



**USAID**  
FROM THE AMERICAN PEOPLE



# ALLIANCE FOR ETRADE DEVELOPMENT

## ACCELERATING MSME ECOMMERCE IN AFRICA: ROADMAP

30 June 2021

This document is made possible by the generous support of the American People through the United States Agency for International Development (USAID). The contents are the responsibility of Palladium and do not necessarily reflect the views of USAID or the United States Government.

# ALLIANCE FOR ETRADE DEVELOPMENT

## ACCELERATING MSME ECOMMERCE IN AFRICA: ROADMAP

**Agreement No:**

7200AAI9CA0002I

**Submitted to:**

USAID Center for Economics and Market Development

**Prepared by:**

Kati Suominen, Founder and CEO, Nextrade Group, Technical Director of the Alliance for eTrade Development

**DISCLAIMER:**

The author's views expressed in this document do not necessarily reflect the views of the United States Agency for International Development or the United States Government, or the views of the Alliance for eTrade Development members.

# TABLE OF CONTENTS

|             |   |           |
|-------------|---|-----------|
| <b>I.</b>   | <b>Introduction</b> .....   | <b>4</b>  |
| <b>II.</b>  | <b>How do african MSMEs engage in ecommerce and what challenges do they face? ...</b>   | <b>6</b>  |
| a.          | Why MSME ecommerce matters to Africa.....   | 8         |
| b.          | MSME ecommerce in Africa: 10 stylized facts.....  | 8         |
| 1.          | There are five archetype african MSMEs online sellers .....   | 8         |
| 2.          | Most African MSMEs are social sellers, but many urban mid-size and large firms are onboarding onto regional and global online marketplaces .....  | 11        |
| 3.          | Online sellers and buyers are likelier to engage in trade and outperform.....   | 14        |
| 4.          | There are no meaningful differences between women- and men-led firms in the use of ecommerce or online performance .....  | 17        |
| 5.          | African MSME online sellers perceive strong gains from ecommerce, and look to invest more in their ecommerce capabilities in 2021 .....   | 18        |
| 6.          | Ecommerce transactions are digitizing but cash still dominates in local transactions; export-driven online sellers accept international payments by bank wires, paypal, and credit cards..... | 21        |
| 7.          | African consumers are increasingly turning to ecommerce and buying equally from local and global marketplaces, opening growing opportunities for local MSMEs.....                             | 21        |
| 8.          | African MSMEs, especially small offline sellers, still face significant challenges to doing ecommerce.....  | 24        |
| 9.          | The challenges are similar across countries, pointing to a common regional agenda on trade facilitation, logistics improvements, and MSME finance.....  | 27        |
| 10.         | To grow their ecommerce businesses, African MSMEs want better digital marketing capabilities, internet and finance .....  | 29        |
| <b>III.</b> | <b>State of policies conducive to MSME ecommerce in africa</b> .....  | <b>30</b> |
| a.          | Adoption of pro-MSME ecommerce policies in Africa: where are we?.....   | 30        |
| <b>IV.</b>  | <b>Policy and technology solutions to promote african MSMEs' ecommerce</b> .....  | <b>37</b> |
| a.          | Improving the enablers of MSME ecommerce: logistics, finance, digital capabilities, payments .  | 40        |
|             | Enabler 1: Etrade facilitation and ecommerce logistics.....   | 40        |
|             | Enabler 2: Access to finance.....   | 49        |
|             | Enabler 3: MSME ecommerce skills and workforce reskilling.....  | 53        |
|             | Enabler 4: Crossborder payments.....  | 57        |
| b.          | Cross-cutting pillars: digital policy coordination, access to data, digital identity, cybersecurity, formalization .....  | 61        |
|             | Pillar 1: Digital policy coordination and dialogue.....   | 61        |
|             | Pillar 2: Open access to data.....  | 63        |
|             | Pillar 3: MSME digital identity.....  | 65        |
|             | Pillar 4: MSME cybersecurity.....   | 66        |
|             | Pillar 5: MSME formalization.....   | 66        |

|   |           |
|---|-----------|
| v. Conclusion.....  | 68        |
| <b>Appendix I: MSME sample and survey fielding.....</b>                                 | <b>69</b> |
| <b>Survey fielding .....</b>  | <b>70</b> |
| <b>Appendix I: variables for best place for MSME ecommerce-index .....</b>              | <b>71</b> |
| <b>Appendix III: variables and their coding in alliance’s draft policy mapping.....</b> | <b>72</b> |

## **ACKNOWLEDGEMENTS**

This report was produced for the Alliance for eTrade Development, a Global Development Alliance supported by the U.S. Agency for International Development. The author would like to thank Erica Vambell for research assistance, Susan Zimmerman for perceptive comments, and all participants in the Alliance for eTrade Digital Trade Dialogue with the African Union Commission in September 2020 for sharing their insights.

# I. INTRODUCTION

Ecommerce – the sale and purchase of goods and services online domestically and across borders – is opening new opportunities for African micro, small, and medium-sized enterprises (MSMEs) to grow their sales, export, and create new jobs. Booming amid the COVID-19 crisis as the region’s consumers have migrated online, ecommerce is empowering new players, opportunities, and job-creation in the region’s logistics, financial services, payments, and IT sectors. Ecommerce is also emerging as a critical component of African governments’ work on MSME resilience and economic recovery from COVID.

African governments have taken various measures to promote ecommerce in their economies, and have also come together, including under the auspices of the African Union, to discuss ecommerce development approaches.<sup>1</sup> In February 2020, the 33<sup>rd</sup> African Union Ordinary Session resolved that the Phase III Negotiations of the African Continental Free Trade Agreement (AfCFTA) would focus on the AfCFTA Protocol on Ecommerce.

These are constructive steps toward enabling African MSMEs to use ecommerce as a growth lever and create new jobs. The purpose of this report, prepared as part of the U.S. Agency for International Development-supported Alliance for eTrade Development II (“eTrade Alliance” composed of Cargill, DHL, Element, Etsy, Google, Latin American eCommerce Institute, Mastercard, PayPal, Ringier One Africa Media, UPS, and Visa), is to contribute to African governments and African Union Commission’s (AUC) work to advance ecommerce development with new diagnostics and ideas. In particular, this report will:

- Discuss, using survey data on over 2,000 firms, how African MSMEs of different characteristics engage in ecommerce and what challenges they face to starting their ecommerce businesses and growing their ecommerce sales, including across borders;
- Identify priority challenges for African MSMEs to engage in ecommerce;
- Take stock of and compare the adoption of policies conducive to MSME ecommerce in 12 African economies, to understand how African governments are already addressing the challenges facing MSMEs in ecommerce;
- Put forth additional proposals for goals, policies, and technology solutions to MSMEs’ challenges in ecommerce in four key areas (logistics and trade facilitation, MSME finance, MSME digital transformation, and cross-border digital payments);
- Propose national and regional initiatives and ideas to operationalize these solutions to advance MSME ecommerce in Africa;
- Discuss cross-cutting approaches to enable MSME ecommerce and robust digital ecosystems, such as promoting digital regulatory coherence among African economies; enabling MSMEs and ecommerce ecosystem players to access, use and analyze data; providing MSMEs with incentives to formalize and use a digital identity, and bolstering MSMEs’ cybersecurity.
- Review how African governments can accomplish broad-based, sustained, and commercially viable reforms and initiatives in support of MSME ecommerce, such as through public-private dialogues and partnerships, engagement of local governments and stakeholders in ecommerce development, and greater coherence among national digital policies.

Throughout, the paper pays particular attention on enabling rural and women-led MSMEs in ecommerce.

This report is envisioned as a roadmap for African Union Commission (AUC) and AU Member States on policies, technologies, and concrete activities to enable MSME ecommerce in Africa. This version also includes ideas from the AUC-eTrade Alliance Digital Trade Dialogue on 17-18 September 2020.

The following section discusses the growth of ecommerce in Africa and how MSMEs use ecommerce in their businesses, and the challenges they face to growing through ecommerce. Section three discusses how African governments are already addressing these challenges, and proposes further concrete goals and initiatives in these areas for the next five years. Section four discusses cross-cutting policies critical for MSMEs to successfully leverage ecommerce for their growth. Section five concludes.

## II. HOW DO AFRICAN MSMES ENGAGE IN ECOMMERCE AND WHAT CHALLENGES DO THEY FACE?

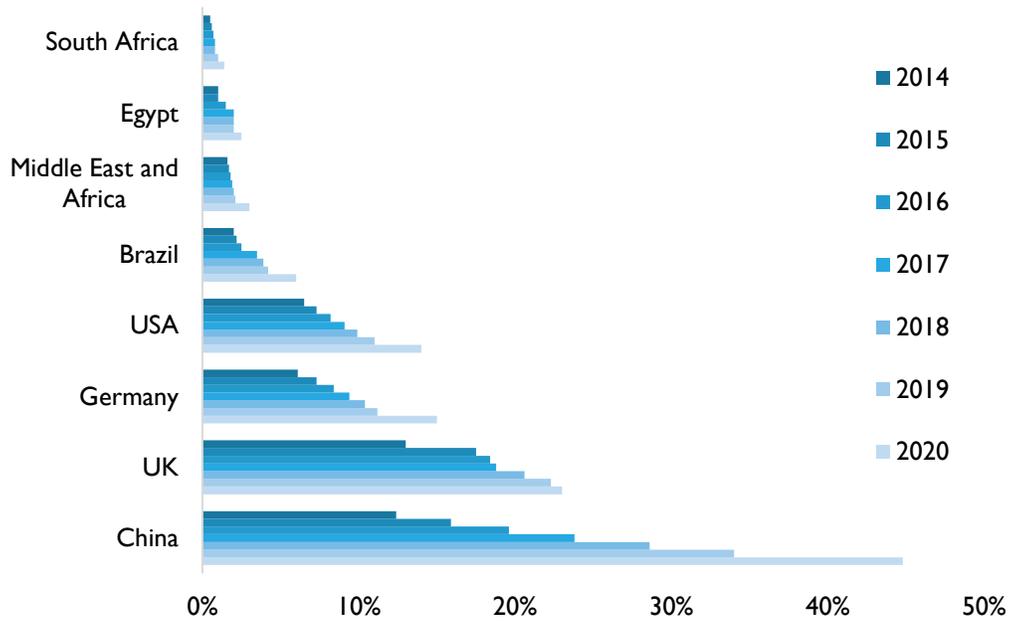
African economies have digitized rapidly in the past few years. In 2017, the latest year for which data are available, 25 percent of sub-Saharan Africans used the Internet, including 42 percent of Nigerians and 56 percent of South Africans; in North Africa, 64 percent of Tunisians and 65 percent of Moroccans used the internet in 2018. While still below 10 percent in Africa, fixed broadband penetration has also been growing at double digits in the past few years. By 2018, depending on the country, 30-40 percent of micro and small African firms had built a website.<sup>2</sup>

These trends reflect the declining cost of Internet connections in Africa, and are translating into online transactions. For example, about a fifth of South Africans, third of Nigerians, and almost a one-half of Kenyans made payments using their mobile phones in 2018.<sup>3</sup> African consumers also increasingly use ecommerce to buy goods and services, including from local and regional marketplaces such as Jumia, Takealot, and Konga, and global marketplaces like Amazon, eBay, and Etsy. The COVID-19 crisis has accelerated the growth of online shopping in Africa. A Visa survey found that 64 percent of consumers in South Africa bought groceries online because of COVID, and 53 percent made their first online purchase from a pharmacy during the crisis.<sup>4</sup> In 2020, nearly three in five Nigerian consumers said they planned to shop more online in the future.<sup>5</sup>

Still, however, Africa's ecommerce market is very incipient and online transactions are but a fraction, typically less than 3 percent, of retail sales in the region, compared to 23 percent in the UK and about 14 percent in the United States (Figure 1). As for cross-border trade, there are no comprehensive data on ecommerce in goods domestically or across borders; however, data on exports of digitally deliverable services suggest that African firms have gradually increased their cross-border sales of digital services to 26 percent of all services exports in 2019 (Figure 2). This share is however relatively low compared to such B2B ecommerce services export superstars as Brazil (63 percent), Philippines (58 percent), and Costa Rica (50 percent).

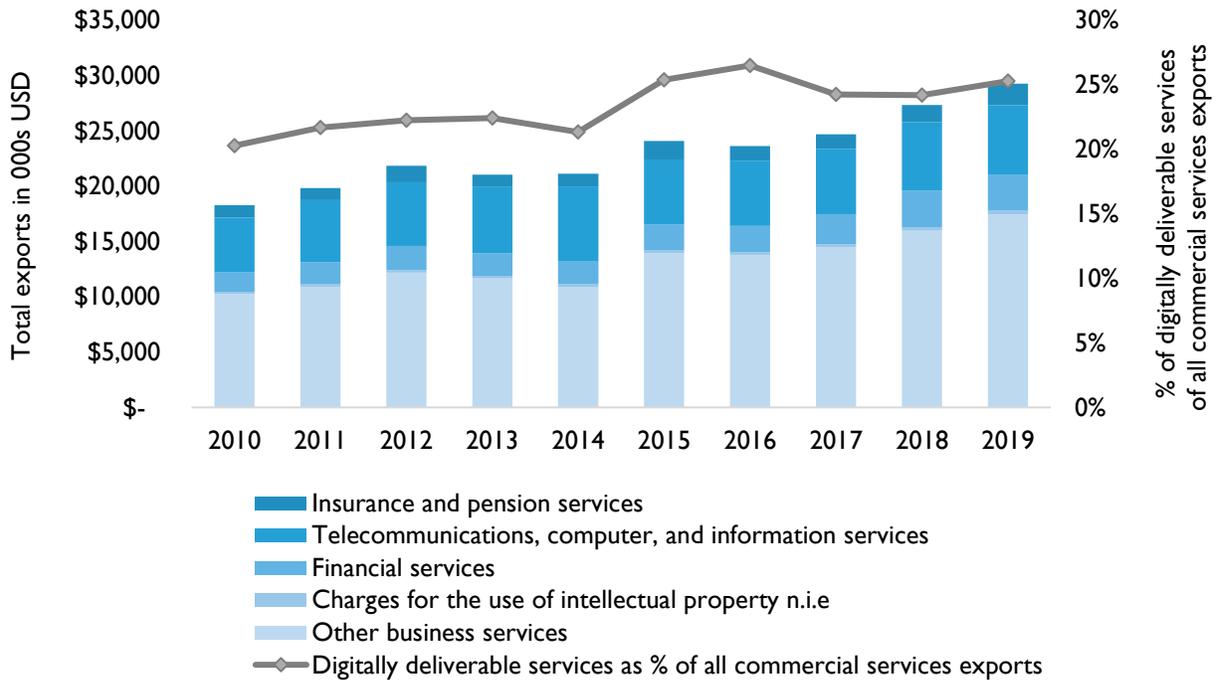
In general, these data suggest that ecommerce is gradually growing among African consumers and firms, but that it is still far from its potential. How to then accelerate ecommerce development in Africa?

**Figure 1: Share of Online Transactions as a Share of Domestic Retail, by Country**



SOURCE: AUTHOR ON THE BASIS OF EMARKETER DATA.

**Figure 2: Africa's Digitally Deliverable Services Exports in 2010-19, by Sector and as Share of All Commercial Services Exports**



SOURCE: AUTHOR ON THE BASIS OF WORLD TRADE ORGANIZATION DATA.

## A. WHY MSME ECOMMERCE MATTERS TO AFRICA

The growth of ecommerce use among African consumers opens ready opportunities for local MSMEs to diversify their customer base and grow their sales. But there are further reasons, most by now well-established in empirical literature, for African governments to focus on promoting MSME ecommerce. For example, research across geographies shows that ecommerce can:

- **Enable MSMEs to reach new domestic and foreign customers**, diversify their markets and products, and grow their exports;
- **Enable MSMEs to access a wide variety of goods and services** from around the world, a particular benefit for MSMEs in small developing nations with limited pools of domestic suppliers of parts, components, and services;
- **Create significant opportunities for firms that support online sellers and buyers**, such as logistics, warehouse, payments, and financial and IT services;
- **Bridge in-country disparities between rural and urban areas in terms of access to entrepreneurial opportunities and wider varieties of products and services**, especially in rural regions with good Internet and logistics networks;
- **Bridge disparities between women- and men-led MSMEs** in access to critical services, business networks, and markets; and
- By pushing MSMEs to differentiate, **promote intra-industry trade and regional integration** even among countries with similar factor endowments.<sup>6</sup>

This report examines these dynamics and potential benefits in Africa.

## B. MSME ECOMMERCE IN AFRICA: 10 STYLIZED FACTS

There is to date little data on how and to what extent different types of African MSMEs use ecommerce; what challenges they face in transacting digitally; and what policy and technology solutions African governments are already pursuing to solve these challenges.<sup>7</sup> This impedes the design of targeted and impactful policy solutions to promote African MSMEs' ecommerce.

This report paper seeks to help bridge these knowledge gaps with MSME online survey data collected first by Nextrade Group on 18-25 August 2020, another by the eTrade Alliance on 4-15 September 2020 from 2,011 MSMEs from three African economies (Kenya, Nigeria, and South Africa; please see descriptive statistics in Annex I), and extensive comparative data on the adoption of over 100 policies conducive to MSME ecommerce in 10 major policy areas in 12 African countries. Note that the survey data are collected via an online survey and the sample thus inherently consists of, and to some extent overrepresents, firms that have some digital devices and capabilities. At the same time, respondents that have some digital capabilities also have more insight into the workings of the digital economy than do firms that do not use the Internet.

The top-10 stylized facts about the surveyed MSME sellers in Africa include:

### I. THERE ARE FIVE ARCHETYPE AFRICAN MSMEs ONLINE SELLERS

The survey data reveals five archetype MSME online sellers: (1) global marketplace sellers that use global ecommerce marketplaces to sell as well as buy goods and services; (2) local and regional marketplace

sellers that use African marketplaces; (3) sellers with their own online stores; (4) social sellers that use primarily social media and messaging apps to market their goods and services and transact with customers; and (5) offline sellers that do not use social media or online sales capabilities (Table 1). In broad generalizations, the archetypes can be described as follows:

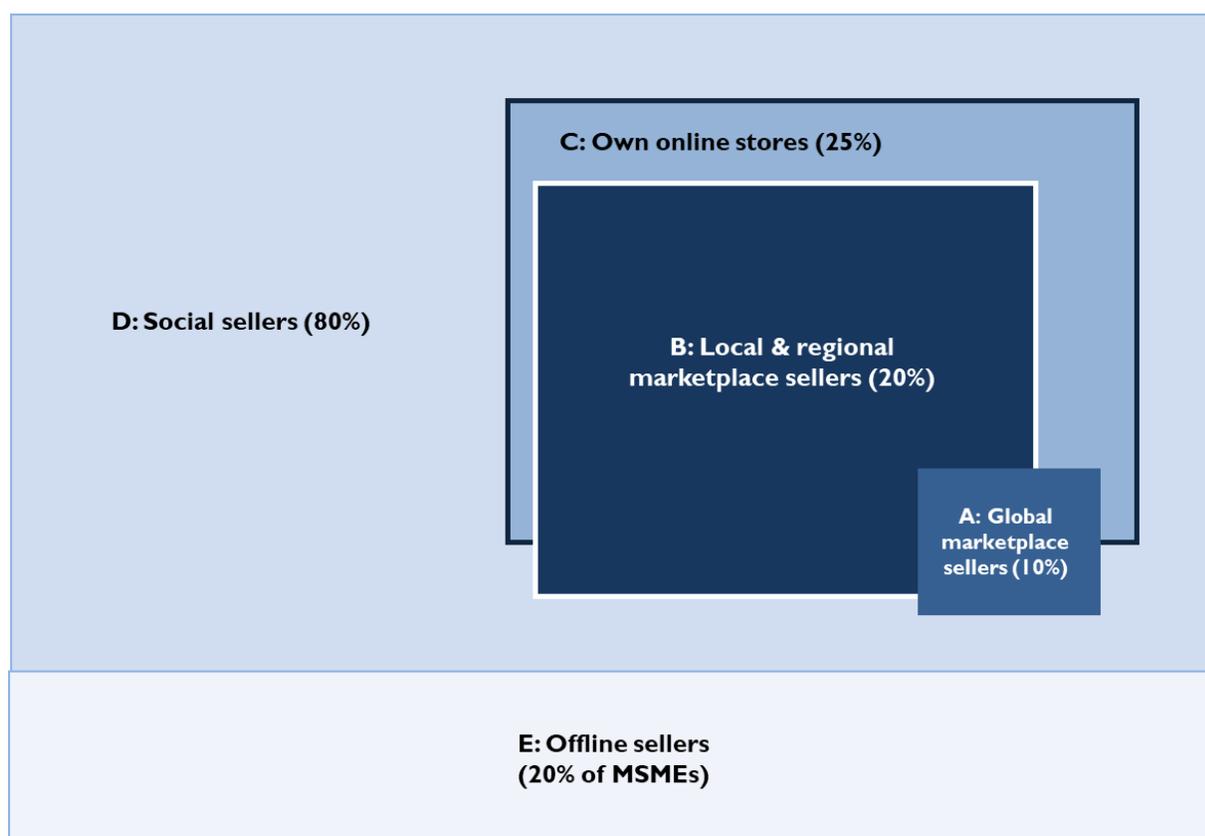
- **Archetype A: Global marketplace sellers:** Established, fast-growing larger MSMEs and large B2B and B2C sellers that use global online marketplaces, derive more than 25 percent of their revenue from ecommerce, and also derive at least 20 percent of their revenue from exports. These firms are typically located in first-tier cities, see growing their ecommerce sales as a priority, and are willing to invest in their ecommerce development.
- **Archetype B: Local and regional marketplace sellers:** Small to mid-size fast-growing B2C sellers that have their own online stores, often derive 10-25 percent of their revenue from online sales, and use domestic or regional marketplaces such as Jumia or Konga as well as social media. These firms tend to see growing their ecommerce sales as a top priority and are willing to invest in their ecommerce development. These firms are typically located in first- and second-tier cities.
- **Archetype C: Sellers with own online stores:** MSMEs that have their own online stores to market their goods and services and transact online, and typically also use social media intensively. These firms also tend to see investing on ecommerce capabilities as an important priority.
- **Archetype D: Social sellers:** Micro and small firms that market their goods and services on social media such as Facebook and Instagram, may interact with their clients using WhatsApp, but typically close sales with cash. These firms see investing in ecommerce as important, but do not necessarily prioritize it. These firms are present nation-wide, including in rural areas.
- **Archetype E: Offline sellers:** Micro and small firms in second- and third-tier cities and rural areas that often provide services and do not see ecommerce or exporting as a priority.

**Table 1: Archetype African MSME Sellers**

| Archetype   | Size                        | Typical sectors and clients   | Located in  | Growth                           | Export and import participation rates | Export intensity                 | Typical foreign markets        | Self-declared priority investing in ecommerce |
|---|-----------------------------|---|---|----------------------------------|---------------------------------------|----------------------------------|--------------------------------|---|
| <b>A</b><br>Global marketplace seller             | Typically midsize and large | B2B IT and business services, B2C electronics, food products, apparel, accessories, machinery and industrial products | First-tier cities   | Very strong: ~55% grow >10% p.a. | ~40% & >60%                           | Medium-high: 10-25%; diversified | Other Africa, USA, China       | High  |
| <b>B</b><br>Local and regional marketplace seller | Small to midsize            | B2C and B2B food products, electronics, apparel, accessories, footwear IT services                                    | First- and second-tier cities                             | Strong: ~45% grow >10% p.a.      | ~25% & >65%                           | Medium-low: 1-25%                | UK, Europe, USA, other Africa  | Very high                                     |
| <b>C</b><br>Sell through online store             | Micro and small             | B2C and B2B IT services, electronics, food products, apparel, accessories   | First- and second-tier cities                             | Medium: ~35% grow >10% p.a.      | ~25% & >60%                           | Medium-low: 1-25%                | Other Africa, USA, some Europe | High  |
| <b>D</b><br>Social seller                         | Micro                       | Primarily B2C IT services, electronics, food products, apparel, accessories, machinery and industrial products        | First, second- and third-tier cities, ~10% in rural areas | Medium: ~33% grow >10% p.a.      | ~20% & >50%                           | Medium-low: 1-25%                | Other Africa, some USA         | Medium-high                                   |
| <b>E</b><br>Offline seller                        | Micro                       | B2C services, agricultural and food products  | First, second- and third-tier cities, ~10% in rural areas | Slow: ~23% grow >10% p.a.        | ~15% & ~40%                           | Low: <10%                        | Europe, some USA               | Low   |

These groups are not exclusive: except for offline sellers, several firms with their own online stores use social media as well, and most regional and global marketplaces sellers often have their own online stores (Figure 3).

**Figure 3: Overlap among Surveyed African Archetype MSME Sellers**



In short, MSMEs in Africa vary significantly in their use of ecommerce and interest in building their ecommerce capabilities. These data are of course an “X-Ray” while the reality is dynamic – for example, firms in Archetype C are often on their way to becoming Bs and As. This report seeks to identify policies and programs that enable MSMEs to move up this “ecommerce value chain”, grow, and create new jobs.

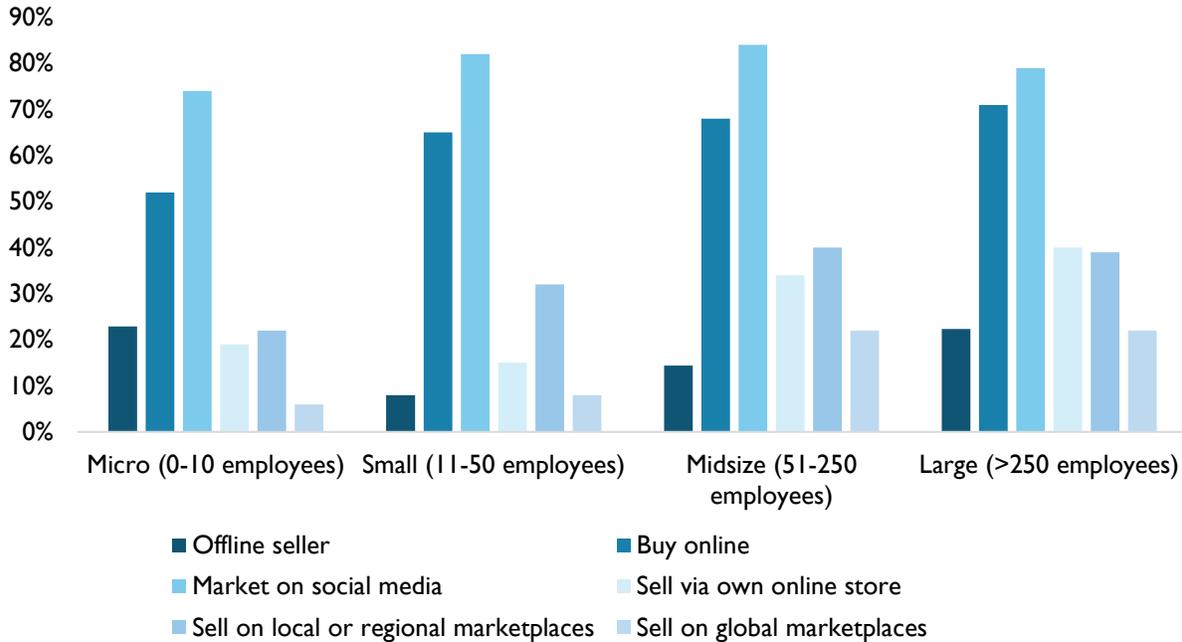
## **2. MOST AFRICAN MSMEs ARE SOCIAL SELLERS, BUT MANY URBAN MID-SIZE AND LARGE FIRMS ARE ONBOARDING ONTO REGIONAL AND GLOBAL ONLINE MARKETPLACES**

As in surveys in other regions, firm size and location arbitrate firms’ propensity to sell online and on marketplaces: rural microenterprises are far less likely to sell on global marketplaces than mid-size and large urban enterprises (Figure 4). Rural firms in Africa are less likely than urban firms to buy or sell online, likely because of more limited access to Internet connections and robust financial, logistics, and digital services (Figure 5).

Most African MSMEs “sell” online by marketing their goods and services on social media (i.e., Facebook and Instagram) or on classifieds (i.e., OLX or Jiji in Nigeria), and interact with the customer on WhatsApp to close the sale (Figure 6). Only a fifth of micro enterprises report selling on their own online store, 16 percent use Jumia, and fewer than 3 percent report using eBay. Some firms also use local marketplaces like Konga (Nigeria), and Takealot and Bidorbuy (South Africa). Overall, mid-size and

large firms are likelier to have online stores and use global and regional marketplaces such as like eBay and Amazon for goods and Upwork and Freelancer for services: they have the staff capabilities and ability cover the fixed costs of setting up on marketplaces and managing their online stores and customers.

