Chapter 6 The nexus between the digital economy and investment

In today’s fast-paced global business environment, cross-border investment decisions are perhaps the quintessence of the digital economy. Without digital payment platforms and e-banking, the flow of international capital across borders would be inconceivable in today’s business world.

Beyond the well-established financial transactions of formal banking and stock exchange platforms, there are many digital innovations taking centre stage. These include financial technology (fintech), virtual money and blockchain technologies. Digitalization in today’s era offers endless opportunities to generate investment instruments and services, enabling investors to pair themselves with opportunities at the click of a mouse. For example, there is an array of mutual funds and crowdfunding platforms that aggregate investors from multiple jurisdictions and allow them to channel resources to specific business sectors in new and profitable ways. Digitalization is not only a means to an end, but it is the technological backbone driving the growth of private equity as an alternative form of investment financing in Africa, making private equity one of the strongest performing sectors.481

A word of caution is needed. Digitally-driven investment vehicles and models require both evolved regulatory supervision within national borders and cross-border cooperation. In Nigeria in 2016, the popular Mavrodial Mundi Moneybox digital platform (also known as MMM) collapsed, leaving individual investors with significant losses when financial regulators were unable to intervene or provide compensation. Regulators had their hands tied because the platform was not registered as a financial institution or product in Nigeria (see chapter 2).

Just as investment regulation in the digital space needs careful attention, so does regulation on investment-related issues, such as taxation. When firms operate in the digital economy and collect payments for their goods and services, the remittance of value-added tax (VAT) or payment of corporate income tax may only be captured by the source country if the recipient country (that is, the jurisdictions where transactions take place) does not have adequate regulations covering these transactions.482

When it comes to e-commerce, digital trade takes place on trading platforms that are outside Africa—Alibaba, eBay, Amazon—and payments through these platforms also take place through systems that are mostly not on the continent—Visa, Mastercard, PayPal. This leaves African countries with few opportunities for reaping the direct benefits of such trade, and it takes away opportunities for raising revenue through taxing these activities. Down the line, the continent may miss out on opportunities for domestic resource mobilization. Hence the need for regulating the development of digital platforms within the continent.
The main challenge of taxation in the digital economy is that existing international rules are not fit for purpose for digital transactions. The permanent establishment rule (PE), for example, allocates a country’s taxing rights to businesses that have sufficient physical presence in its jurisdiction. But in an increasingly digital world, consumers are able to purchase goods and services online, and sellers can cater to buyers from anywhere in the world, while maintaining minimal or no physical presence in the user’s jurisdiction. Tax authorities struggle to properly tax foreign-domiciled companies, even in cases where significant economic value is created locally. Facebook, for instance, has 200 million users in Africa but only one physical office on the continent—in Johannesburg. Online transactions can also lead to the undercollection of VAT in two ways: through VAT exemption on low-value parcel imports and due to the complexity of enforcing VAT on services and intangibles (such as digital downloads) purchased by private consumers. These taxation issues can create an unlevel playing field for domestic and foreign firms.

An important counter current to the above is that several locally-focused e-commerce platforms have emerged, such as Jumia and Konga (Nigeria), Takealot and Bidorbuy (South Africa) and Kilimall (Kenya). These platforms bring together African consumers and entrepreneurs. Some also sell goods from outside the continent (or from the continent to the rest of the world), such as Mall for Africa and Aftownmall. There are also some African payment platforms making headway—such as the well-established M-Pesa (Kenya and eastern Africa) and Wari (Senegal and western and central Africa), among others—as well as initiatives by regional bodies and international organizations, indicating that the continent is making progress in increasing presence and bridging the digital divide.

Although such platforms and initiatives can help integrate African economies through networked industries, value chains and institutions, virtually linked economies can also create and amplify concerns around the interplay between investment, competition and intellectual property in the presence of market failures. The benefits of digitalized economies will be maximised where there is coherence of regulations and where supervisory structures balance investment protection, fair competition and enough protection to foster market innovation and also enable compliance with the existing rules and regulations. Such a set-up will level the playing field for investors in terms of their obligations, as well as their ability to access markets, irrespective of the investors’ origin, and allow for sustainable and transformative investment in Africa.

