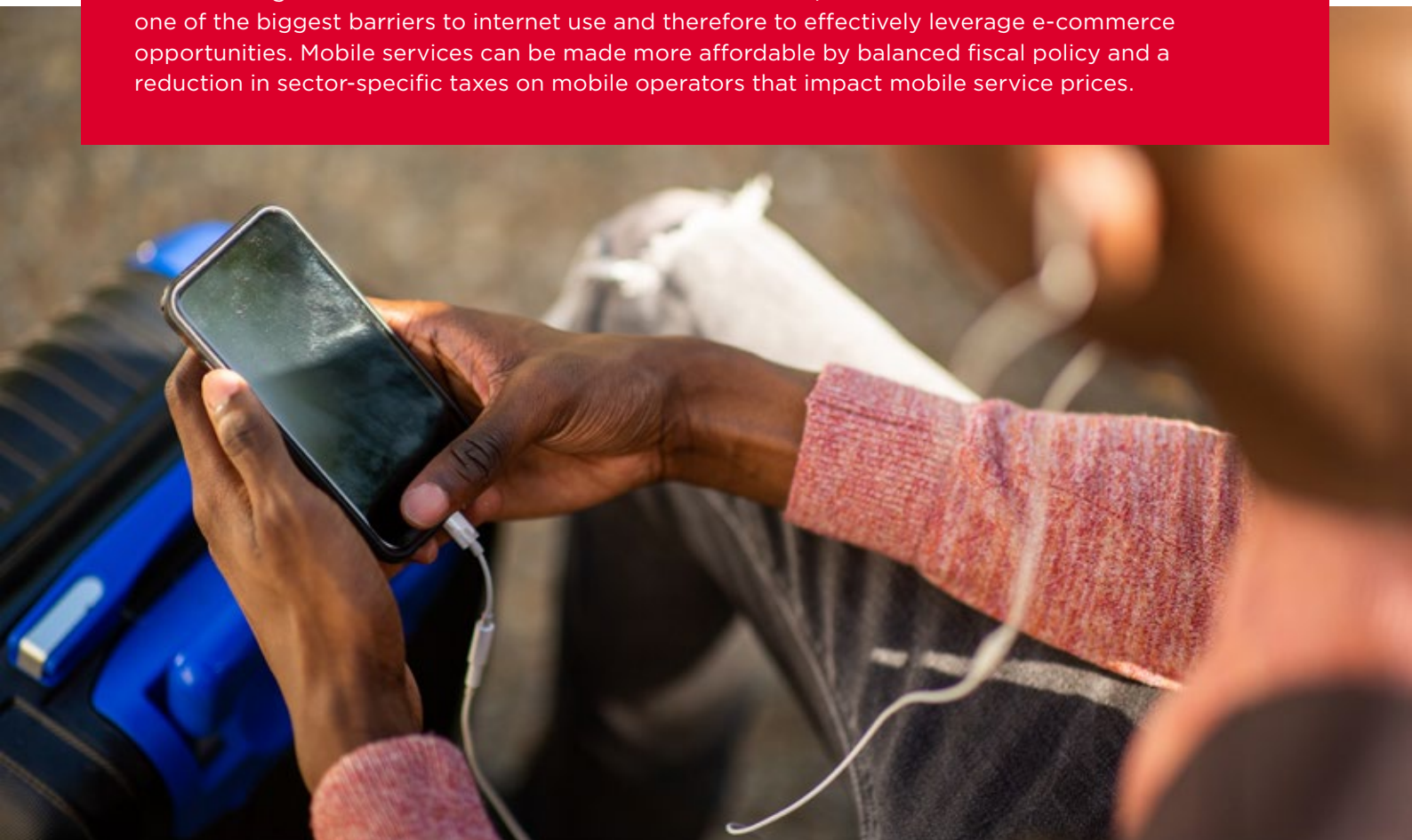
The upload and download speeds provided by mobile networks are also linked to the capacity of spectrum available. While cities can use mid-band spectrum, which has good capacity, signals have limited reach and rural areas require low-band spectrum, which has good reach but lower capacity. Governments in Africa need to rethink and reprioritise low-band spectrum allocation to improve internet quality beyond cities to expand the reach of e-commerce.⁶⁰

Handset affordability

The cost of smartphones continues to be one of the biggest challenges in the region. GSMA research identifies two strategies to make handsets more affordable for consumers: reducing the price of handsets by improving efficiencies in the supply chain, and improving customer access to financing, such as BNPL.⁶¹ Local manufacturing of lower cost smart feature phones offers another opportunity to enable access.

Affordability of mobile services

While the region has seen consistent reduction in data costs, the cost of mobile services remains one of the biggest barriers to internet use and therefore to effectively leverage e-commerce opportunities. Mobile services can be made more affordable by balanced fiscal policy and a reduction in sector-specific taxes on mobile operators that impact mobile service prices.



59 GSMA. (2022). [The State of Mobile Internet Connectivity 2022](#).

60 Tech Africa News. (2023). [GSMA: Closing Africa's Rural-Urban 5G Divide with low band spectrum expansion](#). (accessed 21 September 2023)

61 GSMA. (2022). [Making internet-enabled phones more affordable in low- and middle-income countries](#).

4.2 Business and digital skills

A notable challenge to scaling the use of e-commerce by MSMEs in the region is a lack of skills to leverage e-commerce effectively. When asked to identify one obstacle to business growth, approximately 10 per cent of MSMEs identified a need for training on the use e-commerce channels and 14 per cent identified a need for more skilled employees. (Table 5).

Between 20 and 35 per cent of MSMEs indicated an interest in training on the use of social commerce, e-commerce marketplaces and websites (Figure 20). Interestingly, the need for training did not vary significantly by business size, indicating that all sizes of businesses feel the need for training on e-commerce use.

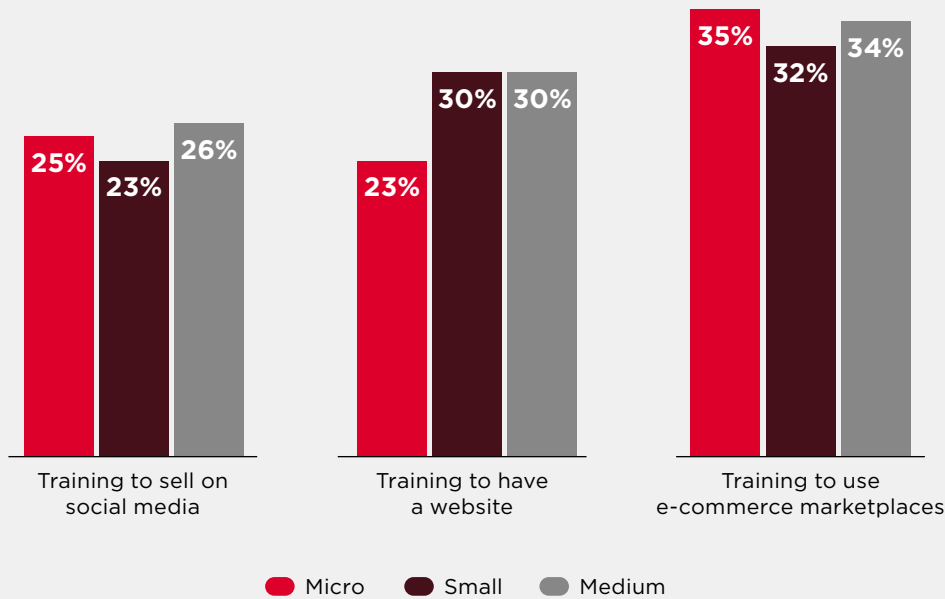
Table 5
Key needs for scaling e-commerce business⁶²

➔ More skilled workers	14%
➔ Training to use e-commerce marketplaces	12%
➔ Training to market products	11%
➔ Training to own and run website	10%
➔ Training to sell on social media	9%

Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

Figure 20

MSMEs' interest in training for e-commerce, by business size⁶³



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

⁶² Survey Question: If you could name one thing that is an obstacle to your business growing, what would it be? You can say anything.

⁶³ Survey Question: On which of the following topics are you most interested in receiving training. Are there any other topics you would like training on?

- How to use mobile money
- How to use data from digital payments to improve business processes
- How to apply for a loan, credit or attract investments
- How to set prices to maximize profits
- How to market on social media or websites
- How to manage sales of goods on an e-commerce marketplace
- How to set up and manage an e-commerce website
- How to use digital tools to manage tasks such as payroll, supply chain and customer relationships
- Other

Table 6 lists some of the key business and digital skills needed to effectively utilise the three different channels for e-commerce: social, marketplace and

website. However, MSMEs are not a homogenous group and upskilling strategies need to be tailored to the needs of different types of businesses.

Table 6
Key business and digital skills required for e-commerce

➔ Basic	
<p>Digital:</p> <ul style="list-style-type: none"> • Using the internet • Using WhatsApp, Facebook, Instagram and TikTok for peer-to-peer interactions • Creating social media content (e.g., Facebook posts) 	<p>Business:</p> <ul style="list-style-type: none"> • Basic accounting • Stock management
➔ Intermediate	
<p>Digital:</p> <ul style="list-style-type: none"> • Using a variety of social media apps and their e-commerce related features, such as Facebook Marketplace, Facebook Shop, Instagram Shop and Facebook Messenger for advertising and marketing purposes • Using email marketing • Being aware of and able to comply with personal data protection regulations 	<p>Business:</p> <ul style="list-style-type: none"> • Knowing how to register for a business license • Understanding and being able to meet Know Your Customer (KYC) requirements for e-commerce marketplaces and platforms • Understanding e-commerce business and tax regulations • Understanding product demand and pricing • Advanced accounting • Marketing (e.g. packaging, photography) • Product standardisation and quality control • Copywriting
➔ Advanced	
<p>Digital:</p> <ul style="list-style-type: none"> • Understanding key functionalities needed for a brand website • Integrating/using integrated digital payments and delivery solutions • Understanding search engine optimisation (SEO) • Knowing how to maximise digital sales channels • Conducting business data analytics/ using data analytics for business planning • Understanding and implementing cybersecurity measures 	<p>Business:</p> <ul style="list-style-type: none"> • Understanding how to establish a recognisable brand • Strategising to drive repeat customers • Scaling via investments • Understanding regulations related to and expanding to cross-border trade • Complying with personal data protection and consumer protection laws

Source: GSMA Mobile for Development

A wide range of stakeholders have been delivering digital upskilling programs to MSMEs; these include governments, donors, social media services and e-commerce marketplaces, and third-party e-commerce services providers such as digital marketing agencies and fintechs facilitating e-commerce payments. However, the gap in digital and business skills is large and needs a concerted and coordinated effort driven by public-private sector partnerships. In addition, to reach wider populations, trainings need to be delivered in local languages to improve accessibility; initiatives to deliver digital skills training in local languages remain limited.

Many MSMEs choose to remain on social commerce due to a lack of higher level digital skills. Low digital literacy also reflects the lack of uptake of own brand websites, which requires more digital know-how. As noted earlier, the skills gap has meant that e-commerce marketplaces, especially in nascent markets such as Ethiopia and Tanzania, frequently use a network of field agents to onboard and train merchants, at high cost. In more mature e-commerce markets such as Nigeria, where large e-commerce companies have established a reliable presence, digital onboarding, and self-registration by MSMEs is growing.

Key insights

A wide digital and business skills gap means that MSMEs are unable to maximise the e-commerce opportunity. Low digital literacy leads to a preference for social commerce versus selling on e-commerce marketplaces and own brand websites at the cost of formalisation, professionalisation and growth of the business.

If MSMEs continue to use e-commerce primarily via social media services, and in informal ways, consumer mistrust is also likely to persist. Governments, e-commerce marketplaces, NGOs, and donors need to collaborate on providing upskilling programmes for MSMEs that are less fragmented and better coordinated, that can help them scale and professionalise. Similarly, investments in a more digitally skilled labour force would enable MSMEs to recruit the right talent for e-commerce growth.



4.3 Access to capital

MSMEs need capital to expand operations, employ more digitally skilled resources, manage bigger product orders and growing demand, and adopt more automated business solutions. Limited access to financing is one of the most notable challenges identified by MSMEs in our survey across all surveyed markets.



23%

of surveyed MSMEs using e-commerce identified capital constraints as the key obstacle to business growth



40%

of surveyed MSMEs using e-commerce indicated capital as their most critical need for growth

Lack of financial resources deters investments in digital business tools and optimised online brand presence, limiting MSME growth via e-commerce.⁶⁴ Estimates by the World Bank/AfDB from 2019 indicated that of 44 million formal MSMEs in Africa, almost half faced a financing deficit. Traditional

banks have tended to not prioritise credit provision to MSMEs due to their small scale, less robust record-keeping, and lack of assets for collateral. In a risk-averse strategy, banks prefer to lend to corporates. For example, in Rwanda, small and medium enterprises (SMEs), which comprise 98 per cent of all businesses in the country, only received 17 per cent of all loans disbursed in 2022, versus corporates, that received 60 per cent.⁶⁵ In South Africa, Nigeria and Kenya, banks tend to lend to governments rather than to MSMEs.⁶⁶

E-commerce start-ups and MSMEs interviewed for this report all indicated that generating financing for business growth was a challenge. In response to capital limitations, apart from an increasing number of e-commerce marketplaces offering micro-credit and BNPL options, fintechs are trying to bridge the gap by developing more targeted financial products for MSMEs. While fintechs are better placed than banks to develop such solutions, regulatory hurdles, lack of digital identities, complex Know Your Customer (KYC) processes and lack of data for credit risk assessments are challenges they need to overcome. For example, a rising fintech sector in Egypt is technologically ready to cater to the MSME financing gap, but KYC is complex as businesses do not have unique identities or easily accessible company information for credit risk assessments; therefore, few fintechs are addressing the MSME financing gap.

Key insights

MSMEs in the region are significantly under-funded, and even when they have the ambition and skills to leverage e-commerce effectively, struggle to obtain the credit and investment needed to scale adoption. Innovative financing mechanisms and better financial support for MSMEs is needed.

While governments and traditional financial institutions should look to address the MSME financing gap, fintechs are best placed to leverage digitalisation of credit risk assessments and develop financial products specifically devised to cater to the needs of MSMEs.

⁶⁴ Some digital marketing agencies in the region are offering MSMEs tailored digital marketing solutions via low-cost, affordable subscription models. GSMA grantee [Africa118](#) is one such example; it builds and manages the online presence of MSMEs for a relatively affordable monthly charge.

⁶⁵ See: [Can hybrid finance unburden Africa's shaky SME sector?](#) (accessed 19 September 2023)

⁶⁶ Ibid.

MSMEs’ perceptions of consumer readiness for e-commerce

For MSMEs to have an incentive to adopt e-commerce, customer demand is essential. A growing youth population that is digitally savvy⁶⁷ and an increasing GDP leading to a growing middle class with more purchasing power offer an opportunity for e-commerce uptake in markets such as Kenya, Ghana, South Africa and Rwanda.⁶⁸

However, MSMEs in our surveyed markets perceived that many customers are hesitant to adopt e-commerce (Figure 21). Over half of all

MSMEs surveyed perceived customers’ lack of trust in online businesses as a challenge to online sales. Forty-three per cent of MSMEs also felt that customers preferred in-person purchases, while an equal number perceived a preference by customers for cash payments as a challenge to e-commerce adoption. Over a third of MSMEs indicated that customer uncertainty over the correct use of online purchasing and returns processes limited e-commerce adoption.

Figure 21
MSMEs’ perception of customer challenges with e-commerce⁶⁹

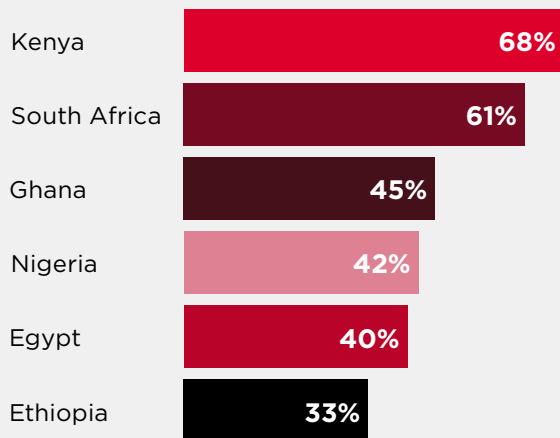


Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

67 McKinsey & Company. (2023) [Reimagining economic growth in Africa: Turning diversity into opportunity](#).
 68 AFR-IX Telecom. (2022). [African Growth and the Rising of African Middle Class](#).
 69 Survey Question: Based on what you know, or what customers have told you, is [ITEM] a reason that limits your customers use of e-commerce to make purchases from your business?
 a) Customers do not understand how to use the marketplaces
 b) Customers do not understand how to use websites
 c) Customers do not trust e-commerce platforms and websites to keep their money and/ or personal data secure
 d) Customers prefer to use cash
 e) Customers do not have a bank or mobile money account for digital payments
 f) Customers do not own devices needed to buy online
 g) Customers do not have reliable access to the Internet
 h) Customers prefer to interact with the merchant in person
 i) Customers think returning items purchased online is difficult
 j) Another problem, please specify

MSMEs' surveyed in each market indicated that low trust in e-commerce is one of the biggest barriers to consumer uptake (Figure 22).