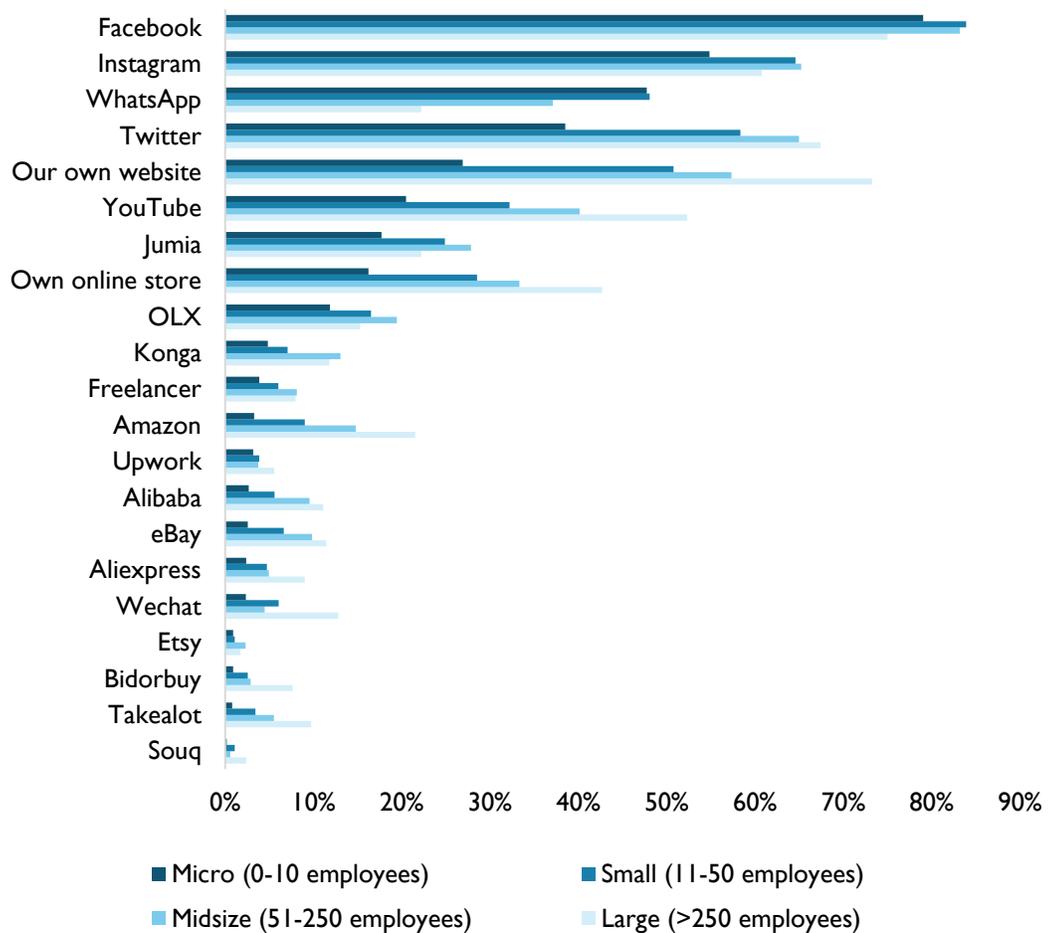
**Figure 4: % of Surveyed African Firms' Online Sales Activity, by Firm Size**



**Figure 5: Surveyed African Micro and Small Firms' Online Sales Activity, by Firm Location**



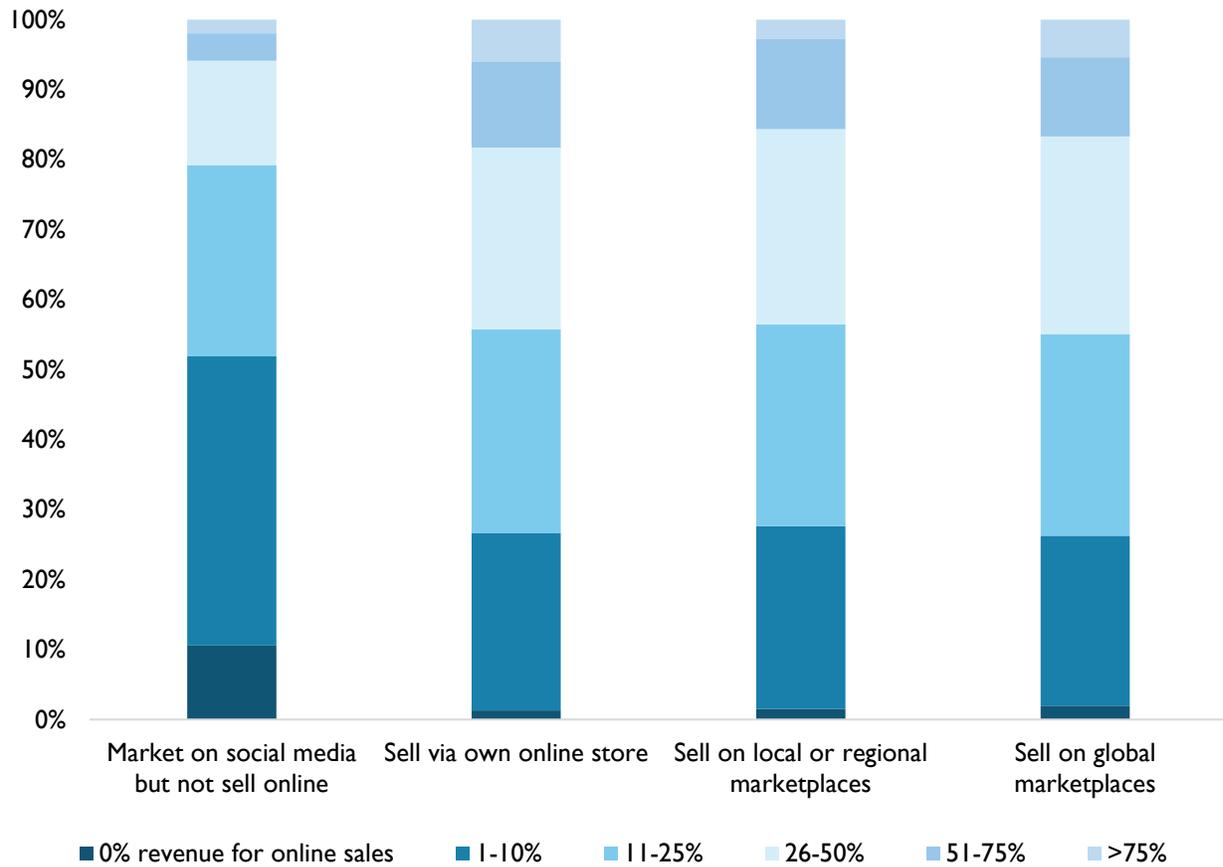
**Figure 6: % of Surveyed African Firms' Primary Online Channel, by Firm Size**



NOTE: SINCE SOME PLATFORMS ARE FOR SERVICES SELLERS AND OTHERS FOR GOODS SELLERS, THE PERCENTAGES OF UPWORK AND FREELANCER USERS ARE FOR SERVICES SELLERS ONLY. PERCENTAGES FOR FACEBOOK, INSTAGRAM, TWITTER, YOUTUBE, JUMIA AND OLX ARE AVERAGES FOR GOODS AND SERVICES SELLERS. REMAINING PLATFORMS DISPLAY PERCENTAGES OF GOODS SELLERS.

Global marketplace sellers also use online channels intensively: some 42 percent of them derive more than 25 percent of their revenue for online sales and 14 percent derive over 50 percent of their revenue from online sales (Figure 7). Meanwhile only a tenth of “purely” social sellers report generating more than 25 percent of their sales online.

**Figure 7: % of Revenue Stemming from Online Sales, by Firms' Online Sales Activity**



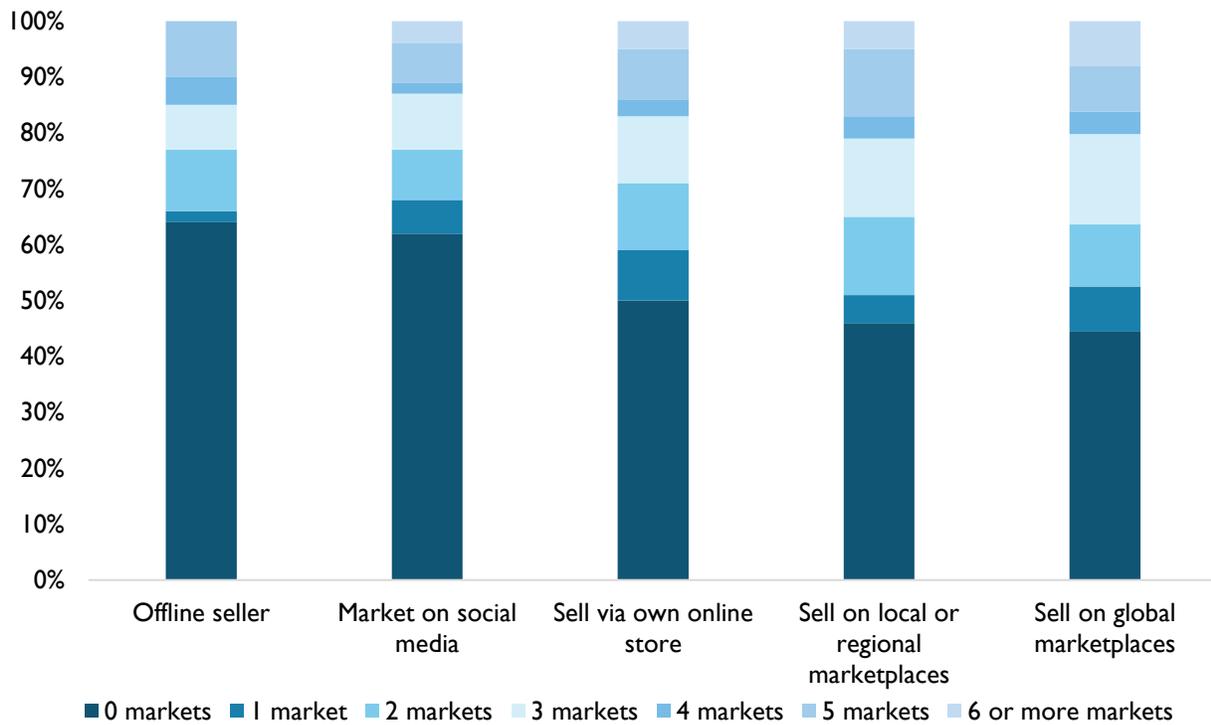
### 3. ONLINE SELLERS AND BUYERS ARE LIKELIER TO ENGAGE IN TRADE AND OUTPERFORM

African firms that sell online are likelier to export and outperform offline and social sellers. Online sellers are also almost twice as likely to export in every firm size category, online buyers are likelier to import than firms that do not buy online, and firms that sell on global online marketplaces are especially likely to engage in trade (Figure 8). Online seller-exporters are also likelier to export to many markets and to extra-regional markets than offline sellers (Figure 9).

**Figure 8: % of Surveyed African Firms that Export, by Online Activity and Size**



**Figure 9: Number of Export Markets, by Surveyed Firms' Online Activity**



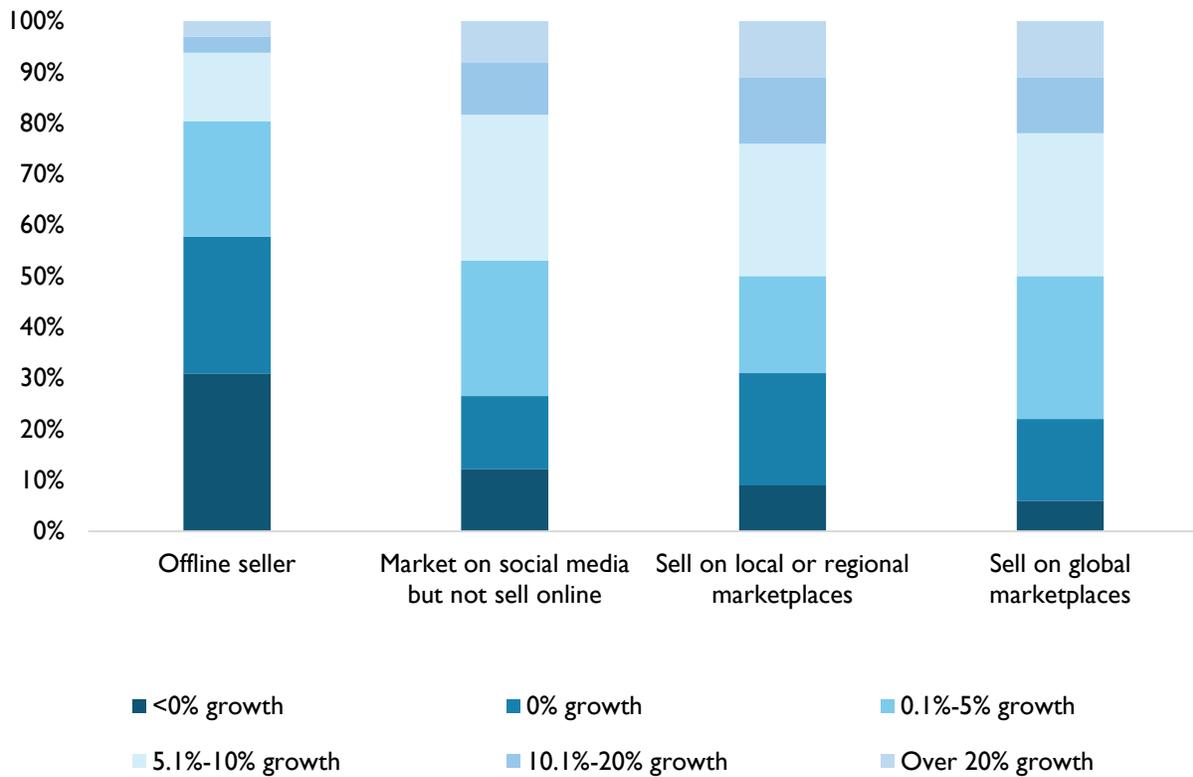
Ecommerce use does not necessarily *cause* firms to export – the correlation between exporting and ecommerce use may simply mean that existing exporters have self-selected into doing ecommerce. However, a third of surveyed firms stated they have started to export *as a result* of starting to use ecommerce, and about a quarter say they have diversified their export markets as a result of ecommerce. More than 40 percent of micro and small firms and more than one-half of midsize and large firms selling on global marketplaces report having started to export as a result of starting to use ecommerce; same proportions of global marketplace sellers report having diversified their export markets as a result of using ecommerce.

These findings are consistent with findings from many other surveys, including Nextrade Group surveys in more than 50 markets around the world. Ecommerce enables MSME trade in part because it essentially reduces the geographic distance that has for centuries curtailed visibility, trust, and trade between buyers and sellers located far apart.<sup>8</sup> Online stores and marketplaces' customer reviews, payment tools, and dispute settlement mechanisms give the buyer a sense of trust, the lubricant of trade that previously took several repeated transactions between buyer and seller to build.

Global online marketplaces bring together hundreds of millions of buyers from around the world and are a particularly powerful means for MSMEs to reach new markets. In the first USAID-supported eTrade Alliance (2017-19), we found that over 95 percent of developing country firms using global online marketplaces export and over 90 percent of them export to 10 or more markets and derive over 90 percent of their revenue from exports.<sup>9</sup> These patterns are dramatically different from traditional patterns of firm internationalization where fewer than 10 percent of firms in any one country export and if they do, they typically export to only 1-3 markets. These patterns are not accidental: developing country firms use global online marketplaces *in order to* expand their markets and reach the hundreds of millions of foreign buyers that use these marketplaces. In addition, by streamlining the provision of trade-related services such as logistics and compliance, the Internet and digitization help reduce firms' trade costs – the costs of moving a good or service from seller to buyer.<sup>10</sup>

Online sellers also outperform their peers: over 50 percent of them grew 10 percent or faster in 2019, as opposed to only 30 percent of offline sellers that grew as fast (Figure 10). These findings echo familiar patterns in international trade: larger and more productive firms self-select into exporting and tend to grow further as a result of exporting. It appears that here too, especially larger and more urban African MSMEs have entered into a virtuous cycle of selling online, growing and diversifying their exports, and growing their businesses.

**Figure 10: Surveyed African Firms' Growth of in 2018-19, by Online Activity**

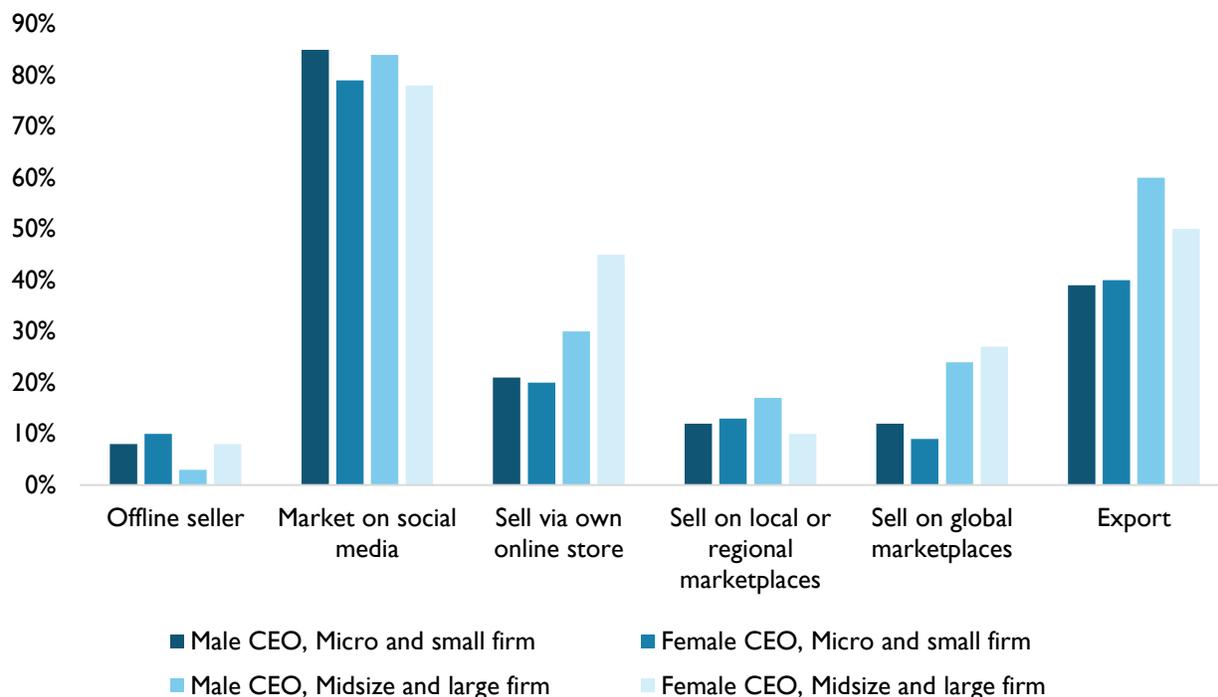


**4. THERE ARE NO MEANINGFUL DIFFERENCES BETWEEN WOMEN- AND MEN-LED FIRMS IN THE USE OF ECOMMERCE OR ONLINE PERFORMANCE**

About 70 percent of firms in the sample have a male CEO; this simply reflects the fact that more firms in Africa are led by men than by women in general. However, the differences appear to stop there: there are no meaningful differences between women- and men-led firms in the propensity to use ecommerce or marketplaces, or in their export and growth performance, controlling for firm size (Figure 11).

This may suggest that ecommerce can be a great equalizer between men- and women-led firms, if only more women-led firms could be brought to life and use it. After all, a number of studies suggest that women face greater challenges than men to launch formal businesses and access technologies that would enable them to get to a point where most of the surveyed firms find themselves – as more established enterprises that already have access to technologies. The eTrade Alliance is currently exploring these dynamics further, for example by expanding the concept of “women-led firm” to also include firms that may be led by a man but have primarily female executive teams.

**Figure 11: % of Surveyed African Micro and Small Firms, by Online Sales Activity and Gender of CEO**

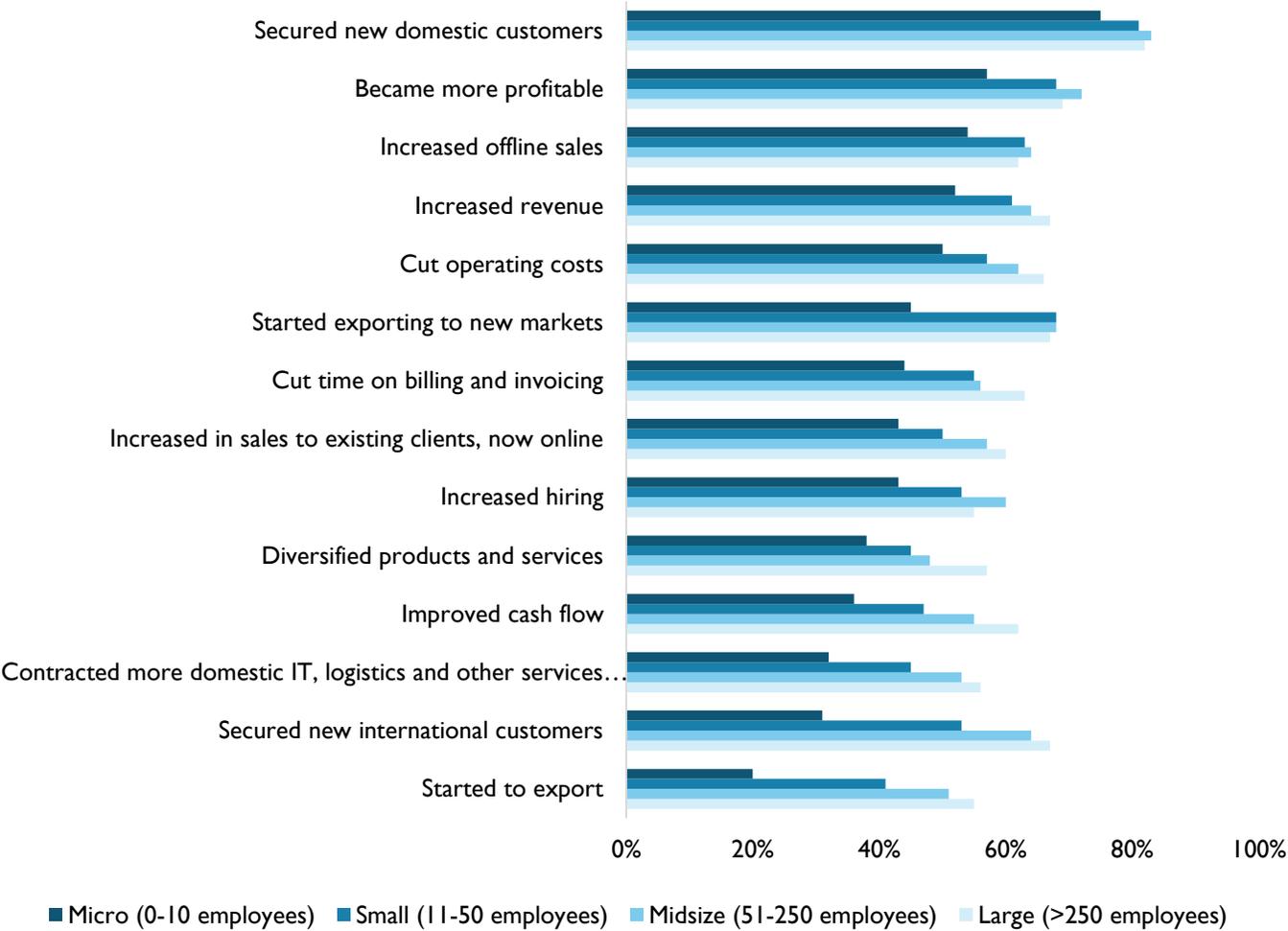


## 5. AFRICAN MSME ONLINE SELLERS PERCEIVE STRONG GAINS FROM ECOMMERCE, AND LOOK TO INVEST MORE IN THEIR ECOMMERCE CAPABILITIES IN 2021

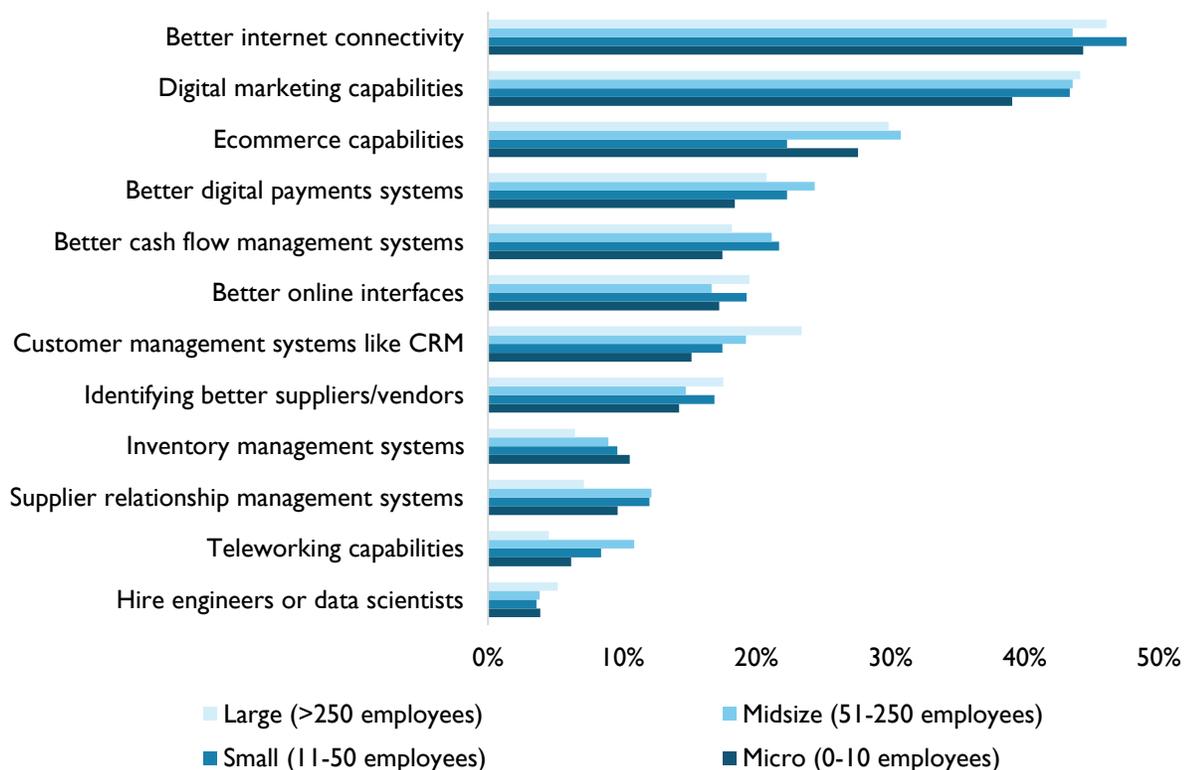
African MSMEs report significant gains from ecommerce use. Nearly one half of micro and small firms have gained new domestic customers and a quarter of firms have secured new international customers after setting out to sell online (Figure 12). Strong shares of MSMEs also report gains in cash flow, revenue growth, and profitability. Larger firms further along in their ecommerce journey, report gains across different areas. Online sellers appear to be imparting broader economic gains in their communities: about a quarter of all firms have increased hiring due to ecommerce and about 30 percent have contracted new services in their domestic markets.

One signal that African firms are gaining from ecommerce use is their willingness to invest in their ecommerce businesses. Nearly one-half of firms of all sizes look to invest especially in better Internet connections and digital marketing capabilities, and a third surveyed wants to invest in ecommerce capabilities in 2021 (Figure 13). The COVID-19 crisis has only cemented this resolve as MSMEs' customers and competitors have moved online (Figure 14).

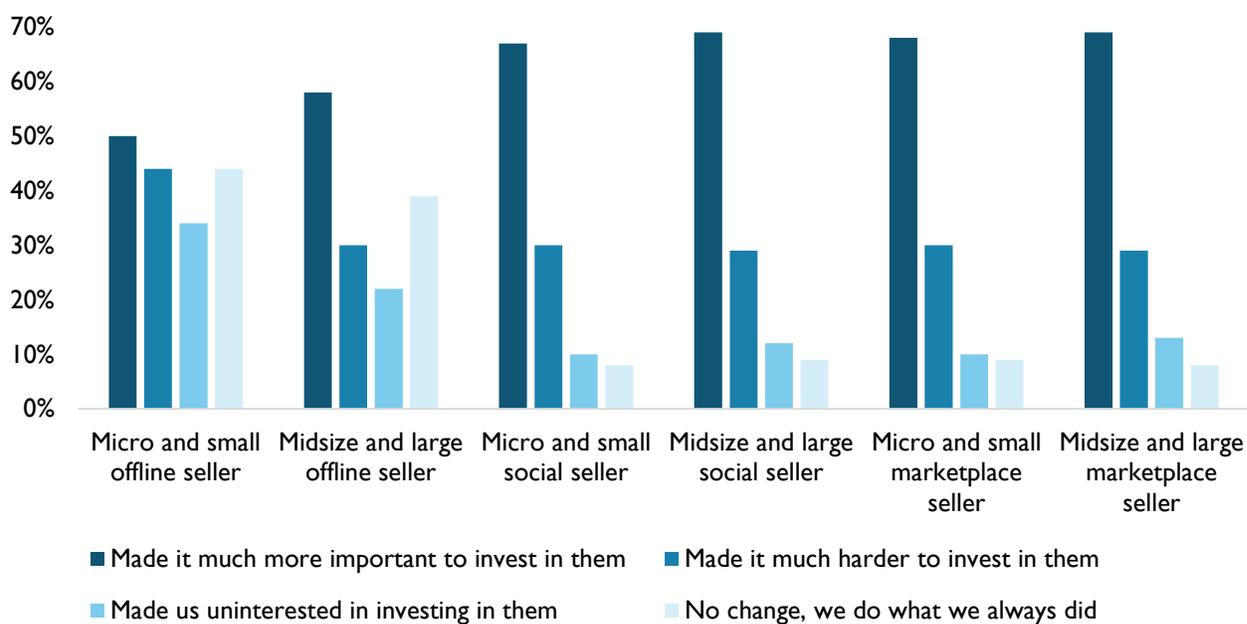
**Figure 12: % of Surveyed African Firms that Indicate Benefits from Ecommerce Use**



**Figure 13: Surveyed African Firms' Top-3 Priority Investment Areas in 2021, by Firm Size**



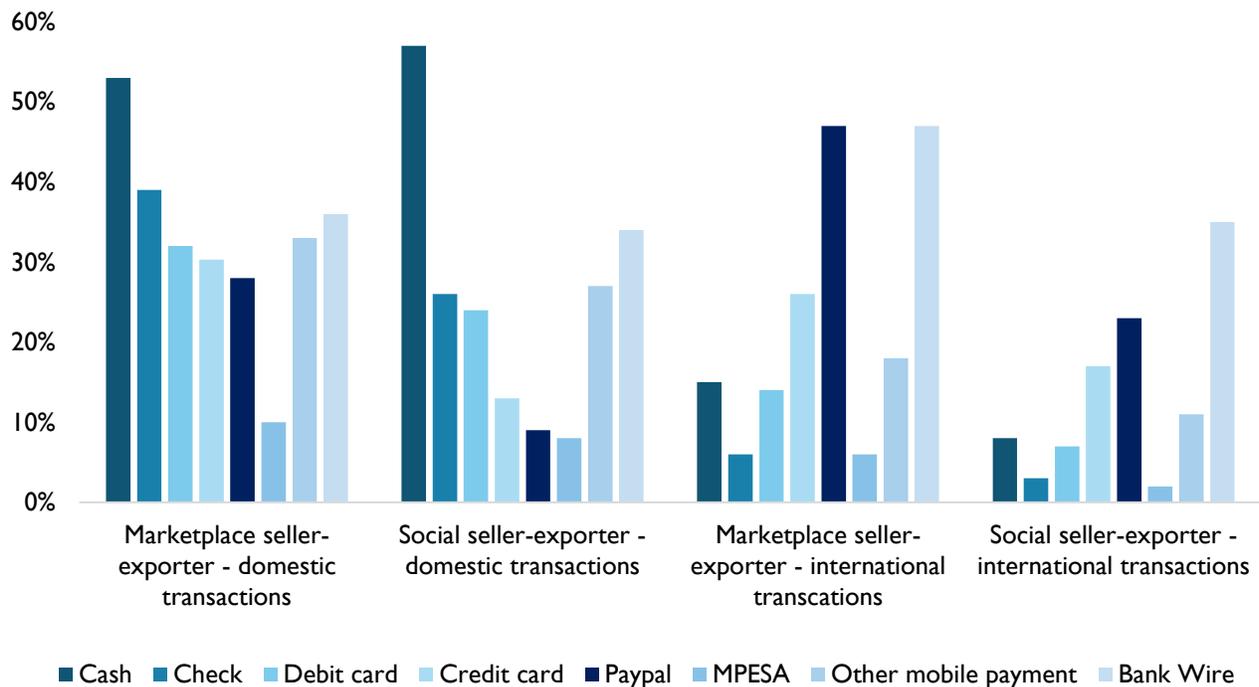
**Figure 14: Surveyed African Firms' Interest in Investing in Ecommerce and Digital Capabilities as a Result of COVID-19, by Firm Size**



**6. ECOMMERCE TRANSACTIONS ARE DIGITIZING BUT CASH STILL DOMINATES IN LOCAL TRANSACTIONS; EXPORT-DRIVEN ONLINE SELLERS ACCEPT INTERNATIONAL PAYMENTS BY BANK WIRES, PAYPAL, AND CREDIT CARDS**

Cash is the most widely used method by which African MSMEs receive payments domestically, but local sellers are also increasingly using mobile payments to transact with customers. Both marketplace and social sellers use bank wires; these tend to be more prevalent in B2B transactions, though many B2B sellers also get paid with cards, possibly for shipments that are paid in smaller successive tranches or for inventory sold directly to consumers. In international transactions, both marketplace and social sellers accept PayPal, bank wires, and credit cards as most common methods of payment; especially global marketplace sellers receive payments through these channels (Figure 15). B2B exporters are particularly likely to get paid with bank wires.