This chapter defines and characterizes the digital economy in Africa, taking account of the players, sectors, components and value of the economy on the continent. It looks at the various initiatives, policies and regulations being developed to support the digital economy—and e-commerce in particular—at the continental, regional and national level and how these efforts could affect investment decisions. The focus is on recent efforts to develop e-commerce in the context of the African Continental Free Trade Area (AfCFTA) and the African Union (AU) Digital Transformation Strategy initiative.
Defining the digital economy

Surprisingly, given its increasing significance, there is no commonly agreed definition of the digital economy, even though there have been multiple initiatives to define the term since it was first coined in the mid-1990s. This chapter adopts the proposal by Bukht and Heeks, who define the digital economy as “that part of economic output derived solely or primarily from digital technologies with a business model based on digital goods and services.” Building on this definition, the United Nations Conference on Trade and Development (UNCTAD) identifies three main components of the digital economy and suggests a three-scope approach to defining the term (figure 6.1):

• Core digital economy—fundamental innovations (semiconductors, processors), core technologies (computers, electronic devices) and enabling infrastructures (the internet and telecoms networks).

• Narrow scope digital economy—digital and information technology (IT) sectors are comprised of those firms—such as digital platforms, mobile applications and payment services—that produce products or services that rely on core digital technologies and infrastructures.

• Broad scope digital economy—a wider set of traditional sectors where digital products and services are being increasingly used and where new activities or business models have emerged as a result of digital technologies. Examples include retail, commerce, finance, media, tourism and transportation.
The core and narrow scopes are the digital economy but, because digital technologies are transforming all sectors, the broad scope can be more accurately called the “digitalized economy.” Most efforts to measure the digital economy—some of which are discussed below—cover the core and narrow scopes only.

**The digital economy in Africa**

**Context**

For billions of people around the world, many aspects of life are becoming increasingly digital. Africa is no exception. Nigerians can now buy electronic products on the e-commerce website Jumia and watch movies on the streaming app iROKOTv. Many Kenyan adults use mobile money provider M-Pesa to transfer money, pay bills, save and borrow. Breadfast—a food delivery service—brings freshly baked bread and other breakfast items straight to the doorsteps of Egyptian consumers every morning. Office workers in Addis Ababa commute to and from their workplaces using the ride-hailing app Ride. In Zambia, ZEduPad tablets give...
primary school students access to pre-loaded literacy and numeracy lessons in eight local languages, as well as English. Rwandans can easily and reliably access crucial government services online. They can also settle utility bills, pay in supermarkets and send and receive money through bank and mobile money applications. Across the continent, hundreds of millions of people regularly use social media platforms, such as Facebook and WhatsApp, to stay connected with family and friends.

Consumers are not the only ones to benefit from this digital revolution. African entrepreneurs are using technology to build innovative products and services to serve the specific needs of local and external markets. In 2019, the continent was home to 618 active tech hubs, with major clusters in Egypt, Kenya, Nigeria and South Africa. This was a 40 per cent rise from just a year earlier. Innovations in the tech sector also have spillover effects on traditional industries, where small and medium-sized enterprises (SMEs) and big corporations alike use technology to improve productivity and solve long-standing problems. Governments are similarly leveraging digital technology to improve public administration and to enable citizens to access services online.

This digital transformation is possible because of two key technological developments. First, for the past several decades the internet has been reshaping economies and business models. And more recently, the Fourth Industrial Revolution (4IR)—characterized by rapid advances in robotics, big data, the blockchain, cloud computing, 3D printing, artificial intelligence and the internet of things—is further blurring the boundaries between the digital and physical worlds.