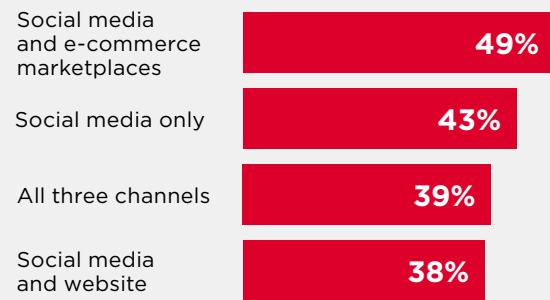
Figure 22
MSMEs who perceived lack of consumer trust as a barrier to e-commerce, by market



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

Linked to the challenges of consumer uptake due to lack of trust, 43 per cent of MSMEs using social commerce and 39 per cent of MSMEs using all three e-commerce channels felt that customers continue to prefer in-person retail (Figure 23).

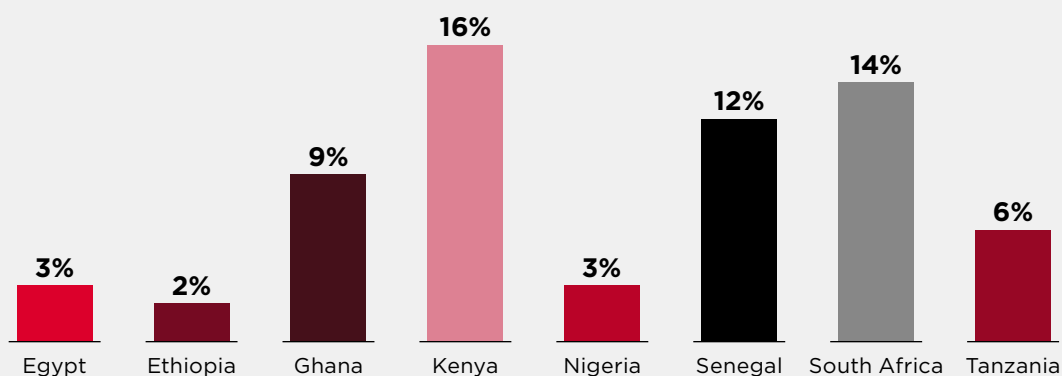
Figure 23
MSMEs who indicated that their customers preferred in-person interactions, by e-commerce channel



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

Recent data from Findex (2021)⁷⁰ corroborates the low uptake of online purchases in the region (Figure 24). While 16 per cent of the surveyed population in Kenya had made an online purchase in 2021, in Egypt, Ethiopia, Nigeria and Tanzania, a negligible percentage of the population had done so.

Figure 24
Online purchases made by consumers in 2021, by market



Base: Total population aged 15 and above
Source: World Bank Global Findex Database, 2021
Note: The data for Ethiopia was added to the database in 2022.

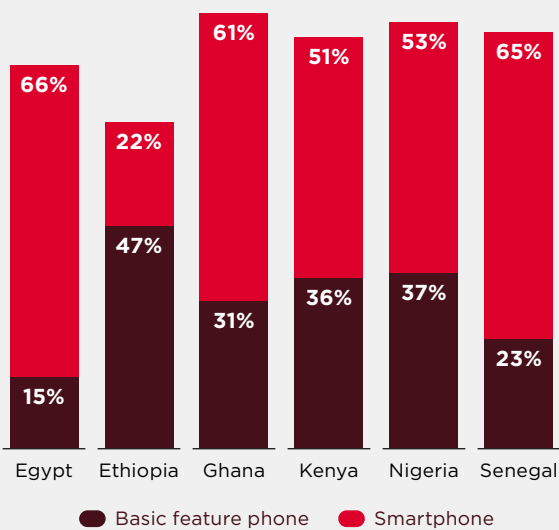
70 The World Bank. (2021). [The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19](#).



Sixteen per cent of MSMEs perceived customers' lack of devices as a constraint to e-commerce adoption. While mobile penetration is growing and over half of the male adult population in all markets own a smartphone, indicating the growing opportunity for e-commerce, smartphone ownership in Ethiopia remains exceptionally low.

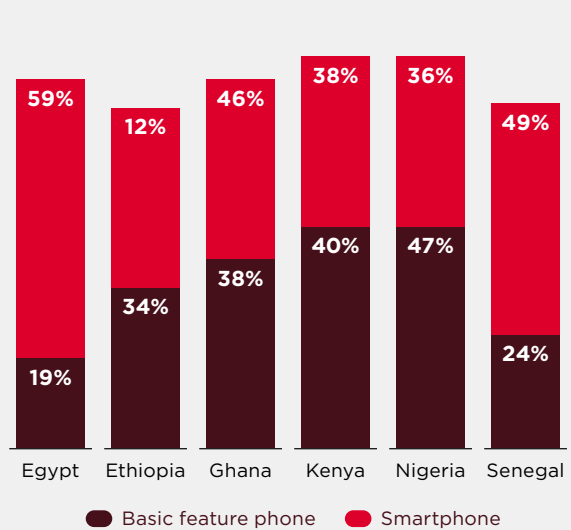
There is also a notable gender gap in smartphone ownership, which is less significant in Egypt but high in all other markets, which means fewer women can utilise e-commerce to make purchases more efficiently and conveniently (Figures 25 and 26). While the demand for online purchases is growing, low trust is likely to continue to perpetuate a preference for in-person, cash purchases, constraining demand.

Figure 25
Device ownership by men in 2022, by market



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

Figure 26
Device ownership by women in 2022, by market



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

5. Building blocks for e-commerce growth



An enabling environment for e-commerce will improve customer trust as well as encourage MSMEs to adopt e-commerce at scale. To create one, three key building blocks are needed, including:

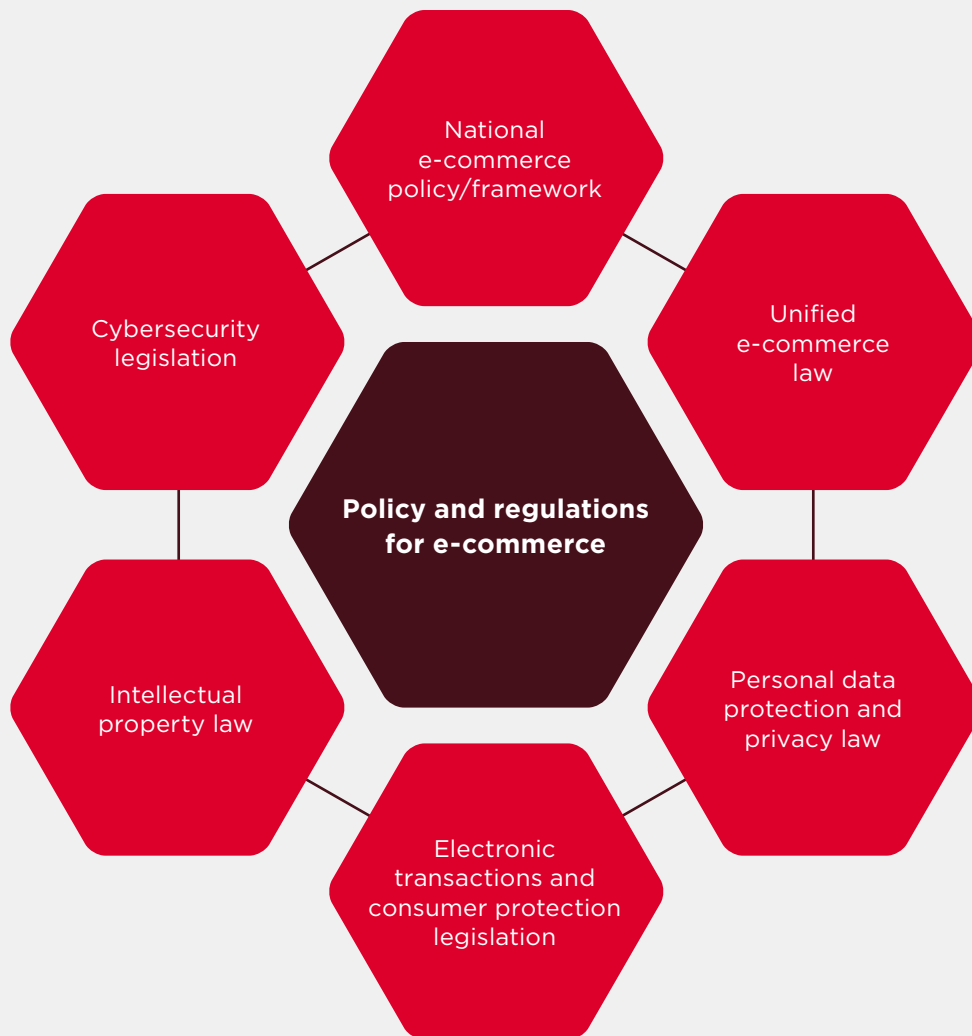
- Enabling e-commerce policies and legislation and their strong implementation;
- Wide uptake of digital payments that are secure, instant, and convenient; and
- Efficient and reliable logistics and delivery infrastructure and services.

5.1 Policy, regulations, and implementation

Policies, regulations, and their effective implementation have a key role to play in enabling e-commerce by building consumer confidence, protecting customers, and clarifying procedures related to online trading for MSMEs. While a wide

range of business, financial and transport-related policies and regulations impact e-commerce, Figure 27 summarises the key policies and regulations that directly impact adoption.

Figure 27
Enabling policy and regulations for e-commerce



Source: GSMA Mobile for Development



E-commerce regulations set out the rules of online trading, providing clarity to MSMEs selling online, rather than them having to second-guess the implications of broader, less relevant, and potentially dated trade laws.

By laying out the legal terms for online transactions, electronic transactions legislation also plays an important role in enabling e-commerce at a national and cross-border level. Electronic transactions regulations define what qualifies as an electronic exchange and establish the legality of e-signatures and online contracts. They also establish parties' rights to, and processes for recourse mechanisms to resolve disputes related to electronic exchanges. Where these laws are lacking or dated, contracting parties may be left unprotected because the exchange is not legally recognised and therefore not protected.

In 2012, SADC members adopted a draft document of the Southern African Development Community e-transactions and e-commerce model law, with the objective to have it serve as a guide for member states to create a secure legal environment for electronic transactions and e-commerce, and improve regional e-commerce.⁷¹

Data privacy and protection laws clarify how businesses must collect, store, manage and process personal data. These laws help guide businesses on data protection measures, reassure consumers that there is legal recourse should their data be wrongfully used and governments take action where personal data is being compromised.

With the increasing prevalence and use of personal data online, updated cybersecurity laws and standards ensure that businesses have clear guidelines on the measures to take to safeguard customers and prevent fraudulent activity.

Finally, with regards to e-trade, copyright laws also play an important role in safeguarding entrepreneurs selling unique products online to protect their intellectual property, which may otherwise be easily duplicated.

Where e-commerce and e-transactions, personal data privacy and protection, cybersecurity and intellectual property laws are lacking, outdated, have gaps or are fragmented, they create an environment of mistrust and uncertainty. In addition, to boost regional e-commerce, countries need to prioritise some harmonisation of national e-commerce related policies to facilitate MSMEs in trading online across borders with a relatively unified rather than conflicting sets of rules.

71 ITU. (2013). [Establishment of Harmonized Policies for the ICT Market in the ACP Countries; Electronic Transactions and Electronic Commerce; Southern African Development Community \(SADC\) Model Law](#). The model law encapsulates legal requirements for e-communications, e-signatures, e-contracts, the protection of online consumers and the responsibilities of service providers. In its implementation at the national level, however, key informant interviews revealed that instead of offering robust consumer protection, the legislation is sometimes more heavily used for surveillance of online communications.

E-commerce policies and frameworks

E-commerce strategies have been devised or are being drafted in almost all markets in this study, with South Africa being the only exception (Table 7).⁷² These policies have helped lay out key priorities and roadmaps to action based on identified gaps in the market and institutional environment.

Table 7

National e-commerce policies and frameworks in selected markets

Egypt	National e-commerce strategy 2017 ⁷³
Ethiopia	National e-commerce strategy 2023 ⁷⁴
Ghana	Lacking ⁷⁵
Kenya	Forthcoming ⁷⁶
Nigeria	Forthcoming ⁷⁷
Rwanda	Proposed National e-commerce strategy 2023 ⁷⁸
Senegal	National e-commerce strategy 2019 ⁷⁹
South Africa	-
Tanzania	Lacking ⁸⁰

Launched in 2017, Egypt's e-commerce strategy has six themes that guide its strategic direction in scaling e-commerce, while Rwanda's policy has nine priority areas, listed below for an interesting comparison on priorities to support e-commerce adoption for MSMEs in the two markets.

National e-commerce strategies have helped develop the institutional environment for e-commerce, allowing different government stakeholders to work collaboratively to support MSMEs and creating a more enabling ecosystem for adoption and scale. Rwanda is currently considered one of the most enabling regulatory environments for doing business.



Egypt's e-commerce strategy: Key themes

- Empowering businesses through e-commerce
- Incentivising formalisation of MSMEs through e-commerce
- Boosting the logistics sector
- Accelerating growth of the payments sector
- Enabling legal and regulatory environment
- Leveraging e-commerce to grow the ICT sector and ICT services



Rwanda's e-commerce strategy: Key themes

- Awareness, capacity, and skills development
- ICT infrastructure and services
- E-commerce platforms and marketplaces
- Financial services and digital payment solutions
- Transport and logistics
- Trade facilitation
- Legal and regulatory frameworks
- Entrepreneurship, innovation, and access to finance
- The use of data for informed decision-making

⁷² In markets where e-commerce strategies are not yet in place, national digital development strategies that identify e-commerce as an important component of MSME development have also been an enabler.

⁷³ UNCTAD. (2017). [ICT Policy Review: National E-Commerce Strategy for Egypt](#).

⁷⁴ Ethiopia's national e-commerce strategy (2023) has been developed with support from the Tony Blair Institute for Global Change.

⁷⁵ UNCTAD is currently undertaking an e-trade readiness assessment in Ghana which may result in a national e-commerce policy.

⁷⁶ In October 2022, UNCTAD undertook an e-commerce strategy validation workshop in partnership with Kenya's Ministry of ICT. An official e-commerce policy has not yet been published but is expected.

⁷⁷ NITDA in Nigeria announced in July 2023 that the National e-commerce strategy is forthcoming. See: [National e-commerce policy to support MSMEs, says NITDA](#) (accessed 19 September 2023)

⁷⁸ UNCTAD. (2023). [Towards an e-commerce Strategy for Rwanda](#).

⁷⁹ Strategy published in 2019 facilitated by UNCTAD.

⁸⁰ Key informants report that an e-commerce strategy is under discussion.

Cybersecurity

It is estimated that \$3.5 billion is lost annually in Africa due to cyber-attacks, and even more due to the risk of cyber-attacks, creating hesitation for online trading of goods. While all surveyed markets have a cybersecurity law (Table 8), most markets suffer from insufficient digital cybersecurity infrastructure, policy preparedness and lack of institutional oversight. This results in either no cybersecurity protocols or

poor, fragmented implementation by organisations. According to Interpol, 90 per cent of organisations in Africa operate without any cybersecurity measures.⁸¹ The threat of cyber-attacks is highest in the most advanced e-commerce markets of Nigeria, South Africa, and Kenya, despite clear cybersecurity regulations.

Table 8
National cybersecurity and personal privacy and data protection laws

Country	Cybersecurity laws	Personal privacy and data protection
Egypt	Law No. 175 of 2018 on Anti-Cyber and Information Technology Crimes	Personal Data Protection Law, 2020
Ethiopia	Computer Crime Proclamation, 2016	Data Protection Proclamation (Draft), 2020
Ghana	Cybersecurity Act, 2020	Data Protection Act, 2012
Kenya	Computer Misuse and Cybercrimes Act, 2018	Data Protection Act, 2019 & Data Protection Regulations, 2021
Nigeria	Cybercrimes Act, 2015	Data Protection Act, 2023 Nigeria Data Protection Regulation, 2019
Rwanda	Regulation of cybercrimes for regulated institutions, 2022 Law N°60/2018 of 22/8/2018 on prevention and punishment of cyber crimes	Data Protection Law, 2021
Senegal	National Cybersecurity Strategy, 2022	Personal Data Protection Act, 2008
South Africa	Cybercrimes Act, 2021	Protection of Personal Information Act, 2020
Tanzania	Cybercrimes Act, 2015	Personal Data Protection Act, 2022

In the context of cross-border e-commerce, cybersecurity features prominently in the African Union's agenda 2063 as well as its digital transformation strategy.⁸² ECOWAS has recently launched the joint platform for advancement of cybersecurity in West Africa, with an eye to developing alignment on regional cybersecurity and data sovereignty.⁸³

Concerted efforts have been made by common markets to prioritise cybersecurity, but a number of challenges have emerged. Prioritisation and coordination between countries is needed to implement robust measures to protect national infrastructure.⁸⁴ There is also a need for investment at the regional level to upgrade cybersecurity, and public-private partnerships are also required for improved cybersecurity. A lack of cybersecurity professionals in the region exacerbates implementation challenges.