**Figure 15: Top-2 Favored Methods of Receiving Payments among Surveyed African Firms, by Export Participation and Online Sales Activity**



**7. AFRICAN CONSUMERS ARE INCREASINGLY TURNING TO ECOMMERCE AND BUYING EQUALLY FROM LOCAL AND GLOBAL MARKETPLACES, OPENING GROWING OPPORTUNITIES FOR LOCAL MSMES**

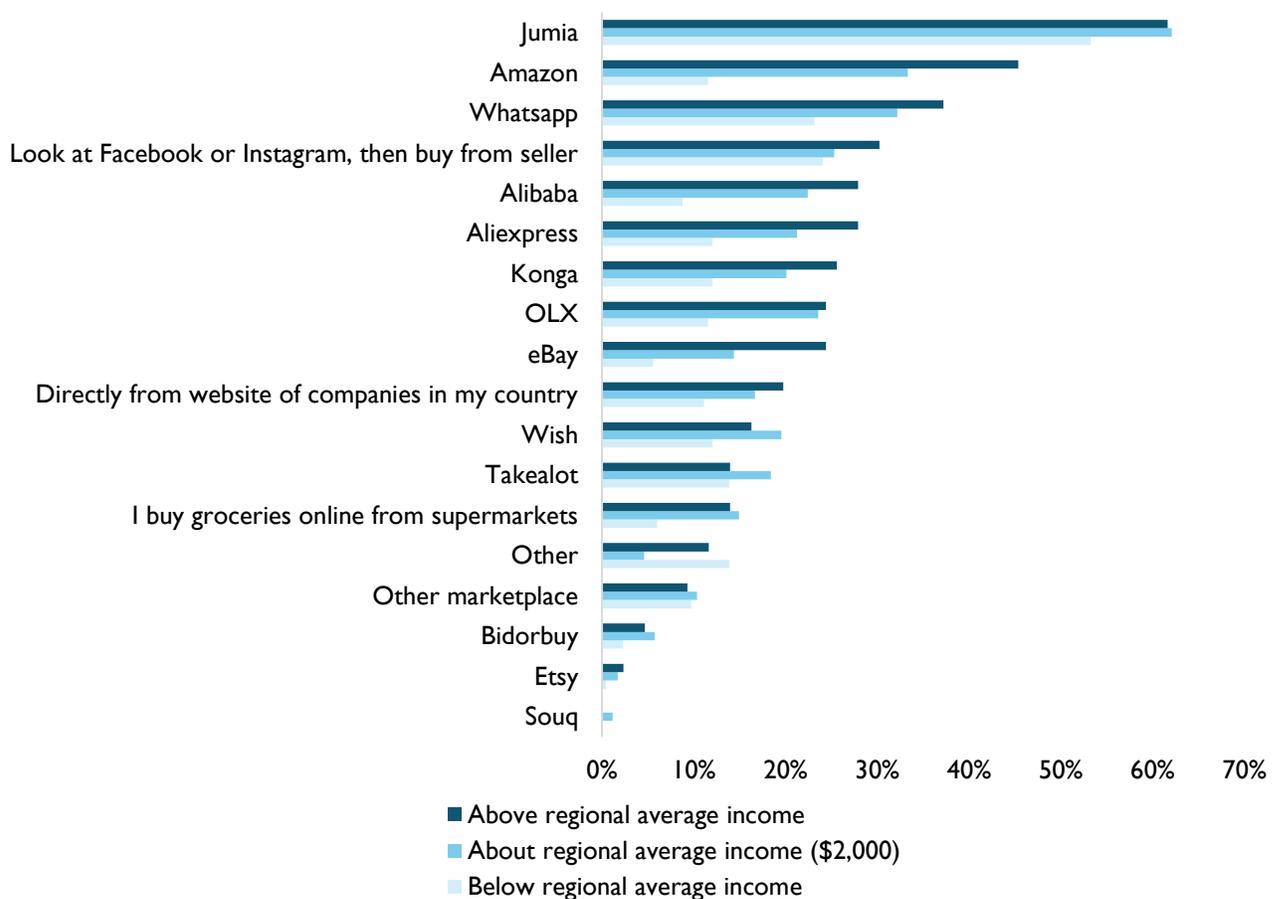
To get a sense of local markets for African MSMEs selling online, Nextrade Group ran a complementary, indicative online survey of 447 African online shoppers on 25-26 August 2020. A majority, 53 percent, of the surveyed consumers across income categories indicated they are buying more online today than two years ago and 27 percent (including shoppers in low-income categories) indicated to be buying at least twice as much online as two years ago. Consumers buy online for the same reasons consumers globally

buy online: it is more convenient and saves time, there is more selection online, and because they can pay digitally which according to almost one-half of shoppers facilitates transactions a great deal. Only 27 percent said their top reason for buying online was being forced to, due to COVID-19.

While consumers do buy from overseas marketplaces and markets – first and foremost China and the United States – majorities stated they are buying on Jumia and from local social sellers (Figure 16). Significant shares also indicated they are pleased with the products and performance of local sellers when compared to international sellers (Figure 17). Most consumers had never experienced fraud online when dealing with local or international sellers, and most had rather positive views about local sellers.

The consumer survey also reveals great deal of interest among African shoppers to not only buy but also to sell online (Figure 18). This is promising as selling online could help ordinary Africans supplement their incomes by selling goods like used books, apparel, handicraft, and furniture; promoting C2C commerce, digital transactions, and the circular economy; and perhaps propelling some Africans to become formal, full-time online sellers with their own businesses. In advanced markets, sellers on marketplaces like Etsy or eBay have often started out as “makers” who sell their crafts and other products alongside their day jobs, and, upon discovering demand for their products, turn into full-time sellers.

**Figure 16: Surveyed African Consumers’ Preferred Purchase Channels, by Income Level**



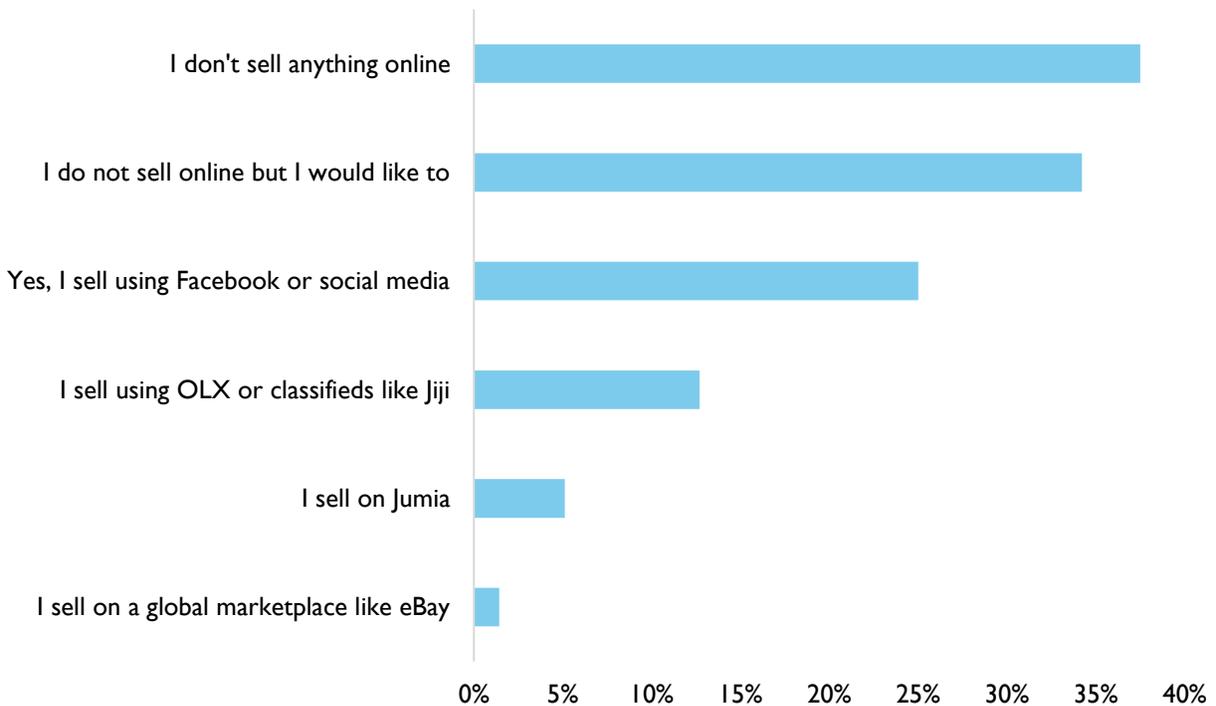
SOURCE: NEXTRADE GROUP DATA.

**Figure 17: Surveyed African Consumers' Perception about Local Sellers**



SOURCE: NEXTRADE GROUP DATA.

**Figure 18: Surveyed African Consumers' Interest in Selling Online**

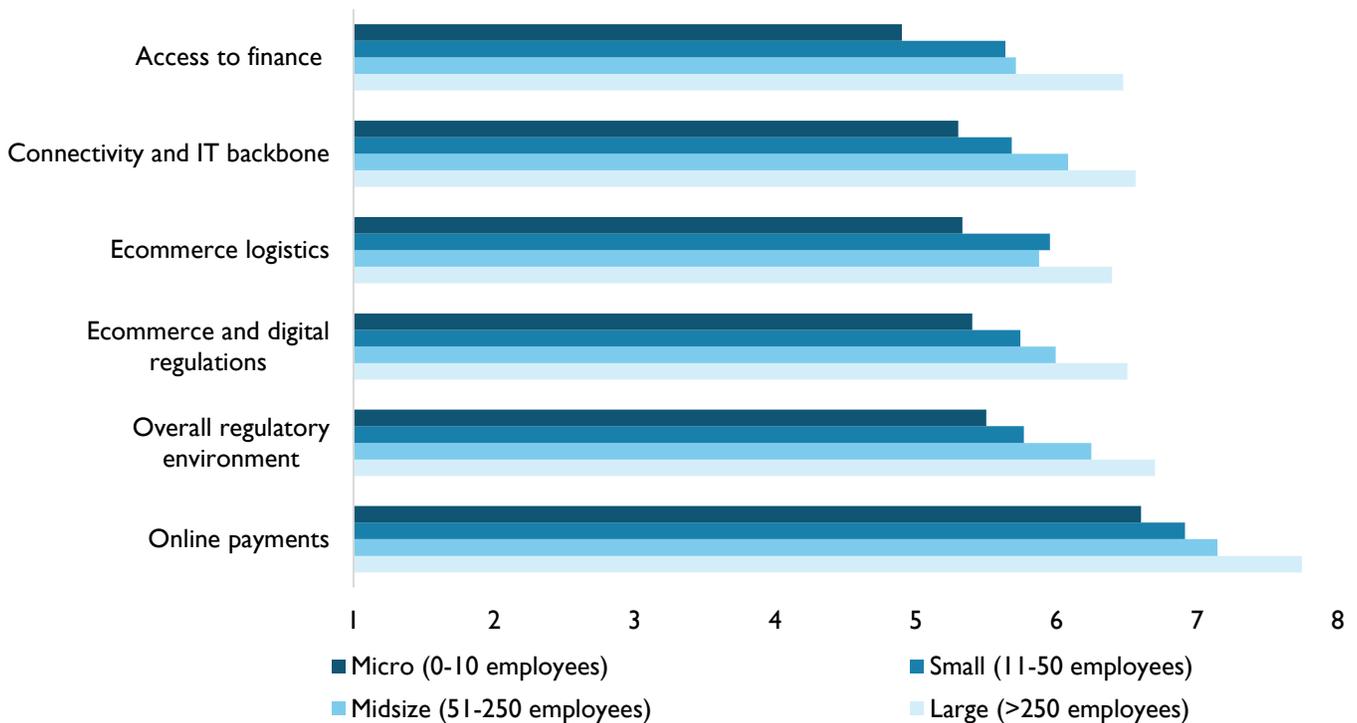


SOURCE: NEXTRADE GROUP DATA.

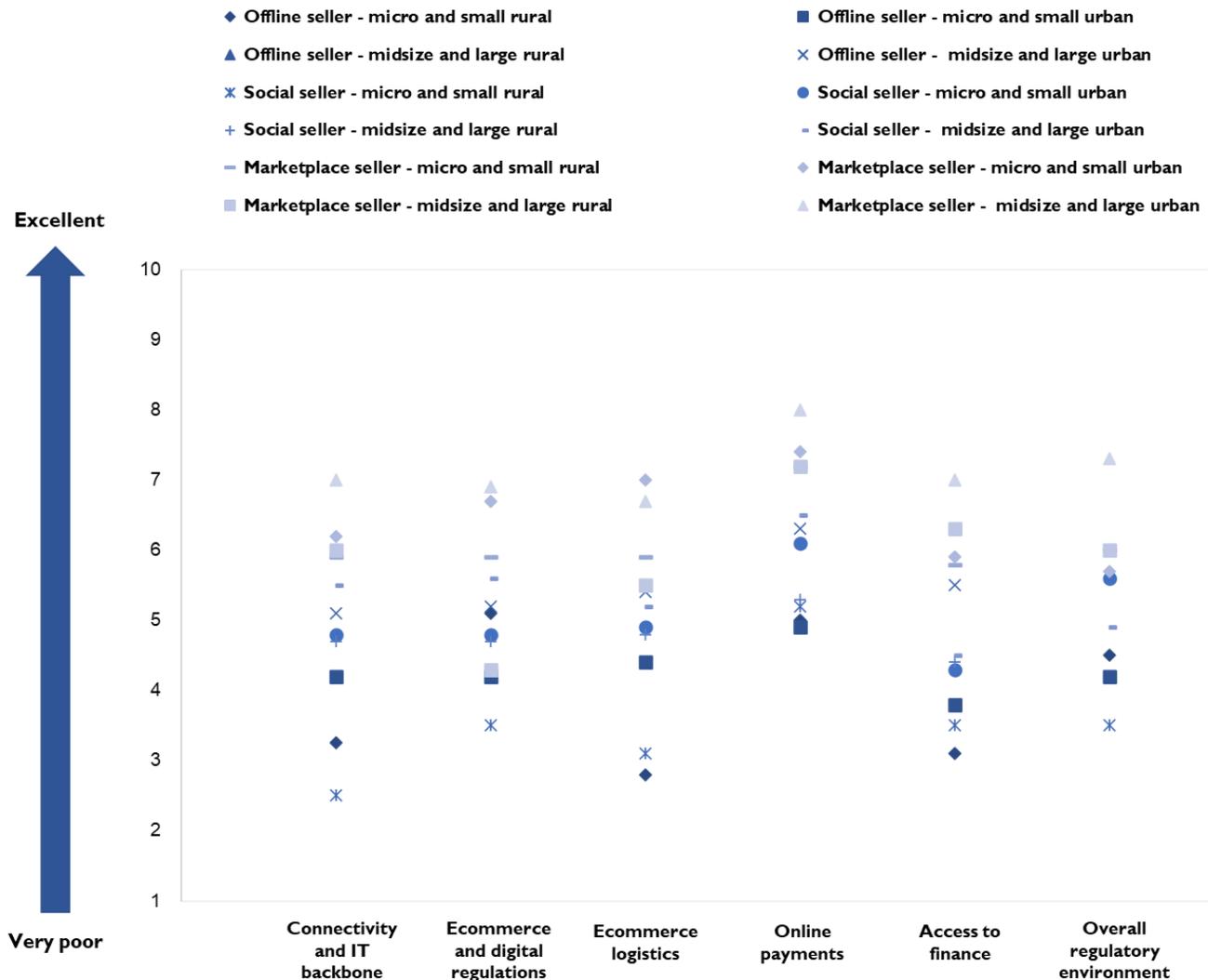
## 8. AFRICAN MSMEs, ESPECIALLY SMALL OFFLINE SELLERS, STILL FACE SIGNIFICANT CHALLENGES TO DOING ECOMMERCE

African firms report a range of challenges to engaging in ecommerce. The main challenges for sellers of all sizes relate to access to finance, logistics, and Internet connectivity (Figure 19); the challenges are more pressing for micro enterprises and in rural areas where transport networks, logistics, IT, and financial services are scarcer (Figure 20).

**Figure 19: Surveyed African MSMEs Rating Key Elements in Their Countries' Enabling Environments (1 = extremely poor, significantly limits our ecommerce business; 10 = excellent, facilitates out ecommerce business), by Firm Size**



**Figure 20: Surveyed African MSMEs Rating Key Elements in Their Countries' Enabling Environments (1 = extremely poor, significantly limits our ecommerce business; 10 = excellent, facilitates out ecommerce business), by Firm Size, Online Sales Activity and Location**

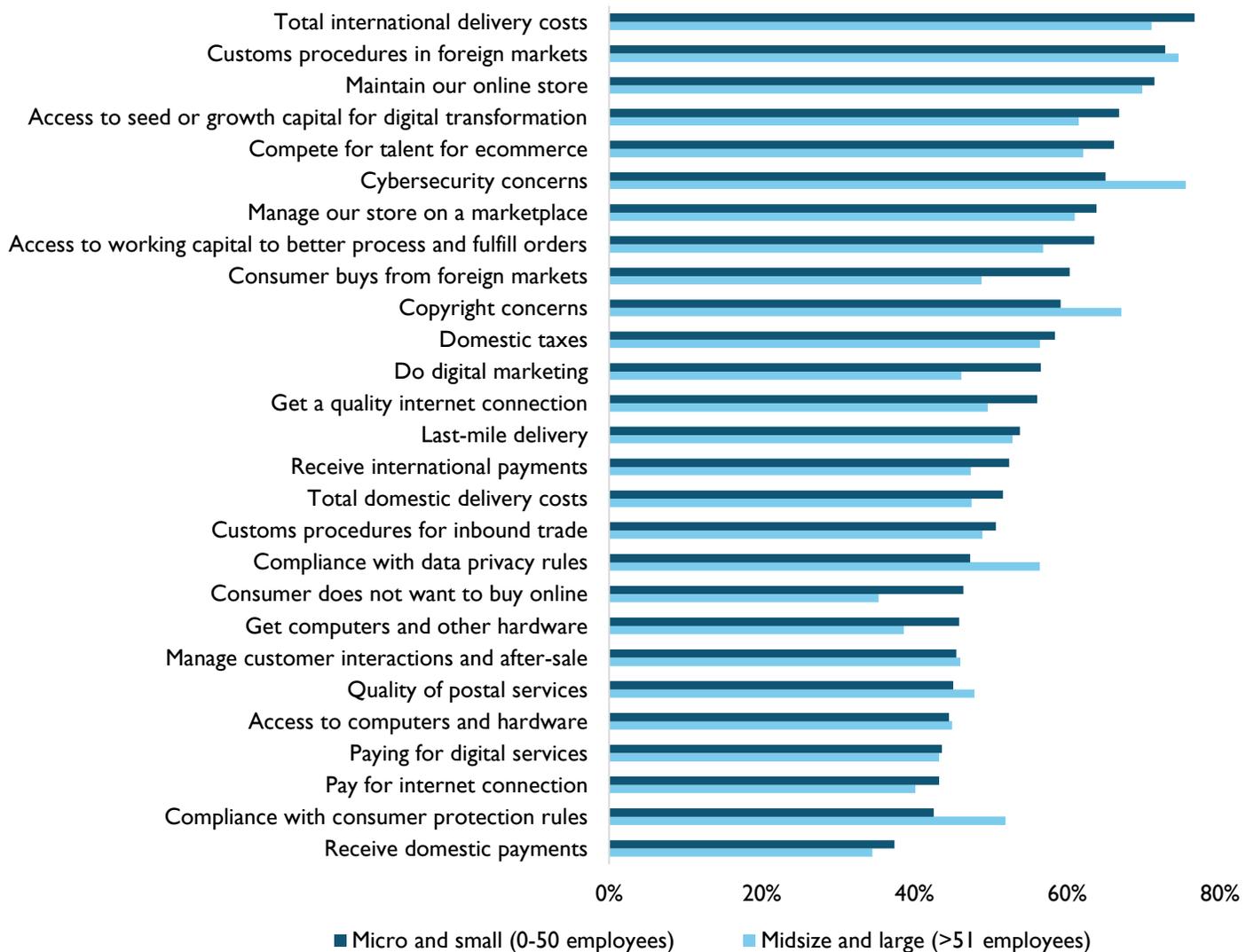


Online sellers of all sizes report challenges in cementing their online presence, dealing with customs procedures and international delivery costs, paying domestic taxes, and accessing financing for working capital and for digital transformation (such as investing in digitizing inventory management) (Figure 21). These observations are echoed by discussions with marketplaces in Africa, which suggest that online sellers often underestimate the working capital needs to fulfill orders they receive online, and that their subsequent challenges to access financing undermine their ability to fulfill orders and thus their reputation with customers and marketplaces they sell on.

For purely social sellers that do not yet have their own online stores and typically do not export, the leading challenges are similar – only these firms also encounter challenges that marketplace sellers have

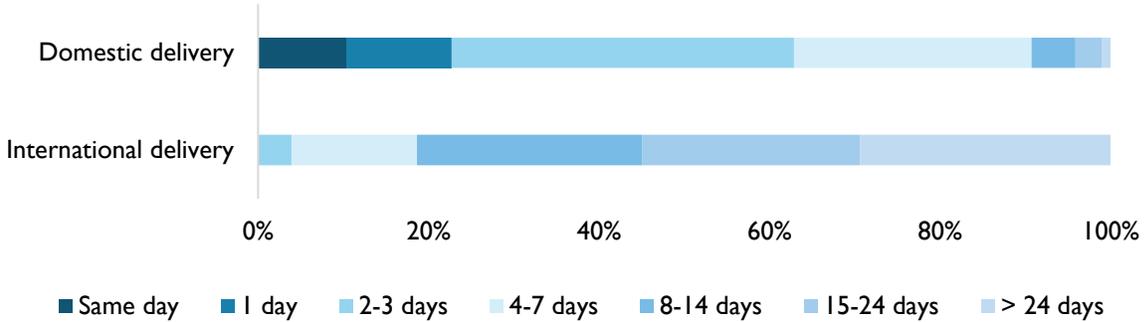
already overcome to an extent, such as setting up on online marketplaces. Social sellers also worry about competition from foreign sellers; in contrast, marketplace sellers have already overcome these concerns, perhaps because they are more competitive firms or because they have more exposure to opportunities for local firms in the African ecommerce market.

**Figure 21: % of Surveyed African Firms Citing Areas in the Enabling Environment for Ecommerce as “Huge Challenge” or “One of the Main Challenges” for Growing their Ecommerce Business, by Firm Size**



Rural last-mile delivery in particular is still challenging for MSMEs with delays at the border and long delivery times being the main culprit. In the consumer survey, 30 percent of online shoppers report waiting 25 days or more for items from abroad and over half reports waiting over two weeks – while a majority received their domestic shipment within a week, often within days (Figure 22).

**Figure 22: % of Surveyed African Consumers Reporting Their Experiences with Typical Delivery Times in Domestic and International Ecommerce Delivery**



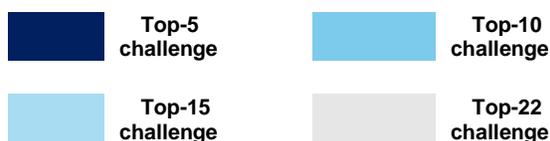
SOURCE: NEXTRADE GROUP DATA.

**9. THE CHALLENGES ARE SIMILAR ACROSS COUNTRIES, POINTING TO A COMMON REGIONAL AGENDA ON TRADE FACILITATION, LOGISTICS IMPROVEMENTS, AND MSME FINANCE**

The challenges reported by MSMEs are similar in each surveyed country, pointing to the importance of a common regional ecommerce agenda. Common institutions such as AUC and African Development Bank can also usefully provide regional digital public goods that benefit every country when supplied regionally, such as a fund for MSME digital transformation and common cybersecurity measures and technologies (Table 2).

**Table 2: Surveyed African Firms' Priority Challenges in the Enabling Environment for Ecommerce, by Online Sales Activity and Country (1 = greatest challenge; 22 = least challenging)**

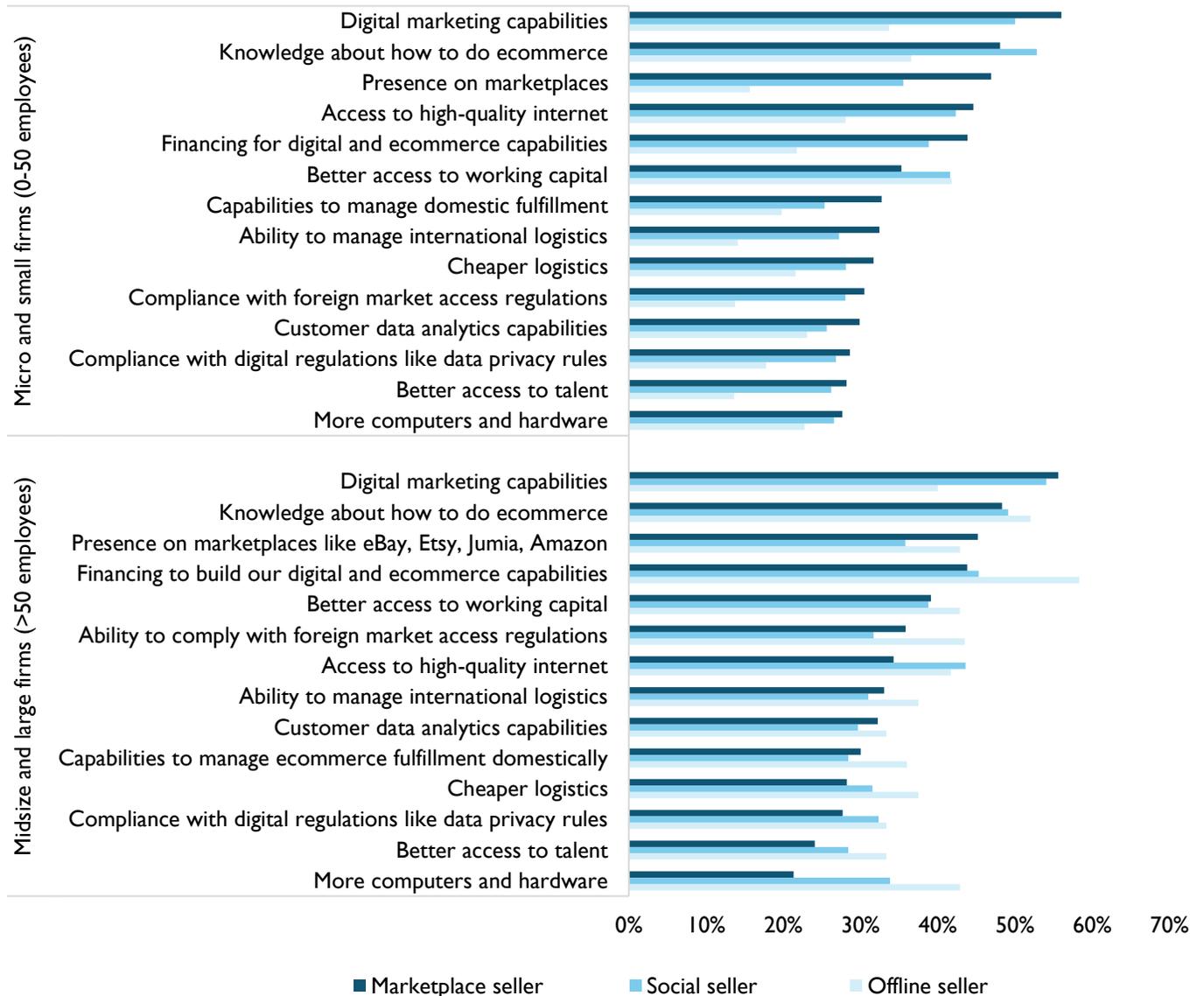
|   | Social sellers |       |         |              | Global and local marketplace sellers |       |         |              |
|---|----------------|-------|---------|--------------|--------------------------------------|-------|---------|--------------|
|   | All countries  | Kenya | Nigeria | South Africa | All countries                        | Kenya | Nigeria | South Africa |
| International delivery costs                                | 1              | 1     | 1       | 1            | 1                                    | 2     | 1       | 4            |
| Customs procedures in foreign markets                       | 2              | 2     | 2       | 3            | 2                                    | 1     | 2       | 1            |
| Maintain our online store                                   | 3              | 3     | 3       | 7            | 4                                    | 5     | 4       | 3            |
| Compete for talent for ecommerce                            | 4              | 4     | 8       | 6            | 8                                    | 6     | 6       | 11           |
| Access to seed or growth capital for digital transformation | 5              | 5     | 5       | 10           | 7                                    | 8     | 5       | 8            |
| Manage our store on a marketplace                           | 6              | 7     | 7       | 5            | 10                                   | 11    | 11      | 14           |
| Cybersecurity concerns                                      | 7              | 9     | 6       | 7            | 3                                    | 3     | 3       | 5            |
| Access to working capital                                   | 8              | 6     | 4       | 8            | 11                                   | 12    | 10      | 17           |
| Consumer buys from foreign sellers                          | 9              | 8     | 13      | 2            | 12                                   | 9     | 22      | 2            |
| Copyright concerns  | 10             | 11    | 12      | NA           | 6                                    | 7     | 9       | NA           |
| Domestic taxes  | 11             | 10    | 15      | 4            | 5                                    | 4     | 7       | 6            |
| Do digital marketing  | 12             | 12    | 10      | 14           | 7                                    | 13    | 24      | 13           |
| Get a quality internet connection                           | 13             | 18    | 9       | 15           | 9                                    | 16    | 8       | 9            |
| Last-mile delivery to customer                              | 14             | 14    | 14      | 9            | 14                                   | 17    | 19      | 6            |
| Receive international payments                              | 15             | 17    | 11      | 13           | 19                                   | 19    | 14      | 18           |
| Total domestic delivery costs                               | 16             | 13    | 18      | 12           | 16                                   | 15    | 20      | 15           |
| Customs procedures in our own market                        | 17             | 15    | 17      | 3            | 13                                   | 14    | 17      | 12           |
| Data privacy rules  | 18             | 19    | 20      | 12           | 18                                   | 22    | 13      | 24           |
| Get computers and other hardware                            | 19             | 21    | 16      | 18           | 26                                   | 25    | 27      | 19           |
| Manage customer interactions and after-sale                 | 20             | 20    | 22      | 20           | 21                                   | 18    | 21      | 10           |
| Quality of postal services                                  | 21             | 22    | 25      |              | 15                                   | 20    | 12      | 26           |
| Pay for internet connection                                 | 22             | 26    | 19      | 19           | 25                                   | 24    | 25      | 7            |



## 10. TO GROW THEIR ECOMMERCE BUSINESSES, AFRICAN MSMEs WANT BETTER DIGITAL MARKETING CAPABILITIES, INTERNET AND FINANCE

African firms want better digital capabilities and financing to grow their online sales. Most micro and small firms that already sell on online marketplaces and export see these needs as especially urgent – likely because they perceive growth opportunities in ecommerce and want to tap them (Figure 23). Firms that do not sell on marketplaces or export express as top-3 needs capacity especially in digital marketing, presence on marketplaces, and access to finance and talent.

**Figure 23: % of Surveyed African Firms Identifying an Area as “Top-3 Need” to Grow their Ecommerce Business, by Firm Size and Online Sales Activity**



How are African governments supporting MSMEs in acquiring the capabilities for ecommerce, and what else can be done? The next section discusses policy and technology solutions.