The internet and 4IR provide the digital foundation and technical innovations that drive the digital economy, a phenomenon that poses unique opportunities and risks. Countries, businesses and consumers that can master these developments have the potential to position themselves for success in the 21st century, while those who cannot do so risk lagging behind. Success depends not only on hard infrastructure (electricity grids, telecommunication networks, and access to smartphones and the internet), but also on human capital and soft infrastructure (skills and financing) and enabling regulations and institutions. Unfortunately, there are wide gaps in the abilities among and within countries to take advantage of the digital economy.
Information and communication technology and other supporting infrastructure in Africa—electricity, mobile phones, the internet and digital payments

The digital economy’s backbone is built on information and communications technology (ICT) infrastructure. At the most basic level, all ICT infrastructure is powered by electricity. Yet electrifying Africa remains a challenge. In 2016, only 43 per cent of the population in Africa had access to electricity, the lowest rate of any region and much lower than the overall global rate of 87 per cent. Household access rates are lower than 50 per cent in two of three countries in the region, and more than 600 million Africans are not connected to grids. Near-universal access is achieved in only Mauritius and Seychelles. For those who are connected, paying for electricity can be burdensome. As a benchmark, the price of powering a refrigerator for a year is much higher in Africa than in the rest of the world. This cost is equivalent to 49 per cent of GDP per capita in Liberia, 23 per cent in Gambia and 21 per cent in Sierra Leone, as opposed to almost zero in developed countries such as Australia, France, Japan, United Kingdom and United States.

Mobile phones are the dominant method of accessing communications and information on the continent. In 2018, there were 456 million unique mobile phone subscribers in Africa. This represents a 45 per cent mobile phone penetration rate, 23 percentage points lower than the global average. Thirty-nine per cent of mobile subscribers owned smartphones, and 239 million had access to the internet on their phones. Personal computer ownership is minimal. Only 15 per cent of South Africans between the ages of 15 and 65 have a desktop or laptop. PC ownership rates are 8 per cent in Nigeria, 6 per cent in Lesotho and 2 per cent in Uganda.

Africa has made great strides in connecting its citizens to the internet. In absolute numbers, internet users on the continent have risen 14-fold, from fewer than 20 million in 2005 to just under 300 million in 2019 (figure 6.2). This has been possible due to developments in both first- and last-mile connectivity. Major infrastructure projects, such as the Central Africa Backbone and the Trans-Sahara Optical Fibre Backbone, have linked various African countries—including those that are landlocked—to high-speed fibre optic networks. Nearer to consumers, the smartphone and mobile broadband revolution has been instrumental in connecting users on the continent to the world wide web. The vast majority of Africans with access to the internet do so through mobile rather than fixed broadband. In 2019, there were 354 million active mobile-broadband subscriptions in Africa but just 5 million active fixed-broadband subscriptions. Privatization and liberalization have transformed the telecommunications sector in many African countries and are partly responsible for the rise in mobile-broadband use. In the mobile operator space, markets that were once dominated by state-owned monopolies now have multiple players offering a level of competition and consumer choice.
Significant challenges remain, however, in bringing the rest of the continent online. Despite recent progress, in 2019 individuals with internet access make up less than 30 per cent of Africa’s population, compared with the global average of 53.6 per cent (see figure 6.2). In addition to further infrastructure investment, two major stumbling blocks for higher internet use and penetration—affordability and reliability—must be addressed. In 2019, one gigabyte of data costs more than 7 per cent of the average monthly salary. In Democratic Republic of Congo it takes as much as 26 per cent of monthly income to pay for one gigabyte of data. Of the 50 countries in which data are most expensive, 31 are in Africa.\footnote{Further, African countries are among the most likely to cut off access to the internet. These blackouts vary in length and scope and, rather than blanket shutdowns, they are increasingly being used to block access to selective social media websites.} When the internet is available, speed is usually slow. No African nations are listed among the 50 countries with the highest mobile and fixed broadband download speeds. Morocco (53) and South Africa (54) are the best-performing African countries. Large economies such as Nigeria (113), Egypt (108), Kenya (97) and Ethiopia (71) do less well. Seven\footnote{of the bottom 20 countries in download speeds are in Africa.} of the bottom 20 countries in download speeds are in Africa.