⁸¹ African Business. (2023). [Africa's cybersecurity threat](#).

⁸² On 8 June 2023, the African Union's convention on cybersecurity and personal data protection, the Malabo convention, came into force providing a framework to harmonise policies regionally across personal data protection, electronic commerce, and cybersecurity. The convention serves as an opportunity to push forward the AfCFTA agenda for establishing a common free trade market, because e-commerce is reliant on cross-border data flows, which the convention helps facilitate by laying out a shared framework for data protection and management.

⁸³ ECOWAS. (2023). [Official launch of the joint Platform for Advancing Cybersecurity in West Africa](#).

⁸⁴ Kearney. (2023). [Cybersecurity in Africa-a call to action](#).

Personal data privacy and protection

To build confidence in e-commerce, it is essential that personal data privacy and protection laws are in place. All surveyed markets have a personal data protection law except Ethiopia, where it is in draft stage.

At the national level, Egypt has one of the strictest cybersecurity and data protection laws. Kenya not only has a clear cybersecurity strategy that elaborates all elements of cybersecurity from governance, implementation, risk assessments and capacity building, but also has updated regulations on the use of data for commercial purposes, marketing, data localisation and cross-border transfers of data.⁸⁵ Ghana also has strong cybersecurity and data protection laws, and the Cybercrimes Act 2020 establishes a Cybersecurity Authority to oversee implementation of the law. South Africa has been drafting updated regulations for public consultation, such as an amendment to the Protection of Personal Information Act and a notice of code of conduct linked to the Protection of Personal Information Act. Nigeria has strong and clear data protection laws while Tanzania passed a long-awaited personal data protection act in 2022. Senegal's data protection act is dated, though some elements of the act were amended in 2022.⁸⁶

While robust and updated cybersecurity and data protection regulations are essential for advancing e-commerce to protect consumers and build trust, implementation and cybersecurity infrastructure are critically important. In all markets, the threat of cyber-attacks is growing. Key gaps in the region are the lack of cybersecurity skills, lack of cybersecurity infrastructure and absence of dedicated institutions mandated to oversee implementation of cybersecurity measures.

Cybersecurity and the upholding of data protection also requires a collaborative approach between the public and private sector. Businesses need to understand and invest in cybersecurity and data protection measures, just as governments must guide and oversee implementation, and they need to work together to educate consumers on their rights and how to protect their data from attacks.

In terms of cross-border trade, in a study conducted by the Overseas Development Institute, only 23 per cent of digital trade agreements between low- and middle-income countries had a data protection component, less than two per cent of these commitments were binding⁸⁷ and most agreements did not have commitments on free cross-border data flows, which simplifies trading online across borders.⁸⁸ There is an opportunity with AfCFTA for member states to work towards a shared personal data protection standard as well as align on the movement of data between borders.

Finally, it is important that legislation is proportional. Exceptionally strict laws can act as a deterrent by creating fear and concern over surveillance.

85 Ministry of ICT. (2022). [National Cybersecurity Strategy. Republic of Kenya](#).

86 Senegalese Data Protection Authority. (2022). [General Deliberation No. 2022-00591/CDP](#) [in French].

87 ODI. (2021). [Digital trade provisions in the AfCFTA: what can we learn from South-South trade agreements?](#)

88 Ibid.

Consumer protection and electronics transaction laws

Consumer protection and electronics transactions acts serve to govern e-commerce transactions and protect customers. In 2021, only 25 African countries had a consumer protection and electronic transactions regulation.⁸⁹ Egypt, South Africa and Nigeria have strong and relatively well-implemented consumer protection and electronics transactions laws in place. Ghana's consumer protection laws are

fragmented, and elements are overseen by various regulators. A single comprehensive consumer protection law, overseen by a single regulatory body, would in this case be enabling. In addition, where these laws are dated, they need updating to address the existing and rapidly changing e-commerce landscape.

Table 9
National consumer protection and electronic transactions regulations

Market	Consumer protection	Electronic transactions act
Egypt	Consumer Protection Law, 2018	Usage of the non-cash payments' methods law (Law no.18) for year 2019
Ethiopia	Fragmented laws	Electronic Transactions Proclamation No. 1205/2020
Ghana	Fragmented laws Unified draft bill in process	Electronic Transactions Act, 2008
Kenya	Consumer protection Act, 2012	National Electronic Single Window System Act, 2022
Nigeria	Federal Competition and Consumer Protection Act, 2018	Central Bank of Nigeria's Guidelines on Operations of Electronic Payment Channels in Nigeria
Rwanda	Financial Service Consumer Protection Law, 2021	Electronic Transactions Act, 2010
Senegal	Code of consumption	Act No. 2008-08 of January 25, 2008, on electronic transactions
South Africa	Consumer Protection Act, 2008	Electronic Communications and Transactions Act, 2002
Tanzania	Fair Competition Act 2003 Bank of Tanzania (Financial Consumer Protection) Regulations, 2019	Copyright and Neighbouring Rights Act, Revised Edition, 2002

89 CIPESA. (2021). [Advancing Consumer Protection across Africa in the Digital Age](#).

E-commerce and intellectual property rights

A recurring theme in key informant interviews conducted is a worry over intellectual property rights, with entrepreneurs and MSMEs expressing concern about counterfeits of their unique products, even though all surveyed markets have intellectual property protection legislation. In the Property Rights Alliance's Intellectual Property Rights index, which scores countries on four factors, the protection of intellectual property rights, patent protection, trademark protection and copyright protection, all selected markets score below the average score of 5.4 for 2022, with Nigeria and Ethiopia receiving some of the lowest regional scores.

Table 10

National intellectual property laws

Market	Intellectual property law	Protection of Intellectual Property Rights Index score (2022) ⁹⁰
South Africa	Copyright Act No. 98 of 1978	6.28
Rwanda	Revised policy on intellectual property 2018	5.40
Egypt	Intellectual property law 2002	5.12
Tanzania	Copyright and Neighbouring Rights Act No. 7 of 1999	5.04
Ghana	National Intellectual Property Policy and Strategy (NIPPS 2016)	4.93
Kenya	Intellectual Property Bill 2020	4.77
Senegal	Weak copyright protection	4.08
Nigeria	Copyright Act 2022	3.39
Ethiopia	Fragmented/dated	3.31

A 2019 assessment of intellectual property protection in Nigeria by PwC indicated that Nigeria's consumer goods market is flooded with both grey and counterfeit products, and there is little enforcement of intellectual property laws.⁹¹ This is due to the level of informality in the economy, outdated legislation, and weak enforcement mechanisms. Ethiopia's patent laws are also weakly implemented.⁹²

A best practice example of strong implementation of consumer protection and intellectual property law embedded specifically in e-commerce laws is the China e-commerce law, amended in 2019 to enhance intellectual property rights. To effectively regulate platform commerce, the legislative process for China's e-commerce law took six years with multiple stakeholder consultations. The law covers consumer protection and competition, as well as intellectual property law. The law covers platform operators, any merchant on a platform, and any online seller.

On e-commerce platforms and marketplaces, the platform owners bear as much responsibility as merchants for any breaches in consumer protection or intellectual property. For enhanced consumer protection, the law demands that all online merchants have a business registration, pay taxes, and display their licenses on their websites. Platform operators need to have constant oversight over vendors and ensure they are registered, report violations to authorities, monitor products sold, and take action against any infringement. The platform bears equal liability for breaches as vendors. Platforms are also expected to work with intellectual property rights holders.

One challenge however is upholding the same level of enforcement on social commerce platforms. Social platform owners are not held liable, and merchants selling counterfeit products sell on closed groups, making surveillance difficult.

⁹⁰ The [International Property Rights Index](#) provides a global assessment of both physical and intellectual property rights by country. The average intellectual property rights score globally remains at 5.24 in 2022.

⁹¹ PwC. (2019). [Impact of Intellectual Property Infringement on Businesses and the Nigerian Economy](#).

⁹² In addition, Ethiopia is not a signatory to a number of international intellectual property rights treaties.

Unified e-commerce law

Currently, none of the markets in this research study have a unified e-commerce law, although Ethiopia has one in draft stage. This can act as a barrier to building confidence in consumers and online businesses. For example, in Kenya, online trade platforms are not regulated by the Information and Communication Act, as they do not fulfil the criteria of an electronic service as conceived in the act; and therefore,

consumers using online platforms for purchases are not protected in the same way as users of other services identified in the act as electronic services.⁹³

Ethiopia's recent categorisation specifically for e-commerce businesses enables them to register under a business category most suited to their operations and follow the most relevant business guidelines.

BOX 5

Why regulations matter: The case of Ethiopia

Undergoing market liberalisation and driving its growth forward through a digital agenda under the digital Ethiopia 2025 plan, Ethiopia has recently drafted an e-commerce policy framework as well as creating an e-trade business license category. MSMEs trading online can now register for an e-commerce license. Prior to this, MSMEs conducting e-commerce were registering under multiple business licence categories, such as a commission licence (to trade goods) and a business delivery licence (to deliver goods) and dealing with laws not tailored or applicable to their service.

“When you go to the government office to get a license, there isn't any e-commerce license. You need a license as a technology company, a warehousing license, licenses related to driving, etc. It's not efficient.”

KII, Ethiopia (prior to the creation of an e-commerce licencing business category)

Before 2020, when an e-transactions law was passed, Ethiopia did not recognise digital signatures, and electronic transactions were therefore operating in a legal vacuum. The 2020 e-transactions law recognised e-commerce businesses and platforms, and put in place legal requirements for consumer protection and dispute resolution for goods traded online, providing clarity to MSMEs.

Similarly, there was no regulation for payment system operators before 2020. Chapa, a fintech based in Ethiopia that acts as a payment gateway to facilitate international payments for merchants, could not launch its product until the Payment System Operators' directive was established in 2020, as the regulations to enable it to launch its service did not exist.

While Ethiopia has made notable strides in creating an enabling environment for e-commerce, value added tax (VAT) regulations are outdated and recognise only transactions conducted in a physical location and not those through digital platforms. As such, e-commerce businesses face significant bureaucratic hurdles to pay VAT.

93 Communications Authority of Kenya. (2023). [The Development of E-commerce in Kenya](#).

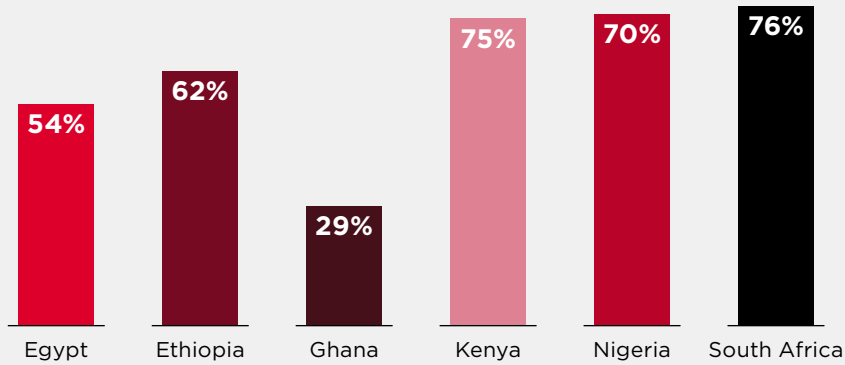
In Egypt there is no specific legislation for e-commerce businesses, which means that MSMEs engaged in e-commerce must comply with more fragmented, wider range of laws.

Ghana's laws applying to e-commerce businesses are outdated and there is no e-commerce policy framework. In comparison to MSMEs surveyed

in other countries where between half and two thirds indicated that they understood e-commerce regulations, only 29 per cent of Ghana's MSMEs said they understood e-commerce regulations, partly reflecting the uncertainty created by the absence of an e-commerce framework and legislation (Figure 28).

Figure 28

MSMEs understanding of e-commerce laws and regulations, by market⁹⁴



Base: Total MSMEs surveyed

Source: GSMA e-commerce survey 2023

In Tanzania, the lack of an over-arching e-commerce framework and legislation has restricted the growth of e-commerce adoption by MSMEs in the country.⁹⁵ South Africa is the only country among surveyed markets that provides an enabling environment for e-commerce without a specified e-commerce framework, attributable primarily to strong regulations linked to consumer protection as well as a more mature ecosystem.

A unified e-commerce legislation that combines personal data privacy and protection, consumer protection, cybersecurity, and electronic transactions laws specifically for e-commerce would help provide more clarity to MSMEs in African markets and enable them to follow a set of regulations that are consistent and relevant for their businesses, as well as help boost consumer confidence.

⁹⁴ Survey Question: Would you say that you understand the laws and regulations that apply to running an online business, or are the laws and regulations unclear?

⁹⁵ An e-commerce framework is reportedly currently under development in Tanzania.

Regulatory evolution based on market conditions

As e-commerce grows in African markets, governments are reassessing how to regulate online businesses, e-commerce platforms and marketplaces and social commerce. The recent case of Jumia is an interesting case in point. In February 2023, COMESA declared that Jumia - who had previously declared that they would not be liable for third party sales on their platform - now take responsibility for products sold by third parties on its websites, as customers deal with Jumia and not the third parties directly. The company would have to ensure the accuracy of seller and product information, and establish conflict resolution mechanisms.⁹⁶

Social commerce is much more challenging to regulate, in particular informal social commerce. As peer-to-peer digital social networks and not e-commerce sites, social media platforms are not held liable for goods traded on their apps. They serve as the optimal channel for informal MSMEs to trade without meeting challenging KYC and

business registration requirements. However, some governments, such as Egypt, have imposed taxes on social media influencers and content creators generating an income past a certain threshold, and income generated through social commerce may be next. While not a regional market, Indonesia in an interesting case - the country was planning to introduce taxes on sales made via social media services but has recently banned e-commerce sales on social media altogether.⁹⁷

Similarly, sales on own brand websites can only be regulated if updated regulations related to online transactions are in place. As noted earlier, in the case of Ethiopia, lack of updated VAT regulations means e-commerce businesses struggle to pay tax.

It is important that regulations be consultative, involve public-private sector engagement, and reflect market conditions so that they are enabling and proportional, and serve to protect businesses and consumers rather than restrict them.

Key insights

All markets in this study have electronic transactions laws and most have a personal data protection and consumer protection law as well. In some markets, these regulations are either dated or fragmented. In this case revised single policies are needed, enforced by a single agency mandated specifically to oversee implementation.

Implementation challenges include a lack of digital cybersecurity infrastructure and digitally skilled labour to embed effective cybersecurity measures in organisations. Most organisations are not clear on the law and do not have sufficient guidance on implementing robust cybersecurity measures. More public-private collaboration is needed for effective implementation of consumer protection measures as well as education for consumers on how to protect themselves.

Finally, balancing harmonisation of regulations with national development priorities is necessary to facilitate cross-border trade so that MSMEs selling to other countries can adhere to a more unified set of regulations for online trade. Agreements on cross-border data flows are also needed to facilitate regional trade.

⁹⁶ TechCrunch. (2023). [African watchdog forces Jumia to review its terms in push to protect consumers](#). (accessed 21 September 2023)

⁹⁷ The Guardian. (2023). [Indonesia bans e-commerce sales on social media platforms like TikTok](#).