### III. STATE OF POLICIES CONDUCTIVE TO MSME ECOMMERCE IN AFRICA

Digitized African MSME are gaining from ecommerce and ready to invest in building their online sales capabilities. African governments too are keenly aware of the opportunities ecommerce offers to firms and consumers, and are working to put in place policies that enable ecommerce in their economies and across borders. In this work, they have a number of opportunities, such as:

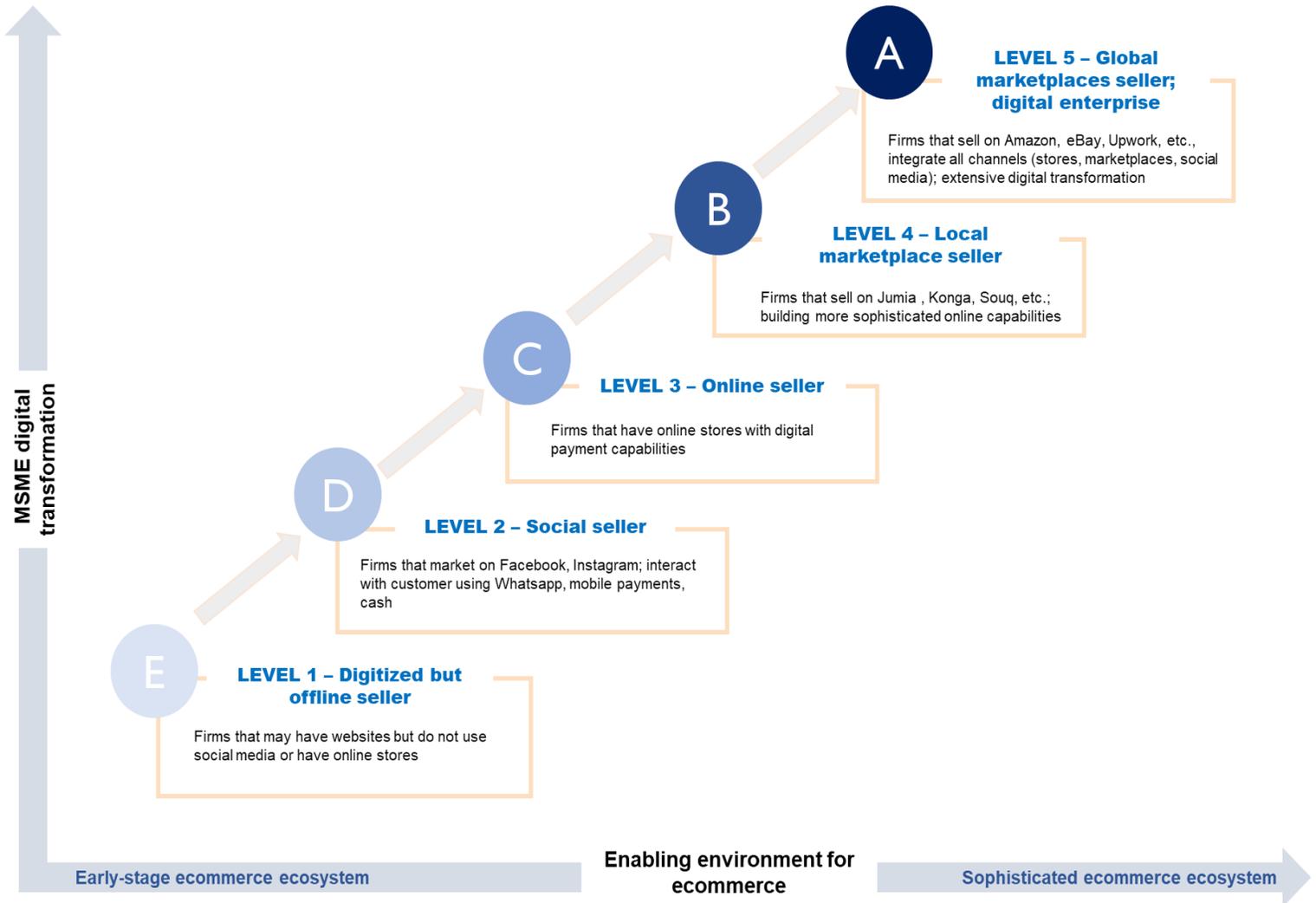
- Rapidly growing penetration of mobile phones and payments;
- Increasingly robust and diverse regional ecommerce ecosystems, such as ecommerce marketplaces, delivery companies, mobile payments, Fintechs and IT services;
- Growing product innovation in ecommerce markets, especially to enable small sellers to start online;
- Young, digitally savvy workforces to work in ecommerce sectors;
- Growth of and public and private sector support for innovation and digital entrepreneurship; and
- Growth of venture financing and foreign investments in the ecommerce sector, including in various ecommerce logistics startups and Fintechs.

However, MSME survey data show that there is still work to be done to unlock the benefits of ecommerce in such areas as customs procedures, logistics, access to finance, and MSMEs' skills and capabilities for ecommerce. Where are African governments in adopting of pro-ecommerce policies?

#### A. ADOPTION OF PRO-MSME ECOMMERCE POLICIES IN AFRICA: WHERE ARE WE?

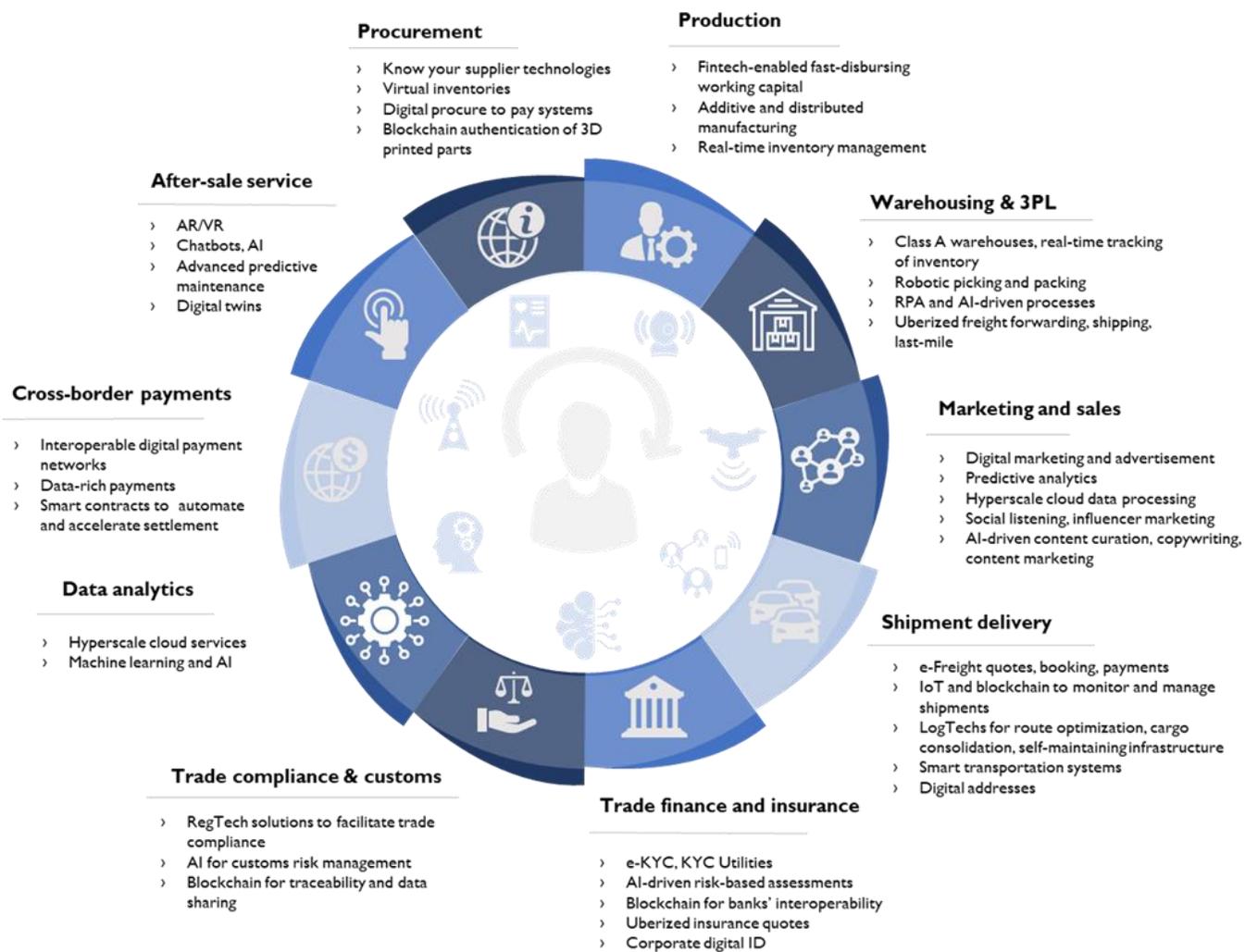
Success in ecommerce development implies new online sellers and great online sales volumes. Conceptually, there are two main success drivers. The first is a firm's own digital transformation and evolution into global online seller (Figure 24). Another success driver is digital transformation of each sales cycle a firm performs, from acquiring a customer to fulfilling the order and performing after-sale service (Figure 25). Both of these drivers are enabled by a policy environment and an ecommerce ecosystem. Empirically, most African countries still lag peer economies and advanced nations in the digital transformation of firms and robustness of ecommerce ecosystems, as measured by the Alliance's Best Place for MSME Ecommerce-Index (Figure 26; see Annex II for variables).

**Figure 24: Online Seller Types and Journeys**



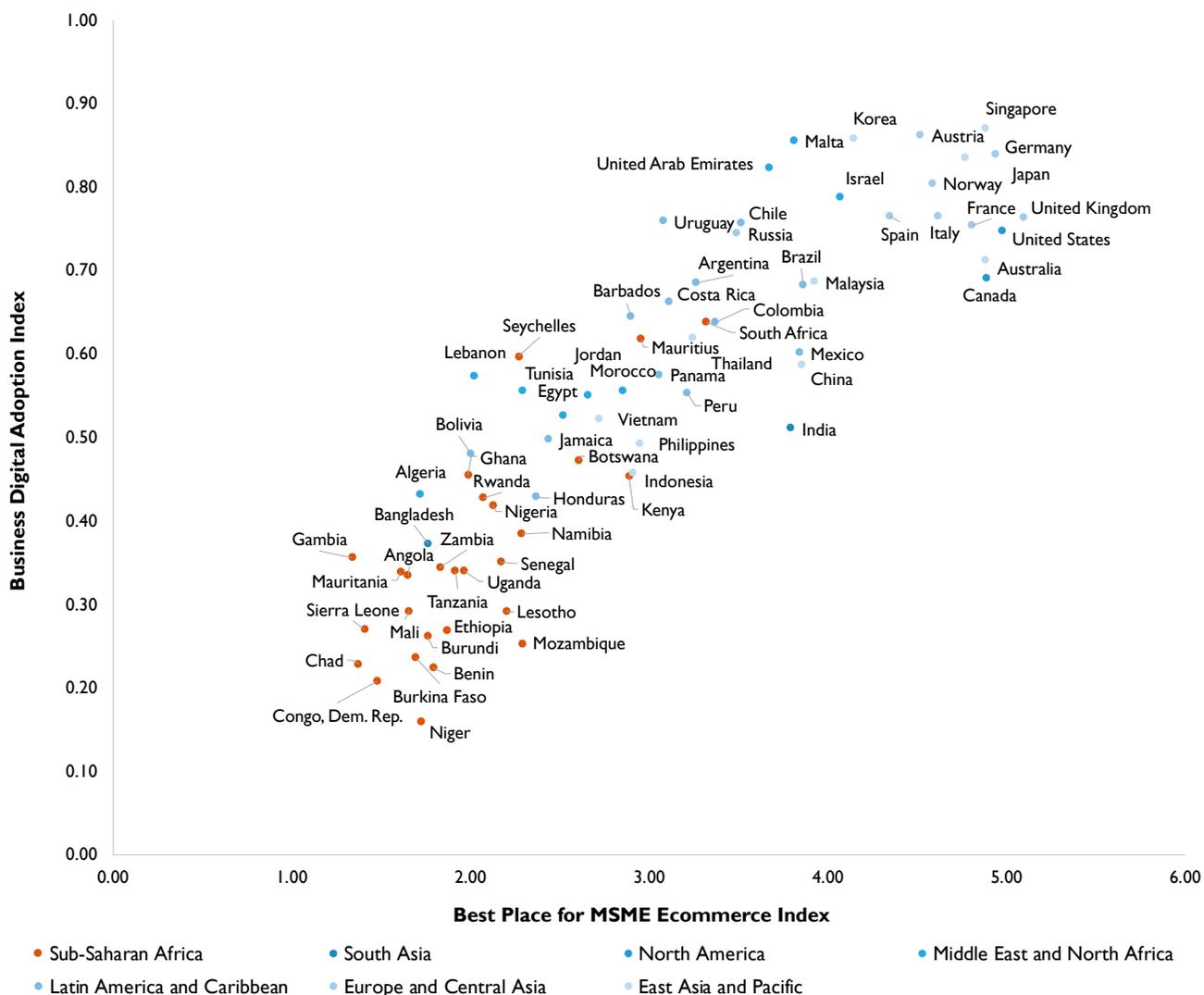
Source: Nextrade Group.

**Figure 25: Digitizing African MSMEs' Sales and Trade Cycle, Selected Steps and Private and Public Technology Approaches**



Source: Nextrade Group

**Figure 26: Firms' Digital Transformation and Enabling Environment for MSME Ecommerce, Selected Economies**



SOURCE: AUTHOR ON THE BASIS OF THE DIGITAL ADOPTION INDEX: WORLD BANK; BEST PLACE INDEX: VARIOUS SOURCES LISTED IN ANNEX II.

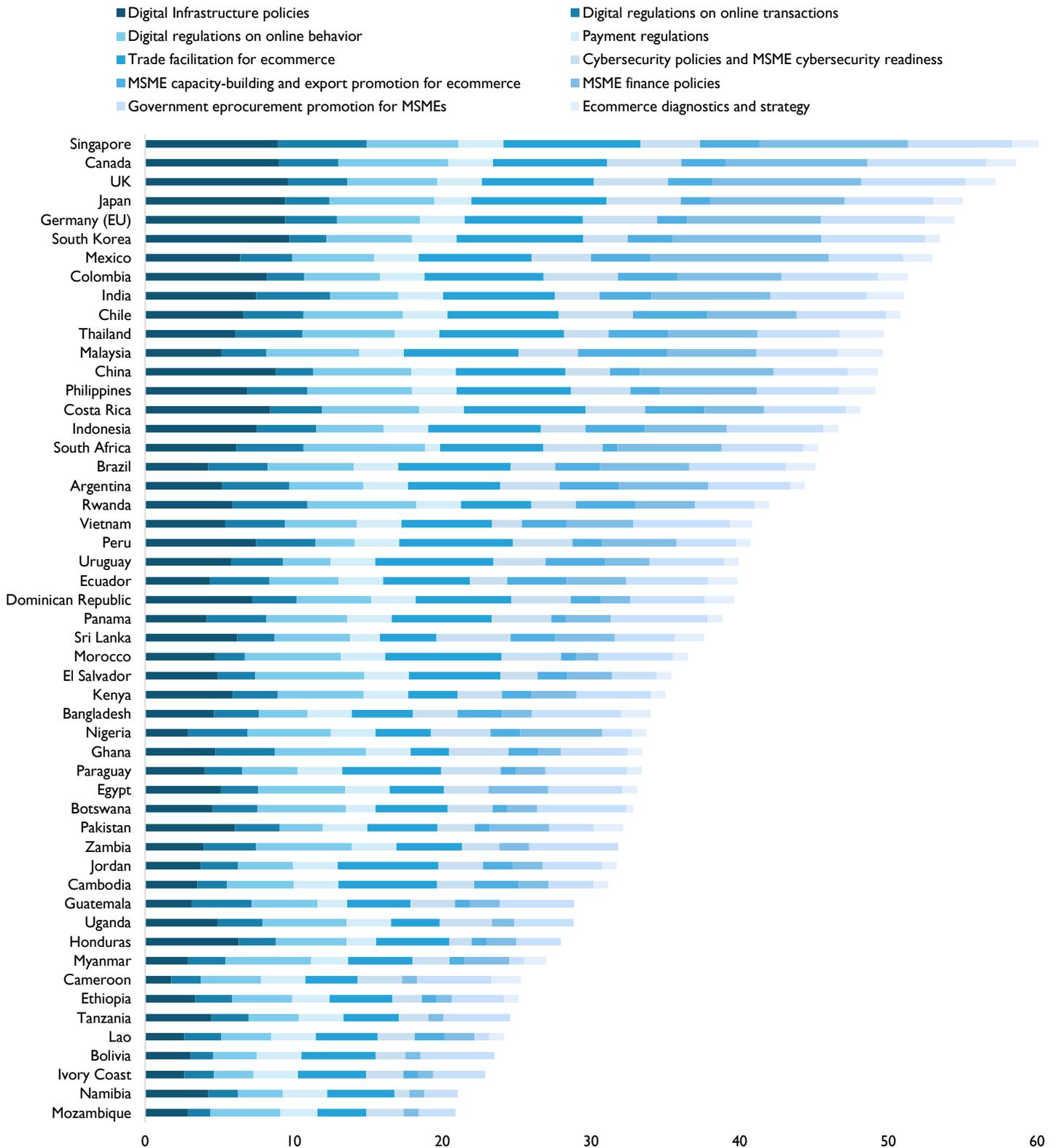
How do African countries compare to peers economies in adopting policies conducive to MSMEs' digital transformation and ecommerce ecosystems? Some answers are provided by the Alliance's MSME Ecommerce and Digital Economy Index developed by Nextrade Group that maps the adoption of over 100 policies in 10 major policy domains that shape ecommerce development in 52 countries, of which 12 are in Africa (see Annex III for the areas mapped).<sup>11</sup> We identified the following patterns:

- **The analyzed Sub-Saharan African countries have adopted about 25-45 percent of the mapped pro-ecommerce ecommerce policies and practices** (Figure 27). Most mapped African countries have adopted basic policies for digital infrastructures, digital transactions (such as digital signatures laws), online payments, and MSME finance instruments such as loan guarantees

and direct loans. In Northern Africa, Morocco does better at 65 percent adoption; most of the mapped advanced Asian, North American and European economies are at 80-90 percent.

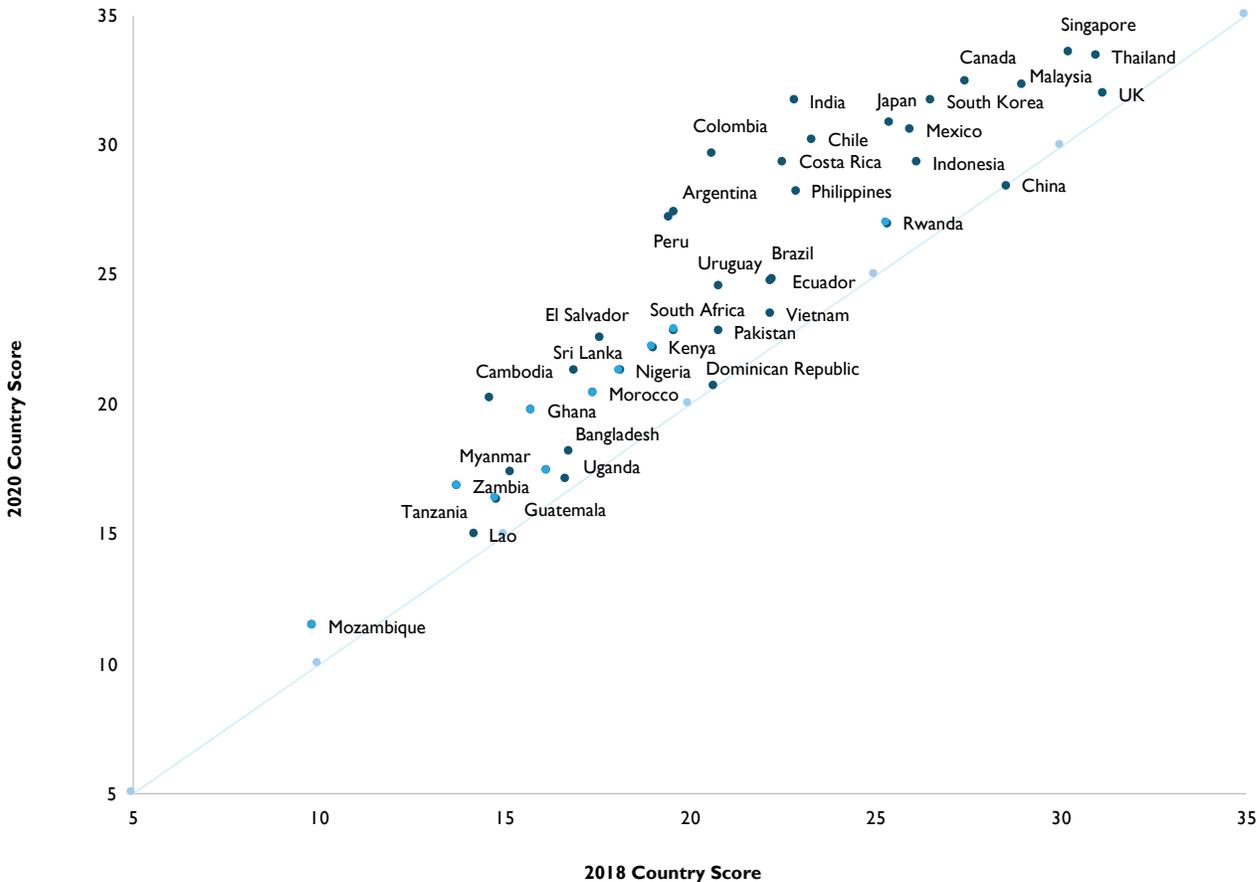
- **African countries have accelerated their adoption of policies conducive to MSME ecommerce in the past few years.** Compared to the first eTrade Alliance’s mapping in 2018, particularly South Africa, Nigeria, and Mozambique have made considerable progress in adopting good policies and practices, including in areas like ecommerce logistics and SME financing solutions (figure 28). Many African countries have also in the past few years put in place data privacy and transfer laws.
- **Policy adoption and implementation are still more limited on digital regulations** such as safe harbors for internet intermediaries, online dispute resolution, many essential trade facilitation commitments, and policies that encourage financial innovations such as Fintech and equity crowdfunding laws.

**Figure 27: Draft MSME Ecommerce and Digital Policy Index 2020-21 (maximum: 75)**



SOURCE SUOMINEN, VAMBELL, AND FURTEK (2021).

**Figure 28: MSME Ecommerce Policy Index 2018 and 2020 (countries and policy areas mapped in 2018 only)**



## IV. POLICY AND TECHNOLOGY SOLUTIONS TO PROMOTE AFRICAN MSMEs' ECOMMERCE

What can African governments do to best respond to MSMEs' pain points in ecommerce and to leverage global good ecommerce policies and practices? The following discussion addresses these questions, with the aim of contributing to African governments' ongoing ecommerce development work. We focus on four enablers of MSME ecommerce – trade facilitation and logistics, MSME finance, MSME digital transformation, and cross-border payments – and propose in each area:

- Vision, goals, and KPIs in each of these areas for 2022-2025; and
- National and regional policy, technology, and public-private partnership solutions to attain these goals; and
- Cross-cutting policies that support all enablers (Table 3).

The overarching goal is to both accelerate African MSMEs' use of ecommerce and the growth of MSMEs' online sales, especially across borders. The envisioned solutions are based on the following principles:

- **Firm-centric and demand-driven solutions.** Solutions discussed here are aimed at building firms' capacity for ecommerce and solving MSMEs' priority pain points to growing their online sales.
- **Mass-customized solutions.** The perennial tension in building MSME capacity to engage in ecommerce and export is between scalability and customization: how to offer solutions to many firms, each with distinct needs, priorities, and constraints. Policy and especially technology can enable mass-customized and localized solutions.
- **Building on what exists.** MSME ecommerce development is not a new endeavor; it means adjusting MSME export promotion, finance, trade facilitation, and other policy areas African governments have worked on for years, to enable firms in digital trade.
- **Aimed at an interoperable and vibrant ecommerce ecosystem.** We might say it takes a village – a virtual village – of private and public service providers to build ecommerce sellers. The key to vibrant ecommerce ecosystems is interoperability among players, enabled by access to such connecting technologies as blockchain, open platforms, and open APIs.
- **Riding on the power of global networks.** The 21st century is an era of virtual global networks – social media networks, ecommerce marketplaces, cross-border payments networks, and peer-to-peer lending networks, among others. These “open loop” networks are multilateral and dense, with hundreds of millions of nodes and billions of interactions and transactions among them, and billions of new potential connections. Policies need to enable African MSMEs to be able to readily leverage these networks for new online customers, world-class services, and secure cross-border transactions.
- **Promoting regional digital integration and provision of regional digital public goods.** The power of ecommerce is that it enables even small firms access to suppliers and customers in foreign markets. Cross-border ecommerce within Africa is still limited – and as such, has huge potential for growth. The African Union Commission is working toward a regional ecommerce strategy. The solutions here are aimed to support that strategy and propose actions that:
  - **Facilitate cross-border ecommerce transactions**, such as logistics and cross-border payments and logistics;

- **Promote cross-border ecommerce**, such as build MSMEs' capacity for cross-border ecommerce and promote cross-border online purchases;
- **Fuel regional digital integration**, such as enabling compatible digital regulations for MSMEs to apply similar rules when transacting across countries; and
- **Promote the provision of regional public goods** – whose value grows the more countries join in the provisions, such as continental digital identity solutions and loan guarantees for MSMEs doing digital transformation (Table 4).

**Table 3: African MSMEs' Pain Points in Ecommerce and Policy and Technology Solutions**

| Enablers  | MSMEs' pain points  | Examples of goals  | Solutions - Domestic  | Solutions - Regional  |
|---|---|--|---|---|
| <br><b>Logistics</b>  | <ul style="list-style-type: none"> <li>• Slow and arcane customs procedures</li> <li>• High total cost of delivery to foreign customers</li> <li>• Elevated cost of hinterland rural last-mile delivery</li> <li>• Poor addresses and cash payments raising delivery times and inefficiencies in the “final 50 feet”</li> </ul> | <ul style="list-style-type: none"> <li>• Domestic delivery for a median shipment in a day within first-tier cities, 2 days to second-and third-tier cities, 3 days to rural areas by 2022</li> <li>• Cross-border inbound delivery times lowered by 25% by 2022 and 50% by 2025</li> <li>• Customs clearance times for imports lowered by 50% in 2025</li> </ul> | <ul style="list-style-type: none"> <li>• Accelerate TFA implementation</li> <li>• Simplify border clearance for low-value items above <i>de minimis</i> thresholds</li> <li>• Promote digitization of trade documents and AI and blockchain for customs risk management and automation</li> <li>• Adopt digital addresses for last-mile delivery</li> <li>• Promote warehouse 4.0 solutions and test-beds for technology-driven delivery solutions, working with cities</li> <li>• “Smart Port” and “Smart Airport” pilots to increase capacity and throughput</li> </ul>   | <ul style="list-style-type: none"> <li>• Full liberalization of trade in goods</li> <li>• Liberalize regional air and ground cargo markets</li> <li>• “LogTech Academy” to promote companies’ adoption of warehousing and logistics technology solutions</li> <li>• Create African “TradeTech Academy” for governments to pilot disruptive technologies in border clearance</li> <li>• Consider regional logistics tech sandboxes, for example for testing autonomous and drone delivery regionally</li> </ul>  |
| <br><b>Finance</b>    | <ul style="list-style-type: none"> <li>• Frequent cash flow constraints</li> <li>• Access to fast-disbursing working capital loans to fulfill orders</li> <li>• Access to long-term funding for digital transformation projects</li> </ul>  | <ul style="list-style-type: none"> <li>• Any MSME can use mobile phone to access a loan in 120 minutes by 2025</li> <li>• &gt;20% of MSMEs that seek funding for digital transformation projects secure it by 2025</li> <li>• Interoperable regional financial ecosystem by 2025</li> </ul>  | <ul style="list-style-type: none"> <li>• Adopt FinTech and equity crowdfunding laws</li> <li>• Guarantee for Fintech-issued working capital loans to online sellers</li> <li>• Adopt of FinTech sandboxes</li> <li>• Promote open banking and open finance</li> <li>• Promote e-invoicing and procure-to-pay solutions, including in B2G transactions</li> </ul>  | <ul style="list-style-type: none"> <li>• Adopt a regional FinTech sandbox and passporting</li> <li>• Pilot a regional credit guarantee to support B2B online buyers’ access to financing to make online purchases</li> <li>• Develop a regional Digital Transformation Fund for online sellers’ digital transformation projects</li> </ul>  |
| <br><b>E-skills</b> | <ul style="list-style-type: none"> <li>• Limited ecommerce and digital marketing capabilities</li> <li>• Use local and global marketplaces</li> <li>• Management of outbound international shipments</li> </ul>   | <ul style="list-style-type: none"> <li>• Increasing the share of MSMEs with online stores to 50% by 2025</li> <li>• Increasing the share of MSMEs that use global marketplaces 25% in 2025</li> <li>• Doubling current MSMEs online sellers’ ecommerce sales by 2023</li> </ul>  | <ul style="list-style-type: none"> <li>• Leverage public-private partnerships to onboard MSMEs on marketplaces and secure logistics, finance, digital marketing, and payment services for ecommerce</li> <li>• Provide mass-customized online capacity-building for social sellers to build capabilities to transact digitally</li> <li>• Work with anchor firms to build MSME suppliers’ ecommerce capabilities</li> <li>• Promote digital capabilities and labor market matching in workforce development strategies</li> <li>• Promote online dispute resolution (ODR) systems for a scalable and quick resolution on disputes in online transactions</li> </ul> | <ul style="list-style-type: none"> <li>• “African 360° eBusiness Academy” to enable MSMEs access holistic capabilities for running a global online business</li> <li>• “Ecommerce Executive Education” program for leaders of established MSMEs to develop ecommerce capabilities and learn from peers across the region</li> <li>• Regional “RegTech” solution to enable MSMEs to access market access data for all products and markets and automate trade compliance</li> <li>• African E-Business Code of Conduct and regional eTrust Mark</li> </ul> |
| <br><b>Payments</b> | <ul style="list-style-type: none"> <li>• Prevalence of cash</li> <li>• Limited interoperability in cross-border B2C payments</li> <li>• Costly cross-border B2C and B2B payments</li> <li>• Frictions in B2B payments in logistics value chains</li> </ul>  | <ul style="list-style-type: none"> <li>• Digital payments in 20% of transactions in Africa by 2022 and 35% in 2025</li> <li>• Cross-border payments available to 50% of African mobile payment users by 2025</li> <li>• Cross-border payment fees cut to global average by 2025</li> </ul>   | <ul style="list-style-type: none"> <li>• Advance regulations governing payment providers that are calibrated to risk</li> <li>• Promote biometric IDs and 3D Secure standards for customer authentication for small purchases</li> <li>• Support open data transfer policies to enable fraud-prevention in digital payments</li> </ul>  | <ul style="list-style-type: none"> <li>• Interoperable cross-border mobile payments with ISO 20222, standardized QR codes, APIs</li> <li>• Promote digitized invoicing and automated payments using smart contracts among players moving B2B ecommerce cargo</li> </ul>   |

**Table 4: Cross-Cutting Policies to Enable African MSMEs' Ecommerce**

|  <b>Digital integration</b>   |  <b>Access to data</b>   |  <b>MSME Digital ID</b>   |  <b>Cybersecurity</b>  |  <b>Business formalization</b>  |
|--|---|--|--|--|
| <ul style="list-style-type: none"> <li>• Ensure compatible and flexible national digital regulations for MSMEs to apply similar rules when transacting across Africa.</li> <li>• Promote regional Digital Dialogues among public and private sectors to assess how digital and other regulations are impacting ecommerce in Africa and discuss best global digital regulatory practices, including emerging models in regional trade agreements.</li> <li>• Promote permanent regional dialogues and information sharing among specific national regulators (e.g., consumer protection agencies) to discuss and align regulatory approaches.</li> <li>• Develop common measurements of ecommerce flows and use, for tracking Africa's ecommerce development and regional digital integration.</li> </ul> | <ul style="list-style-type: none"> <li>• Consider a data transfer regime such as APEC Cross Border Privacy Rules (CBPR) system to enable orderly cross-border data transfers, while respecting national data privacy laws in that are in place</li> <li>• Consider Executive Agreements (as between U.S. and UK) to promote orderly access to data for law enforcement purposes.</li> <li>• Promote public-private dialogues on emerging privacy-preserving technologies such as encryption and confidential computing, and their implications on regulating data.</li> </ul> | <ul style="list-style-type: none"> <li>• Promote decentralized self-sovereign regional Corporate Digital ID identity solutions for MSMEs to be authenticated and verified by service providers and customers.</li> </ul> | <ul style="list-style-type: none"> <li>• Adopt cybersecurity laws and Computer Emergency Response Teams (where not yet in place).</li> <li>• Support and subsidize MSMEs' cybersecurity training and technology purchases.</li> <li>• Partner with technology companies and VCs to develop cybersecurity solutions tailored to MSMEs.</li> </ul> | <ul style="list-style-type: none"> <li>• One-stop shop fully online business registration (where not implemented yet).</li> <li>• Carrots and sticks approaches – tax holidays and fee exemptions coupled with inspections.</li> <li>• Promote Africa eTrust Mark among formal companies.</li> </ul> |

The following sections discuss policy proposals in detail.