Mobile money is one area where Africa is a pioneer. The continent\footnote{boasted almost half the total global mobile money accounts, with 396 million registered users in 2018. They are served by 1.4 million agents. In countries such as Kenya and Zimbabwe, more than 60 per cent of all adults have mobile money accounts. The value of mobile money transactions in Kenya was projected to exceed the country’s GDP in mid-2018.} boasted almost half the total global mobile money accounts, with 396 million registered users in 2018. They are served by 1.4 million agents. In countries such as Kenya and Zimbabwe, more than 60 per cent of all adults have mobile money accounts. The value of mobile money transactions in Kenya was projected to exceed the country’s GDP in mid-2018.
Quantifying the digital economy in Africa

There have been various attempts to quantify aspects of the digital economy. Numerous international and regional organizations, academic institutions and researchers have adopted different methodologies to calculate the value of the digital economy. This makes it difficult to compare results from different studies, let alone arrive at standardized measures that are universally accepted. Lately, however, international efforts to coordinate measurements have been led by the International Telecommunication Union (ITU), the International Labour Organization (ILO) and UNCTAD. With these cautions in mind, the following section reports estimates of the size of Africa’s digital economy across multiple dimensions.

**Contribution to GDP**

The most obvious measure of the digital economy is its contribution to GDP. At the global level, estimates of the value added by the digital economy to GDP range from 4.5 per cent (narrow scope) to 15.5 per cent (broad scope).

In an analysis of the 14 economies that accounted for 90 per cent of Africa’s GDP, the McKinsey Global Institute found that the internet contributed 1.1 per cent to overall GDP in 2012. In comparison, the internet’s contribution to GDP was 1.9 per cent in emerging countries and 3.7 per cent in developed economies. In the 14 African countries studied, the internet’s contribution to GDP varied widely. It was 3.3 per cent in top performer Senegal, a level comparable to that of developed countries, but only 0.5 per cent in Angola. In dollar terms, the value of the internet economy in 2012 was $17.7 billion for the 14 countries and ranged from $18 to $18.5 billion for the continent. But there is a massive upside potential for the internet’s contribution to GDP. If it matches the impact that mobile telephony has had on Africa’s economy, the internet could contribute $300 billion to Africa’s GDP by 2025.

GSMA offers a different estimate of the contribution of the mobile sector. It found that in 2018 the mobile ecosystem directly contributed $39 billion, or 2.4 per cent of GDP, to Africa’s economy. It argues, however, that mobile technologies also enable significant productivity gains in the broader economy. If indirect contributions and productivity gains are included—estimates that are inherently imprecise—mobile contributions to the economy rose to $144 billion or 8.6 per cent of GDP.

**Digital trade**

The Organisation for Economic Co-operation and Development (OECD) defines digital trade or e-commerce as “the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders.” E-commerce orders are placed and received over the internet, but deliveries and payments do not necessarily happen online. Orders placed by phone, fax or e-mail are not considered e-commerce transactions. With the rising adoption of social media networks such as Facebook and Instagram,
merchants and consumers are increasingly promoting, buying and selling products on these platforms. This specific category of trade is generally classified as social commerce. Digital trade can be between a business and a consumer (B2C), a business and another business (B2B), a business and a government (B2G) or between two consumers (C2C). In this chapter the terms digital trade, digital commerce, electronic commerce and e-commerce are used interchangeably.

The latest estimates from UNCTAD show that global e-commerce reached $25.6 trillion in 2018, of which $21 trillion was B2B and $4.4 trillion was B2C sales. This represented 30 per cent of world GDP. One in four of the world’s population older than 15—approximately 1.45 billion people—made online purchases in 2018.  

In Africa the uptake of e-commerce starts from a low base. Both new and established businesses in Africa are taking advantage of the internet and digital technologies to sell goods and services directly to a large population that is going online for the first time. In 2017, there were only 21 million online shoppers on the continent. B2C e-commerce was worth $5.7 billion or 0.5 per cent of GDP, much lower than the global average of 4 per cent. This was because of the weak digital infrastructure that undergirds e-commerce transactions. UNCTAD’s B2C E-commerce Index is an annual ranking of countries’ preparedness for online shopping. It is calculated as the average of four indicators: financial institution account ownership rate (banks or mobile money), percentage of the population using the internet, Postal Reliability Index (by the Universal Postal Union) and the number of secure internet servers per one million people. According to the 2019 edition of the Index, Africa scored the lowest among all the world’s regions. The best-performing African country, Mauritius, ranked only 58, and 9 of the bottom 10 countries were in Africa.