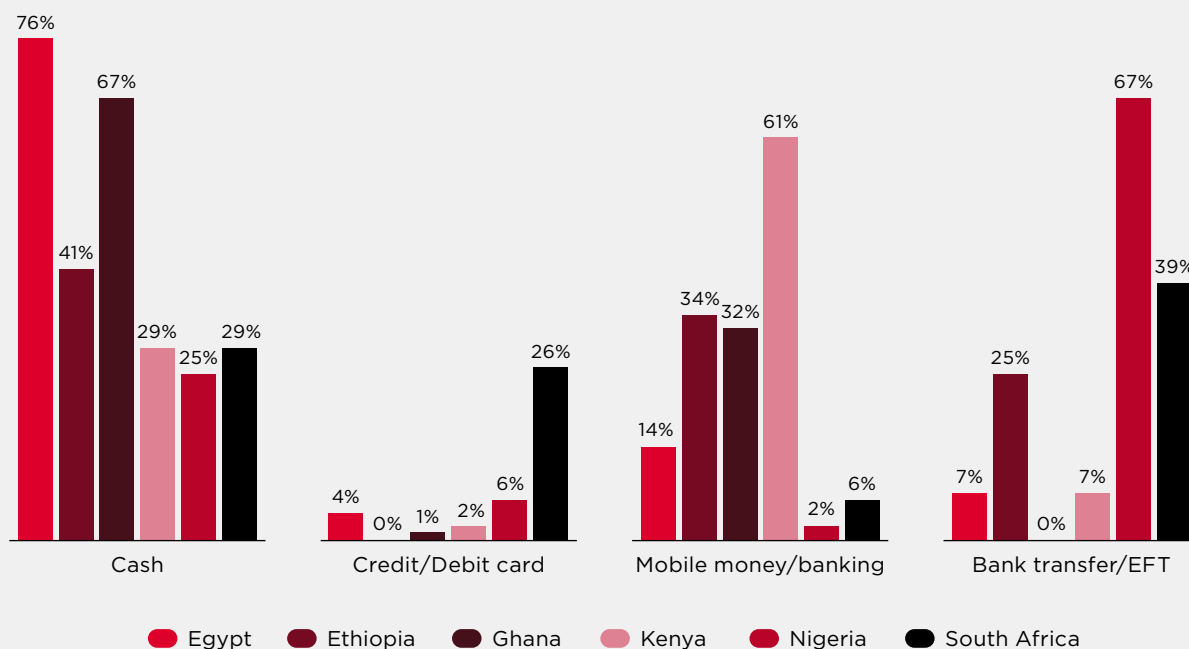
5.2 Digital payments

Digital payments are a key component of a fully digitised online exchange process. While the uptake of digital payments is growing steadily in the region,

cash on delivery persists as the preferred method of payment for many MSMEs (Figure 29).

Figure 29

MSMEs' preference for payment method, by market⁹⁸



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

⁹⁸ Survey Question: Thinking about the different ways that you make and receive payments, which one do you prefer?

In all countries surveyed, at least a quarter of MSMEs indicated a preference for cash payments. 76 per cent of MSMEs in Egypt indicated cash as their preferred method of payment, followed by Ghana, where 67 per cent of MSMEs indicated cash as a preferred method. Egypt has a strong banking sector and mobile money is ubiquitous in Ghana. These findings may be linked to the high number of informal enterprises in our sample in both these markets, who are more likely to prefer cash. Ghana also imposed a tax on P2P mobile money transactions in 2022, which subsequently led to a 25 per cent drop in P2P transfers and could be acting as a deterrent, as P2P transfers can frequently include commercial payments for goods (see Box 8).⁹⁹ The lack of an e-commerce policy and dated laws relating to e-commerce may also be contributing to risk-aversion related to digital e-commerce payments in the country.

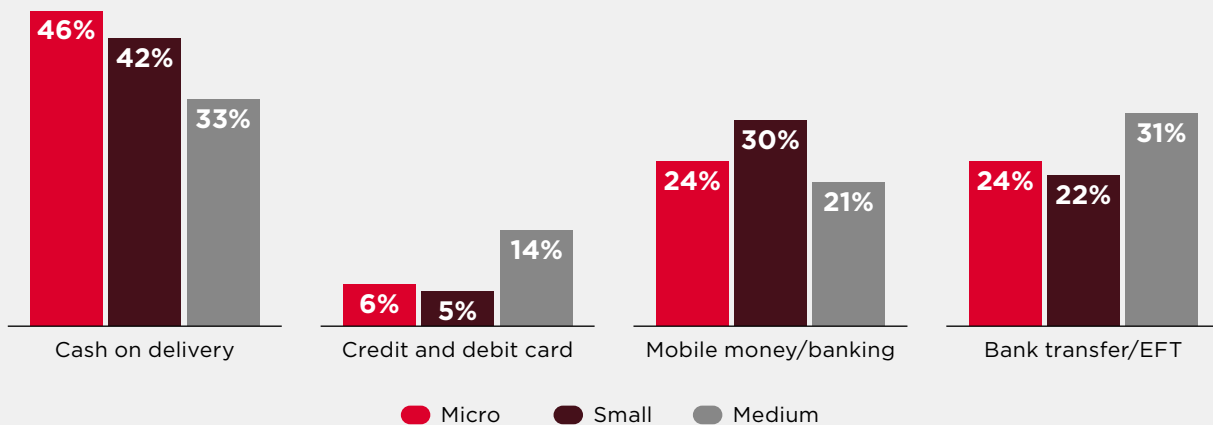
In Ethiopia, formal financial inclusion remains low, the population is heavily rural and mobile money uptake has been limited up until 2020, when market liberalisation allowed mobile operators to offer the service, explaining the preference for cash by over 40 per cent of MSMEs.

The wide adoption of mobile money in Kenya means that more than 60 per cent of MSMEs indicated a preference for mobile money payments.¹⁰⁰ Unsurprisingly, 67 and 39 per cent of MSMEs surveyed in Nigeria and South Africa expressed a preference for payments via bank transfers; both markets have strong banking sectors.¹⁰¹

The uptake of card payments remains low across the region. Less than 10 per cent of MSMEs reported a preference for card payments in all core markets except South Africa, where the preference of bank cards for payments was higher.¹⁰² Card penetration in South Africa is the highest in the region, with almost 60 per cent of the population having a debit card, and 10 per cent a credit card.

Despite the steady growth in digital payments across the region, a notable number of surveyed MSMEs also indicated a preference for cash irrespective of their size (Figure 30). 46 per cent of micro, 42 per cent of small and 33 per cent of medium businesses indicated cash as a preferred method of payment. However, the preferences of medium sized businesses were more widely split, indicating the exposure of larger businesses to a wider variety of payment methods.

Figure 30
MSMEs' preferred payment method, by business size¹⁰³



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

99 GSMA. (2023). [The E-levy in Ghana: Economic Impact Assessment](#).

100 69 per cent of adults in Kenya had a mobile money account in 2021. See World Bank. (2021). [The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19](#).

101 Nine per cent and 37 per cent of adults have a mobile money account in Nigeria and South Africa respectively, compared with 45 per cent and 84 per cent at a financial institution.

102 The World Bank. (2021). [The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19](#). 84 per cent of adults in South Africa had an account at a formal financial institution.

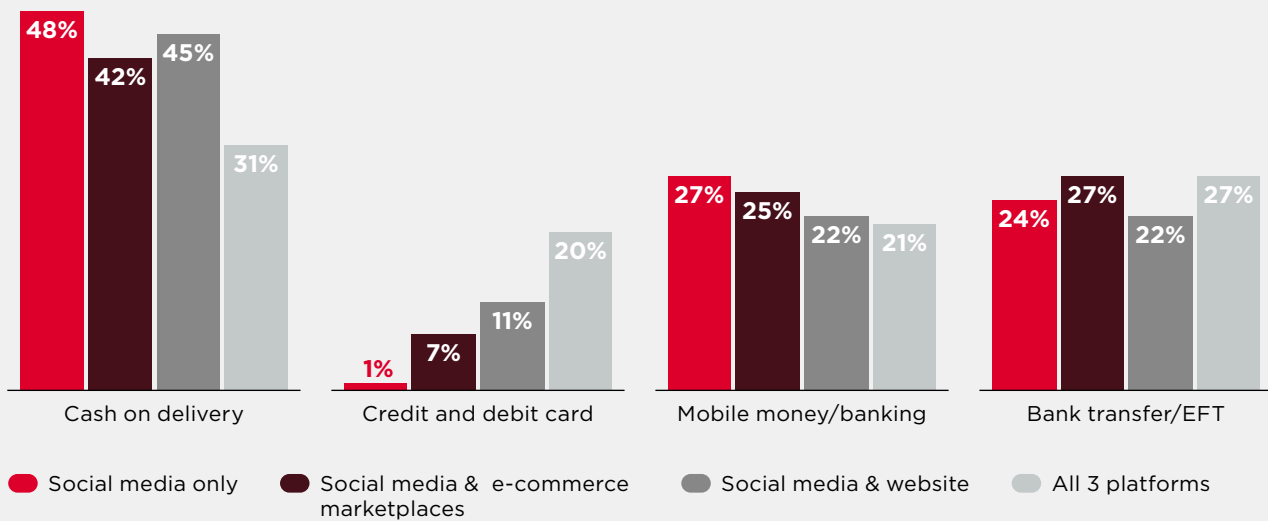
103 Survey Question: Thinking about the different ways that you make and receive payments, which one do you prefer?

Similarly, cash was preferred by businesses across all combinations of methods used to sell online, although the more channels MSMEs used, the more evenly

distributed their payment preferences were, likely due to experience of more types of payments (Figure 31).

Figure 31

MSMEs' preferred payment method, by e-commerce channel¹⁰⁴



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

While many MSMEs preferred the use of cash for payments, this may in part be driven by customer preference for cash payments, which between a third and half of MSMEs identified as a demand-side obstacle to e-commerce growth (Figure 32).

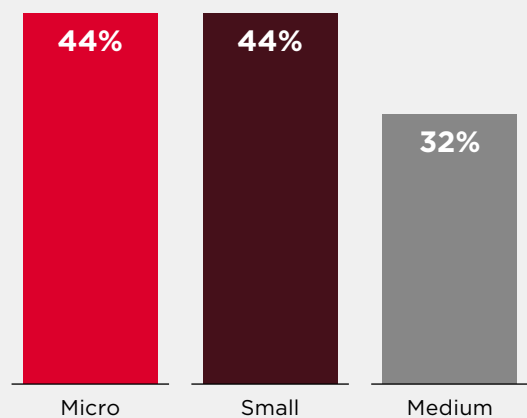
There are a range of reasons for the persisting preference for cash. At the macro level, formal financial inclusion, and level of informality in the economy impacts how people pay for goods and services. Where formal financial inclusion is low and informality is high, cash is likely to be the most widely used payment method. Furthermore, challenges with unreliable internet quality, poor electricity infrastructure, and the cost of handsets and mobile services all act as deterrents to the uptake of digital payments.

However, three key determinants of the uptake of digital transactions for e-commerce include:

- The affordability of digital payments;
- The convenience of digital payments, based on payments system interoperability; and
- Trust in payment methods

Figure 32

Customer preference for cash as an obstacle to e-commerce, as perceived by MSMEs¹⁰⁵



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

¹⁰⁴ Survey Question: Thinking about the different ways that you make and receive payments, which one do you prefer?

¹⁰⁵ Survey Question: Based on what you know, or what customers have told you, is [ITEM] a reason that limits your customers use of e-commerce to make purchases from your business?

- Customers do not understand how to use the marketplaces
- Customers do not understand how to use websites
- Customers do not trust e-commerce platforms and websites to keep their money and/or personal data secure
- Customers prefer to use cash
- Customers do not have a bank or mobile money account for digital payments
- Customers do not own devices needed to buy online
- Customers do not have reliable access to the Internet
- Customers prefer to interact with the merchant in person
- Customers think returning items purchased online is difficult
- Another problem, please specify

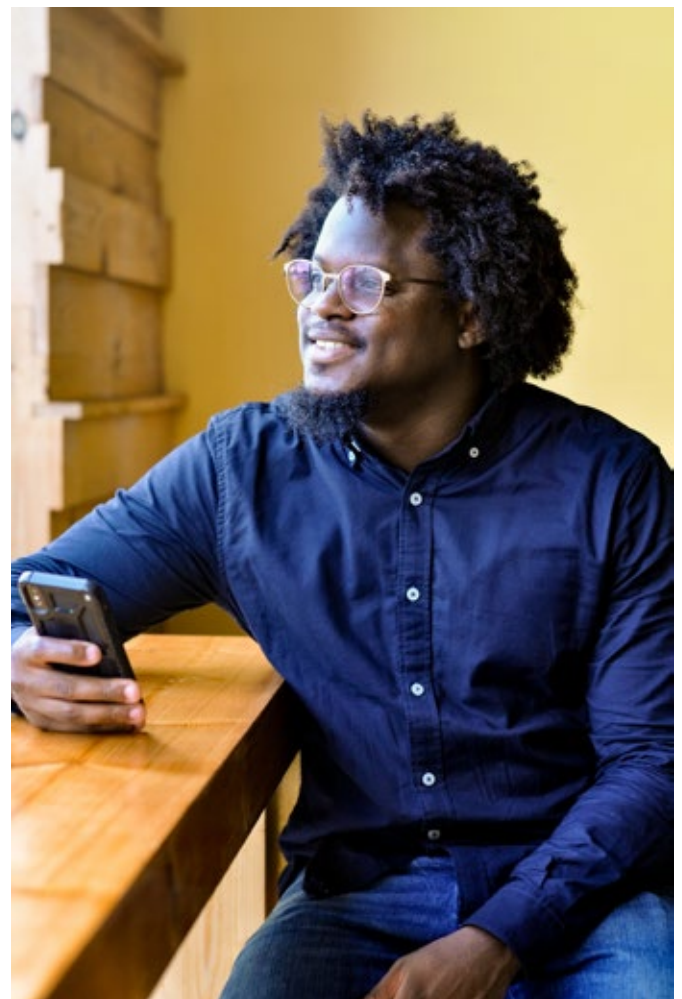
Affordability of digital payments

Key informant interviews suggest that cash payments are perceived as no cost, compared to banking and digital transactions that incur charges. The use of cash has its challenges; it is resource heavy to manage and prone to theft. Cash on delivery also makes cash flow management more difficult for MSMEs, who must fulfil orders before they are paid, and items returned on delivery incur delivery charges borne by MSMEs.

Digital payments are quick, efficient, and safe and a key enabler of e-commerce. However, in markets where the purchasing power of a large segment of the population is limited, and consumers tend to buy low-ticket items, transaction costs are a deterrent. The commercial pricing of digital transactions is impacted by a number of factors beyond profitability, including:

- **Tax regulations:** Governments may use levies on digital transactions as a proxy to tax the informal economy and expand the tax base. Taxation on digital payments, such as on mobile money transactions, levied by some governments, including Kenya and Ghana, has raised the cost, discouraging use, in particular for low-value transactions where the proportional tax is higher.¹⁰⁶ For the majority of African MSMEs, these transaction charges are significant enough to act as a deterrent, despite the efficiency and safety they may offer. Enabling affordable low-value payments by balancing fiscal policy with digitalisation of the economy is essential for supporting e-commerce for micro and small businesses.

- **Charges by payment systems:** Payment systems across countries have different financing models, with different implications for affordability. For instance, the Ghana Instant Pay (GIP) payment system—a real-time interbank payment transfer service—operates on a strict cost-recovery model. Banks charge consumers a one per cent fee on all transactions, with 30 per cent of these fees being routed to the Ghana Interbank Payment and Settlement System (GhIPSS) and the remaining 70 per cent retained by the sending financial institution.¹⁰⁷ The Nigerian Interbank Payment (NIP) settlement system also operates on a cost-recovery model but with moderated profit for shareholders.¹⁰⁸ PesaLink,¹⁰⁹ which allows instant transfers between bank accounts in Kenya, operates on a for-profit basis. The governance of payment systems determines the costs charged to financial services providers and passed on to customers.



¹⁰⁶ GSMA. (2023). [State of the Industry Report on Mobile Money](#).

¹⁰⁷ AfricaNenda. (2022). [The State of Instant and Inclusive Payment Systems in Africa SIIPS 2022](#).

¹⁰⁸ The Central Bank of Nigeria recently reduced the charge to banks for using NIP, it was agreed that the reduction would not be passed on to consumers to support the banking sector.

¹⁰⁹ [PesaLink](#) is the bank-led system in Kenya.

Real-time and interoperable payments

In the financial system, payments interoperability refers to the ability to make digital payments between two accounts held at different institutions. Instant and interoperable payment systems are retail payment systems that can process retail transactions digitally in real-time across providers, at all times.¹¹⁰

For e-commerce to prosper, there needs to be a well-functioning interoperable payments system so that different types of digital payments, ranging from mobile money to bank transfers and cards,

can be accepted, and processed instantly. In addition, payment gateways act as a key enabler for interoperability and are a crucial building block for e-commerce. They enable secure online transactions by encrypting sensitive payment information and facilitating communication between online businesses and digital payment service providers. Across our core markets, both Nigeria and Ghana provide multilateral interoperability, allowing transactions between different payment systems (Box 6).¹¹¹

BOX 6

Multilateral interoperability in Nigeria and Ghana

The Nigerian Inter-Bank Settlement System (NIBSS) launched NIP in 2011 to enable real-time interbank payments and facilitate high volumes of retail transactions.¹¹² It gradually integrated mobile wallets and card networks and now operates a central processing hub—the Nigerian Central Switch—which connects directly to all commercial banks, microfinance banks, and mobile money operators in Nigeria, supported by payment gateways to enable secure and real-time online transactions. Considered one of the most robust interoperable payments systems globally, NIP processes transactions on an average of 10 seconds or less.¹¹³

In Ghana, the Ghana Interbank Payment and Settlement Systems (GhIPSS), a subsidiary of the Central Bank, launched its real-time payment service, GhIPSS Instant Pay (GIP), in 2015 to enable the real-time clearing and settlement of low-value interbank transactions. In parallel, GhIPSS launched the Mobile Money Interoperability (MMI) service to foster real-time transactions between mobile money providers (MMPs). The two platforms, GIP and MMI, are connected to allow interoperability between mobile money wallets and bank accounts. By connecting different systems together, GhIPSS has created a payment ecosystem that allows for multilateral interoperability between all supported channels and platforms.¹¹⁴ The maximum processing time is 40 seconds, but in practice, a transaction is completed between five and 10 seconds.¹¹⁵

¹¹⁰ There are various types of Interoperability: between mobile money wallets from different providers, or between payment instruments, for example between mobile money wallets and bank accounts.