## A. IMPROVING THE ENABLERS OF MSME ECOMMERCE: LOGISTICS, FINANCE, DIGITAL CAPABILITIES, PAYMENTS

### ENABLER 1: ETRADE FACILITATION AND ECOMMERCE LOGISTICS

Efficient logistics and customs procedures are critical for MSMEs' participation in cross-border ecommerce, from enabling them to import inputs for production to delivering products to customers. In Africa, arcane border processes and inefficient logistics are the leading barrier for MSMEs and consumers to engage in ecommerce. In our survey, MSMEs indicated they struggle with the costs of cross-border shipping and last-mile delivery, especially in rural areas, and are frustrated with slow customs clearance and burdensome, often redundant paperwork.

These findings are of course not new. Most African countries are at the bottom half of leading indices measuring trade facilitation, such as the Logistics Performance Index, the Ease of Doing Business indices related to trade, and Enterprise Surveys indicators on customs clearance times. The cost of transportation in Africa constitutes by some estimates 50-75 percent of the retail price of goods, three times higher than in developed economies. One reason for high transport costs is that time is money in trade: one day's delay in transit is equivalent to 1.5 percent additional tariff and up to 6 percent for time-

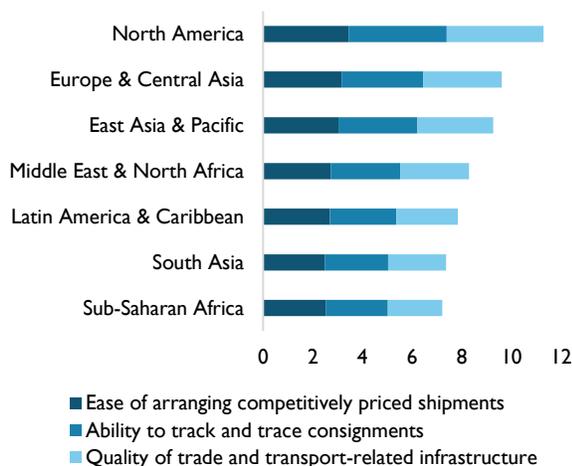
sensitive goods.<sup>12</sup> The costs in turn mean that cross-border ecommerce is primarily accessible to firms that have high-margin products and/or price-insensitive buyers able to absorb the logistics costs. The reasons behind delays and inefficiencies are well-known and include:

- **Paper-based, outdated border procedures**, especially when importing goods into their countries or exporting to other African countries. On average, African economies have achieved only 46 percent adoption of paperless trade commitments (such as e-payment of customs duties or electronic submission of customs declarations) and 25 percent in cross-border paperless trade measures (such as electronic exchange of certificates of origin), versus over 75 percent and 54 percent, respectively, in advanced nations.<sup>13</sup> Most African countries are signatories to the World Trade Organization (WTO) Trade Facilitation Agreement (TFA) that commits signatories to digitize documents and processes and streamline border clearance, but most sub-Saharan African countries are only in early phases of implementation and have not put in place such measures key to fast border clearance of items bought online, such as risk management, pre-arrival processes, e-payment of customs duties, and separation of release from final determination of customs duties, taxes, fees and charges.
- **Lack of interoperability is a major challenge to border agencies in Africa and beyond.** Even in countries with an electronic single window, border agencies still often operate within their own silos, which limits every agency's traceability of shipments. Border agencies in single windows can interoperate poorly, with limited data sharing and coordination of actions such as risk management and inspections. Interoperability among African countries' customs agencies is also limited, impeding agencies' ability to trace goods to their origin and perform pre-clearance of goods even before they arrive.
- **Limited road and port infrastructure.** Some 43 percent of all Africans and 35 percent of Africans in the poorest countries have access to an all-seasons road, far below global average of 69 percent.<sup>14</sup> Urban areas are often fragmented and sprawling without connective infrastructure – the share of paved roads of urban infrastructure is low and drops off abruptly.<sup>15</sup> Traffic in major cities is very heavy. Ports too underperform: the turnaround times in African seaports are among the slowest in the world.<sup>16</sup>
- **Lack of precise addresses.** Lack of addresses in African cities and rural areas cause delays, high variability in delivery times, and lower delivery time accuracy, which translate into higher per-delivery costs and poor user experience. For example, Jumia makes 30,000 deliveries every day in each major African city; for any one driver, one-half or 15 out of 30 daily deliveries can go undelivered due to challenges in finding the customer and have to be taken out again the next day, resulting in massive duplication of effort.<sup>17</sup> Inefficiencies caused by lack of addresses have reportedly caused major ecommerce platforms to divest from or not enter into certain African countries.<sup>18</sup>
- **Low drop density in shipping.** The demand and supply of items to be delivered is still low especially in rural areas, which raises the unit cost of any one shipment. After all, a delivery company's scale economies are much greater if they can deliver, say, ten parcels in an hour to one urban neighborhood than when they deliver two parcels over a trip of five hours to a remote rural area. This limited "drop density" especially in more remote areas arrests economies of scale and is a key cost-driver in first and last mile delivery and in cross-border B2C and B2B shipments especially within smaller economies.

- Limited utilization of technologies in logistics.** Limited scale economies can be overcome with cargo consolidation techniques; similarly, digital booking solutions as well as use of blockchain can accelerate delivery, reduce empty backhaul, harness potential transport assets, and enhance interoperability among various logistics services in multimodal systems. Africa's inland logistics markets in general are diverse, composed perhaps of a few larger formal operators and great many small and often informal one truck-one driver companies, freelancers on a motorbike, as well as bus companies, posts, media houses and security companies. Most of these players are still informal and technology-poor. The efficiency of the first and last mile delivery is in sub-Saharan Africa the lowest in the world and less than one-half of that in advanced markets.
- Market structures that may skew competition.** While in principle there is a diverse supply of logistics services in African markets, there are both private arrangements among providers and policy barriers that undermine competition and market forces. Air cargo markets are not yet fully liberalized.

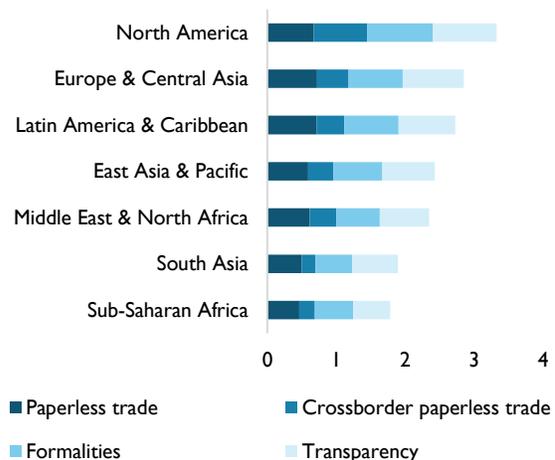
Figure 29 summarizes comparative data on Africa's border processes key to ecommerce, logistics efficiency and quality; Figure 30 summarizes trade facilitation and paperless trade implementation.

**Figure 29: Logistics Performance Index (max. 15)**



Source: World Bank Logistics Performance Index.

**Figure 30: Paperless Trade Index (max. 4)**



Source: UN Global Survey on Trade Facilitation and Paperless Trade Implementation

To be sure, there is a tremendous amount of positive work and investment on the way in each of these areas. For example, companies like Sendy, Kwik, Parcelninja, uAfrica, and Africa Logistics Properties are using first-rate technologies to streamline ecommerce fulfillment and warehousing. Postal services have embraced ecommerce – for example, Ghana Post has launched a digital addressing system and a designated ecommerce delivery fleet, while Egypt Post transformed its Consolidation Hub at Cairo airport in 2019 into a technology-driven ecommerce logistics center. In addition, 28 African countries have agreed on the Single African Air Transport Market (SAATM) project as part of the African Union Agenda 2063, which aims to liberalize and create a single market for civil aviation in Africa.<sup>19</sup> What then are the best ways to build on these and many other advances, to improve ecommerce logistics further? Here are some suggestions:

## VISION AND POTENTIAL KPIS TO ENABLE MSME ECOMMERCE IN 2022-2025

- Domestic delivery for median shipments in one day within first-tier cities (overnight), in two days from first-tier to second- and third-tier cities, and three days from first-tier cities to rural areas by 2023.
- Cross-border inbound delivery times lowered by 25 percent by 2023 and 50 percent by 2025, so that the median parcel moves from foreign seller to a domestic buyer in less than two weeks, as opposed to over 25 days today.
- Customs clearance times for imports lowered by 50 percent in 2025 – in sub-Saharan Africa countries, this means coming to the level of Slovenia in the Enterprise Surveys; for Northern African countries like Egypt and Morocco, this means coming to the level of Poland.

## DOMESTIC POLICY AND TECHNOLOGY SOLUTIONS

### I. FINALIZE TFA IMPLEMENTATION

One key to attaining these targets is African countries' full implementation of TFA commitments in areas critical to ecommerce, such as (1) pre-arrival processing and pre-clearance of goods; (2) electronic submission of air cargo manifests; (3) risk management; (4) separation of border release from final determination of customs duties, taxes, fees and charges; (5) expedited shipment; (6) e-payment of customs duties and fees; and (7) digital single windows. A vast literature shows that digitization of paper and border processes significantly shorten border clearance times and mitigate corruption in customs.<sup>20</sup> In addition, TFA implementation would help bring African countries to a par with the standards applied among the world's border agencies, which further enables multi-country delivery services to operate with predictability and transparency and lower costs to shippers.

During COVID, these provisions have been critically important to facilitate trade in countries that have implemented them. Where they have not been implemented, , paper-based processes and lack of standardization decelerated the clearance of critical shipments.<sup>21</sup>

### 2. FREE TRADE IN AFCFTA MARKETS, WHILE SIMPLIFYING DUTY COLLECTION FOR LOW-VALUE ITEMS FROM EXTRA-REGIONAL MARKETS

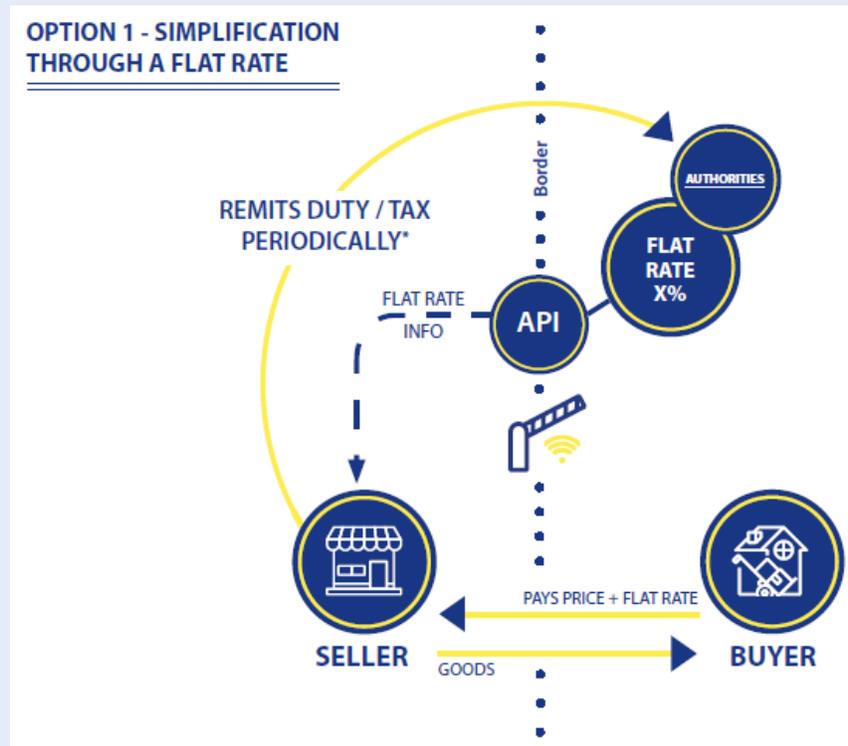
The less time and money MSMEs have to spend at borders, the more cross-border ecommerce there will be. Under the AfCFTA, intra-African trade should be free of duty. With extra-regional partners with which African economies do not have free trade agreements, the simplest solution to reduce time and cost in border clearance is to increase duty-free thresholds for entry.<sup>22</sup> For low value items above *de minimis* thresholds, African economies can apply a simplified process and a flat rate or “buckets” as applied by Canada (Case 1).

#### **Case 1: Facilitating trade for low-value items above *de minimis* thresholds**

Africa can further facilitate inbound ecommerce from extra-regional markets of low-cost items that are above *de minimis* thresholds but are still low value, such as below \$2,500.<sup>23</sup> The Global Express Association has recently proposed some options for countries to facilitate ecommerce:

### Option 1: Combined flat rate

Some countries have chosen to implement a flat-rate import charge, set at a reasonable level, that replaces all duties and taxes. This has the benefit of simplicity and predictability. Information on the rate can be provided through an API (Application Programming Interface), making collection at origin from the foreign vendor very easy (Figure Option 1).



SOURCE: GLOBAL EXPRESS ASSOCIATION 2020.

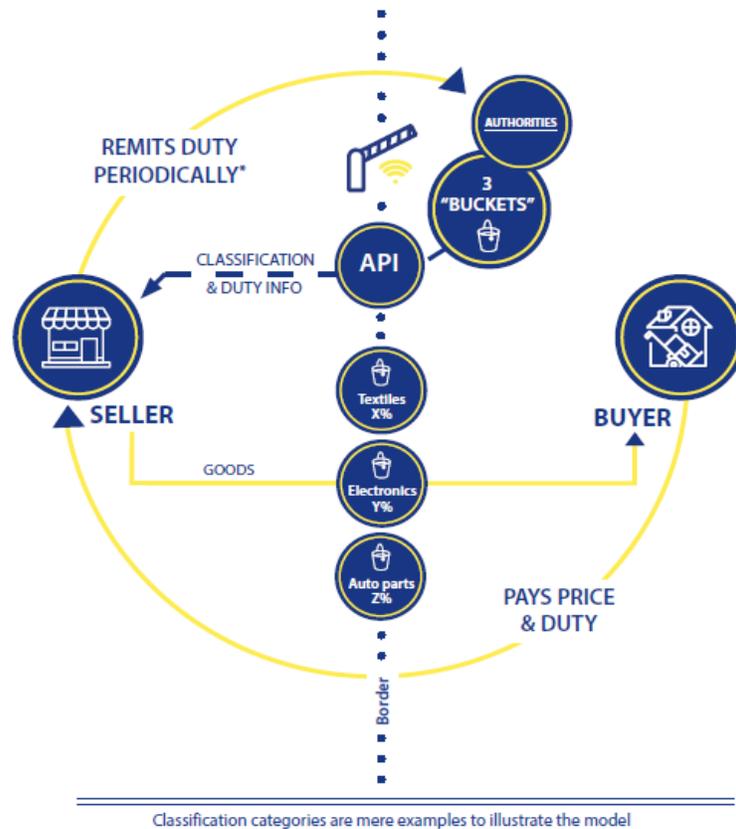
### Option 2: Simplified classification of products

Another method to do so is for all African countries to adopt simplified classification and duty rate system applied in Canada.<sup>24</sup> Under the scheme, shipments below 500 Canadian dollars are grouped in three “buckets” that collectively contain the nearly 5,400 harmonized system codes used to classify imports. Each bucket is assigned a rate depending on whether the goods imported enter under FTA preferences (as below). The solution enables the foreign vendor to easily calculate the duties and offer customers a landed cost at the point of sale (as there is no confusion which specific HS code it may be under.) This also makes it easier for customs to forecast revenue (Figure Option 2).

| "Buckets" of simplified tariffs in Canadian General Harmonised System 2012  | MFN Rate | FTA Rate |
|---|----------|----------|
| <p><b><u>BUCKET 1 - HS 982515100000</u></b><br/>           Bedding / Linen / Towels / Curtains / Clothing / Apparel (excluding religious &amp; saris) / Footwear &amp; parts thereof (including skates) / Textiles</p>  | 20%      | Free     |
| <p><b><u>BUCKET 2 - HS 9825200000</u></b><br/>           Auto Parts (excluding engine / ignition) / Beauty aids / Cosmetics / Toiletries / Wax / Travel Sets / Bicycles / Tricycles / Brushes / Candy / Chocolate, Snack Foods / CD/ DVD's (prerecorded music) / Ceramics / Cleaning / Polishing / Lubricating products / Clock / Coffee / Tea Makers / Cookware / Kitchenware / Tableware / Golf Clubs / Balls / Handbags / Wallets / Hats / Instruments for writing / drawing / painting / Jewelry (Finished/Imitation) / Leather &amp; goods thereof / Luggage / Miscellaneous goods not elsewhere specified / Musical Instruments (Guitars, Keyboards, Drums etc.) / Plastic Articles, NES / Saris / Sports Equipment (excluding downhill skis / rackets / hockey sticks / football) / Textile floor coverings / Tools, hand held (not powered) / Umbrellas / Walking sticks / Whips / Crops</p>  | 8%       | Free     |
| <p><b><u>BUCKET 3 - HS 9825300000</u></b><br/>           Auto parts for engine / ignition / Bicycle parts / Cameras &amp; parts / accessories thereof / CD / DVD's (blanks / unrecorded) / Computers / Laptops &amp; parts / accessories thereof / Downhill skis / Hockey sticks / Racquets / Football equipment / Electrical apparatus (Switchers / Plugs / Sockets etc.) / Exercise Bicycles / Stair climbers &amp; parts thereof / Eyewear (Sunglasses etc.) / Machinery parts, NES / Microscopes / Motorcycle parts / Musical Instrument parts &amp; accessories / Novelty / Festive items / Phones - Tele / Cell Head / Ear / Micro / Power tools (hand held) / Precious gems / metal findings / Printed Matter (Printed art / Books / Brochures etc.) / Safety Headgear / Software / Toys / Cards / Handicrafts / Hobby crafts / Video game consoles &amp; Electronic games / Video / Digital cameras / Watches &amp; Watch / Clock parts &amp; accessories</p> | Free     | Free     |

SOURCE: GLOBAL EXPRESS ASSOCIATION 2020.

### OPTION 2 – SIMPLIFIED DUTY COLLECTION



SOURCE: GLOBAL EXPRESS ASSOCIATION 2020.

### 3. DIGITIZE AND AUTOMATE CUSTOMS CLEARANCE AND ENABLE INTEROPERABILITY AMONG BORDER AGENCIES

Digitizing paper-based documents and processes is a starting point for traceability, predictability, and automation in customs clearance. Emerging technologies such as artificial intelligence – increasingly widely used and piloted by countries such as Brazil, Jamaica, Japan, Korea, the Netherlands, and Singapore – open important opportunities for risk management at scale and improving the accuracy of customs declarations in inbound ecommerce shipments.<sup>25</sup> Blockchain is similarly increasingly deployed by customs agencies to secure and share data on shipments and solve for challenges of duplication of efforts, limited traceability, and poor interoperability among border agencies. As an example, in April 2021, Egypt announced it would start using blockchain to manage shipment data and trace shipments to their origin.

### 4. ADOPT DIGITAL ADDRESSES TO ACCELERATE LAST-MILE AND FINAL 50 FEET DELIVERY

The lack of national street address systems in most African countries is a major obstacle to efficient ecommerce delivery. Highly targeted digital addresses have in pilots been found to reduce the time for last-mile delivery more than 30 percent and the volatility of delivery times by 75 percent even in cities that already have world-class addressing systems, resulting in cost-savings.<sup>26</sup> There are both public and private sector solutions. One open-source solution is Google Plus Codes addressing system that slices

the world into a grid of trillions of 3m x 3m squares, each with its unique code, and that has been adopted both to locate people in extremely crowded areas (such as dense residential areas in Kolkata, India) and in very sparsely populated rural areas (such as Navajo Nation in the United States). A governmental entity's endorsement of digital addresses is vital to make them the *de facto* addressing system.

## 5. ENABLE TEST-BEDS AND SANDBOXES FOR TECHNOLOGY-DRIVEN LAST-MILE DELIVERY, WAREHOUSING, AND FULFILLMENT SOLUTIONS

The development of ecommerce markets tends to be highly correlated with the diffusion and development of last-mile delivery solutions. One exciting approach promoted by African governments such as Rwanda, Kenya, Malawi and South Africa is drone delivery, which, if scaled, could help (quite literally!) overcome the problem of limited road infrastructure especially in the delivery of time-sensitive items such as medicine to rural areas. Drones have in pilot projects lowered delivery times – though also raising new concerns about privacy that will need to be dealt with.<sup>27</sup> In general, African national and local governments can work with the private sector and postal services to develop technology-enabled logistics solutions and business models that are explicitly aimed at bypassing the continent's road and port infrastructure problems. For example, governments can mount test beds and “LogTech sandboxes” with the private sector to test new delivery technologies.

## 6. PROMOTE MODERN WAREHOUSING AND DELIVERY SOLUTIONS WITH CITIES

City governments across Africa are increasingly facing the issues of many other cities around the world – namely to accommodate the growing volumes of ecommerce warehousing and delivery in their cities. At the same time, city governments are systematically considering ecommerce and ecommerce logistics as an opportunity to enable MSMEs to grow, create logistics jobs, and attract online sellers. Many cities from São Paulo to New York and Los Angeles have created policies and build new facilities to facilitate ecommerce – for example by incentivizing nighttime deliveries to reduce daytime congestion, and working with the private sector to open urban warehouse facilities and micro-warehouses underserved parts of cities. Amid COVID-19, many cities have also accelerated the use of autonomous vehicles such as drones, last-mile bots, and driverless vans to deliver groceries, medicine, and frozen goods. While ecommerce is still a small share of African economies, it is growing – and city governments can learn from experiences in other parts of the world to streamline delivery and work with local industry to create ecommerce logistics and warehouse jobs in urban areas.

## 7. PROMOTE SMART AIRPORTS

The global smart ports revolution in maritime ports has been accompanied by a smart airport revolution, which among other things can imply the use of digital data and blockchain Internet of Things (IoT) applications and other technologies to coordinate and monitor airport operations and assets. The growth of ecommerce is highlighting the importance of improving airport operations, to accelerate plane turnaround times, improving the quality and efficiency of cargo handling; and fostering air-surface links and coordination between airports and land cargo operators. These types of measures are especially important in African countries where airlines struggle under heavy taxes and regulations. Some African airports have significantly modernized cargo handling capacities – one example is the buildout of Africa's largest modern cargo terminal in Addis Ababa for Ethiopian Airlines.<sup>28</sup> There could be timely opportunities for smart airport initiatives in African airports to accelerate throughput; use of technology could also reduce the pressures to fund costly airport expansion projects.

## REGIONAL SOLUTIONS

### I. LIBERALIZE AFRICA'S AIR CARGO AND GROUND LOGISTICS SERVICES

Thanks to the growth of ecommerce pre-COVID, air cargo was gaining share from maritime trade as the means of moving trade, and nearly one half of air cargo traveled in the belly space of passenger planes. While COVID has drastically reduced passenger flights, cargo flights have continued operating, and inland logistics have in most markets kept moving.<sup>29</sup> Countries with the least disruptions have fully liberalized, professional, and competitive air cargo and freight markets. The SAATM, if implemented fully, promises to create new efficiencies in African air cargo and promote intra-African trade.<sup>30</sup> Governments could also consider a Single African Freight Market to liberalize national road transport markets, enable licensing and passage of transporters, and ideally also digitize border crossings and processes. Such reforms have lowered and can further lower transport costs significantly within Africa and promote regional integration.<sup>31</sup> To ensure parcels move in the next crisis, governments should exempt express delivery services from any transport restrictions.<sup>32</sup>

### 2. LOGTECH AND TRADETECH ACADEMIES FOR LEVERAGING TECHNOLOGY-DRIVEN LOGISTICS SOLUTIONS

The boom in ecommerce amid COVID-19 is expected to lead to exponential growth in ecommerce logistics demand globally in the next five years – for example to manage the rapid growth in the volume and diversity of stock keeping units, and the pressures for fast delivery. In Africa, there are many promising startups that service this demand already, but existing B2B and B2C delivery providers, warehouse operators, fulfillment centers, and others also look to better service the demand for ecommerce logistics. Major retailers and other large businesses that manage their own warehousing and logistics need to accelerate their digital transformation by learning about emerging solutions and training their staffs to apply them. In response, African countries could partner with technology firms to create a LogTech Academy that helps businesses learn about and test warehousing and logistics technologies and business models; supports the development of a digitally-savvy workforce for the logistics sector; and funds promising digital transformation projects in the sector. An extension of the concept could be a TradeTech Academy aimed to enable advanced African trade agencies to systematically develop technology pilots, such as using AI and blockchain in automating risk assessment and clearance of ecommerce shipments.

### 3. INTEROPERABLE CUSTOMS

Interoperability and digital data share among customs agencies in most parts of the world is very limited – when interoperability would pre-empt duplication of efforts and help all countries trade goods to the origin and perform pre-clearance of goods even before they arrive. As African customs and border agencies digitize, they can learn about the important progress toward interoperability from Latin America where Chile, Colombia, Costa Rica, Peru, and Mexico have successfully tested blockchain to share Authorized Economic Operator data with each other; and Brazil, Argentina, Uruguay, and Paraguay are piloting bCONNECT to further interoperability among their customs.<sup>33</sup>

## ENABLER 2: ACCESS TO FINANCE

Limited access to capital is a key constraint for African MSMEs to engage in ecommerce. Online sellers and buyers tend to encounter three types of financing constraints:

- Fast-disbursing working capital loans for supplies and labor to process and fulfill an order;
- Longer-term loans and equity solutions to finance digital transformation, such as create omnichannel capabilities, supplier and customer relationship management systems, inventory management systems, and so on; and
- Especially in B2B transactions, trade finance, such as supply chain finance or letters of credit, that the importer will pay after receiving goods or services.

These challenges reflect African MSMEs' long-standing financing gaps, estimated at over \$330 billion.<sup>34</sup> While strong majorities, often over 80 percent, of African MSMEs do have bank accounts, only a fraction, typically fewer than 20 percent, have lines of credit and one-half lacks the capital needed to grow.<sup>35</sup>

Banks are unlikely to solve for MSME online sellers' working capital needs in the short-run. Banks in Africa as elsewhere are under increasing regulatory pressures, especially KYC/AML compliance, which raises the fixed costs of due diligence and makes small loans uneconomical. Banks in Africa also have particularly limited data on MSMEs and particularly great challenges to enforce loan contracts. In addition, MSMEs in Africa have low liquidity and a high share of nonperforming loans. These challenges translate into high collateral requirements that MSMEs are hard-pressed to meet. As a result, MSMEs resort to internal funds, supplier credit, or, if accessible, credit cards to meet working capital needs.

The best and most scalable immediate opportunity to enable African MSMEs access to fast-disbursing credit are Fintechs that are unencumbered by complex financial regulations surrounding banks, and armed with data and technology to accelerate loan underwriting processes. Fintechs have proliferated in Africa and some lend to MSMEs. As examples, Kenya's 4G Capital uses data and algorithms to provide unsecured working capital loans to MSMEs, and mobile loans between \$20 and \$500;<sup>36</sup> Merchant Capital helps South African MSMEs access working capital, underwriting loans based on MSMEs' transactional data; and Mastercard's Kionect enables small kiosk owners in Nairobi to borrow to buy inventory from wholesalers, using Musoni, a regional micro-finance provider.

These types of solutions are fitting for online sellers – which also have much better digital data on their transactions they can share. In the United States, Fintechs lending to MSMEs have enabled rural and unbanked MSMEs to secure financing gaps precisely this way.<sup>37</sup> African governments are at different stages of crafting financing regulations and encouraging practices that would help scale alternative financing markets, such as Fintech laws, equity crowdfunding laws, regulatory sandboxes, and open banking practices. In addition, formal online sellers will inherently generate digital data on their transactions that could be better used by all players in the financial services ecosystem, including banks, to accelerate loan underwriting.

African MSMEs also indicate needs for financing their digital transformation. Banks are unlikely to lend to these projects – they require longer-term lenders and equity financing. Groundwork has been laid. A growing number of African governments such as those of Nigeria, Rwanda, Kenya, Morocco and Ghana offer such direct loans, even if not necessarily explicitly to firms' digital transformation projects. Many African governments also have guarantees and financing windows for women entrepreneurs, including for digital business.

## VISION AND POTENTIAL KPIS

- Online seller MSMEs can use their mobile phones to know if they qualify for a working capital loan within 120 minutes by 2025.
- At least 20 percent of online seller MSMEs that seek long-term loans or equity funding for their digital transformation projects to build their ecommerce capabilities secure it by 2025.
- “Open finance”: Stakeholders in the financial services ecosystem (banks, Fintechs, payment providers) and ecommerce marketplaces can share data to facilitate the provision of financial services to MSMEs.

## POLICY AND TECHNOLOGY SOLUTIONS

### 1. FINTECH SANDBOXES AND PASSPORTING

African economies, like many around the world, are amid a FinTech boom. Many countries such as the UK, Singapore, Australia, Mexico, and others are using regulatory sandboxes to allow FinTech applications be tested for 12 to 24 months without subjecting them to usual financial regulatory requirements; countries in Africa such as Kenya, Egypt, South Africa, and Rwanda, among others, have adopted a sandbox and Nigeria and Ghana have issued plans for them. The South African Reserve Bank (SARB) is part of the 29-member Global Financial Innovation Network (GFIN) global regulatory sandbox.