Both the value of e-commerce and the number of online shoppers are growing fast, however. Statista estimates that in 2021 African consumers will spend $24.8 billion online on major product segments including fashion, electronics, furniture and appliances, toys, food and personal care. It forecasts B2C e-commerce revenue will rise at a compound annual growth rate of 13.3 per cent between 2021 and 2025, reaching $40.8 billion by 2025. The McKinsey Global Institute projects an even higher number: in Africa’s largest 14 economies, e-commerce could account for 10 per cent of total retail sales by 2025, generating $75 billion in online sales every year.

**Employment**

The digital economy has the potential to boost employment. Globally it already makes up approximately 3 per cent of the total workforce. But there are fears that automation enabled by the internet can also reduce jobs. Acemoglu and Restrepo suggest a conceptual framework for analysing these effects. They argue that automation—and technological changes more generally—makes it possible for capital to replace labour in certain production tasks (displacement effect). At the same time, because automation raises productivity in the overall economy, it augments the demand for labour in non-automated tasks (productivity effect).
Additionally, technological advances typically create new tasks in which labour enjoys a comparative advantage relative to capital (reinstatement effect). Thus, the overall impact of automation on labour demand depends on the magnitude of the displacement effect, on the one hand, and the productivity and reinstatement effects, on the other. If the former exceeds the latter, job losses ensure. Otherwise automation leads to a net positive gain in employment.

Empirical studies suggest that employment gains generated by technology could more than offset any losses. A McKinsey Global Institute study found that globally the internet creates 3.1 new jobs for every job that it eliminates. The ratio is higher in aspiring (McKinsey’s terminology) economies (3.2 jobs) than developed countries (1.6 jobs). This is because the internet enables significant productivity gains for all sectors of the economy. In a survey of SMEs, the institute found that companies that use web technologies grow twice as fast as those that do not. And internet-enabled businesses bring in more than twice as much in export revenues as a percentage of total sales and create twice as many jobs as their offline peers.

For Africa in particular, a World Bank report argued that the trade-off between job losses caused by automation and employment gains from innovation is less pronounced than in the rest of the world due to two factors. First, digital tools can raise the productivity of low-skilled workers in all sectors and, second, manufacturing—the sector most susceptible to automation—remains small on the continent. As a result, Africa has the potential to create jobs across all skills in all sectors by further adopting digital technologies.

PwC estimated that digitalization created more than 600,000 jobs in Africa in 2011. GSMA estimated that the mobile ecosystem employed 3.5 million people in Africa in 2018. Of these, 500,000 were formally employed by mobile operators and other mobile sector employers, 1.2 million were informally employed and another 1.8 million jobs were supported by the mobile ecosystem in other sectors of the economy. A Boston Consulting Group report indicated that online marketplaces—defined as “digital platforms that essentially match independent third-party providers of goods and services with consumers”—could create 3 million new jobs by 2025 with little downside risks for incumbent businesses and workforce norms. The report projected online marketplaces will directly employ 100,000 people in software development, operations and marketing. There will also be indirect employment opportunities for 1 million people in jobs, such as drivers, merchants, logistics personnel, housekeepers and so on. Another 1.8 million jobs will be “induced” by additional economic activities generated by online marketplaces.

The mobile sector and online marketplaces are subsets of the overall digital economy. In the broader economy, opportunities for employees with digital skills are likely to be much bigger. A modelling exercise by the International Finance Cooperation (IFC) found that there will be 230 million “digital jobs”—defined as jobs requiring digital skills in agriculture, industry and services in both the formal and informal sectors—in Africa by 2030.
The authors cautioned, however, that the continent’s education systems currently face resource shortages, do not adequately equip students with foundational skills and are grappling with a mismatch between the skills taught in schools and those demanded by employers. Unless there are fundamental shifts in education systems, especially to equip people with the digital skills necessary for the future of work, Africa risks failing to capture the opportunities presented by digitalization.

**Experience in China shows that e-commerce platforms allow women to start businesses from home selling products online.**

Not only can the digital economy contribute positively to employment in Africa, but it has the potential to help underserved groups such as women and youth. Experience in China shows that e-commerce platforms allow women to start businesses from home selling products online. In China this has resulted in one in two online enterprises being women-owned, a higher ratio than their offline counterparts. And according to the African Development Bank, for young Africans age 15 to 35 who are not students, only one in six is wage employed. The continent’s youth are well positioned to benefit from employment opportunities offered by new business models such as e-commerce and the gig economy. But if left unregulated, these new employment norms may pose a different set of challenges, including low pay, unsatisfactory working conditions and uncertainty. It is thus essential that labour laws and regulations be updated to keep pace with the new reality to ensure employees are adequately protected from potential exploitation.