¹¹¹ Multilateral interoperability is the most enabling form of interoperability, allowing transactions between providers from different payments systems.

¹¹² Payments Afrika. (2021). [FSS I TechFin: The New Challenge of the Banking World](#).

¹¹³ AfricaNenda. (2022). [The State of Instant and Inclusive Payment Systems in Africa SIIPS 2022](#).

¹¹⁴ Mastercard. (2021). [Customers can now pay small businesses via WhatsApp](#).

¹¹⁵ AfricaNenda. (2022). [The State of Instant and Inclusive Payment Systems in Africa SIIPS 2022](#).

Most other selected markets provide some degree of interoperability, although there are still opportunities to address gaps. In Kenya, for example, although digital financial services, mobile money in particular, are widely adopted and used, interoperability is based on bilateral agreements between financial services providers. Insights from interviews with key informants highlight that competition and lack of infrastructure sharing prevents the optimal integration of services and creates inefficiencies. In Ethiopia, the national switch now provides a well-functioning national payment system, but the ecosystem could benefit from more payment gateways.¹¹⁶

“Because of bilateral interoperability, most people in Kenya have multiple SIM cards linked to different mobile money accounts to make sure they can easily make transactions with a wide range of providers. This is also the case with merchants to receive transactions.”

Key Informant Interview, Kenya

In East Africa, Tanzania has been very successful in driving best practices regarding interoperability. Tanzania was one of the first markets to allow people using different mobile money services to make seamless transactions between their accounts.¹¹⁷ In 2022, Tanzania launched the Tanzania Instant Payment System (TIPS), which builds on its successful mobile money system to enable multilateral interoperability. However, payment gateways remain limited and are needed to support e-commerce.¹¹⁸

Rwanda is making improvements in terms of interoperability. While real-time payments were mostly provided by mobile money players without efficient interoperability with other systems, banks are progressively integrating with the mobile money-led system.

Open Application Programming Interfaces (APIs) constitute an emerging opportunity to enable interoperability between digital financial service providers without the need to change underlying technical infrastructure at high expense.¹¹⁹ By allowing different payment platforms to execute transactions with each other, APIs enable a payment service provider to integrate with a variety of other financial service providers' networks, as well as e-commerce sites.¹²⁰ Integration of financial services via open APIs in markets such as Kenya and South Africa, where interoperability remains limited, could enable more adoption of digital payments for e-commerce. Africa is seeing some growth of open banking via open APIs, whereby banks are enabling mobile operators and fintechs to connect with their infrastructure to expand financial services and reach wider market segments they have not traditionally reached, including small merchants and MSMEs. The pan-African bank, Ecobank has opened up its infrastructure to third parties while in other markets such as Nigeria, regulators have moved to regulate the sharing of financial data under open banking.¹²¹

116 GSMA. (2023). [Mobile Money in Ethiopia: Advancing financial inclusion and driving growth](#).

117 CGAP. (2015). [How Tanzania Established Mobile Money Interoperability](#).

118 International Trade Administration. (2022). [Tanzania- Country Commercial Guide: eCommerce](#).

119 AfricaNenda. (2022). [The State of Instant and Inclusive Payment Systems in Africa SIIPS 2022](#).

120 Ibid.

121 PYMNTS. (2022). [Open banking APIs help Africa's mobile money fintechs expand services](#).

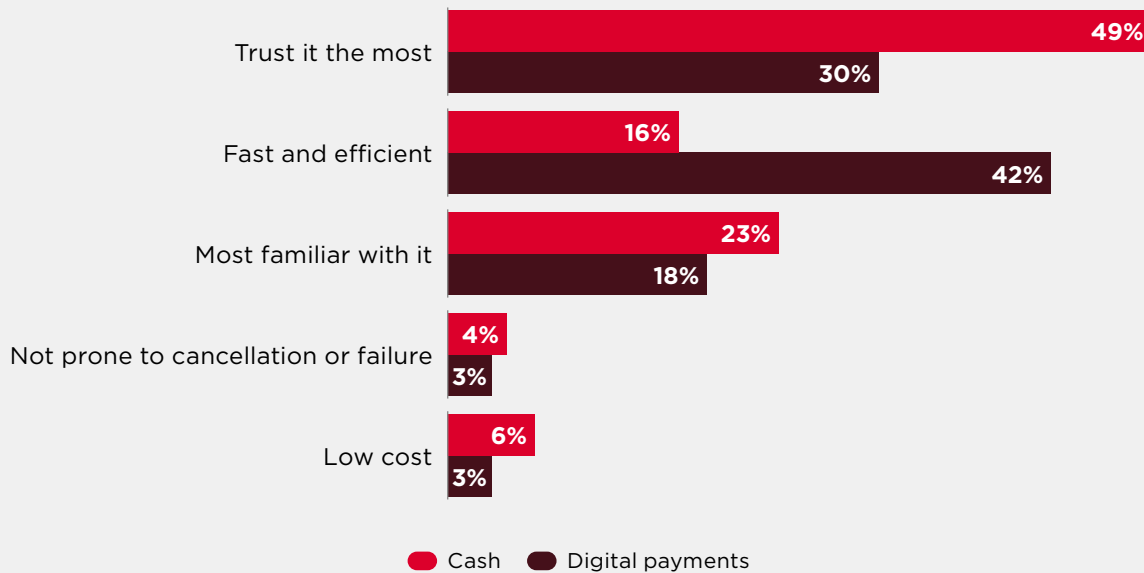
Trust in payment methods

Trust is a key component of MSMEs' preferences for payment method (Figure 33). Almost 50 per cent of MSMEs that preferred cash as the payment method said that they trusted it the most, while 30 per cent of MSMEs that preferred digital payments indicated trust as the primary reason. 16 per cent of MSMEs

that preferred cash felt it was fast and efficient, while 42 per cent of MSMEs that preferred digital payments cited speed and efficiency as the primary reason. Familiarity with the payment method was the third most important determinant of payment preferences.

Figure 33

Main drivers of payment preferences¹²²



Base: MSMEs who specified a payment preference

Source: GSMA e-commerce survey 2023

Strong implementation of cybersecurity laws, electronic transactions acts, and consumer protection acts for online trade are key regulatory enablers of trust in digital payments and, as noted earlier, need to be communicated widely and clearly to consumers.

Lack of product standardisation for retail goods sold in many African markets means that products often differ from the advertised items, creating distrust in consumers and leading to frequent returns due to poor quality assurance. With cash on delivery, items varying in quality can be returned at the time of delivery without the customer making a payment, alleviating concerns over digital refunds.

For digital payments made at the point of sale, having a simple, robust, and trustworthy refund/recourse mechanism is essential to building consumer confidence. While e-commerce

marketplaces tend to provide return and refund mechanisms, as do MSMEs selling on own brand websites, the level of consumer protection depends on the enforcement of consumer protection laws.

In the case of informal social commerce, cash is likely to remain the predominant method of payment for the foreseeable future in most markets. However, digital payments solutions for formal social commerce are growing. Social media services such as WhatsApp and Facebook are actively investing and working with financial service providers to enable e-commerce payments in Africa.¹²³ In South Africa, for instance, a version of WhatsApp payment, Money Message, was launched in 2021 in collaboration with Nedbank, Mastercard and Ukheshe, which enabled even unregistered small businesses to invoice customers and collect payments.¹²⁴

¹²² Survey Question: Why do you prefer this payment method over the others?

1. Most familiar with it
2. Trust is the most
3. Low cost
4. Fast and efficient
5. Not prone to cancellation or failure
6. Other

¹²³ Payments Afrika. (2021). FSS I TechFin: The New Challenge of the Banking World. (accessed 21 September 23)

¹²⁴ Mastercard. (2021). [Customers can now pay small businesses via WhatsApp](#). (accessed 21 September 2023). The service was discontinued as of June 2023. See Nedbank [website](#).

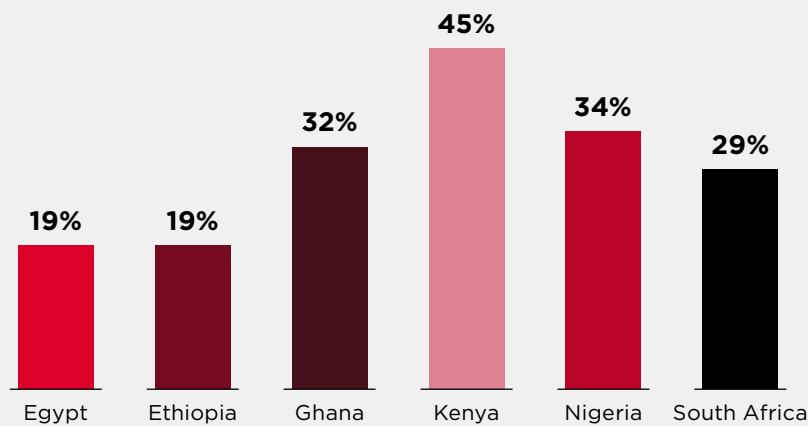
Where recourse mechanisms and refund processes exist, they also need to be clearly articulated to consumers, and uncomplicated, to build trust. Over one third of MSMEs surveyed for this study reported that their consumers found it difficult to return items.

Instant settlement and interoperable systems make refunds faster and are a key enabler. However, digital

payments are not immune to transaction errors, especially among consumers with lower digital skills. Recourse mechanisms can be time-intensive and costly for consumers. When resolving transaction issues in informal social commerce, there is a high dependency on a merchant's goodwill to refund products. Cash on delivery, therefore, remains the most trusted method in such transactions.

Figure 34

Fraudulent or incorrect transactions, by market¹²⁵



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

Cross-border payments

Around one fifth of MSMEs selling to buyers in other countries mentioned the lack of cross-border payment options as a challenge to cross-border commerce. Enabling instant and affordable cross-border payments is essential for MSMEs seeking to sell internationally.

Payment transaction costs between markets within Africa remain very high at eight per cent, compared to less than two per cent in the US and Europe. High transaction costs for intra-African payments are driven partly by the lack of clearing processes within the continent. Most payments are routed through overseas banks, mostly in Europe and North America. As a result, an African currency must first be exchanged for dollars, pounds or euros and then converted a second time to a different African currency. This adds an estimated \$5 billion a year to the cost of intra-African currency transactions.¹²⁶

Multi-country systems have emerged to improve cross-border payment processes and reduce the complexities and multiple currency conversion layers. For example, in Southern Africa, SADC has created the Transactions Cleared on an Immediate Basis (TCIB) system, which allows both bank and non-bank financial institutions to connect directly and indirectly to a payments system to process regional payments requests instantly. TCIB shows promise in terms of inclusivity and enables transfers and remittances (P2P). Similarly, the Pan-African Payment and Settlement System (PAPSS) was launched in 2022 to support the development of AfCFTA, following a successful pilot, to centralise payment and settlements for intra-African commerce (Box 7).

¹²⁵ Survey Question: Which of the following have you experienced regarding processing payments digitally?

1. Customer lack of willingness to use them
2. Monetary cost of adopting digital payments
3. Time and effort required to start accepting digital payments
4. Too many options to choose from
5. Too complicated and hard to understand
6. Delay in transfer from buyer to seller for a purchase, or vice versa for a refund
7. Requirement for bank account to receive payment
8. Fraudulent or incorrect transactions
9. Other

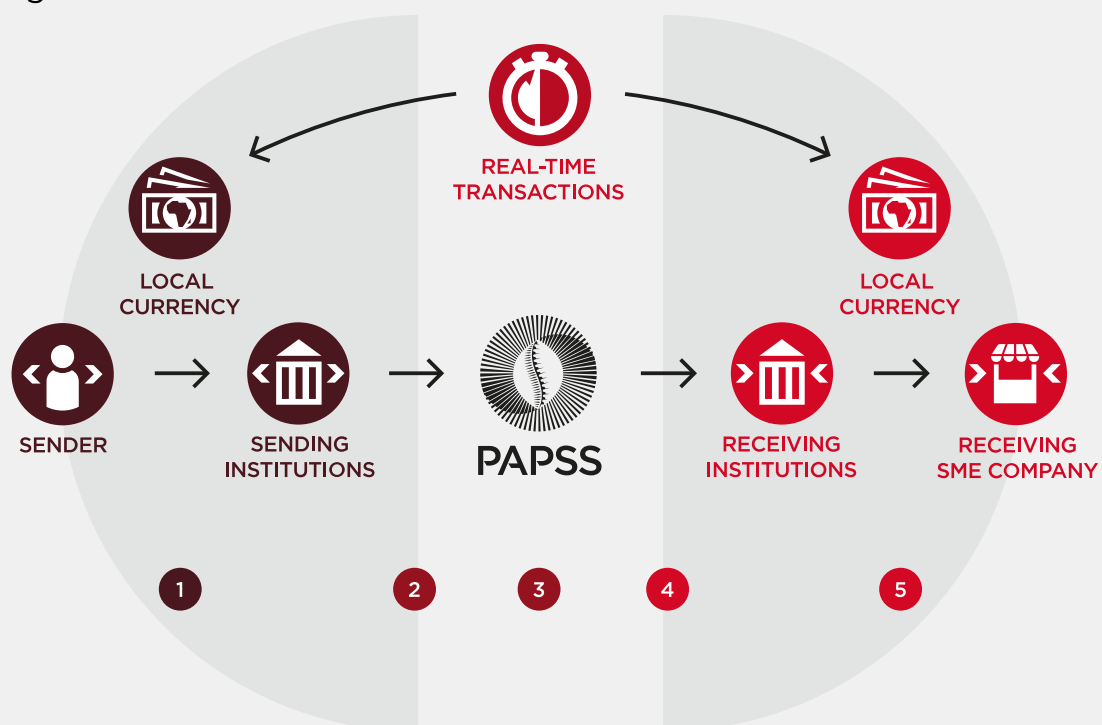
¹²⁶ IMF. (2022). [Freeing Foreign Exchange in Africa](#).

PAPSS aims to reduce intra-African payment transaction costs

PAPSS aims to offer cross-border solutions for transfers and remittances, as well as for merchant payments and business-to-business transactions. It enables the efficient flow of money securely across African borders, minimising risk and contributing to financial integration across the region. An initial pilot of PAPSS was rolled out in 2021 in six countries (the Gambia, Ghana, Guinea, Liberia, Nigeria, and Sierra Leone). After successful completion of the pilot, PAPSS began commercial rollout in January 2022 with the vision of eventually being operational across Africa.

Figure 35

Pan-African Payment and Settlement System (PAPSS) and intra-regional trade



- 1** An originator issues a payment instruction in their local currency to their bank or payment service provider.
- 2** The payment instruction is sent to PAPSS.
- 3** PAPSS carries out all necessary validation checks on the payment instruction.
- 4** The payment instruction is forwarded to the beneficiary's bank or payment service provider.
- 5** The beneficiary's bank clears the funds to the beneficiary in their local currency.

Source: PAPSS¹²⁷

Cross-border digital payments solutions are expected to grow and mature in the region, but consumer trust remains a fundamental stumbling block, linked to the safety of online payments, fear of scams, and clear, efficient recourse mechanisms for erroneous transactions or returned goods.

127 See PAPSS [website](#).

Emerging opportunities in digital payments

While it is estimated that only five to seven per cent of total payment transactions in Africa in 2020 were digital, Africa's domestic e-payments market is expected to grow by 20 per cent per year to 2025.¹²⁸ In East Africa, retailers and merchants are driving this trend. According to regional payments service

provider Pesapal, digital payments for e-commerce basket values are expected to increase by 18 per cent due to a growing acceptance of such payments by both buyers and sellers.¹²⁹ The integration of payment innovations such as digital cards, quick response (QR) codes, and near field communications is also growing.