### 2. PROMOTE E-LOAN GUARANTEE: GOVERNMENT GUARANTEES ON FINTECH-ISSUED LOANS TO MSMEs

Most government around the world, including in Africa, have sought to expand MSMEs’ access to finance by offering guarantees on bank loans to MSMEs. Research suggests that government guarantees around the world have helped MSMEs obtain additional loans on better terms as well as expanded lending to MSMEs during cyclical economic shocks that tend to hit MSMEs harder than large firms.<sup>38</sup> At the same time, banks are willing to lend only to selected MSMEs and their loan approval processes are long. Meanwhile, Fintechs have proliferated around Africa and helped open MSMEs’ access to fast-disbursing working capital loans. This setting opens an opportunity for governments and development organizations to expand their loan guarantee programs to loans issued by Fintechs to MSMEs, and thereby expand the pool of MSMEs eligible for quick loans. The concept could also be applied to export credit agencies that in most countries guarantee bank-issued export working capital loans to small exporters.<sup>39</sup>

### 3. ADOPT EQUITY CROWDFUNDING LAWS

MSMEs that seek to carry out a larger-scale digital transformation and startups that look to service sellers – such as ecommerce marketplaces, Fintechs, digital marketing firms, and logistics companies – often require seed financing and growth capital. While growing very rapidly in Africa (according to one estimate 250 deals totaling \$2 billion in 2019), venture capital is still available to only a very few firms even in markets with vibrant venture capital communities.<sup>40</sup> Many businesses that are able to access seed funding spend significant time to search and identify angel investors. Equity crowdfunding can reduce these search costs, both by expanding the pool of potential investors and by matching investors to companies of interest to them.<sup>41</sup> Equity crowdfunding is already practiced on the continent, but most African countries have not adopted equity crowdfunding laws that would delineate who can raise and

who can invest, how, how much, and how platforms ought to behave. Nigeria’s Securities and Exchange Commission banned equity crowdfunding in 2016, but recently issued proposed crowdfunding regulations.<sup>42</sup> Other African governments should follow: legislation and regulatory oversight help tame fraud and the costs of securities issuance.<sup>43</sup> Governments can also consider incentives to investors investing via equity crowdfunding platforms. The UK provides tax incentives for individual taxpayers to invest in young tech companies, and the Mexican government offers guarantees to high net-worth individuals that lend through Fintechs to MSMEs.<sup>44</sup>

#### 4. ADOPT OPEN BANKING AND OPEN FINANCE PRACTICES

Open banking practices – data-sharing between banks and other financial service providers such as payment providers and online lenders through APIs or shared data platforms – are hoped to facilitate loan underwriting of small and nascent borrowers.<sup>45</sup> In Africa, open banking has largely proliferated by banks’ volunteerism – for example, in July 2020, the Co-operative Bank Kenya opened a suite of open APIs to allow developers to integrate and manage payments in web or mobile applications. In South Africa, Nedbank has released various APIs to Fintechs.<sup>46</sup> Some governments have encouraged open banking – in 2018, the National Bank of Rwanda published open banking regulations modeled after the European Union’s Payment Services Directive 2. To accelerate open banking, governments in Africa can adopt similar standards.<sup>47</sup> Governments can also consider open finance, the next frontier of data sharing in the financial services ecosystem explored especially by the UK government to extend open banking principles to enable consumers and businesses to gain better control over a wider range of their financial data, such as savings, insurance, investments, pensions, and consumer credit.<sup>48</sup>

#### 5. PROMOTE E-INVOICING AND PROCURE-TO-PAY SOLUTIONS FOR MSME FINANCE

Electronic invoicing, the practice of submitting and formalizing every business invoice with the government, can also enable African online seller MSMEs to access financing. While e-invoicing is typically associated with efforts to improve tax collection, specifically in Latin American countries where they are widely used, e-invoicing has also reduced fraud, improved businesses’ accounting practices, and helped businesses have more reliable cash flow – e-invoices are after all account receivables that businesses can use as collateral to secure working capital and factoring services. For example, in Chile, which pioneered electronic invoicing in 2003, factors are able to use the invoice as collateral and enable MSMEs to improve their cash flow and cost of credit. While a traditional unsecured line of credit in Chile might in the past have incurred a 40 percent interest per year, factoring might only cost 12-24 percent.<sup>49</sup> One common way to start e-invoicing is to apply it in B2G transactions.

### REGIONAL SOLUTIONS

#### 1. REGIONAL FINTECH SANDBOX AND PASSPORTING

A number of African governments have adopted or are adopting Fintech regulatory sandboxes to promote financial innovation. A potentially impactful next step to enable regional Fintechs to scale would be the creation of a regional sandbox whereby Fintechs could quickly deploy across markets, and national regulators could reflect on these new innovations and learn from each other. Another potentially useful concept for African economies is “passporting” as applied in Europe, which enables a financial services firm authorized by a regulator in one EU country to apply for a “passport” to conduct the same business throughout the EU without the need for further authorization.

#### 2. AFRICAN DIGITAL TRANSFORMATION FUND TO ACCELERATE ONLINE SELLER MSMEs’ DIGITAL JOURNEYS

African MSMEs see lack of financing in digital transformation as a main constraint to competing in ecommerce. In response, African governments and private sector can pursue the creation of a Digital Transformation Fund whereby MSMEs can (1) learn about the latest technology solutions for the various areas of digital transformation they would like to pursue; and (2) secure co-investments from a range of funders (such as donors, social impact funds, existing government funds, investors and banks) in MSMEs' transformation into global online sellers and digital enterprises. The approach could be especially attractive both to technology providers that are interested in educating firms about digital solutions, and funders that look for stakes in firms with potential to scale. The selection criteria for firms to enter the program would need to be highly rigorous, and each company would have to have goals and milestones to meet and invest substantially. The Fund could well become self-sustainable; after all, firms that succeed at becoming digital enterprises and scaling their online sales outperform the broader market.

### 3. ECOMMERCE GUARANTEES ON LOANS TO ONLINE BUYERS

African firms are increasingly using ecommerce to vet and identify vendors and procure inputs, supplies and services, often from overseas markets. However, these firms can still be left with the traditional challenge of accessing credit to finance the purchase. An ecommerce purchase loan guarantee could help them secure the credit for their online purchases. Korea has successfully done this through offering a government guarantee to banks that lend to businesses that make online purchases. Buyers on online marketplaces can apply to a bank for a loan, and the bank then transmits information to the Korean Credit Guarantee Fund (KODIT), which conducts a credit investigation and issues the e-guarantee.<sup>50</sup>

## ENABLER 3: MSME ECOMMERCE SKILLS AND WORKFORCE RESKILLING

African MSMEs have yet to use formal ecommerce as a growth lever. In our survey, most MSMEs in the region “sell” online by marketing their goods and services on social media or classifieds and then perhaps interacting with the customer on WhatsApp to close the sale. This is very typical; in most developing countries and emerging markets, most MSMEs are social sellers that do not yet have their own online stores or presence on marketplaces.

These findings also underscore the obvious: capacity-building of African MSMEs for ecommerce needs to be nuanced by firm size, firm location, and, in particular, by firms’ ecommerce readiness. For example, micro and more informal social sellers can be offered solutions that enable them to formalize and build their online stores; small and midsize firms that have online stores and inventory on demand on marketplaces can be onboarded on regional and global marketplaces; and midsize and large enterprises that are already selling on marketplaces can be supported to advance their digital transformation.

Granted, African MSMEs face broader challenges of securing world-class talent for their online businesses, in part because of Africa’s labor market mismatches that keep talent from sorting into the most suitable jobs, and in part because of skills gaps. Nowhere are these challenges as great as in Sub-Saharan Africa: 75 percent of sub-Saharan Africans of ages 20-29 have not completed secondary education; returns on each year of work in sub-Saharan Africa are 30-65 percent lower than in best-performing advanced nations; and about 50 percent of sub-Saharan African young workforces are mismatched to their jobs, being either over- or underskilled for the work they do. These challenges arrest the potential of the ecommerce sector.

### VISION AND KPIS FOR 2022-2025

- Increasing the share of formal MSME online sellers with their own stores from about 15-20 percent today to 30 percent by 2023 and 50 percent by 2025.
- Increasing digitized African MSMEs on global marketplaces from less than 10 percent today to 20 percent in 2023 and 25 percent in 2025.
- Doubling current online sellers’ online sales by 2023.

### POLICY AND TECHNOLOGY SOLUTIONS

#### I. CREATE PUBLIC-PRIVATE PARTNERSHIPS TO ENABLE MSMES TO GROW ON REGIONAL AND GLOBAL MARKETPLACES

Marketplaces such as eBay, Etsy, Amazon, Freelancer, Fiverr, and Upwork bring together hundreds of millions of buyers from around the world for African MSMEs to gain visibility to new customers and suppliers. Our data show that African MSMEs that use global marketplaces are significantly more internationalized than their peers. However, the region’s export promotion agencies and other stakeholders have yet to fully leverage global marketplaces to enable MSMEs to engage in ecommerce. They could follow in the footsteps of their peers and partner with large online marketplaces to help MSMEs export using ecommerce, such as Costa Rica’s export promotion agency Procomer. In 2018, the Nigeria Export Promotion Council partnered with MallforAfrica to help firms, especially women-led firms, to export using ecommerce.<sup>51</sup> Other African export promotion agencies can similarly use their comparative advantages in matchmaking, trade compliance, and MSME training to bring new value to both MSMEs and marketplaces. For example, export promotion agencies can identify and vet companies with inventory that is in demand on marketplaces; train these MSMEs to professionalize their online

stores and onboard marketplaces; and optimize their online presence through partnering with private sector partners to support MSMEs' digital marketing, and payments, international fulfillment and trade compliance, and access to finance. Improving export promotion agencies' capabilities to support MSMEs that seek to export using ecommerce is crucial, as is targeting of firms poised to succeed at e-exporting.

## 2. PROVIDE SCALABLE ONLINE CAPACITY-BUILDING AND FINANCING FOR SOCIAL SELLERS TO BUILD ONLINE STORES AND FORMAL ECOMMERCE CAPABILITIES

Africa has millions of MSMEs that are marketing their goods and services via social media, messaging apps, and classifieds, but not yet through formal ecommerce channels. These social sellers can be offered scalable online courses and programs, customized with AI-driven approaches, to learn step by step how to build their own online stores and to start selling online. A complementary strategy is to provide small financial incentives for exporters to build their digital capabilities for export. For example, Malaysia External Trade Development Corporation (MATRADE) has an eTrade program to promote Malaysian exporters' use of ecommerce platforms and to access financing to cover fees for listing, marketing, translation, and fulfillment. Partnerships between national and local governments and other subnational stakeholders will help reach firms at scale, engage remote firms still disconnected from ecommerce markets, and bring further resources to support MSME ecommerce development.

## 3. WORK WITH ANCHOR FIRMS TO BUILD MSME SUPPLIERS' ECOMMERCE CAPABILITIES

Many MSMEs in Africa are suppliers to large local firms such as supermarkets or industrial producers. As these larger anchor firms digitize their own sale capabilities, they can also digitize interactions and transactions with their MSME suppliers – and thereby facilitate MSMEs digital transformation and conversion into online sellers. African governments and other stakeholders could systematically work with these larger firms to train their existing MSME suppliers to manage digital supplier management tools, procurement, and payment and invoicing systems – aspects that help also the anchor firms to gain greater visibility into suppliers' inventories and support suppliers' cash flow and resilience.

## 4. PROMOTE DIGITAL CAPABILITIES AND LABOR MARKET MATCHING IN WORKFORCE DEVELOPMENT STRATEGIES

Digital enterprises require so-called soft skills – cognitive abilities, critical thinking, and social and communications skills – that enable employees to quickly adapt to new demands, leverage new technologies, and innovate, but that are also harder to identify, quantify and cultivate.<sup>52</sup> The eTrade Alliance is tackling this problem through identifying the intensity of different types of competencies and aptitudes in greatest demand in leading African ecommerce firms and the prevalence of these skills in the broader labor market and among social sellers. As African labor markets digitize, governments and other stakeholders have increasing opportunities to access and leverage data on job applicants and open positions, to understand the skillsets and competencies that are in growing and declining demand among different types of employers – and to access data on the supply of these skills in African labor markets. Scalable online skills assessments and real-time data on demand and supply in labor markets can play a major role in African governments and companies' workforce development strategies and work to cultivate skills in the region for the 21<sup>st</sup> century global digital economy.

## REGIONAL SOLUTIONS

### 1. AFRICAN 360° E-BUSINESS ACADEMY

Africa has millions of small firms that are actively marketing and selling online using social media and messaging apps, but that have yet to professionalize their operations and create formal online sales capabilities. This translates into difficulties for these businesses to secure bank loans, anticipate demand spikes, and fulfill larger orders, and also complicates the efforts of marketplaces to work with small business sellers. One key remedy African policy and business communities see is education and professionalization, along the lines of a “360° E-Business Academy.” Under this academy, small online sellers could use virtual tools and courses to run a professional online business and digitize their businesses operations, including master the use of digital technologies in their inventory management, accounting, marketing, customer analytics, customer service and after-sale support, and demand forecasting. Local and global technology companies can offer tools and services in many of these areas. The Academy can be continentally scalable and feature peer-learning, prizes and awards for exceptional African sellers, as well as rigorous KPIs to perfect its learning approaches and tools.

### 2. AFRICAN ECOMMERCE EXECUTIVE EDUCATION

There are many MSMEs in the region that have started to sell online via their own online stores. These firms have already built online sales capabilities, but can professionalize them much further. For example, online MSMEs can better leverage customer data; enhance digital marketing; improve product displays; use AI to optimize customer experience and journeys; and digitize backend operations such as inventory management, warehousing, accounting and financing, and supplier relationship management and payments. Such firms can be brought into cohorts (such as a cohort of apparel companies, cohort of food processing companies, cohort of smaller supermarkets, etc.) to participate in what could be envisioned as “executive education for ecommerce” with global experts and global companies, and then receive one-on-one mentoring with experts to solve their specific challenges through technology and new processes. This could be done in partnership with leading universities. African universities could also offer an ecommerce certification track, in partnership with marketplaces and ecommerce associations.

### 3. SUPPORT MSMEs' COMPLIANCE WITH MARKET ACCESS REGULATIONS THROUGH REGIONAL REGTECH SOLUTIONS FOR E-EXPORTERS

One of the biggest challenges for African online seller MSMEs to export is lack of easy access to customized information on market access requirements in their export markets. Regulatory technology, or RegTech, uses structured and unstructured data and technology to help firms monitor and meet regulatory requirements. While RegTechs have been used especially by banks and financial services firms to comply with the burgeoning financial regulations, RegTech use cases are proliferating among other regulated industries. They can also help firms to monitor trade compliance requirements in various export markets and automate regulatory compliance. As any one company can benefit from a RegTech but few would build one on their own, an export promotion agency could make it available to all firms.

### 4. AFRICAN ETRUST MARK, ONLINE BUSINESS CODE OF CONDUCT, AND ODR

African consumers appreciate local sellers but are still at times concerned about their trustworthiness. To cultivate a cadre of trusted sellers, African consumer protection agencies and private sector can work together to establish an African eTrust Mark for certified online sellers for African MSMEs to build confidence and transact with consumers across the region. If a differentiator in the minds of consumers,

the trust mark could attract more firms to be certified and pay for their certification. African governments and private sector leaders could promote an African Consumer Protection Code of Conduct, to guide businesses and consumers' responsibilities in online transactions, as accomplished for example by the ASEAN Online Business Code of Conduct. Governments could also consider public-private partnerships to create online dispute resolution (ODR) systems, possibly modeling approaches after Mexico's successful Concilianet that brings together leading companies, the consumer protection agency, and the judicial system to address consumers' complaints and resolve disputes over small online transactions.

## ENABLER 4: CROSSBORDER PAYMENTS

Globally, 85 to 90 percent of all consumer transactions are still made in cash, a trend that is prevalent in Africa<sup>53</sup> At the same time, Africa has had a tidal wave of payment innovations in the past ten years especially with mobile payments that today fuel online transactions with more traditional payment instruments. For example, a buyer on Jumia Kenya can easily pay by M-PESA either when ordering or in a contactless way upon delivery. In Nigeria, a buyer using Konga can pay by KongaPay, Visa, Mastercard, or Verve. In South Africa, where card payments are more common, a buyer using Takealot can pay with all major cards, Ozow, or Payfast. In Egypt, digital wallets such as PayPal and CashU are popular; while in Uganda, more than one in two online shoppers choose mobile payments.<sup>54</sup> Asked in a recent survey about the greatest opportunity for retail payments, a plurality or 41 percent of African banks answered, “supporting ecommerce through digital wallets”.<sup>55</sup>

Cross-border digital payments are also increasingly accessible in Africa in B2C and C2C transactions, partly because of industry-led efforts among international and local providers to unlock cross-border payments in Africa. For example:

- Banks have adopted digital and mobile-first strategies to enable cross-border payments. For example, Ecobank has introduced services like Rapidtransfer for instant cross-border payments across their network of 33 countries in Africa.
- While mobile money wallets typically lack virtual or physical network credentials and thus cannot be used in cross-border payments, in 2019, Visa partnered with pan-African FinTech leader MFS Africa to offer these credentials and enable cross-border mobile payments among 180 million mobile wallets.
- In 2018, Mastercard joined forces with DPO Group to enable more than 40,000 African major merchants to accept Mastercard payments and receive payments from international customers.
- In 2018, Airtel Africa which operates in 14 countries across sub-Saharan Africa offering telecommunications and mobile money services opened access to mobile payment provider Mukuru’s customers to send money directly to Airtel’s Money mobile wallets across 12 African countries.<sup>56</sup>
- Also in 2018, PayPal and Safaricom announced a partnership to enable Kenyans to move money between their M-PESA and PayPal accounts, thereby connecting more Kenyans to global ecommerce.<sup>57</sup>
- Central Bank Digital Currencies are of growing interest to the region and opening new opportunities for instant, digitized settlement, perhaps initially especially in domestic transactions.

With African online shoppers increasingly accustomed to paying for domestic purchases through their mobile phones, mobile-first payment methods will also likely play a growing role in domestic and cross-border B2B transactions in smaller-value transactions. However, a number of frictions remain in C2B and C2C cross-border payments:

- **Regulatory fragmentation across the region** - national mobile and electronic payment solutions do not yet interoperate well, limiting cross-border microtransactions and scalability of B2C sellers. There is also limited data on these regional payment frictions.
- **High cost of cross-border remittance payments** – the commission often cited for remittance payments is in sub-Saharan Africa 9.4 percent, well above the global average of 7 percent.<sup>58</sup>

- **Concerns about security and integrity of mobile payments** and lack of consumer redress and dispute resolution mechanisms especially in cross-border transactions.
- **Large unbanked populations with limited access to international payment instruments.** Most Africans and African MSMEs do not have bank accounts that would readily enable them to transact with global customers on global marketplaces using cards or PayPal.
- **Limited mobile internet penetration** in some countries and high cost of data.
- **Frictions and inefficiencies in B2B payments** among trade and ecommerce freight providers.

There are also frictions in B2B payments. Most B2B sellers that have online stores or stores on marketplaces do not enable payments online; the negotiation and order processing shifts offline and payments are made with bank wires. Positively, in intra-regional B2B payments, intra-African bank payments and clearing have grown in the past few years, and increasingly settlement can be in local currencies especially in various subregions. The Pan-African Payment and Settlement System (PAPSS) aims to enable local currency use in cross-border transactions across Africa.<sup>59</sup>

## VISION AND POTENTIAL KPIS

- Digital payments in 20 percent of transactions in Africa by 2022 and 35 percent in 2025.
- Cross-border payments available to 50 percent of African mobile payment users by 2025.
- Cross-border B2B and B2C payment fees cut to global average by 2025.

## POLICY AND TECHNOLOGY SOLUTIONS

### 1. REGULATIONS ON PAYMENT PROVIDERS CALIBRATED TO RISK

Most African countries have promoted digital payments and passed e-payment laws that define how payment providers can be authorized to operate in a market and what their obligations are. As the payment landscape diversifies further, African governments can consider calibrating e-payment rules to each provider's risk. A potentially useful framework is Singapore's 2020 Payment Services Act, which introduces a three-tiered regulation where the rules are commensurate to the risks posed by the scope and scale of services provided by the licensee. The Act enables Singapore to balance the aspirations of innovation (coming from smaller new providers) and rigorous oversight (especially on larger providers and providers that hold deposits). All payment service providers holding a license under the Payment Services Act must meet anti-money laundering and countering the financing of terrorism (AML/CFT) requirements. In addition, African governments can consider risk-based assessment (RBA) as used by Financial Action Task Force (FATF), an increasingly widely adopted regulatory improvement to make providers' KYC and AML processes commensurate to the risk transactions posed and focus resources on high-risk customers and transactions.

### 2. FLEXIBLE, TECHNOLOGY-DRIVEN CUSTOMER AUTHENTICATION IN SMALL ONLINE TRANSACTIONS

As ecommerce transactions have mushroomed amid COVID-19, governments are weighing new regulations on sellers to authenticate their customers and prevent fraud. However, these rules can also quickly hamper small online transactions. For example, the EU's 2019 "Strong Customer Authentication (SCA)" rules have been criticized for introducing frictions and a pause into the online payment process that have undermined buyers' user experience and led them to abandon their carts; MSME merchants

have on their side struggled to understand how to apply SCA. While fraud prevention is critical, authentication needs to be nuanced to risk: most ecommerce transactions are low-risk, low-price transactions. Indeed, the EU too has modified SCA to exempt most payments under €30 and payments at unattended payment terminals such as parking meters. In addition, regulation does not always have to be the answer: technologies such as biometrics-based digital identify solutions and 3D Secure standards established by large payment providers already enable verification systems, geolocations, and behavioral analytics for spotting anomalous patterns and blocking suspicious payments.

### 3. OPEN DATA POLICIES THAT ENABLE INNOVATION AND FRAUD-PREVENTION

Financial services and payments providers can no longer address risk by looking at a single transaction in a single place: they need to see hundreds of millions of transactions to see the anomalous patterns and predict where they take place. As payments digitize, online fraud is a growing concern for developing country companies, consumers, and governments. In a recent survey, 61 percent of respondents at developing country banks, Fintechs, and merchants agreed that new payment technologies make them more vulnerable to fraud.<sup>60</sup> Open, globalized payment networks are the most effective defense against fraudsters, precisely because these networks are global – they derive their information from massive global data collected in real-time. Such data enable powerful machine learning and deep learning techniques for real-time detection and preventive models to defeat fraud before it even takes place.<sup>61</sup> For example, Visa Advanced Authorization risk-scoring considers 500 attributes in one millisecond, and covered 127 billion transactions in 2019 alone. With access to a vast global data set and powerful analytics, Visa prevented \$25 billion in fraud in 2019 alone.<sup>62</sup> For African MSMEs and consumers to transact securely and globally, governments need to ensure that data on transactions involving Africans can be included in risk-prevention models.

### 4. QR CAMPAIGN FOR RETAILERS

Contactless payments including Quick Response (QR) codes or near-field communications (NFC) have grown dramatically around the world during COVID-19. QR codes are emerging as an important acceptance technology for proximity payments. So far, they have not gained traction in Africa, in part because of requiring strong smartphone penetration rates to take off. However, they are a compelling payment technology even for low-income merchants, help veer societies from cash-based payments, and power cross-border micropayments – and can become more accessible in Africa as adoption of smartphones grows. Payment providers and governments could together launch a QR Campaign pilot to help African retailers accept QR code-based payments and be able to process the payments, and educate consumers about their benefits.

## REGIONAL SOLUTIONS

### I. INTEROPERABLE CROSS-BORDER PAYMENTS

To enable cross-border ecommerce, Africa needs to prioritize its strengths: consumer preferences for mobile payments, dense mobile agent networks, and innovative mobile payment providers with willingness to collaborate with global payment providers. With consumers increasingly using mobile phones to transact, a mobile-first strategy should guide regulatory approaches. African governments could draw on the work in Southeast Asia, a region also with high unbanked populations, limited use of cards, strong market forces for cross-border ecommerce, lack of uniform national payment regulations, and many innovative payment providers. The region is currently enabling mobile-based cross-border payments through the adoption of QR code standards that consolidate QRs and enable cross-border QR payments; ISO 20022 standards that enable streamlined and standardized communications among payment systems; and regionally compatible standardized interfaces and open APIs that help players –

sellers, billers, Fintechs and intermediaries – to access and leverage any platform even as technology advances.<sup>63</sup> African financial services leaders have endorsed ISO 20022 for cross-border payments.<sup>64</sup> Such pan-regional payment systems can have great economics, to the extent they mirror the economics of national payments and are based on the principles of full competition among providers and open loop networks.

## 2. B2B LOGISTICS EPAY SYSTEMS: SMART CONTRACTS AND DIGITAL PAYMENTS TO FUEL INTEROPERABILITY AMONG ECOMMERCE LOGISTICS PROVIDERS

During the pandemic, uncoordinated national restrictions at both the border and inland – such as delays in getting operational permits issued, curfews, bans on deliveries in certain districts, and differing requirements for delivery drivers – disrupted businesses operations in many countries.<sup>65</sup> With the exception of global express delivery firms that provide end-to-end services, logistics players that “touch” any one shipment (freight forwarders, shipping/air carriers, terminal operators, ports, warehouses, and so on) are fragmented and interoperate poorly, partially due to analog payments and settlement practices.<sup>66</sup> Interactions, paperwork, and transactions among these players are still often paper-based, manual, and error-prone - data can be typed manually some 100 times per transaction, in different email files, and ERP systems. Digitization and automation of all of “handshakes” among the players in logistics supply chains would accelerate delivery and reconciliation, and improve all parties’ cash flow. Smart contracts could be used to automate the payment process – payments could be triggered as parties complete their work and shipment moves from seller to buyer.

## B. CROSS-CUTTING PILLARS: DIGITAL POLICY COORDINATION, ACCESS TO DATA, DIGITAL IDENTITY, CYBERSECURITY, FORMALIZATION

### PILLAR I: DIGITAL POLICY COORDINATION AND DIALOGUE

MSMEs that compete in the digital economy and offer services to MSME ecommerce sellers require a range of sophisticated logistics, payments, and financial services. They also need to understand customer expectations and deliver new value to customers. And they need to ensure compliance with national digital regulations. African governments have made considerable progress in recent years with ecommerce-related policies and regulations, such as adopting laws to enable online transactions and online payments, pursuing reforms to enable financial innovations, adopting laws on consumer protection online, adopting safe harbor regimes for internet intermediaries, and establishing data privacy regimes. All in all, the region's regulatory frameworks are gradually being upgraded to the ecommerce era.

In their work to enable MSMEs' crossborder ecommerce, African governments can work together to ensure that national policy and regulatory frameworks are compatible and support MSMEs that seek to transact across many markets. For example, governments can:

- **Seek to ensure MSMEs can apply similar rules and standards when transacting across African countries.** Divergent national regulations across markets would hamper MSMEs from taking advantage of ecommerce and scaling across markets – very much as divergent national product standards limit small businesses' export diversification. In contrast, ongoing regional policy coordination helps ensure MSMEs and ecommerce ecosystem businesses such as Fintechs, Logtechs, and marketplaces can apply similar digital regulations when selling and scaling to service customers across Africa.
- **Launch regular regional public-private digital dialogues to assess how different national digital regulations are impacting cross-border ecommerce in Africa,** and discuss best global digital regulatory practices. Public-private dialogues also enable policymakers to have their “ear to the ground” and hear from firms at the front lines of ecommerce about the pain points businesses face, and to develop common solutions with private sector actors interested in propelling domestic and cross-border MSME ecommerce.
- **Promote permanent regional dialogues and information sharing among national regulators** (e.g. national consumer protection agencies) to discuss and align regulatory approaches and identify good practices.
- **Promote interoperability among digital platforms domestically and across borders.** African MSMEs and startups have ready access to globally available open APIs, software-as-a-service solutions, and cloud computing services – and thus can leapfrog 20<sup>th</sup> century's vertically integrated firms and monolithic IT architectures. These various digital solutions need to however interoperate; one good example of efforts to ensure interoperability among digital platforms is the Digital Economy Partnership Agreement (DEPA) between Chile, New Zealand and Singapore (Case 2).

- **Track progress through comparable data and methods.** African governments can track regional ecommerce use and digital integration by firm segments, geographies, and gender, for example by incorporating ecommerce-related questions in business surveys and censuses. EU members, the United States and Mexico have made particularly important progress in tracking ecommerce flows and use among different types of firms and consumers, and can offer useful examples. However, in most economies, progress has yet to be made on systematically tracking the extent and direction of *cross-border* online sales and purchases.

### **Case 2 - Next generation digital integration – for Africa as well? Learning from the Digital Economic Partnership Agreement (DEPA)**

The Digital Economic Partnership Agreement (DEPA) of 2020 between Singapore, New Zealand, and Chile is an exciting blueprint for African countries to assess for policy ideas that could be adopted and cultivated in AfCFTA. Like many regional trade agreements, DEPA reinforces a moratorium on customs duties on electronic transmissions and free transfer of data, but it also calls for parties to work on:<sup>67</sup>

- **Interoperable digital identities:** Promote the interoperability between their respective regimes for digital identities.
- **Interoperable electronic invoicing:** Ensure implementation of e-invoicing in their own countries and promote the global adoption of interoperable e-invoicing systems, sharing best practices and collaborating on promoting the adoption of interoperable systems for e-invoicing.
- **Interoperable cross-border electronic payments:** Support the development of efficient and secure cross border electronic payments, including by fostering the adoption and use of internationally accepted standards, promoting interoperability and the interlinking of payment infrastructures.
- **Innovation in payments:** Cooperate to foster innovation and competition in the payments ecosystem.
- **Fintech innovation:** Promote cooperation among parties' Fintech sectors and the development of Fintech solutions for business or financial sectors.
- **AI governance:** Promote the adoption of ethical and governance frameworks that support the trusted, safe and responsible use of AI technologies.
- **eProcurement.** Cooperation on how the use of technology enabled government procurement processes impact existing and future international government procurement commitments
- **Digital inclusion:** Cooperation on the participation of women, rural populations, low socio-economic groups and Indigenous Peoples in the digital economy.
- **Digital SME Dialogue:** Digital SME Dialogue with governments, private sector, non-government organizations, academic experts and other stakeholders from each Party.

The Singapore-Australia Digital Economy Agreement (SADEA) of 2020 echoes DEPA and bolsters the existing digital trade provisions of the 2017 Singapore-Australia Free Trade Agreement. SADEA also includes seven MOUs to operationalize the DEA modules in AI, data innovation, digital identities, personal information protection, e-invoicing, trade facilitation and e-certification on agricultural commodities.

## PILLAR 2: OPEN ACCESS TO DATA

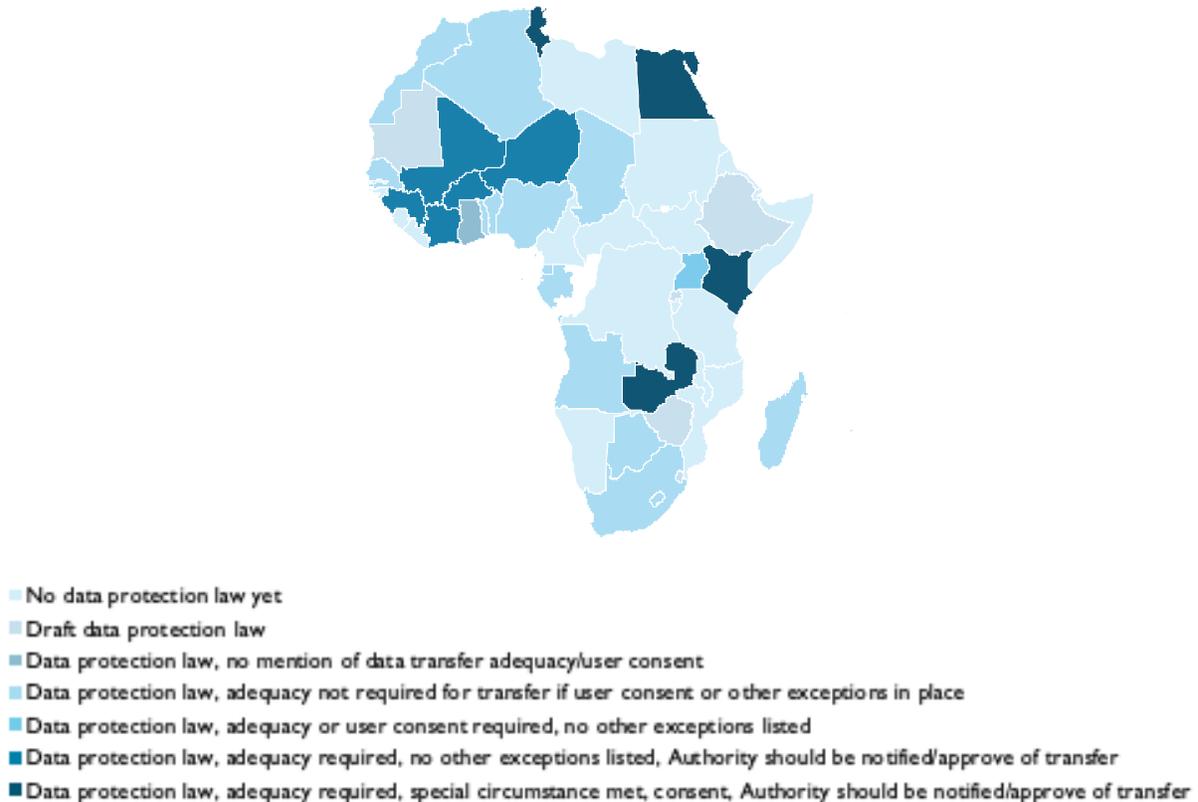
Every enabler of MSME ecommerce— technology-powered logistics, financial solutions, cross-border payments, MSME digital transformation – hinges on fluid access and analysis of data. Logistics companies need data to optimize routes, consolidate cargo, identify customers, and improve their operations to save costs for their users. Fintechs need access to firms’ internal and transactional data to underwrite loans. Global payment providers need massive, global datasets to be able to optimally manage risk and predict anomalies. Online seller MSMEs need data and analytics on their customers and transactions to improve their offerings, target high-potential customers, and anticipate demand spikes.