**Fourth Industrial Revolution sectors**

Africa is fast becoming a hotbed for innovations, with a small but growing number of companies using cutting-edge technologies to solve difficult problems in agriculture, healthcare, education, finance and industry. The African Development Bank identified 712 4IR start-ups backed by $210 million in venture funding in 2019. A good example is the Nigerian start-up Ubenwa, which uses machine learning to analyse the cries of newborn infants and detect anomalies such as birth asphyxia or brain injury. It has the potential to help save lives through early detection and treatment.

**E-government**

With more and more people accessing the internet, citizens are demanding that governments improve the efficiency of public administration by moving more public services online. But many countries in Africa are not fully prepared for e-government. According to the 2018 UN E-Government Development Index (EGDI)—a measure of governments’ willingness and abilities to use ICT to deliver public services—only six African countries were ranked in the high EGDI group,
while 14 achieved very low EGDI scores. But there has been some encouraging progress. For instance, the Irembo portal is a key component of the Rwanda government’s drive to improve public service delivery and combat corruption. Irembo allows citizens and businesses to electronically access public services. Citizens can apply online for national IDs, register for driving tests, pay traffic fines and transfer land titles. Rwandans can even book COVID–19 tests through the online portal. The increasing use of technology is another important trend in moving government services online to better manage public resources through e-procurement (see chapter 4).

Business models of e-commerce firms operating in Africa

Africa has a young population that is rapidly urbanizing, connected to the internet for the first time and comfortable with the use of digital technologies. Spending power is on the rise. Consumer spending on the continent reached $1.5 trillion in 2015 and is projected to rise to $2.1 trillion by 2025 and $2.5 trillion by 2030. African consumers are increasingly going online to buy a broader range of goods and services. Taking advantage of these favourable demographic trends and changing consumer behaviours, incumbent businesses and start-ups alike are competing for a chance to capture a share of booming online shopping markets.

Africa is now a centre for innovation and experimentation in e-commerce. A 2017 analysis by Disrupt Africa identified 264 e-commerce start-ups active in 23 African markets. These start-ups adopt a variety of business models (table 6.1): they enable trade in goods (MallforAfrica, an online marketplace) and services (Vezeeta, a digital healthcare booking platform). They operate either in their home markets only (Konga in Nigeria) or in multiple regional markets (Jumia, which has headquarters in Lagos but operates in 11 African countries). They serve mainly either B2C or B2B segments. A business model that is growing in importance is online boutiques that sell products made by Africa-based artisans and by SMEs to the diaspora and other global consumers. An example is soleRebels, a company selling footwear inspired by “barabasso”—traditional Ethiopian shoes handcrafted from recycled tires. But e-commerce start-ups are not spread evenly across the continent: the vast majority of entrepreneurship teams are based in West Africa (48.1 per cent), southern Africa (27.3 per cent), and east Africa (18.2 per cent). This is because businesses are choosing to operate closer to consumers: more than half of online shoppers in Africa are located in just three countries—Kenya, Nigeria and South Africa. Nigeria is the largest e-commerce market in both revenue and number of shoppers.
Table 6.1 E-commerce business models in Africa

<table>
<thead>
<tr>
<th></th>
<th>GOODS</th>
<th></th>
<th>SERVICES</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Local</td>
<td>Konga, Takealot, Kilimall, Jiji, Copia</td>
<td>Twiga Foods</td>
<td>SWVL, SweepSouth, Gokada, Vezeeta</td>
<td>MaxAB, Sendy</td>
</tr>
<tr>
<td>Regional</td>
<td>Jumia, MallforAfrica</td>
<td>WasytoCap</td>
<td>GetSmarter, Mubawab</td>
<td>Kobo360</td>
</tr>
<tr>
<td>Global (often targeting the diaspora)</td>
<td>Aftownmall, soleRebels, Afropolitan, TONGORO</td>
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</tbody>
</table>