Digital cards

New partnerships between MMPs and global payment processing systems, such as Visa and Mastercard, are driving integration of the financial ecosystem. They are enabling mobile money users to access a digital card in addition to a physical one, which allows users to make or receive instant payments for e-commerce. They can also enable microentrepreneurs who do not own a bank account to use a digital card to

make purchases on global platforms. In 2021, MTN Mobile Money partnered with Mastercard to make digital cards available in all 16 countries of operation, including Ghana, Nigeria, Rwanda, and South Africa. In 2022, Safaricom M-PESA and Visa launched the M-PESA Global Pay Visa digital card, enabling millions of M-PESA users to make digital payments globally.¹³⁰

QR codes

QR codes are increasingly integrated as part of merchant payment use cases to streamline the transaction process. From the payer's perspective, QR codes can be scanned, displayed on a smartphone, or entered as an alphanumeric code on a feature phone. For merchants, QR codes remove the need for costly POS devices and can validate the receipt of funds through a mobile phone. Fintechs and MMPs are leading the way in terms of developing QR code solutions. In Senegal for instance, merchants

widely use Wave Mobile Money and Orange Money QR code solutions. Wave also enables remote QR code payments through API integration. A rising number of bank systems, including Ghana's GIP, Nigeria's NIP and Egypt's Instant Payment Network, are also developing or integrating these QR code solutions. Ghana has developed its own QR code solution, GhQR, which enables payments from bank accounts, mobile money, and digital cards.¹³¹

Near Field Communications (NFC)

NFC enable simple and safe two-way interactions between electronic devices, allowing consumers to perform contactless transactions. NFC tags do not rely on network activity and low-tech phones can support NFC-enabled payments if equipped with an NFC chip.¹³² MTN provides mobile money users in some countries, including Rwanda, with an NFC tag to facilitate person to business (P2B) purchases

through MoMoPay. The NFC tag is linked to the customer's mobile wallet, mirroring the process of a contactless debit or credit card. Following payment initiation via close contact between the MTN point of interaction and the NFC tag, payment is validated and processed. These solutions can be used on lower-tech devices and in the absence of internet connection or data.

128 McKinsey & Company. (2022). [The future of payments in Africa.](#)

129 Bloomberg. (2023). [Retailers Are Driving East Africa's Adoption of Digital Payments.](#)

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

131 McKinsey & Company. (2022). [The future of payments in Africa.](#)

132 BIS. (2020). [Payment aspects of financial inclusion in the fintech era.](#)

Under-representation of digital e-commerce payments

Payment systems that enable P2B and B2B transactions facilitate the development of e-commerce by offering digital payment solutions between businesses and consumers. Across surveyed markets, Nigeria's NIP, Kenya's mobile money system, South Africa's RTC and Ghana's GIP are all enabling P2B transactions.¹³³

In other countries, mobile money providers also often support P2B transactions¹³⁴ but this tends to be restricted to their own mobile money service, which limits the uptake of digital payments for e-commerce as both the business and the customer must have the same mobile money service provider. In 2022, to improve interoperability, Safaricom's M-PESA began accepting merchant payments from Airtel Money.¹³⁵ B2B transactions remain limited, with only Ghana and Nigeria offering B2B payments interoperability.

Meanwhile, key informant interviews for this research indicate that many MSMEs make P2B and B2B transactions to and from personal mobile money wallets, which masks e-commerce transactions as P2P transfers, underestimating the use of digital payments for e-commerce.

“Many P2B transactions are hidden. A lot of what accounts for P2P transfers is in fact P2B transactions.”

Key Informant Interview

As businesses scale and process higher volumes and sizes of payments, the development of P2B and B2B interoperability is important in facilitating such payments.

Key insights

The speed and efficiency of digital payments is the main reason why MSMEs prefer their use over cash and is essential to build trust in digital financial services as this drives usage further.

A significant proportion of MSMEs report experiencing delays when making digital transactions, which highlights the need to make electronic payment systems more robust to enable real-time settlement.

While most countries provide some degree of interoperability, there is a need to transition from bilateral to multilateral interoperability and allow for better integration between different schemes to enable seamless e-commerce payments.

There is also an opportunity to leverage innovations like open APIs to advance ecosystem innovation and implement best practices in a cost-effective manner.

Beyond cash, MSMEs' use of digital payments is diverse and reflective of the financial services ecosystem in the specific market.

- Mobile phones can act as both a payment instrument and channel, and eliminate costs for both MSMEs and consumers. However, charges on mobile money transactions have been introduced in some countries recently, posing affordability challenges and acting as a barrier to adoption of digital payments.
- The multiplication of payment instruments and channels that focus on convenience, such as digital cards, QR codes, NFCs, and social media payments, constitute opportunities to reach more merchants and customers.
- P2P transactions generally play a pivotal role in enabling merchant payments, especially for smaller businesses and those leveraging social media. However, as businesses grow and e-commerce becomes more widely adopted, enabling P2B and B2B transactions will become essential to scale.
- Returns and refund processes remain uncertain and complex to navigate, while resolving transaction errors can be time-intensive and costly. More efforts are needed in aftersales processes and in terms of consumer protection to build trust in e-commerce.

¹³³ AfricaNenda. (2022). [The State of Instant and Inclusive Payment Systems in Africa SIIPS 2022](#).

¹³⁴ For example, Airtel Money and M-PESA in Kenya, MTN Mobile Money and Airtel Money in Rwanda, Orange Money, Free Money and Wave Mobile Money in Senegal, Airtel Money, Tigo Pesa, and Vodacom M-Pesa in Tanzania. See: [Mobile Money Deployment Tracker](#).

¹³⁵ GSMA. (2023). [State of the Industry Report on Mobile Money](#).



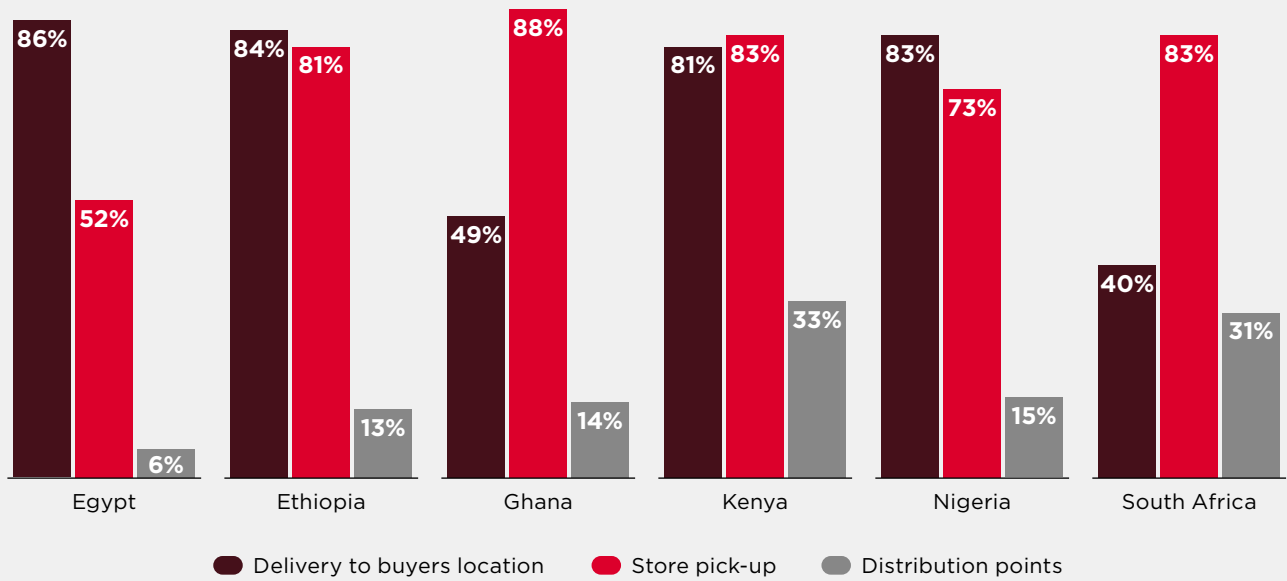
5.3 Logistics and delivery

The ability to deliver goods on time, in full, and without damage can be a challenge, and an expensive proposition in African markets due to poor road networks and vast distances between cities and urban and rural communities. Customers also expect quick delivery, which necessitates the use of more expensive private express delivery services. National postal services tend to be more affordable and have wider reach but are slower and generally much less efficient and reliable than private logistics and delivery services providers.

To overcome the challenges of inadequate delivery services in the region, several delivery mechanisms for e-commerce purchases exist. For example, many buyers pick-up their online purchases from the seller directly. MSMEs in Ghana, Kenya and South Africa reported this as their primary method for order fulfilment, while in Egypt, Ethiopia, and Nigeria, more MSMEs reported delivering products to the buyer (Figure 36). This finding was consistent across all business sizes.

Figure 36

Delivery methods used by MSMEs, by market¹³⁶



Base: All MSMEs surveyed

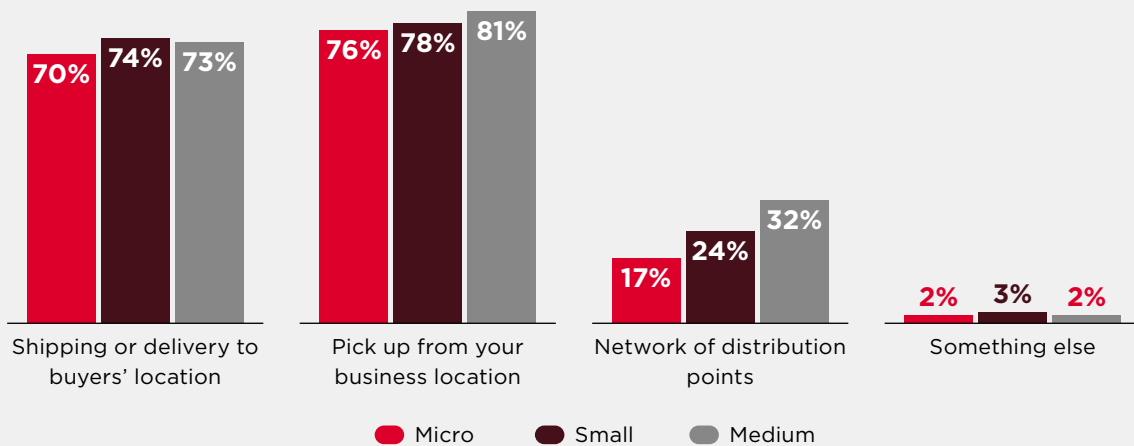
Source: GSMA e-commerce survey 2023

Other delivery methods such as the use of distribution points, for example corner stores or parcel lockers, is considerably less with only 17 per

cent of micro, 24 per cent of small and 32 per cent of medium enterprises across core markets engaging in this method (Figure 37).

Figure 37

Delivery methods, by MSME size¹³⁷



Base: All MSMEs surveyed

Source: GSMA e-commerce survey 2023

136 Survey Question: Which of the following do you use to get purchases to buyers?

1. Shipping or delivery to buyers' location
2. Pick up from your business location
3. Network of distribution points, like corner stores or parcel lockers
4. Something else?

137 Survey Question: Which of the following do you use to get purchases to buyers?

1. Shipping or delivery to buyers' location
2. Pick up from your business location
3. Network of distribution points, like corner stores or parcel lockers
4. Something else?

While delivery to the buyer’s location is a key benefit of e-commerce to customers, collection from the seller’s location limits the benefit that e-commerce brings as buyers need to be in proximity to sellers. MSMEs across core markets face numerous challenges associated with delivery (Figure 38).

These include a lack of delivery capacity when needed, high costs of shipping and delivery, goods lost and/or damaged during delivery, slow delivery time, the cost to bring goods to shippers for onward delivery, and delayed pick-up of shipments from business locations.

Figure 38
Delivery challenges experienced by MSMEs



Base: All MSMEs surveyed
Source: GSMA e-commerce survey 2023

Table 11
Top two barriers to delivery, by market¹³⁸

Egypt	Ethiopia	Ghana	Kenya	Nigeria	South Africa
Goods lost or damaged during delivery	Cost of shipping and delivery	Lack of delivery capacity when you need it	Goods lost or damaged during delivery	Cost of shipping and delivery	Lack of delivery capacity when you need it
Slow delivery to customer	Slow delivery to customer	Cost of shipping and delivery	Cost of shipping and delivery	Goods lost or damaged during delivery	Delayed pick-up of shipment from your place of business

Base: All MSMEs surveyed
Source: 2023 GSMA e-commerce survey

¹³⁸ Survey Question: Have the following been a big problem, a small problem or not a problem at all for your business?

- a) Lack of delivery capacity when you need it
- b) Cost of shipping and delivery
- c) Goods lost or damaged during delivery
- d) Slow delivery to customer
- e) Time or money spent to bring goods to shipper for onward delivery
- f) Delayed pickup of shipment from your place of business
- g) Difficulty making request for delivery
- h) Difficulty communicating delivery details to shipper
- i) Problems verifying delivery was completed
- j) Lack of shipping and delivery options that accept my payment methods
- k) Limited options for delivery to my customers' locations
- l) Limited options for pick-up where my products are located

Three main logistics and delivery challenges exist in the region that make delivery expensive and particularly challenging:

- Lack of well-developed road infrastructure;
- Poor national addressing systems; and
- Expensive in-house delivery solutions versus insufficient and fragmented provision of reliable and affordable third-party delivery services solutions.

Transport infrastructure

Road congestion, poor road quality and lack of delivery routes underpin many of the delivery challenges faced by MSMEs as they ultimately cause delays and increase costs. The quality of road infrastructure and transportation challenges vary by market, with South Africa having the best density, but the general condition of road infrastructure across Africa is poor. Less than 50 per cent of roads are paved, and it is estimated that 85 per cent of rural feeder roads are in too poor condition to be used in wet seasons.¹³⁹ It is also estimated that 50 per cent of the rural population in the region does not have access to roads, making rural e-commerce especially challenging,¹⁴⁰ unless it is localised.

In Nigeria, congestion has been the major cause of delivery challenges in the main cities, impacting delivery costs and causing delays. Nigeria also removed fuel subsidies in May 2023, making deliveries more expensive. Poor road quality, especially for delivery to the last mile, has not only impacted the time deliveries take, but also raised vehicle maintenance costs. To tackle congestion challenges, local solutions in cities included the development of two-wheel ride-hailing companies, which launched in Lagos with heavy foreign investment but were then restricted by local transit regulations, ostensibly to improve transport safety but exacerbating mobility and delivery challenges.¹⁴¹

These challenges have been compounded by the economic impacts of rising fuel prices on e-commerce businesses. Fluctuation of fuel costs has a substantial impact on delivery and logistics. Not only do high fuel costs contribute to high delivery costs, but the unpredictable nature makes it difficult for MSMEs and platforms to plan how much will be expensed on delivery.

In Ghana, challenges include insufficient delivery solutions, especially to the last mile. In Ethiopia, the challenge of poor road infrastructure is compounded by extremely low rates of car ownership, which means that last mile delivery solutions are still emerging, while in cities, e-commerce deliveries frequently take place on foot or public transport.

Egypt has recently invested heavily in transportation infrastructure, including highways, which is expected to improve the uptake of e-commerce in an already relatively mature e-commerce market.

Despite having one of the best road infrastructures in the region, last mile delivery infrastructure challenges persist in South Africa. Tanzania has one of the most extensive road networks in the region, but again, last mile delivery challenges remain to be solved. In an innovative move, the government of Rwanda has partnered with drone delivery company Zipline to accelerate the delivery of medical supplies, which may evolve to the delivery of e-commerce purchases. It is estimated that only about \$5 billion is invested in road infrastructure currently, while between \$18-25 billion is required.¹⁴² With insufficient public sector investments available for road infrastructure, public-private partnerships for financing are increasing, as is foreign investment in infrastructure in the region, which should help reduce delivery costs and increase e-commerce beyond major cities.

¹³⁹ Brickstone Africa. (2022). [Facts about Africa's Road Transport Infrastructure](#).

¹⁴⁰ Wilson Center. (2023). [Modernizing Infrastructure Vital to Fulfilling Africa's promise](#).

¹⁴¹ Vanguard. (2023). [Ban on Okada in restricted areas stays - Lagos reiterates](#). (accessed 21 September 2023)

¹⁴² Brickstone Africa. (2022). [Facts about Africa's Road Transport Infrastructure. \(accessed 21 September 2023\)](#)

Addressing systems

Inefficient home addressing and postal code systems add to the challenges and costs of delivering goods. In the absence of clear addressing, delivery providers struggle to locate customers, resulting in both delayed and failed deliveries, increased costs, and reducing trust in e-commerce. None of the markets considered for this research have completed the implementation of a national address and postcode system. Even in markets with relatively good addressing, it remains insufficient. Experts consulted for this research suggest that addressing may be more important than infrastructure, noting Nigeria as a key example of a country where, in the presence of an extensive addressing system, e-commerce is growing despite a deficit in trade and transport infrastructure.