Data on users, places, postings, interactions, and transactions, analyzed with AI and machine learning, are essential to enable businesses to create new products and services, and streamline processes and workflows. For example, in Nigeria, small business lender OneFi uses AI with algorithms trained on Amazon Web Services machine learning technology, to quickly analyze terabytes of data to determine if a customer is likely to pay back a loan, tripling loan volumes to 1,500 a day.<sup>68</sup>

There have been various discussions about data governance in Africa, and many African governments have in recent years put in place different types of data privacy and transfer regimes (Figure 31). Data transfer issues in particular are still under discussion – and just as in many regions, in Africa there have been discussions about data localization. What needs to be highlighted in these debates is that voluminous empirical research by now shows that data localization raises costs on local MSMEs seeking to engage in ecommerce and local startups that seek to develop new innovative services. Localization mandates are found to arrest the competitiveness of local firms’ exports; curtail foreign direct investment; undermine productivity growth of manufacturing, communications, financial services, and many other sectors; limit trade in services that developing countries need to build smart manufacturing, agriculture and transport networks; and impose discriminatory impacts on trading partners.<sup>69</sup>

Indeed, localization mandates have similar impacts on local firms and consumers as tariffs on intermediate products or local production mandates: they increase local companies’ operating costs and limit their access to best-in-class providers. They also make modern business operating models, built on software and APIs, nonviable for domestic enterprises. Localization also does nothing to ensure data security. Data security has little to do with where data is stored – it has everything to do with how it is stored and governed. The negative impacts of localization on data security can be especially significant in countries that lacks the foundations to manage and secure data, such as low political risk, excellent IT networks and facilities, strong cybersecurity protections, and so on.

**Figure 31: Data Transfer Regimes in Africa, 2021 (draft mapping)**



SOURCE: SUOMINEN AND VAMBELL, (FORTHCOMING IN 2021).

It is essential for African online seller MSMEs and the ecosystem that support them to be able to access, store, move, and analyze data in order to improve their customer service and operations, and innovate new products and services. African governments can consider numerous regional models around the world that govern the transfer of data across borders, while also enabling each participating country to retain its own privacy regimes:

- An especially good example for Africa is the **Asia-Pacific Economic Cooperation (APEC) Cross-Border Privacy Rules (CBPR)** system, a government-backed data privacy certification that private companies voluntarily join to demonstrate compliance with international data privacy protections. Unlike EU's General Data Protection Regulation (GDPR), CBPR does not replace or change a country's domestic data privacy laws and regulations, nor does it determine whether a country's privacy protections are "adequate." CBPR is recognized by Australia, Canada, Japan, Mexico, the Philippines, South Korea, Singapore, Taiwan, and the United States. Several others such as Indonesia, Chile, Vietnam and Malaysia are said to be actively considering CBPR membership.
- **Singapore-Australia Free Trade Agreement (SAFTA)** of 2017 calls for the parties to adopt or maintain a legal framework to protect the privacy of users in ecommerce and to allow

crossborder data flows, and bars parties from forcing companies to localize computing facilities (servers) as a condition for market access.<sup>70</sup>

**U.S.-Mexico-Canada Agreement (USMCA)** of 2020 formally recognizes the validity of the APEC CBPR system as the baseline data transfer mechanism. USMCA also cements the principle of data privacy while enabling data transfers across borders. It requires members to “adopt or maintain a legal framework that provides for the protection of the personal information of the users of digital trade,” and calls for members to develop interoperability and compatibility between their different privacy regimes. The **U.S.-Japan Digital Trade Agreement of January 2020** echoes the provisions in USMCA.

- The 11-country **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) of 2018** prohibits parties from localizing “computing facilities” (such as servers) in their countries; requires parties to allow cross-border transfer of data of personal information; and calls on parties to adopt or maintain laws to protect ecommerce users’ personal information. These provisions have been “exported” to further trade agreements among CPTPP members and third countries, such as Chile-Uruguay FTA of 2018 and Chile-Argentina FTA of 2019, and are also echoed in the Regional Comprehensive Economic Partnership (RCEP) among 15 Asia-Pacific nations. The **2020 Digital Economic Partnership Agreement** between Singapore, New Zealand, and Chile cements the principle of free crossborder data flows further.

There are also useful bi- and plurilateral policy innovations, such as the **U.S.-UK executive agreement under the U.S. CLOUD Act** that balance businesses’ needs to transfer data across borders with law enforcement request for data on overseas servers in criminal cases.<sup>71</sup>

In addition, regulators need to account for significant innovation in privacy-preserving technologies, such as encryption techniques that protect data that is stored or is in transit, and confidential computing that helps protect privacy while data are in use, by isolating sensitive data during processing in a protected central processing unit (CPU) “enclave”.<sup>72</sup> Governments could support especially small firms in learning about and using these and other promising technologies to protect personal data whether in store, use, or transit.

### **PILLAR 3: MSME DIGITAL IDENTITY**

MSMEs in Africa are setting up online stores, onboarding global online marketplaces, and transacting online with customers, often individuals and other MSMEs, around the world – digitally. Yet one problem remains: how does a trading partner, customer, or vendor know that the company at the other end of the transaction is who it says it is?

In the analog world, buyers and sellers build trust through repeated, mutually satisfactory interactions and transactions. In the digital economy, trust-building has to and can be much faster. One solution is to arm companies with a corporate digital ID associated with a company’s corporate vitals and transactional data. Such an ID would help companies to quickly be authenticated by their customers and service providers, and essentially serves as a “master key” for businesses to access any different types of services.

A regional corporate ID for African MSMEs would be very important regional digital public good. It would enable MSMEs to easily authenticate and authorize themselves to login and access public and private services across the continent and beyond, for their ecommerce. A corporate digital ID could

also enable MSMEs to quickly authenticate themselves across several marketplaces, and thus fuel interoperability across marketplaces and access to services on and off marketplaces, such as online payments and embedded finance solutions. While building a national corporate digital IDs like Singapore's CorpPass and then merging national corporate IDs into a regional system would likely be extraordinarily time-consuming and expensive, African countries could champion with the private sector a regional decentralized corporate digital ID solution that enables buyers and service providers to online seller MSMEs to verify and authenticate any company digitally, with no paperwork.<sup>73</sup> The eTrade Alliance is publishing in the coming months a white paper on such a decentralized corporate digital identity solution.<sup>74</sup>

#### **PILLAR 4: MSME CYBERSECURITY**

Cybersecurity threats are a cancer on MSME ecommerce. African countries have become significant targets in the past few years, incurring some \$3.5 billion in losses related to cybercrime in 2017.<sup>75</sup> The ultimate impact of attacks is devastating.

Many African countries have cybersecurity strategies and cybercrime laws in place or are currently discussing them; many also have a Computer Emergency Response Team (CERT). However, Africa's digitizing MSMEs need stronger cyber-defenses and products tailored to their needs and budgets. For example, African countries could readily leverage the 2018 U.S. Commerce Department's National Institute of Standards and Technology (NIST) Cybersecurity Framework Version 1.1 as a public-private model for addressing cybersecurity challenges. African governments can also partner with the private sector to help MSMEs acquire better cybersecurity capabilities. As one approach, the New York City government has partnered with a venture capital fund to invest in businesses that develop and deliver affordable and scalable cybersecurity solutions to New York's MSMEs.<sup>76</sup> These types of approaches are win-win and ensure solutions are commercially viable and scalable. Some governments support MSMEs' access to cyberdefenses – for example, Singapore covers up to 70 percent of the cost of pre-approved cybersecurity products and services, such as subscription, license, and installation fees.<sup>77</sup>

#### **PILLAR 5: MSME FORMALIZATION**

The process of registering and formalizing a new business with relevant government agencies has historically been a challenging process in many countries around the world, due to limited access to information about the process, long processing times, and excessive paperwork that needs to be submitted with handwritten signatures. These complex requirements, along with high and complex taxes, deter firms from formalizing and contribute to Africa's sprawling informal sectors. According to the International Labor Organization in 2018, 86 percent of employment in Africa was in the informal sector.<sup>78</sup> Yet formalizing is critical for firms to scale their online sales, onboard onto global marketplaces, access bank accounts, use global cross-border payments, secure cross-border logistics services, and access financing for transacting and securing technology.

Companies do not formalize when it is not a rational strategy - when the trade-offs of being a formal company are excessive compared to the perceived benefits. In response, several African countries such as Botswana, Kenya and Tanzania have been helping MSMEs formalize by deploying digital platforms that simplify and facilitate business registration and licensing. For example, Mozambique and Egypt have implemented one-stop shop online registration. Other countries such as Morocco have moved part of the registration process online and maintained some required in-person interaction.

There is also empirical evidence that suggests that regulatory carrots (such as compensating MSMEs to formalize) and sticks (such as inspections) also accelerate formalization.<sup>79</sup> In addition, targeting the firms

most poised to formalize helps increase conversion rate.<sup>80</sup> So far, countries have often opted for carrots. For example, Nigeria has exempted small businesses with turnover of less than US\$65,000 from taxes beginning 2020. Vietnam in turn launched a program to enable household businesses to become formal MSMEs in exchange for a three-year business license fee exemption – a potentially useful solution to encourage African social sellers to formalize.<sup>81</sup> India offers a three-year tax holiday to companies that have not made more than US\$3.3M in any preceding year and that seek to innovate new products or services enabled by technology within their first ten years of business.<sup>82</sup> There is as yet little data on the impact of these programs, though there is a correlation between them and the growth in the number of registered MSMEs.

## V. CONCLUSION

Ecommerce has opened tremendous new opportunities for African MSMEs to grow their sales and engage in trade. This report has diagnosed how African MSMEs engage in ecommerce and what barriers they face to growing their online sales, and aimed to provide a roadmap for the African Union Commission and AU Member States on policies, technologies, and concrete activities to enable MSME ecommerce in Africa.

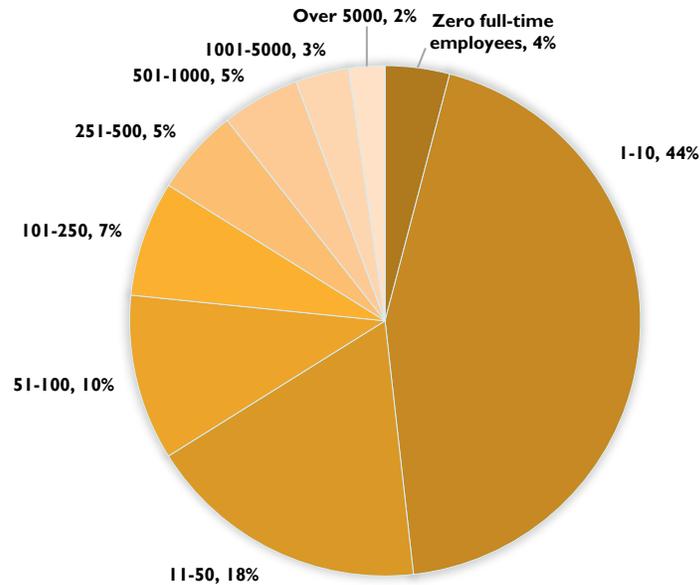
The report has put forth ideas in four enablers of ecommerce: logistics, payments, MSME capacity, and access to finance. In addition, the paper discussed five principles for enabling ecommerce and digital ecosystems: digital regulations, free data flows, a self-sovereign corporate digital identity, cybersecurity standards and technologies suitable to MSMEs, and methods to incentivize MSMEs to formalize.

The report has throughout stressed the importance of multistakeholder engagement: public-private partnerships and dialogues, partnerships between national governments, and permanent regional dialogue among national regulatory agencies shaping the rules for the online economy. It is critical to keep learning from rapidly evolving global best regulatory and policy practices as well as international policymakers who have wrestled with the same regulatory issues African governments face today

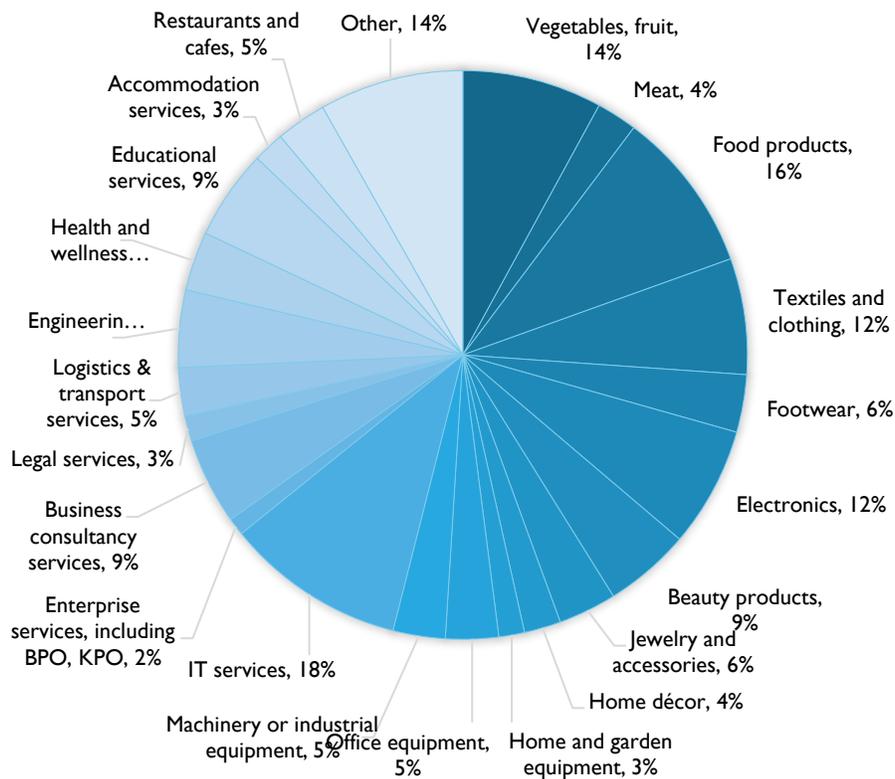
The timing could not be better. African MSMEs can readily leverage massive global networks – social media networks, ecommerce marketplaces, and cross-border payments networks – and be discovered by online buyers, access world-class services, and secure their cross-border transactions. These “open loop” networks are critical for African MSMEs to enter global markets. To enable MSMEs to access global customers and transact with them, domestic and regional policies need to first and foremost enable MSMEs to access and leverage these global networks. The African Union’s work on an ecommerce strategy and Africa’s work toward AfCFTA present great opportunities for enabling MSME ecommerce. If nuanced to MSMEs’ needs and based on principles of free trade in digital goods and services, paperless trade, open digital regionalism, and national treatment, AfCFTA can go down in history as *the* agreement that catalyzed African MSMEs’ growth into global online sellers.

## Appendix I: MSME Sample and Survey Fielding

**Figure I-1: Surveyed firms by Number of Employees**



**Figure I-2: Surveyed firms by Sector**



## Survey fielding

The fielding was accomplished in two waves, first by Nextrade Group on 18-25 August 2020, and subsequently by the eTrade Alliance on 4-15 September 2020, in three countries (Kenya, Nigeria, and South Africa). Unlike in a traditional survey process where we would first draw up a sample frame of firms in a country and then randomly select firms from it for phone interviews, here we leveraged online surveys relying on Pollfish and Cint's proprietary panel of respondents. These firms recruit and engages participants for targeted survey opportunities, selecting respondents on the basis of demographic and firmographic profile information, and sourcing respondents, as done by other online survey firms, from LinkedIn and other similar sources.

The survey takers will take the survey on their laptops or computers, online, on their own time. This online survey method is scalable and saves considerable amount of time and resources. compared to computer-assisted telephone interviews (CATIs). Nextrade Group has found in several prior work utilizing both CATI and online surveys in a country simultaneously that online surveys as executed as here have minimal tradeoffs: they produce very similar patterns as CATI surveys, and, even if the surveys are unsupervised, produce robust, high-quality responses by serious survey takers. This in part owes to robust quality control before, during, and after the survey, through such practices as questions to identify inattentive survey takers and digital fingerprinting to prevent duplicates. A mix of further solutions ensure that even users that may have multiple accounts and devices attempt a specific survey only once; an AI-driven fraud detection system uses personally identifiable information and profiling data to detect patterns that show fraudulent anomalies.

## Appendix II: Variables for Best Place for MSME Ecommerce-Index

| Area                           | Variable   | Source                                   |
|--------------------------------|--|--|
| Connectivity                   | Internet quality - speed   | Opensignal                               |
| Connectivity                   | Broadband cost   | Cable                                    |
| Connectivity                   | Tariffs on ICT products  | WITS                                     |
| Connectivity                   | Taxes on digital services  | Various                                  |
| Payments                       | PayPal is available 1= to send; 2 = send and receive; 3 = send, receive, withdraw                    | PayPal                                   |
| Labor                          | Hourly labour costs in US dollars (converted using 2011 PPPs)  | ILO                                      |
| Labor                          | Labor law flexibility  | World Bank Doing Business                |
| Labor                          | GDP per person employed (constant 2017 PPP \$)   | World Bank                               |
| Labor                          | Labor skills levels - % of technicians   | ILO                                      |
| Labor                          | English proficiency  | EF EPI                                   |
| Labor                          | Digital talent - proxy: Patent applications, residents   | World Bank World Development Indicators  |
| Labor                          | Digital talent - proxy: ICT service exports  | World Bank World Development Indicators  |
| Facilities                     | Office space cost  | CBRE                                     |
| Security                       | Crimes per population  | United Nations Office on Drugs and Crime |
| Ease of doing business         | Doing business - starting a business (score)   | World Bank Doing Business                |
| Ease of doing business         | Total tax and contribution rate (% of profit)  | World Bank Doing Business                |
| Ease of doing business         | Time spent on tax filings  | World Bank Doing Business                |
| Cybersecurity                  | Cybercrimes (malicious email per capita)   | Symantec                                 |
| Ease of trading across borders | Paperless trade score  | United Nations paperless trade database  |
| Ease of trading across borders | Crossborder paperless trade score  | United Nations paperless trade database  |
| Ease of trading across borders | Time to export - documents   | World Bank Doing Business                |
| Ease of trading across borders | Time to export - compliance  | World Bank Doing Business                |
| Market access                  | Regional trade agreements (number)   | WTO                                      |
| Logistics                      | First mile efficiency  | UPU                                      |
| Logistics                      | Logistics performance index: Ease of arranging competitively priced shipments (1=low to 5=high)      | World Bank Logistics Performance Index   |
| Logistics                      | Logistics performance index: Ability to track and trace consignments (1=low to 5=high)               | World Bank Logistics Performance Index   |
| Logistics                      | Lead time to export, median case (days)  | World Bank Logistics Performance Index   |
| Logistics                      | Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high) | World Bank Logistics Performance Index   |
| Logistics                      | Commercial air connectivity  | World Bank World Development Indicators  |
| Logistics                      | Amazon fulfillment center  | Amazon                                   |
| Finance                        | Access to finance - see commercial bank branches per 1000 km <sup>2</sup>                            | International Monetary Fund              |
| Finance                        | Collateral requirements  | World Bank Enterprise Surveys            |
| Finance                        | Depth of Fintech ecosystem - National fintech ranking 65 countries                                   | Findexable                               |
| Finance                        | Doing business - credit bureau coverage (% of adults)  | World Bank Doing Business                |
| Crossborder payments           | Stripe available   | Stripe                                   |
| Quality of digital ecosystem   | Google office  | Google                                   |
| Quality of digital ecosystem   | Amazon offices   | Amazon                                   |

## Appendix III: Variables and their Coding in Alliance's Draft Policy Mapping

### Digital Infrastructure

|  |  |
|--|--|
| Government national broadband plan or initiatives                      | 1 = yes ; 0 = not in place (or not found)  |
| Government initiatives for women-led firms to use and innovate in tech | 1 = yes ; 0 = not in place (or not found)  |
| 5G strategy published or initiatives announced                         | 1 = yes ; 0 = not in place (or not found)  |
| 5G service has been rolled out   | 1 = yes; 0 = not in place (or not found)   |
| 5G spectrum auctioning has happened already                            | 0.5 = spectrum assigned ; 0.25 = auction planned ; 0 = not in place (or not found) |
| 5G piloted/trials have taken place                                     | 0.25= yes; 0 = not in place (or not found)   |
| 4.5G rolled out  | 0.5 = yes; 0.25 = in planning ; 0 = not in place (or not found)                    |
| Competition among fixed wireless broadband providers                   | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Competition among fixed satellite services                             | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Competition among mobile cellular                                      | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Competition among mobile satellite services                            | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Competition among internet services                                    | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Competition in international gateways                                  | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Competition in wireless local loop                                     | 0.2 = full ; 0.1 = partial ; 0 = monopoly, or N/A                                  |
| Universal access/service policy adopted                                | 0.25 = yes; 0 = no   |
| Caps on FDI in wireless and fixed telecommunications                   | -0.5 = some limits or caps on FDI found, such as in certain sectors                |
| Information Technology Agreement member                                | 1 = yes ; 0 = no   |
| 2018 applied tariffs on cellphones                                     | distance from frontier: 1 = best, 0 = worst or N/A                                 |
| 2018 applied tariffs on laptop computers                               | distance from frontier: 1 = best, 0 = worst or N/A                                 |

### Digital regulations on online transactions

|   |  |
|---|--|
| Fully digital business registration available                 | 1 = yes; 0.5 = part of process can be done online, or only certain cities provide the service, or only certain kinds of companies can register online; 0 = not online at all, including even if there is a "one stop shop" |
| Electronic signatures admissible, legal, and enforceable      | 1 = yes ; 0 = not in place (or not found)  |
| Digital or electronic invoice implemented                     | 1 = yes ; 0 = not in place (or not found)  |
| eID/digital ID in place (including for e-government services) | 1 = yes ; 0.5 = in development/piloted ; 0 = not in place (or not found)   |
| National digital corporate ID tested or in place              | 1 = yes ; 0 = not in place (or not found)  |
| Tax exemptions for new businesses                             | 1 = yes ; 0 = not in place (or not found)  |

### Digital regulations on online behavior

|   |   |
|---|---|
| Net neutrality: ISPs barred from limiting Internet content in their networks              | 1 = yes ; 0 = not in place (or not found)   |
| Liability exemptions/safe harbors for internet intermediaries from copyright infringement | 1 = yes ; 0.5 = in draft, or is party to treaty that requires safe harbor regulations though not in place (or not in place (or not found))to have adopted in national legislation yet ; 0 = not in place (or not found), law does not mention internet intermediary liability, or law implies high liability risk i.e. EU directive |
| Copyright limitations and exceptions - use of "fair use" standard                         | 1 = yes ; 0.5 = not officially but abide by Berne Convention ; 0 = not in place (or not found)  |
| Restrictive OTT regulations affecting Internet services                                   | -1 = yes ; 0 = not in place (or not found)  |
| Caps on FDI by foreign marketplaces   | -0.5 = some limits or caps on FDI found, such as in certain sectors   |
| Data transfer allowed (or no law in place)  | 1 = yes, allows data transfer, whether by law or implicitly because there is no law   |
| Data transfer limits to certain sectors   | -0.2 = yes ; 0 = not in place (or not found)  |
| Data transfer always requires jurisdictions to be branded "adequate"                      | -0.2 = adequacy always required ; -0.1 = adequacy can be required but not always i.e. if there is user consent, or a special exception ; 0 = not in place (or not found)  |
| Data transfer always requires user consent  | -0.2 = user consent always required ; -0.1 = user consent can be required but not always i.e. if there is adequacy standard in place, or a special exception ; 0 = not in place (or not found)  |

### Digital regulations on online behavior (cont.)

|   |  |
|---|--|
| VAT/GST Tax   | distance from frontier: 1 = best, 0 = worst                  |
| Digital tax/rate discussed or implemented   | -1 = yes ; -0.5 = Proposed ; 0 = not in place (or not found) |
| Consumer protection regulation in place   | 1 = yes ; 0.5 = in draft                                     |
| Consumer protection law explicitly applies to ecommerce                             | 1 = yes ; 0 = not in place (or not found)                    |
| <i>Legal/regulatory prohibitions on companies using unfair or deceptive acts</i>    | <i>0.25= yes ; 0 = not in place (or not found)</i>           |
| <i>Anti-spam law in place</i>   | <i>0.25= yes ; 0 = not in place (or not found)</i>           |
| <i>Online contracts are to be drafted in clear and simple language</i>              | <i>0.25= yes ; 0 = not in place (or not found)</i>           |
| <i>Forms of redress - consumer's right to return items purchased</i>                | <i>0.25= yes ; 0 = not in place (or not found)</i>           |
| Companies have a Trust certificate or companies / governments certify trusted firms | 1 = yes ; 0.5 = Planning ; 0 = not in place (or not found)   |
| Consumer complaints can be filed online   | 1 = yes ; 0 = not in place (or not found)                    |
| Digital / video-based court proceedings for consumer issues                         | 1 = yes ; 0 = not in place (or not found)                    |

### Payment regulations

|   |   |
|---|---|
| E-payments law in place   | 1 = yes ; 0 = not in place (or not found)   |
| Risk-based approach (RBA) KYC regime in place   | 1 = yes ; 0.5 = in process of implementing ; 0 = not in place (or not found)        |
| <i>Regulatory requirements differentiated by type of service and its respective risks</i> | <i>1 = yes ; 0.5 = in process of implementing ; 0 = not in place (or not found)</i> |
| Demonetization programs to promote digital payments                                       | 1 = yes ; 0 = not in place (or not found)   |
| Regulations or programs to fuel interoperability of online payments                       | 1 = yes ; 0 = not in place (or not found)   |

### Trade facilitation for ecommerce

|  |   |
|--|---|
| <i>De minimis</i> threshold for entry of goods   | distance from frontier: 1 = best, 0 = worst or N/A  |
| Publication of existing import-export regulations on the internet                      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Stakeholders' consultation on new draft regulations (prior to their finalization)      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Advance publication of new trade-related regulations before their implementation       | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Advance ruling on tariff classification and origin of imported goods                   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Risk management  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Pre-arrival processing   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Post-clearance audits  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Independent appeal mechanism   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Separation of release from final determination of duties, taxes, fees and charges      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Establishment and publication of average release times                                 | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Trade facilitation measures for authorized operators                                   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Expedited shipments  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Acceptance of copies of original documents required for import, export or transit      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Electronic Single Window System  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Alignment of working days and hours with neighboring countries at border crossings     | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Alignment of formalities and procedures with neighboring countries at border crossings | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Provides B2B and/or G2B services as shared trade ecosystem platform                    | 1 = yes ; 0 = not in place (or not found)           |
| Use of blockchain and/or AI in customs   | 1 = yes ; 0 = not in place (or not found)           |
| Innovative postal services, such as drones, collaboration with ecommerce platforms     | 1 = yes ; 0 = not in place (or not found)           |
| UPU Postal Development Index   | distance from frontier: 1 = best, 0 = worst or N/A  |

### Trade facilitation for ecommerce

|  |   |
|--|---|
| <i>De minimis</i> threshold for entry of goods   | distance from frontier: 1 = best, 0 = worst or N/A  |
| Publication of existing import-export regulations on the internet                      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Stakeholders' consultation on new draft regulations (prior to their finalization)      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Advance publication of new trade-related regulations before their implementation       | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Advance ruling on tariff classification and origin of imported goods                   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Risk management  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Pre-arrival processing   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Post-clearance audits  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Independent appeal mechanism   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Separation of release from final determination of duties, taxes, fees and charges      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Establishment and publication of average release times                                 | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Trade facilitation measures for authorized operators                                   | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Expedited shipments  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Acceptance of copies of original documents required for import, export or transit      | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Electronic Single Window System  | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Alignment of working days and hours with neighboring countries at border crossings     | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Alignment of formalities and procedures with neighboring countries at border crossings | 1 = Yes ; 0.5 = Partially ; 0.25 = Planning ; 0= No |
| Provides B2B and/or G2B services as shared trade ecosystem platform                    | 1 = yes ; 0 = not in place (or not found)           |
| Use of blockchain and/or AI in customs   | 1 = yes ; 0 = not in place (or not found)           |
| Innovative postal services, such as drones, collaboration with ecommerce platforms     | 1 = yes ; 0 = not in place (or not found)           |
| UPU Postal Development Index   | distance from frontier: 1 = best, 0 = worst or N/A  |

### MSME capacity-building and export promotion for ecommerce

|   |  |
|---|--|
| Export promotion agency programs/guidelines for ecommerce available           | 1 = yes; 0.5 = planning to implement ; 0 = not in place (or not found) |
| Online ecommerce export services, such as channel management platform         | 1 = yes; 0 = not in place (or not found)                               |
| Subsidized digital transformation funding for firms to use ecommerce          | 1 = yes; 0 = not in place (or not found)                               |
| Public-private collaboration (e.g. with marketplaces) to build SMEs' capacity | 1 = yes; 0 = not in place (or not found)                               |
| Programs for women-led firms to learn to export (ex: e-commerce)              | 1 = yes; 0 = not in place (or not found)                               |
| Programs for rural companies to engage in ecommerce                           | 1 = yes; 0 = not in place (or not found)                               |
| Help with MSME logistics for cross-border ecommerce                           | 1 = yes; 0 = not in place (or not found)                               |

### MSME finance

|   |   |
|---|---|
| Regulatory sandboxes for FinTech  | 1 = yes; 0.5 = in development ; 0 = not in place (or not found) |
| Open banking regulations  | 1 = yes; 0.5 = in development ; 0 = not in place (or not found) |
| Regulatory framework for equity crowdfunding  | 1 = yes; 0.5 = in development ; 0 = not in place (or not found) |
| Government credit guarantees for micro and small working capital loans offered to banks | 1 = yes; 0 = not in place (or not found)                        |
| Government credit guarantees for working capital loans offered to Fintechs              | 1 = yes; 0 = not in place (or not found)                        |
| Direct loans from government to small or micro firms                                    | 1 = yes; 0 = not in place (or not found)                        |
| Equity for tech and digital businesses (gov't as GP)                                    | 1 = yes; 0 = not in place (or not found)                        |
| Equity for tech and digital businesses (gov't as LP or fund of funds)                   | 1 = yes; 0 = not in place (or not found)                        |
| Specific equity programs for exporters (or VC investments expressly for exporting)      | 1 = yes; 0 = not in place (or not found)                        |
| Programs to finance/guarantee ecommerce transactions                                    | 1 = yes; 0 = not in place (or not found)                        |
| Financing programs or entities for women-led companies - grants, debt or equity         | 1 = yes; 0 = not in place (or not found)                        |