Digital trade still faces many challenges on the continent, including inadequate access to the internet, a general lack of trust in e-commerce platforms, unreliable street addresses and postal systems, and low financial institution account ownership rates. As a result, a simple copy-and-paste transfer to Africa of existing business models in developed countries does not work. This explains why international e-commerce giants such as Amazon and Alibaba do not yet have local operations on the continent. While both ship select products to some countries in Africa, the costs of international shipping and the hassles of clearing customs limit the volume of orders.551 The continent’s major e-commerce players are currently homegrown (for example, Jumia and Konga in Nigeria, Takealot in South Africa and Kilimall in Kenya). The constraints they experience in tough local operating environments force them to develop skills and innovations that are different from those of their international peers.552 For example, many African consumers are shopping online for the first time and are unfamiliar with the experience. To address this, Jumia developed a direct marketing activation program called JForce that allows registered agents to assist customers in placing orders through Jumia’s website or through its apps.553 Because these obstacles do not apply to the service sector, services such as Uber and Airbnb have significant operational footprints and market share in Africa.

In tandem with the growth of e-commerce, the digital payment ecosystem in Africa is also developing fast. Major e-commerce platforms offer a multiplicity of payment methods on their websites and apps (table 6.2). Despite the advance of mobile money, less than half the population over age 15 has an account at a financial institution or mobile money operator.554 Cash on delivery (CoD) remains the only option for many online shoppers. But bank and electronic fund transfers (EFT) through payment gateways, credit and debit cards and mobile/digital wallets are also increasingly being used and accepted. PayPal is also available on MallforAfrica, a platform that lets African consumers purchase directly from international online retailers in the United States and Europe. In Nigeria, 25 per cent of e-commerce
payments are through bank transfers, 24 per cent in CoD, 16 per cent by credit and debit cards, 10 per cent on mobile wallets and the rest through other payment methods. So while the majority of e-commerce firms operating in Africa are local, a significant portion of payments processed on these platforms happen on foreign-owned card and payment schemes.

Table 6.2 Payment methods available on different e-commerce platforms

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>PAYMENT METHODS AVAILABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jumia</td>
<td>Cash on delivery (CoD)</td>
</tr>
<tr>
<td></td>
<td>Credit and debit cards (VISA, Mastercard, Verve)</td>
</tr>
<tr>
<td></td>
<td>Mobile money and wallets (JumiaPay, mCash)</td>
</tr>
<tr>
<td>Takealot</td>
<td>Cash on delivery (CoD)</td>
</tr>
<tr>
<td></td>
<td>Credit and debit cards (VISA, Mastercard, American Express, Diners Club)</td>
</tr>
<tr>
<td></td>
<td>Payment gateways (PayFast, Ozow)</td>
</tr>
<tr>
<td></td>
<td>Loyalty programs (eBucks, Discovery Miles)</td>
</tr>
<tr>
<td></td>
<td>Non-credit card credit products (Mobicred)</td>
</tr>
<tr>
<td>Kilimall</td>
<td>Credit and debit cards (VISA, Mastercard)</td>
</tr>
<tr>
<td></td>
<td>Mobile money and wallets (M-Pesa, LipaPay, Airtel Money)</td>
</tr>
<tr>
<td>MallforAfrica</td>
<td>Bank transfers</td>
</tr>
<tr>
<td></td>
<td>Credit and debit cards (Webcard, VISA, Mastercard, Verve)</td>
</tr>
<tr>
<td></td>
<td>Mobile money and wallets (M-Pesa, Orange Money, Paga)</td>
</tr>
<tr>
<td></td>
<td>PayPal</td>
</tr>
</tbody>
</table>

Note: Webcard is a stored-value reloadable debit card offered by MallforAfrica.

National, regional and continental policies on the digital economy

This section reviews what governments on the continent have been doing in the areas of e-commerce and the broader digital economy. Not all African governments have set out their e-commerce visions, but recently several comprehensive strategies and policies have begun to emerge. This overview, while non-exhaustive, examines the structure and content of the strategies and policies and highlights the best practices adopted by different African countries to encourage e-commerce.