Addressing formats in Kenya vary between counties as no national standard exists, making delivery particularly challenging.¹⁴³ Postcodes are linked to post offices rather than to individual property addresses and there is a lack of street naming and signage. However, a draft National Addressing Policy is underway with the growth of e-commerce a key consideration in its development. Nairobi will be the first city in Kenya (and the second in East Africa following Kigali) to implement the physical addressing system, funded by the World Bank.¹⁴⁴ The Nairobi addressing system, which will be integrated with Google Maps and includes a postcode framework of property numbers and street names, is expected to be gradually implemented in the rest of the country.¹⁴⁵

E-commerce marketplaces consulted for this report also raised concerns over the risk of fraud and incurred costs due to poor addressing systems.

As there is no clear indication of where a parcel should be delivered when there is no addressing system, there is a risk that the wrong person will falsely claim a delivery. This poses a challenge for businesses selling via websites or social media as costs for redelivery must be expensed. However, if an MSME sells via an e-commerce marketplace, the associated costs and risks are absorbed by the marketplaces. This is an important benefit to MSMEs.

Delivery services remain largely concentrated in urban areas, leaving rural communities increasingly excluded due to large distances between rural regions and urban distribution centres and/or businesses, coupled with insufficient resources to deliver to rural regions and a lack of addressing and backbone infrastructure. These challenges also lead to higher costs of both products and delivery for rural customers.¹⁴⁶ Estimates suggest that while last mile delivery on average costs about 28 per cent of a manufactured product globally, in Africa this cost rises to between 35-55 per cent due to poor infrastructure and limited delivery options.¹⁴⁷

While e-commerce delivery partners and e-commerce marketplaces have attempted standardising delivery costs, this has not proven commercially sustainable. Therefore, while rural populations, especially in markets such as Ethiopia which is almost 80 per cent rural, offer tremendous market opportunity for e-commerce MSMEs and platforms, until the necessary delivery infrastructure is available, this is likely to remain unexploited. Platforms, however, are more likely than individual companies to address this market segments' needs due to higher likelihood of economies of scale, especially in B2B e-commerce.

143 UNCTAD. (2022). [Kenya eTrade Readiness Assessment](#).

144 Techweez. (2023). [Nairobi County is the First Beneficiary of the National Physical Addressing System. \(accessed 21 September 2023\)](#)

145 Hivi Punde. (2023). [Govt to Unveil First National Addressing System to Facilitate E-Commerce Across the Country. \(accessed 21 September 2023\)](#)

146 Jumia Blog. (2023). [Satisfying Rural Populations through Jumia's E-Commerce Initiatives. \(accessed 21 September 2023\)](#)

147 The Baobab Network. (2022). [Baobab Briefing: Last-Mile Delivery](#).

Agricultural B2B e-commerce via platforms offers an opportunity to digitalise rural agricultural markets and drive e-commerce adoption beyond cities. Well-known platforms in this space include Twiga, launched in 2014 in Kenya to connect farmers to small retailers, enabling smallholder farmers to cut out middlemen in their access to markets and realise greater profits.

Nile is a regional B2B marketplace that also enables fresh food producers to sell directly to buyers, aggregating the supply chain across SADC, helping producers boost profits and granting price

transparency to buyers. Working across various e-commerce challenges in the region to build trust between the agri-business and buyer, Nile holds payments in a secure trust until products are delivered to the producer in good condition, and vets its producers to ensure quality. Nile offers a range of delivery options, including farmers shipping directly to buyers through their own delivery methods, shipping through Nile's delivery partners, or through Nile's hubs, where demand from buyers is aggregated and then consolidated packages are shipped to manage costs.¹⁴⁸

BOX 9

Virtual postal address systems

The implementation of physical addressing systems is costly and time consuming for regulators. Tanzania began the roll out of a National Postcode and Addressing (NaPA) system in 2010, but the rollout is still incomplete and covers only a handful of cities.¹⁴⁹ In addition, rapid urban development in countries such as Tanzania, Ghana and Kenya contribute to the difficulty in maintaining up-to-date address and postcode systems as new buildings and streets are built to accommodate ever-growing populations.

Virtual postal address systems (VPAS) can overcome these challenges. VPAS provide users with an address, however unlike physical addresses, no tangible infrastructure is required, such as street signs or door numbers. There are multiple ways in which these can be implemented, and they can be combined with physical address systems. A key benefit of VPAS is that they allow addressing to be expanded to rural areas with ease, ensuring that communities living outside cities are not excluded from typically urban-centred development and thus access to e-commerce. VPAS, however, require internet access to download addresses, which in areas without network coverage or with unreliable coverage can be excluding.

Several innovative solutions already exist which have been implemented both in the private sector and at the national regulatory level. Ghana (AsaaseGPS) and Nigeria (What3Words) have rolled out national VPAS and start-ups are operating VPAS services in many African countries.

GhanaPostGPS was launched in October 2017 by AsaaseGPS in partnership with the Ghana Post Company. This nationwide Digital Property Address System uses GPS to divide Ghana into grids of 5x5 metre squares, assigning each with a unique alphanumeric postcode. AsaaseGPS faced substantial criticism following its launch. The lack of public consultation during the design phase resulted in

an emotive public reaction and initial reluctance to engage with the new system.¹⁵⁰ Moreover, when first introduced, users were charged to access their new addresses which raised further concerns over the universality of the system. AsaaseGPS is now free to use and backed by several public campaigns, increasing its successful implementation.

¹⁴⁸ Nile [website](#). (accessed 25 September 2023)

¹⁴⁹ UNCTAD. (2020). [United Republic of Tanzania: Rapid eTrade Readiness Assessment](#).

¹⁵⁰ The Conversation. (2022). [Ghana digitised its address system: its failure offers lessons to other African countries creating smart cities](#). (accessed 21 September 2023)

Emerging GPS-based innovations for addressing systems

What3words is a GPS-based global solution which enables precise identification of locations through allocation of unique three-word combinations to three metre squares across the globe. Launched in 2013, the world is now mapped in more than 50 different languages with more added annually. Users can access their what3words code free of charge either from the what3words mobile app or webpage. There is a microcharge for the three words to be converted to GPS coordinates.

What3words is already being used by e-commerce in Senegal, Nigeria and South Africa and has been implemented by the Nigeria Postal Service (NIPOST) as part of Nigeria's national address system, making Nigeria the third country in Africa and seventh country globally to do so.

One solution to the challenge of poor addressing systems is the use of pick-up points, such as corner shops and parcel lockers, which could allow MSMEs using e-commerce with B2C models to access rural populations. Although pick-up points still necessitate collection from the buyer, they are a viable option where delivery to buyer location is either unavailable or too expensive.

Survey results indicate that of all delivery options, enterprises across the six markets are using pick-up points the least. Use is lowest in Egypt (six per cent) which may be because delivery to buyer location is used by a high proportion of MSMEs and therefore pick-up points do not add value to the e-commerce supply chain. There are similar levels of pick-up point use in Ghana (14 per cent), Nigeria (15 per cent) and Ethiopia (13 per cent). Kenya and South Africa have the highest rates of pick-up point use with 33 per cent and 31 per cent of businesses using them, respectively.

While e-commerce marketplaces such as Konga, Kasha¹⁵¹, and Jumia have been using pick-up points in multiple countries since at least 2016, there is limited provision of pick-up point services for MSMEs not on e-commerce marketplaces. This may explain the low use of pick-up points found in this survey.

The prevalence and success of pick-up points used by Jumia demonstrates the opportunity they offer for e-commerce scaling. Jumia has between 77 and 563 pick-up points in each of their operating countries, including capital cities, secondary cities, and rural areas. Pick-up points provide several benefits,

allowing customers to collect their orders for a reduced delivery fee from designated local shops which act as agents for Jumia. The agents provide customers with face-to-face interaction with Jumia, they can answer customer queries, and earn income for each delivery picked up from their shop.¹⁵² For enterprises not using e-commerce marketplaces, a pick-up point established by a third party must be used. However, these are scarce, with one or two third parties at most providing this service in each market.

For example, Pick-up Mtaani is a third-party pick-up point service operating in Nairobi. Over 80 small businesses, including petrol stations, bookshops, and small shops, have been recruited as part of Pick-up Mtaani's agent network. MSMEs signed up to the service can offer Pick-Up Mtaani as a delivery option for potential e-commerce customers. When chosen, a preferred delivery location is prompted and between \$0.70 and \$1.47 is charged to the consumer for delivery via M-PESA. This is approximately 70 per cent cheaper than other options. The seller is then able to deliver more than one parcel at one time to a pick-up point, ready for customer collection. The customer receives a code via text message when the parcel is ready to collect. Pick-up Mtaani reports to have reduced delivery costs by over 70 per cent through this service.

While payment on delivery is not currently facilitated through Pick-up Mtaani, they are aiming to launch a mobile version of their system which will enable a payment on delivery service. It will also allow tracking and tracing.

¹⁵¹ See Kasha [website](#). (accessed August 2023)

¹⁵² Jumia Blog. (2022). [Jumia reduces delivery fee through expansion of pickup station network in Kenya](#). (accessed 21 September 2023)



In-house versus third-party delivery

E-commerce businesses can choose to handle deliveries in-house or outsource to third parties, depending on the size and nature of the business.

To overcome delivery challenges, many of the regional e-commerce marketplaces have deployed a range of logistics and delivery methods. Operating models include asset-heavy approaches, such as ownership of warehouses and delivery fleets and direct employment of delivery staff. Marketplaces have integrated third party logistics and delivery providers in a franchise model and have the option to partner with independent third-party delivery providers who handle the delivery for them.¹⁵³ Jumia Logistics, for example, has hundreds of 3PL partners that manage warehousing and delivery for Jumia vendors,¹⁵⁴ while Konga's logistics arm, K-Express has invested extensively in its own fleet of vehicles for delivery. It also partners with last-mile delivery providers who can invest in a Konga logistics franchise.

Maintenance of in-house delivery solutions allows marketplaces a greater measure of control over their operations, but the costs associated can be high. In Kenya, Twiga Foods has replaced its in-house delivery operations supported by leased trucks with a third-party delivery solution. The company expects to decrease logistics costs by 40 per cent through this change.¹⁵⁵

As e-commerce marketplaces choose more asset-light models, an emerging trend is the 'uberisation' of e-commerce deliveries, whereby transport and logistics providers can form a partnership with an e-commerce platform or dedicated logistics provider and accept delivery jobs as they arise.

“The crowd-shipping model of delivery is a great opportunity for e-commerce. The use of technology helps create access to a wide source of underutilised assets to create a powerful and cost-effective logistics system.”

Key Informant Interview, Rwanda

¹⁵³ Logistics Update Africa. (2022). [Next up - an African decade in e-commerce. \(accessed 21 September 2023\)](#)

¹⁵⁴ See Jumia logistics [website](#).

¹⁵⁵ TechCrunch. (2023). [Twiga lays off 33% of its staff, disbands in-house delivery and introduces logistics marketplace. \(accessed 21 September 2023\)](#)

A key reason for the rise of B2B e-commerce models in the region is to drive down delivery and logistics costs by undertaking fewer deliveries in bulk rather than a multitude of small orders at dispersed addresses, which incur much higher delivery costs in general, and are even more expensive when goods are returned at the point of delivery. Hence, delivery costs and challenges significantly impact small sellers operating as B2C retailers, either on their own websites or via social commerce, who need to arrange for each separate delivery rather than leverage economies of scale resulting from bulk deliveries.

Informal micro-enterprises have the most notable challenges with delivery, especially when conducting informal social commerce, due to each product being individually delivered at high cost.

Enterprises selling through e-commerce marketplaces have the advantage of outsourcing deliveries at the cost of commissions charged. Due to bulk deliveries, e-commerce marketplaces can negotiate substantially lower delivery rates with delivery companies, offering this advantage to MSMEs registered on the platform. Delivery costs are also more manageable when customers' expectations on delivery times can be managed. When customers are willing to accept longer delivery times, goods can be delivered much more cheaply than when quicker delivery times are expected.

“Initially we were fulfilling orders in Nairobi and surrounding areas. That was a bit more cost effective, but delivery to further areas such as Kisumu was a real challenge. We charge a standard rate to the consumer and sometimes delivering is much more expensive than this charge.”

Key Informant Interview, Kenya

BOX 11

Paps Logistique: Supporting informal e-commerce delivery providers

Paps Logistique is a logistics provider operating in Senegal which has aggregated informal delivery and logistics providers into a single platform. Potential providers must first complete an induction phase before they become fully operational within Paps.

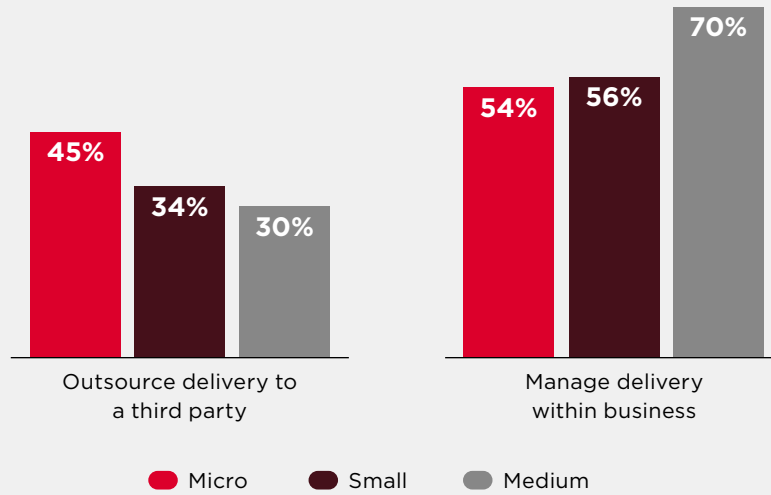
They are onboarded with existing fleets and provided with the necessary tools and necessary technical training. Following this they begin completing deliveries under observation. If they pass this stage, then their induction is complete.

More typically used by large enterprises and e-commerce platforms, Paps' API is plugged into their checkout page. Shipments for the week are collated and sorted by delivery location. If designated for international delivery, shipments are taken through customs together and deconsolidated once through. Informal delivery providers are then allocated orders to deliver.

Survey results indicate that across the region, most MSMEs manage deliveries internally, regardless of business size (Figure 39). Except for Nigeria and South Africa, this pattern holds within each country (Figure 40). Of those predominantly managing delivery in-house, Ghana (22 per cent) has the lowest rates of outsourcing delivery to third party delivery

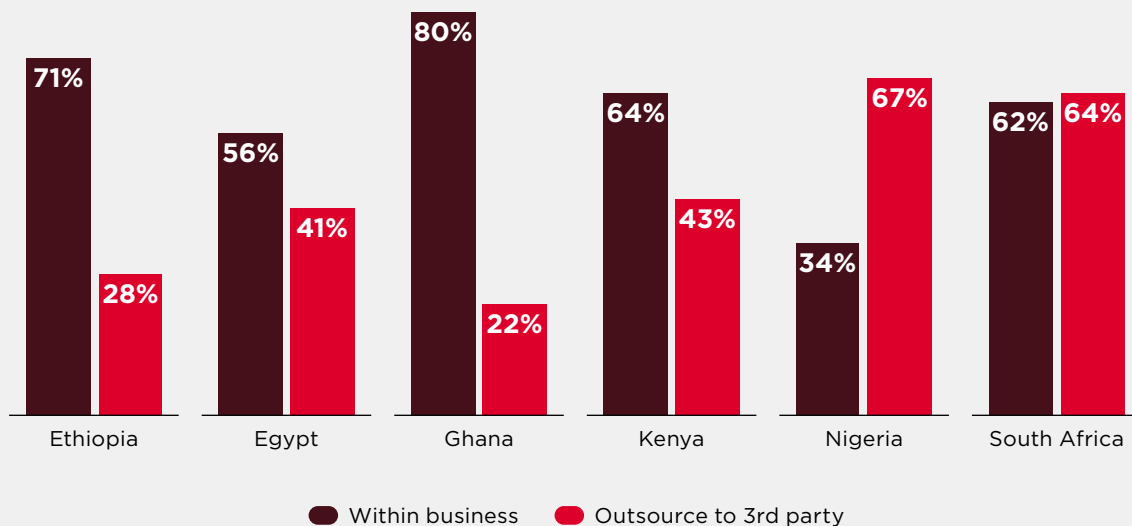
services, followed by Ethiopia (28 per cent), Egypt (41 per cent) and then Kenya (43 per cent). Enterprises in South Africa use the two management methods at almost equal rates whereas 67 per cent of enterprises in Nigeria outsource delivery to a third party compared with 34 per cent managing delivery within the business.

Figure 39
Delivery management, by MSME size¹⁵⁶



Base: MSMEs who use delivery or shipping
Source: GSMA e-commerce survey 2023

Figure 40
Delivery management, by market



Base: MSMEs who use delivery or shipping
Source: GSMA e-commerce survey 2023

156 Survey Question: Do you outsource delivery to a 3rd party or is someone who works for your business responsible for deliveries?