**Government eprocurement promotion for MSMEs**

|  |   |
|--|---|
| Procurement tenders and bid documents available online                               | 1 = yes; 0.5 = only tenders or bid docs online; 0 = not in place (or not found) |
| Procurement bid submission online  | 1 = yes; 0 = not in place (or not found)  |
| Procurement bid process and notices electronic                                       | 1 = yes; 0 = not in place (or not found)  |
| Online, transparent and/or simple bidding search for low-value procurement contracts | 1 = yes; 0 = not in place (or not found)  |
| Initiatives to increase SME procurement bids and contracts                           | 1 = yes; 0 = not in place (or not found)  |
| Initiatives to increase women-led SME procurement bids and contracts                 | 1 = yes; 0 = not in place (or not found)  |
| Complaint mechanism in place, for example about unfair procurement bidding process   | 1 = yes; 0.5 = observer status; 0 = no  |
| Member or observer of plurilateral Agreement on Government Procurement               |   |

**MSME cybersecurity readiness**

|   |  |
|---|--|
| National cybersecurity strategy in place                              | 1 = yes, including if standalone or part of larger strategy; 0.5 = in draft; 0 = not in place (or not found) |
| Cybercrime legislation in place                                       | 1 = yes, if standalone or part of a law i.e. Criminal Code; 0.5 = in draft; 0 = not in place (or not found)  |
| Computer Emergency Response Team (CERT) in place                      | 1 = yes; 0 = not in place (or not found)   |
| Educational campaigns to SMEs on cybersecurity/SME focused assistance | 1 = yes; 0 = not in place (or not found)   |
| Cybersecurity capacity building for governments                       | 1 = yes; 0 = not in place (or not found)   |
| Ratified Budapest Convention  | 1 = yes, 0 = no  |

**Ecommerce strategy and statistics**

|  |   |
|--|---|
| Government digital strategy in place             | 1 = yes; 0.5 = in draft/development ; 0 = not in place (or not found) |
| Government ecommerce strategy in place           | 1 = yes; 0.5 = in draft/development ; 0 = not in place (or not found) |
| Ecommerce flow and/or usage statistics collected | 1 = yes; 0 = not in place (or not found)                              |

**Agreement Officer's Representative:**  
Devi Ramkissoon, USAID  
USAID, Center for Economics & Market Development  
[dramkissoon@usaid.gov](mailto:dramkissoon@usaid.gov)  
+1 (347) 866-6298

**Project Director:**  
Brett Johnson, Palladium  
[Brett.Johnson@thePalladiumgroup.com](mailto:Brett.Johnson@thePalladiumgroup.com)  
+1 (202) 775-9680

**Technical Director:**  
Kati Suominen, Nextrade Group  
[Kati@Nextradegroupllc.com](mailto:Kati@Nextradegroupllc.com)  
+1 (202) 294-8871

[www.allianceforetradedevelopment.org](http://www.allianceforetradedevelopment.org)



**USAID**  
FROM THE AMERICAN PEOPLE



**eTrade  
Alliance**

## References

---

- <sup>1</sup> “Draft Report of the 2<sup>nd</sup> African Union E-commerce Conference,” African Union, October 15-17, 2019, Dakar, Senegal, TI/TD/EAU/E-COM/CONF/Draft/Rpt(II).
- <sup>2</sup> World Bank Enterprise Surveys.
- <sup>3</sup> World bank Findex database and report.
- <sup>4</sup> Nqobile Dlodla, “South African e-commerce is a COVID-fired market of risk and reward,” *Reuters*, July 15, 2020, <https://www.reuters.com/article/us-health-coronavirus-safrica-ecommerce/south-african-e-commerce-is-a-covid-fired-market-of-risk-and-reward-idUSKCN24G1A6>
- <sup>5</sup> Vicky McKeever, “How fintech firm Flutterwave adapted to help small African businesses during lockdown,” *CNBC*, May 21, 2020, <https://www.cnbc.com/2020/05/21/how-flutterwave-has-helped-small-african-businesses-during-lockdown.html>
- <sup>6</sup> See review of literature in Kati Suominen, *Revolutionizing World Trade: How Disruptive Technologies Open Opportunities for All* (Palo Alto: Stanford University Press, 2019)
- <sup>7</sup> Data are limited on domestic and cross-border ecommerce flows of goods in Africa; perhaps the best proxy for ecommerce in goods, data on the volume of domestic and international parcels handled by postal services, are unstable year on year and globally rife with classification problems. However, trade in ecommerce in services (digitally deliverable services such as ICT, insurance, financial, and business services, and royalties) has grown in Africa’s exports and imports, as a share of the region’s total services trade and in 2019 made up about a fifth of services exports and a third of services imports.
- <sup>8</sup> Andreas Lendle, Marcelo Olarreaga, Simon Schropp, and Pierre-Louis Vezina, “There Goes Gravity: How eBay Reduces Trade Costs,” World Bank Policy Research Working Paper 6253, World Bank, 2012
- <sup>9</sup> See Kati Suominen, “Expanding Developing Country Small Businesses’ Use of Online Platforms for Trade,” USAID, July 2018, [https://pdf.usaid.gov/pdf\\_docs/PA00TM8V.pdf](https://pdf.usaid.gov/pdf_docs/PA00TM8V.pdf); and proprietary Nextrade Group survey of 532 MSMEs in the Philippines on use of and challenges to ecommerce, 2020.
- <sup>10</sup> U.S. International Trade Commission (2014): Digital Trade in the U.S. and Global Economies, Part 2. Publication No. 4485. Washington, DC.
- <sup>11</sup> See Kati Suominen, Erica Vambell, and Mariah Furtek, “Expanding MSME Ecommerce in Developing Countries: State of Policies and Path Forward,” Policy Report for USAID (forthcoming in 2021).
- <sup>12</sup> Caroline Friends and Nadia Rocha, “What Constrains Africa’s exports?,” World Trade Organization Staff Working Paper ERSD-2010-07, February 2010, [https://www.wto.org/english/res\\_e/reser\\_e/ersd201007\\_e.pdf](https://www.wto.org/english/res_e/reser_e/ersd201007_e.pdf)
- <sup>13</sup> <https://untfsurvey.org/>
- <sup>14</sup> [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Tracking\\_Africa%E2%80%99s\\_Progress\\_in\\_Figures\\_-\\_Infrastructure\\_Development.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Tracking_Africa%E2%80%99s_Progress_in_Figures_-_Infrastructure_Development.pdf)
- <sup>15</sup> Jeffrey Gutman and Nirav Patel, “Foresight Africa viewpoint – Urban Africa: Avoiding the perfect storm,” Brookings Institution, January 26, 2018 <https://www.brookings.edu/blog/africa-in-focus/2018/01/26/foresight-africa-viewpoint-urban-africa-avoiding-the-perfect-storm/>
- <sup>16</sup> César Ducruet, Hidekazu Itoh, Olaf Merk, “Time Efficiency at World Container Ports,” International Transport Forum Discussion Paper 2014-08 (August 2014), <https://www.itf-oecd.org/sites/default/files/docs/dp201408.pdf>
- <sup>17</sup> Danielle Paquette, “The ‘Amazon of Africa’ faces a big challenge: No addresses,” *Washington Post*, August 3, 2019, [https://www.washingtonpost.com/world/africa/the-amazon-of-africa-faces-a-big-challenge-no-addresses/2019/08/03/8f84f700-ae0f-11e9-b071-94a3f4d59021\\_story.html](https://www.washingtonpost.com/world/africa/the-amazon-of-africa-faces-a-big-challenge-no-addresses/2019/08/03/8f84f700-ae0f-11e9-b071-94a3f4d59021_story.html)
- <sup>18</sup> Danielle Paquette, “The ‘Amazon of Africa’ faces a big challenge: No addresses,” *Washington Post*, August 3, 2019, [https://www.washingtonpost.com/world/africa/the-amazon-of-africa-faces-a-big-challenge-no-addresses/2019/08/03/8f84f700-ae0f-11e9-b071-94a3f4d59021\\_story.html](https://www.washingtonpost.com/world/africa/the-amazon-of-africa-faces-a-big-challenge-no-addresses/2019/08/03/8f84f700-ae0f-11e9-b071-94a3f4d59021_story.html)
- <sup>19</sup> Justin Burns, “Air Cargo Africa 2019: Liberalisation and modernization,” *Cargo Airports & Airline Services*, February 20, 2019, <https://www.caasint.com/air-cargo-africa-2019/>
- <sup>20</sup> Cécile Ferro et al, “Trading across Borders: Technology Gains in Trade Facilitation,” case study, *Doing Business 2017*, World Bank, 2017, <https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DBI7-Chapters/DBI7-CS-Trading-across-borders.pdf>
- <sup>21</sup> “COVID 19 Pandemic – Global Logistics & Express Delivery: Lessons Learned and Recommendations,” Global Express Association, 2020, [https://global-express.org/assets/files/Members-Library-2/GEA\\_express%20delivery%20lessons%20learned%20COVID-19\\_INFO%20PIECE%20F.pdf](https://global-express.org/assets/files/Members-Library-2/GEA_express%20delivery%20lessons%20learned%20COVID-19_INFO%20PIECE%20F.pdf)

- 
- <sup>22</sup> See summary in Kati Suominen, “The Silver Bullet for Fueling Small Business Exports in the Ecommerce Era: A Plurilateral on De Minimis,” April 2017, <https://katisuominen.files.wordpress.com/2017/04/de-minimis-plurilateral-suominen-april-2017.pdf>
- <sup>23</sup> See “Proposal on Tax/Duty Collection on Imported Low Value Shipments,” Global Express Association, September 2020, <https://global-express.org/assets/files/Members-Library-2/GEA%20PROPOSAL%20ON%20DUTY-TAX%20COLLECTION%20ON%20IMPORTED%20LOW%20VALUE%20SHIPMENTS.pdf>
- <sup>24</sup> See “Proposal on Tax/Duty Collection on Imported Low Value Shipments,” Global Express Association, September 2020, <https://global-express.org/assets/files/Members-Library-2/GEA%20PROPOSAL%20ON%20DUTY-TAX%20COLLECTION%20ON%20IMPORTED%20LOW%20VALUE%20SHIPMENTS.pdf>
- <sup>25</sup> Lacerda Coutinho, Gustavo and Jorge Eduardo de Schoucair Jambeiro Filho. 2018. “Brazil’s new integrated risk management solutions,” WCO News 86 (June) <https://mag.wcoomd.org/magazine/wco-news-86/brazils-new-integrated-risk-management-solutions/>.
- <sup>26</sup> what3words, “Quiqup increases delivery efficiency by 30% with what3words,” press release, June 2, 2017, <https://what3words.com/news/e-commerce/quiqup-shaves-30-off-delivery-time-3-word-addresses/>
- <sup>27</sup> Prasad Badgujar, “Drone delivery is becoming a key link in African supply chains,” *Logistics Update Africa*, Accessed November 2020, <https://www.logupdateafrica.com/drone-delivery-is-becoming-a-key-link-in-african-supply-chains>
- <sup>28</sup> “ACUNIS complete Africa’s largest air cargo terminal,” *Airport Suppliers*, April 17, 2019, <https://www.airport-suppliers.com/supplier-press-release/acunis-complete-africas-largest-air-cargo-terminal/>
- <sup>29</sup> [https://global-express.org/assets/files/Members-Library-2/GEA\\_express%20delivery%20lessons%20learned%20COVID-19\\_INFO%20PIECE%20F.pdf](https://global-express.org/assets/files/Members-Library-2/GEA_express%20delivery%20lessons%20learned%20COVID-19_INFO%20PIECE%20F.pdf)
- <sup>30</sup> Several studies show that liberalization air services has significantly reduced airfares and almost always increased air traffic – which further reduces costs due to increased scale  
<http://pubdocs.worldbank.org/en/87171434746272730/Air-Transport-OpenSkiesChapter6.pdf>
- <sup>31</sup> Several studies show that liberalization of air services has significantly reduced airfares and almost always increased air traffic – which further reduces costs due to increased scale; Charles E Schlumberger, *Open Skies for Africa: Implementing the Yamoussoukro Decision* (Ukraine: World Bank Publications, 2010), chapter 6, <http://pubdocs.worldbank.org/en/87171434746272730/Air-Transport-OpenSkiesChapter6.pdf>
- <sup>32</sup> “COVID 19 Pandemic – Global Logistics & Express Delivery: Lessons Learned and Recommendations,” Global Express Association, 2020, [https://global-express.org/assets/files/Members-Library-2/GEA\\_express%20delivery%20lessons%20learned%20COVID-19\\_INFO%20PIECE%20F.pdf](https://global-express.org/assets/files/Members-Library-2/GEA_express%20delivery%20lessons%20learned%20COVID-19_INFO%20PIECE%20F.pdf)
- <sup>33</sup> See for a summary, Kati Suominen, “Technology in Border Clearance- Blockchain Pilot Projects,” Alliance for eTrae Development <https://www.allianceforetradedevelopment.org/border-clearance-technology>, and Mariana Lopez, “Brazil wants to build customs connectivity with blockchain,” Contxto (accessed 20 April 2020) <https://www.contxto.com/en/brazil/brazil-build-customs-connectivity-blockchain/>
- <sup>34</sup> SME Finance Forum, <http://sme-dev.ectostarservers.com/library?page=55>
- <sup>35</sup> SME Finance Forum, <http://sme-dev.ectostarservers.com/library?page=55>
- <sup>36</sup> “Closing the Micro and SME Funding Gap in Africa,” *Umaizi*, 2018, <https://umaizi.com/closing-the-micro-and-sme-funding-gap-in-africa/>
- <sup>37</sup> See for example: Mark E Schweitzer and Brett Barkley, “Is ‘Fintech’ Good for Small Business Borrowers? Impacts on Firm Growth and Customer Satisfaction,” working paper, Federal Reserve Bank of Cleveland, February 1, 2017, <https://www.clevelandfed.org/newsroom-and-events/publications/working-papers/2017-working-papers/wp-1701-is-fintech-good-for-small-business-borrowers.aspx>; Usman Ahmed, Thorsten Beck, Christine McDaniel and Simon Schropp, “Filling the Gap: How Technology Enables Access to Finance for Small- and Medium-Sized Enterprises,” *innovations* 10, No 3/4, 2016, [https://www.mitpressjournals.org/doi/pdf/10.1162/inov\\_a\\_00239](https://www.mitpressjournals.org/doi/pdf/10.1162/inov_a_00239); review in Kati Suominen, *Revolutionizing World Trade: How Disruptive Technologies Open Opportunities for All* (Palo Alto: Stanford University Press, 2019)
- <sup>38</sup> James A. Wilcox and Yukihiko Yasuda, “Do Government Loan Guarantees Lower, Or Raise, Banks’ Non-Guaranteed Lending? Evidence from Japanese Banks” Draft for World Bank Workshop on Partial Credit Guarantees, March 13-14, 2008, [http://siteresources.worldbank.org/INTFR/Resources/WilcoxYasuda\\_PCG%26JapaneseBanks\\_FINAL.pdf](http://siteresources.worldbank.org/INTFR/Resources/WilcoxYasuda_PCG%26JapaneseBanks_FINAL.pdf). See also Alessio D’Ignazio and Carlo Menon, “The Causal Effect of Credit Guarantees for MSMEs: Evidence from Italy,” SERC Discussions Paper 123, Spatial Economics Research Centre, December 2012,

---

[http://eprints.lse.ac.uk/58555/1/\\_lse.ac.uk\\_storage\\_LIBRARY\\_Secondary\\_libfile\\_shared\\_repository\\_Content\\_SER\\_C%20discussion%20papers\\_2012\\_sercdp0123.pdf](http://eprints.lse.ac.uk/58555/1/_lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_SER_C%20discussion%20papers_2012_sercdp0123.pdf)

<sup>39</sup> See Kati Suominen, "Here's What We Really Should Be Debating When It Comes to Trade," *GE Reports*, November 4, 2016, <https://www.ge.com/reports/heres-really-debating-comes-trade/>

<sup>40</sup> Romane Assou et al., "2019 Africa Tech Venture Capital Report," Partech Partners, January 2020, [https://partechpartners.com/documents/12/2020.01\\_Partech\\_Africa\\_-\\_2019\\_Africa\\_Tech\\_VC\\_Report\\_FINAL.pdf](https://partechpartners.com/documents/12/2020.01_Partech_Africa_-_2019_Africa_Tech_VC_Report_FINAL.pdf)

<sup>41</sup> In advanced markets equity crowdfunding has been found to support financing to firms that do not have extensive investor networks or that are run by women or minorities; econometric studies find that SMEs' growth and performance have improved as a result of accessing equity crowdfunding. See for example: Derek Eldridge, Tahir M. Nisar and Mariateresa Torchia, "What impact does equity crowdfunding have on SME innovation and growth? An empirical study," *Small Business Economics*, 2019, <https://doi.org/10.1007/s11187-019-00210-4>

<sup>42</sup> Abubakar Idris, "Nigerian crowdfunding startups are finally coming under heavy regulation," *techcabal*, April 1, 2020, <https://techcabal.com/2020/04/01/nigerian-crowdfunding-startups-regulation/>; For example, under the proposed rules MSMEs incorporated in Nigeria with a minimum of two years' operating track record, shall be eligible to raise funds through a crowdfunding portal registered by the commission. ₦100million by a medium enterprise, ₦70million for small enterprises and ₦50million for micro-enterprises. The aggregate number of securities sold to any investor in investment-based crowdfunding during the 12-month period shall not exceed 10% of their annual income in a calendar year for retail investors. Only "Sophisticated, High Net worth and Qualified Institutional Investors" are exempted from this limit set by the commission.

<sup>43</sup> See, for example: Salman Alibhai, Simon Bell, and Gillette Conner, "What's Happening in the Missing Middle? Lessons from Financing MSMEs," World Bank, 2017,

<http://documents.worldbank.org/curated/en/707491490878394680/pdf/113906-WhatsHappeningintheMissingMiddleLessonsinMSMEFinancing-29-3-2017-14-20-24.pdf>

<sup>44</sup> "Programa de Garantía Fintech para Fondadores de MIPyMES," Government of Mexico, July 25, 2018,

<https://www.gob.mx/focir/acciones-y-programas/programa-de-garantia-fintech-para-fondadores-de-mipymes>

<sup>45</sup> Laura Brodsky and Liz Oakes, "Data sharing and open banking," McKinsey & Company, September 2017

<sup>46</sup> Staff Writer, "Why Nedbank is embracing open banking," *Business Tech*, September 11, 2019,

<https://businesstech.co.za/news/business/340271/why-nedbank-is-embracing-open-banking/>

<sup>47</sup> In India, Thailand and Australia, the government and Central Bank have played an active role in defining and mandating open banking, while in Japan and Korea, an industry standard-setter or government agency recommends but does not mandate open banking and offers useful API standards and technical specifications. Celine Wan Shi Ann and Norariefah Mohd Iqbal, "Open Application Programming Interface (API): A Financial Revolution," *BNM Quarterly Bulletin*, Fourth Quarter 2017, [http://www.bnm.gov.my/files/publication/qb/2017/Q4/p8\\_fa1.pdf](http://www.bnm.gov.my/files/publication/qb/2017/Q4/p8_fa1.pdf)

<sup>48</sup> Call for Input: Open finance, Financial Conduct Authority, Last updated March 18, 2020,

<https://www.fca.org.uk/publications/calls-input/call-input-open-finance>

<sup>49</sup> Diego Caicedo, "Latin America's showing the world the benefits of e-invoicing," *PaymentsSource*, November 2, 2017, <https://www.paymentsource.com/opinion/latin-america-is-showing-the-world-the-benefits-of-e-invoicing>

<sup>50</sup> See "Electronic Credit Guarantee Services," Services, Korea Credit Guarantee Fund, accessed November 2020, [https://www.kodit.co.kr/html/english/serv\\_kodit/credit\\_guar\\_serv/type/electronic\\_guar.jsp](https://www.kodit.co.kr/html/english/serv_kodit/credit_guar_serv/type/electronic_guar.jsp)

<sup>51</sup> Providence Emmanuel, "E-commerce: MFA moves to facilitate non-oil export," *Best Naira News*, January 25, 2018, <http://news.bestnaira.com/posts/view/e-commerce-mfa-moves-to-facilitate-non-oil-export>

<sup>52</sup> Diego Daruich, "The Macroeconomic Consequences of Early Childhood Development Policies," Federal Reserve Bank of St. Louis Working Paper 2018-29, October 2018; Eric Hanushek and Ludger Woessmann, "The Role of Cognitive Skills in Economic Development," *Journal of Economic Literature* 46, no. 3 (2008): 607-668; James J. Heckman and Tim Kautz, "Hard evidence on soft skills," *Labour Economics* 19, no. 4 (2012): 451-464

<sup>53</sup> See Mastercard, "Cashing Out: Economic Growth through Payment Digitization," White Paper, 2016 <https://newsroom.mastercard.com/mea/files/2020/05/Mastercard-White-Paper-Cashing-Out-Economic-Growth-through-Payment-Digitisation1.pdf> <https://newsroom.mastercard.com/mea/files/2020/05/Mastercard-White-Paper-Cashing-Out-Economic-Growth-through-Payment-Digitisation1.pdf>

<sup>54</sup> Cision PR Newswire, "Middle East and Africa Online Payment Methods 2019-2022 - Ground Work is Laid for Mobile Payment Growth in the Middle East and Africa," press release, March 20, 2019, <https://www.prnewswire.com/news-releases/middle-east-and-africa-online-payment-methods-2019-2022---ground-work-is-laid-for-mobile-payment-growth-in-the-middle-east-and-africa-300815698.html>

- 
- <sup>55</sup> “Digital Payments in Africa: Opportunities and Challenges,” OpenWay and Ovum, 2020, [https://static1.squarespace.com/static/55473fe6e4b079a47a7498d1/t/5e81f6d67995013073bed410/1585575676385/OpenWay\\_Ovum\\_Payments\\_in\\_Africa\\_report.pdf](https://static1.squarespace.com/static/55473fe6e4b079a47a7498d1/t/5e81f6d67995013073bed410/1585575676385/OpenWay_Ovum_Payments_in_Africa_report.pdf)
- <sup>56</sup> “Airtel Africa, Mukuru partner to enable cross-border payments within Africa,” *The Paypers*, July 2020, <https://thepayers.com/mobile-payments/airtel-africa-mukuru-partner-to-enable-cross-border-payments-within-africa--1243764>
- <sup>57</sup> Business Wire, “PayPal, Safaricom and TransferTo Announce Collaboration in Kenya,” press release, April 9, 2018, <https://www.businesswire.com/news/home/20180408005081/en/PayPal-Safaricom-TransferTo-Announce-Collaboration-Kenya>
- <sup>58</sup> “A Policy Framework for Innovative Cross-Border Remittances in Africa,” Alliance for Financial Inclusion, September 2018, <https://www.afi-global.org/publications/2839/A-Policy-Framework-for-Innovative-Cross-Border-Remittances-in-Africa>
- <sup>59</sup> Intra-regional payments have been facilitated by the Southern African Development Community (SADC) Integrated Regional Electronic Settlement System (SIRESS) and the Common Market for Eastern and Southern Africa (COMESA) Regional Payment and Settlement System (REPS).
- <sup>60</sup> “Understanding the Evolving Payments Landscape: Emerging Fraud Trends and Key Strategic Implications” A Forrester Consulting Thought Leadership Paper Commissioned by Visa, July 2019, [http://images.globalclient.visa.com/Web/InovantElqVisaCheckout/%7Bcdabdc93-c43d-4057-9c12-15de79c550d2%7D\\_Visa\\_Payment\\_Fraud\\_TLP\\_vFinal.pdf](http://images.globalclient.visa.com/Web/InovantElqVisaCheckout/%7Bcdabdc93-c43d-4057-9c12-15de79c550d2%7D_Visa_Payment_Fraud_TLP_vFinal.pdf)
- <sup>61</sup> A simple analogy is a neighborhood watch: it is the burglar that benefits if neighbors only have information about their own home and cannot access information from each other about burglaries taking place in the neighborhood; by harvesting data from across the neighborhood, every home is better prepared.
- <sup>62</sup> Visa, “Visa Prevents Approximately \$25 Billion in Fraud Using Artificial Intelligence,” press release, June 17, 2019, <https://usa.visa.com/about-visa/newsroom/press-releases/releaseld.16421.html>
- <sup>63</sup> “Envisioning a Pan-Regional Real-Time Payments Ecosystem in Southeast Asia: How the region has become the center of instant cross-border payments growth,” white paper, Kapronasia in collaboration with ACI Worldwide, June 2020, <https://go.aciworldwide.com/APN-Whitepaper.html>
- <sup>64</sup> Staff Reporter, “African Payment Industry Experts Support ISO 20022 Migration,” *Payments Afrika*, April 29, 2019, <https://paymentsafrika.com/payment-news/online-payments/african-payment-industry-experts-support-iso-20022-migration/#:~:text=First%20published%20in%202004%2C%20ISO.increased%20data%20transparency%20and%20interoperability.&text=South%20Africa%20has%20been%20>
- <sup>65</sup> See “COVID 19 Pandemic – Global Logistics & Express Delivery: Lessons Learned and Recommendations,” Global Express Association, 2020, [https://global-express.org/assets/files/Members-Library-2/GEA\\_express%20delivery%20lessons%20learned%20COVID-19\\_INFO%20PIECE%20F.pdf](https://global-express.org/assets/files/Members-Library-2/GEA_express%20delivery%20lessons%20learned%20COVID-19_INFO%20PIECE%20F.pdf)
- <sup>66</sup> “International Trade and Logistics,” IMDA Singapore, November 28, 2016, <https://www.imda.gov.sg/industry-development/sectors/infocomm/logistics/international-trade-and-logistics>
- <sup>67</sup> See “Digital Economy Partnership Agreement (DEPA),” <https://www.mti.gov.sg/-/media/MTI/Microsites/DEAs/Digital-Economy-Partnership-Agreement/Text-of-the-DEPA.pdf>
- <sup>68</sup> “Onefi Case Study,” Amazon Web Services, Accessed November 2020, [https://aws.amazon.com/solutions/case-studies/onefi/?did=cr\\_card&trk=cr\\_card](https://aws.amazon.com/solutions/case-studies/onefi/?did=cr_card&trk=cr_card)
- <sup>69</sup> Matthias Bauer, Martina F. Ferracane, Erik van der Marel, “Tracing the Economic Impact of Regulations on the Free Flow of Data and Data Localization,” CIGI and Chatham House, Paper Series 30, May 2016, [https://www.cigionline.org/sites/default/files/gcig\\_no30web\\_2.pdf](https://www.cigionline.org/sites/default/files/gcig_no30web_2.pdf); Martina F. Ferracane, Janez Kren, Erik van der Marel, “The cost of data protectionism,” *Vox*, October 25, 2018 <https://voxeu.org/article/cost-data-protectionism>; Mona Farid Badran and Rizwan Tufail, “Economic Impact of Data Localization in 5 selected African Countries, an empirical study,” working paper, March 2019, [https://pic.strathmore.edu/wp-content/uploads/2019/03/PIC\\_RANITP\\_Economic\\_Impact\\_of\\_Data\\_Localization\\_in\\_5\\_selected\\_African\\_Countries.pdf](https://pic.strathmore.edu/wp-content/uploads/2019/03/PIC_RANITP_Economic_Impact_of_Data_Localization_in_5_selected_African_Countries.pdf); Kyu Lub Lee, Moonhee Cho, Jungu Kang, Minji Kang, “Welfare Effects of the EU GDPR and Data Localization Measures,” *World Economy Brief* 9, no. 7 (April 2019), <https://think-asia.org/bitstream/handle/11540/9995/WEB19-07.pdf?sequence=1>
- <sup>70</sup> <https://www.enterprisesg.gov.sg/-/media/esg/files/non-financial-assistance/for-companies/free-trade-agreements/Singapore-Australia-FTA/Legal-text/Chapter-14/Chapter-14-Electronic-Commerce>

---

<sup>71</sup> United States Department of Justice, “U.S. And UK Sign Landmark Cross-Border Data Access Agreement to Combat Criminals and Terrorists Online,” press release, October 3, 2019, <https://www.justice.gov/opa/pr/us-and-uk-sign-landmark-cross-border-data-access-agreement-combat-criminals-and-terrorists#:~:text=The%20United%20States%20and%20the.and%20cybercrime%2C%20directly%20from%20tech>

<sup>72</sup> See Nataraj Nagaratnam, “Confidential Computing,” IBM Cloud Learn Hub, 16 October 2020. The contents of the enclave – what data are being processed and how – can only be accessed with an authorized programming code, which is invisible and unknowable to anything or anyone else, including the cloud provider. This not only secures data in use and transit – it also helps protect firms’ IP and can encourage companies to tap new efficiencies as they can move more of the sensitive data and workloads to public cloud services

<sup>73</sup> The European Union has introduced eIDAS, an EU-wide digital identity based on national digital ID systems that enable Europeans in any one-member state to submit tax declarations, enroll in a university, open a bank account, set up a business, authenticate internet payments, bid for tenders and so on in other member states. The system includes both individual digital IDs and, when they exist such as in the Netherlands, corporate digital IDs.

<sup>74</sup> See, Suominen, Kati 2021. “Corporate Digital Identity as an Enabler of MSME Ecommerce.” Alliance for eTrade Development white paper, U.S. Agency for International Development (forthcoming).

<sup>75</sup> Abdi Latif Dahir, “Cybercrime is costing Africa’s businesses billions,” *Quartz Africa*, June 12, 2018, <https://qz.com/africa/1303532/cybercrime-costs-businesses-in-kenya-south-africa-nigeria-billions/>

<sup>76</sup> JVP, “City Of New York And Jerusalem Venture Partners Launch ‘Cybersecurity Moonshot Challenge’ To Protect Small Businesses From Cyberattacks,” press release, November 19, 2018, <https://www.jvpvc.com/press-releases/city-of-new-york-and-jerusalem-venture-partners-launch-cybersecurity-moonshot-challenge-to-protect-small-businesses-from-cyberattacks/>

<sup>77</sup> Ciaran Martin, “Exclusive: British Intelligence calls for ‘Security by Design’,” *GovInsider*, October 2, 2019, <https://govinsider.asia/innovation/exclusive-british-intelligence-calls-for-security-by-design/>

<sup>78</sup> “Women and Men in the Informal Economy: A Statistical Picture (third edition),” International Labour Office, April 30, 2018, [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\\_626831.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf)

<sup>79</sup> See for example: Miriam Bruhn and David McKenzie, “Entry Regulation and the Formalization of Microenterprises in Developing Countries,” PEDL Policy Insight Series, no. 2 (December 2018), [https://pedl.cepr.org/sites/default/files/PEDL%20Policy%20Insights%20Series%20-%20No.2\\_0.pdf](https://pedl.cepr.org/sites/default/files/PEDL%20Policy%20Insights%20Series%20-%20No.2_0.pdf)

<sup>80</sup> David McKenzie, “Targeting which informal firms might formalize and bringing them into the tax system,” *World Bank Blogs*, February 6, 2017, <https://blogs.worldbank.org/impactevaluations/targeting-which-informal-firms-might-formalize-and-bringing-them-tax-system>

<sup>81</sup> Pritesh Samuel, “Vietnam’s Business License Tax Exemption: Highlights of Decree 22,” *Vietnam Briefing*, March 11, 2020, <https://www.vietnam-briefing.com/news/vietnams-business-license-tax-exemption-decree-22.html/>

<sup>82</sup> Startup India, “Startup Recognition & Tax Exemption,” <https://www.startupindia.gov.in/content/sih/en/startupgov/startup-recognition-page.html> (accessed 20 August 2020).