These results are explained by several factors:

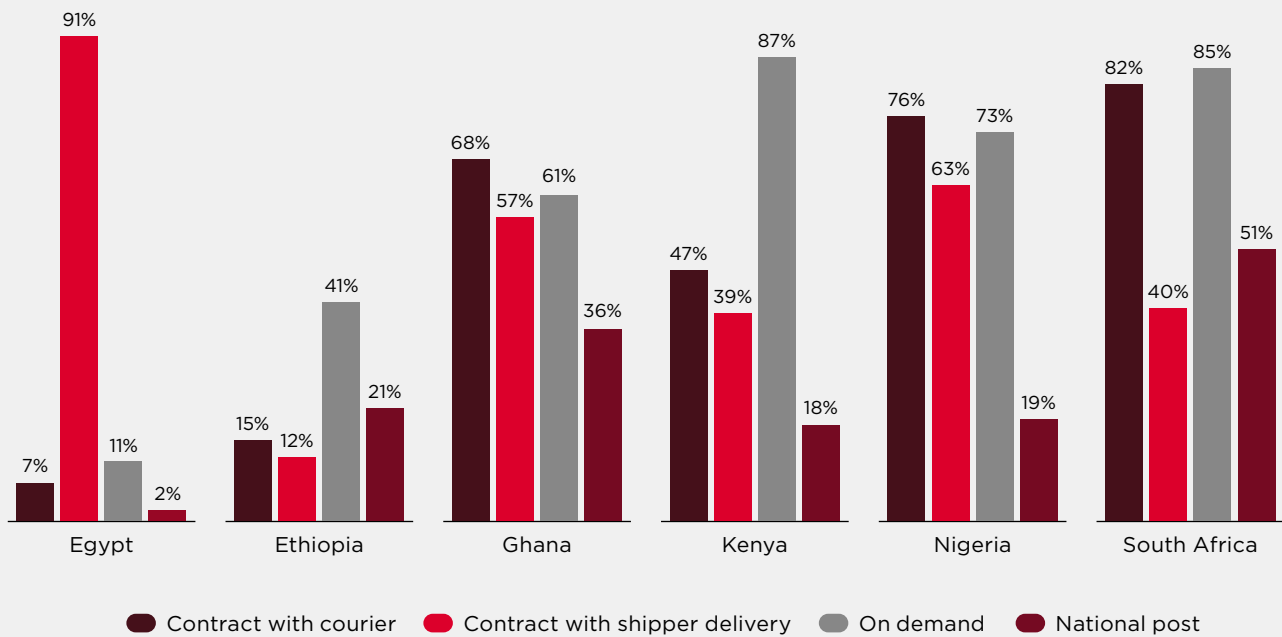
1. The majority of MSMEs surveyed are micro-enterprises who would not find it viable to contract with a third party but arrange for delivery on an ad hoc basis; and
2. There are concerns regarding the reliability of national postal and private local delivery services, which pushes MSMEs to oversee and manage deliveries in-house despite the resources required to keep control of the process.

In terms of market variation, the vast majority (91 per cent) of MSMEs in Egypt opting to outsource delivery utilise contracts with shipping delivery companies. This suggests that Egypt has a better developed delivery services sector which MSMEs can rely on.

In contrast, delivery solutions in Ethiopia are less developed. Less than 25 per cent of MSMEs use either contract delivery options or the national post. However, over 40 per cent of MSMEs who outsource delivery do so on-demand, which could include arranging and paying a courier per delivery and/or using crowd-shipping (formally or informally). This lack of variability in third party delivery type suggests that there are fewer options for MSMEs in Ethiopia.

On-demand delivery and contracting with a courier are used by approximately 80 per cent of MSMEs in Nigeria and South Africa. On-demand delivery is most popular in Kenya where it is used substantially more than other third-party delivery options (Figure 41).

Figure 41
Third party delivery type, by market¹⁵⁷



Base: MSMEs outsourcing delivery to a third party
Source: GSMA e-commerce survey 2023

The national postal services are used by less than 50 per cent of MSMEs in all countries except South Africa. Experts consulted for this research suggest that this is due to a history of underfunding of national post services across Africa. More recently, governments have begun to recognise the role that

the national post has in facilitating e-commerce both domestically and internationally, and the role it has in wider development initiatives. The Universal Postal Union (UPU) is currently working with its member countries to develop their national post systems.

¹⁵⁷ Survey Question asked to MSMEs who used third party delivery services: Do you [ITEM a-d]?
a) Contract with a courier
b) Contract with a shipper delivery service?
c) Make ad hoc or on-demand arrangements with a courier or delivery service?
d) Use the national postal service?
Is there another way you deliver goods that I haven't mentioned?

Drones for e-commerce delivery

A number of start-ups across Africa have begun deploying innovative technologies to provide e-commerce delivery services to reach rural areas typically excluded from traditional delivery solutions. Among these are Swift Lab Technologies¹⁵⁸ (operating in Kenya) and Zipline¹⁵⁹ (operating in Rwanda, Ghana, Kenya, and Nigeria), which use drones for on-demand e-commerce deliveries. According to Zipline, the use of drones is faster, cheaper, and more sustainable than using cars or motorbikes for delivery and allows for second-by-second tracking of delivery location and estimated time of arrival.

As drones do not rely on trade infrastructure, they do not face the same challenges of traditional delivery services, such as dependency on well-connected road infrastructure, rail services, or traffic, making them a good option for e-commerce delivery, particularly for rural areas.

Drones can be used in conjunction with addressing services such as what3words to aid in the navigation of optimal routes for

delivery, showcasing the benefit of combining different innovations. This is currently being trialled in the UK to support Royal Mail in its delivery of parcels to rural and disconnected communities.¹⁶⁰ The results so far are promising. Drones have already proved successful in transporting emergency medical supplies to rural areas across Africa¹⁶¹ and we are beginning to see use cases in e-commerce. For instance, Swift Lab Technologies have partnered with The Postal Corporation of Kenya (PCK) and Zipline has partnered with e-commerce giant Jumia.

Zipline launched in Rwanda in 2016, using drones to deliver blood and medical supplies. It has since expanded into the e-commerce industry, delivering food, retail, and agricultural products in a number of markets. Zipline drones reach speeds of 70mph and can deliver goods of up to three kilograms in weight and 60 miles away from the docking station. Zipline drones are approximately seven times faster than automobile delivery and produce 97 per cent fewer emissions than ground delivery.

Key insights

Delivery challenges are one of the major hurdles to scaling domestic e-commerce in African markets, due to long distances between locations, poor road infrastructure and weakly developed addressing systems, and can be as high as 60 per cent of total product cost in many cases, acting as a major barrier to e-commerce.

Third party e-commerce delivery solutions providers vary in availability, quality and reliability, and in-house solutions are labour as well as capital-intensive for MSMEs to manage. Third party delivery solutions providers need to be less fragmented and more reliable, as well as better integrated with e-commerce businesses to ease delivery challenges.

While e-commerce platforms simplify delivery for MSMEs, the cost to platforms can be unsustainable despite economies of scale, leading to a preference for B2B rather than B2C e-commerce.

Solutions to these challenges are emerging. However, investment in road infrastructure is urgently needed to improve e-commerce to penetrate rural and remote areas and make deliveries more efficient.

¹⁵⁸ Swiftlab Limited [website](#). (accessed 21 September 2023)

¹⁵⁹ Zipline [website](#). (accessed 21 September 2023)

¹⁶⁰ See: [Drones: Connecting remote communities across the UK](#) (accessed 20 September 2023)

¹⁶¹ Logistics Update Africa. (2022). [Next up - an African decade in e-commerce.](#) (accessed 21 September 2023)

6. Conclusions and recommendations



According to UNCTAD, digital commerce, if leveraged effectively, could add \$180 billion to Africa's GDP by 2025. Improving connectivity and the steady uptake of mobile phones is spurring e-commerce adoption by MSMEs in the region. The uptake of digital payments is steadily increasing, supporting the growth of e-commerce, although delivery challenges persist due to poor infrastructure and insufficient delivery providers.

On the demand side, a growing youth population that is more digitally savvy, and a growing middle class in some markets means Africa's MSMEs have a ready market for online retail. But e-commerce remains limited in urban areas and is yet to penetrate rural areas except for pockets of innovation in agri e-commerce and better last mile penetration in some markets such as Nigeria.

A significant opportunity for MSMEs to reach consumers via the trade of goods online to improve their profitability, create livelihoods and contribute more effectively to economic development therefore remains largely untapped. With the advancement of AfCFTA, there is an even greater opportunity to leverage e-commerce for regional gains.

This report has highlighted some of the main barriers to scaling e-commerce adoption, including MSMEs' limited access to capital and digital skills, gaps in legislation or implementation of e-commerce related policies and regulations, a persisting preference for cash payments in the region and lower trust in digital payments, and poor logistics and delivery infrastructure for the reliable and affordable delivery of online purchases. These in turn impact consumer trust in e-commerce, suppressing demand for online retail.

To overcome these limitations and scale e-commerce for MSMEs in the region, we recommend the following actions.

Challenge	Action	Actor
<p>MSMEs are under-financed</p> <p>Tailored financial products are needed to address the needs of MSMEs in adopting e-commerce.</p>	<p>Fintechs, microfinance institutions and mobile money providers are well-placed to offer credit products tailored to the needs of MSMEs, but enabling financial sector regulations are needed.</p>	<ul style="list-style-type: none"> • Financial sector regulators • Fintechs • Mobile money operators • Microfinance institutions
	<p>Investments in established MSMEs in the form of equity or revenue sharing will facilitate greater access to finance and drive e-commerce expansion.</p>	<ul style="list-style-type: none"> • Governments • Private investors • Donors
	<p>Investments in e-commerce start-ups and fintechs that provide microcredit products to informal businesses can facilitate greater access to financial services, boost the resilience of micro-enterprises and generate greater e-commerce adoption.</p>	<ul style="list-style-type: none"> • Private investors
<p>MSMEs are under-skilled</p> <p>MSMEs require upskilling in both business and e-commerce related digital skills.</p>	<p>Partnerships between governments, e-commerce platforms and marketplaces, NGOs, and donors are needed to ensure that MSME upskilling programmes for e-commerce are more targeted, less fragmented and better coordinated.</p>	<ul style="list-style-type: none"> • Governments • Donors and development partners • Non-government organisations (NGOs) • E-commerce services providers
	<p>Investments in a more digitally skilled labour force are required so that MSMEs can recruit the right talent for scaling e-commerce operations.</p>	<ul style="list-style-type: none"> • Public and private sector education providers and digital upskilling programme providers
<p>Connectivity is unreliable</p> <p>MSMEs need higher quality and more reliable connectivity, as do consumers, to consistently adopt online retail. Rural areas need better connectivity infrastructure for e-commerce to expand beyond urban areas.</p>	<p>To encourage e-commerce uptake beyond cities, a commercial case for investments in 3G/4G sites is needed in rural and remote areas by scaling the demand for 3G/4G devices and broadband services.¹⁶²</p>	<ul style="list-style-type: none"> • Mobile operators
	<p>The upload and download speeds provided by mobile networks, and therefore the quality of the network, is linked to the capacity of spectrum available. More and better spectrum allocation as well as reprioritisation of low-band spectrum is needed to improve internet quality beyond cities for rural e-commerce adoption.¹⁶³</p>	<ul style="list-style-type: none"> • Governments

162 GSMA. (2022). [The State of Mobile Internet Connectivity Report 2022](#).

163 Tech Africa News. (2023). GSMA: [Closing Africa's Rural-Urban 5G Divide with low band spectrum expansion](#). (accessed 21 September 2023)

Challenge	Action	Actor
<p>Mobile phones are expensive</p> <p>Consumers, who primarily use mobile devices to make online purchases, need affordable smartphones. Micro-enterprises, which form the bulk of African businesses, also conduct e-commerce primarily on mobile handsets.</p>	The price of handsets needs to be reduced; one strategy is to improve efficiencies in the supply chain.	<ul style="list-style-type: none"> • Original equipment manufacturers
	Handset financing, such as buy now, pay later (BNPL) models can facilitate consumer access to devices.	<ul style="list-style-type: none"> • Partnerships between fintechs, micro-credit providers, and device sellers
	Local manufacturing of lower cost smart feature phones offers an opportunity to enable access.	<ul style="list-style-type: none"> • Regional and national technology manufacturers
	The affordability of mobile data can also be improved by balanced fiscal policy and a reduction in sector-specific taxes on mobile operators.	<ul style="list-style-type: none"> • Governments
<p>E-commerce-related regulations are absent, dated, fragmented, or poorly implemented</p> <p>Updated policies and laws related to e-commerce are needed to provide MSMEs with regulatory clarity and provide adequate consumer protection for online transactions as consumer confidence in online purchases is low.</p>	Formulation of a unified e-commerce law tackling consumer protection, personal data privacy and protection, cybersecurity, electronic transactions, and intellectual property rights will provide clarity to MSMEs and build consumer confidence.	<ul style="list-style-type: none"> • Governments
	Dated regulations need updating, and gaps in regulations linked to e-commerce need to be addressed so that MSMEs have clarity on regulations linked to online transactions.	<ul style="list-style-type: none"> • Governments
	The implementation of regulations, especially cybersecurity laws and redress mechanisms, needs strengthening due to the increasing number of cyber-attacks and persistent risk of financial fraud in the region, which deters the use of e-commerce.	<ul style="list-style-type: none"> • Governments
	Educating and guiding MSMEs on the legislation as well as implementation of relevant cybersecurity, consumer protection and data privacy laws will improve consumer protection measures and help build trust in e-commerce.	<ul style="list-style-type: none"> • Government Departments of Trade • Private sector e-commerce services providers • NGOs
<p>Uptake of digital payments for online sales is low</p> <p>MSMEs need a shift from cash on delivery as a prominent payment method to digital payments to improve cash flow, reduce revenue losses and ease financial management, as well as enable data-driven business planning.</p>	Reassessment of taxation on mobile money services and digital transactions to reduce the costs of digital payments for consumers and businesses will encourage uptake.	<ul style="list-style-type: none"> • Governments
	Scaling the adoption of innovative payment channels such as digital cards, QR codes and NFCs will help make digital payments more convenient for merchants and customers.	<ul style="list-style-type: none"> • Financial sector innovators in partnership with central banks
	Improving interoperability for instant settlements from a range of payment methods, and supporting the development of fintechs such as payment aggregators and gateways will facilitate instant and reliable digital payments.	<ul style="list-style-type: none"> • Payment system providers in partnership with technology providers

Challenge	Action	Actor
Delivery infrastructure needs improving; logistics and delivery services are inadequate MSMEs need reliable, accessible, and affordable logistics and delivery services and transport infrastructure to deliver e-commerce purchases to buyers.	Investment via public-private partnerships in transportation infrastructure will improve both safety and access as well as reduce delivery costs and times.	<ul style="list-style-type: none"> Public and private sector investors
	Reducing fragmentation, improving the reliability and quality of third-party delivery services providers, and facilitating integration between e-commerce businesses and delivery providers will ease delivery challenges.	<ul style="list-style-type: none"> Third party logistics (3PL) and delivery companies in partnership with e-commerce businesses and technology companies
	Scaling national addressing systems will enable accurate, timely and more cost-effective delivery.	<ul style="list-style-type: none"> Governments National posts Public-private partnerships with support from technology providers

Annex: Survey methodology

The survey for this research was conducted by D3 between 26 February and 4 April 2023. It consisted of 1,591 interviews conducted with micro, small, and medium enterprises across six countries (Egypt, Ethiopia, Ghana, Kenya, Nigeria, and South Africa). Local field teams working in local languages administered the questionnaire through the Survey to Go CAPI platform in South Africa and through D3's Research Control Solutions (RCS) CAPI platform in all other locations.

To determine the sample strata for this study, D3 conducted deep-dive desk research on the technological, regulatory, and business environments in each country. Through this process, they identified national definitions for micro, small, and medium businesses, and any available statistics on e-commerce use by sector. D3 used that information to designate a sample allocation in each of the six countries in the study. If necessary, that allocation

was then adjusted to ensure a minimum number of respondents were interviewed in each stratum of the sample. The goal was to interview at least 250 qualifying businesses in every country across fashion and apparel, electronics, toys and DIY, furniture and appliances, food and beverage, personal care, agricultural products, and automotive e-commerce industries.

D3 worked with local field teams to identify qualifying businesses in the target urban and peri-urban zones that corresponded to the sample allocation for their country. The field teams used online searches, existing contacts from previous studies, and snowball sampling methods to identify and recruit participants. The teams then scheduled and conducted interviews with a representative of each business selected to participate. The data was then quality checked and analysed.

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- William Ochola
- Universal Postal Union

GSMA Head Office

One Angel Lane
London, U.K.
EC4R 3AB
United Kingdom
Tel: +44 (0)20 7356 0600