National e-commerce and digital economy strategies, policies and initiatives

E-commerce can contribute to the economy in various ways. It improves market efficiency through disintermediation by directly matching sellers and buyers, allows consumers to have better access to goods and services at lower prices and expands sales opportunities for merchants who can reach many more buyers online than is possible with traditional brick-and-mortar stores. Recognising this economic potential, governments around the world have formulated and implemented policies to spur the growth of e-commerce and the digital economy more broadly.
The need to address market failures is often given as the main rationale for developing national strategies for innovations. According to Lundvall et al., “To understand the construction of innovative systems it is, therefore, not sufficient to explore the endogenous institutional evolution of the private sector. The public sector plays a major role when it comes to supplement the self-organizing forces of the private sector in at least two respects: enhancement in the production and distribution of technology and the reduction in transaction costs.”

This rationale—to accelerate the national adoption of digital technology and lower transaction costs—as well as ambitions to create national champions—seem to be the objectives of national strategies for e-commerce and the broader digital economy.

Egypt’s National E-commerce Strategy

Egypt is the only African nation with a stand-alone National E-commerce Strategy, and one of the very few countries outside Asia with such a strategy. The strategy, launched in 2017, was jointly developed by Egypt’s Ministry of Communications and Information Technology and UNCTAD.

The vision for Egypt is to “fully leverage the potential of e-commerce and the talents of her people to boost domestic trade, regional and international exports, to provide a channel for consumers and businesses to buy and sell, and to create jobs and innovation in the e-commerce ecosystem, producing e-commerce products, services and applications.”

To achieve this vision, an overarching goal is set for combined B2B and B2C e-commerce value to reach 2.35 per cent of GDP by 2020, driven by e-commerce adoption by key economic sectors. This high-level goal is further divided into six strategic goals:

1. Empower businesses through e-commerce.
2. Leverage e-commerce to incentivise formalization of the informal sector.
3. Exploit strengths of the ICT sector for e-commerce.
4. Boost Egypt’s logistics sector into a regional hub.
5. Stimulate the growth of payment sector.
6. Build Egypt’s consumer market for e-commerce.

Each strategic goal is accompanied by a list of recommendations/actions that assigns ministerial or institutional responsibility for implementing each action. These recommendations/actions are expected to be achieved through a mix of public policy tools, including fiscal policy (soft credit, credit guarantees, tax deductions and exemptions), regulatory initiatives (e-procurement, customs duties exemptions)
and capacity building (entrepreneurship training, creation of trade networks and industry associations). For monitoring purposes, the strategy includes a set of key performance indicators as well as a detailed action plan for Egypt.560

Kenya's Digital Economy Blueprint

Apart from Egypt, other African countries usually cover e-commerce issues in broader digital economy strategies or national development plans. A good example is Kenya's Digital Economy Blueprint. It was a product of an inter-ministerial working group led by the Ministry of Information Communications and Technology (MoICT) and published in 2019.

Similar to Egypt's approach in defining its national e-commerce strategy, Kenya builds its digital economy blueprint on a broad vision of "a digitally empowered citizenry, living in a digitally enabled society." This is to be achieved by a mission to create "a nation where every citizen, enterprise and organization has digital access and the capability to participate and thrive in the digital economy." The government justifies the existence of the blueprint by laying out different rationales (sociocultural, political and economic) for the digital economy in Kenya. It also offers clear objectives of what the blueprint is meant to accomplish, that is, to identify the foundation for a Kenya digital economy framework by defining the pillars and enablers of a digital economy, defining the imperatives necessary for Kenya to move to a digital economy and identifying areas where Kenya can intervene and seize opportunities.

To realize the vision, the blueprint defines five areas of focus for Kenya:

- **Digital government**: The presence and use of digital services and platforms to enable public service delivery.

- **Digital business**: Development of a robust marketplace for digital trade, financial services and digital content; e-commerce focus.

- **Infrastructure**: The availability of affordable, accessible, resilient and reliable infrastructure.

- **Innovation-driven entrepreneurship**: The presence of an ecosystem that supports homegrown firms to offer general world-class products and services that help to widen and deepen digital economic transformation.

- **Digital skills and values**: The development of a digitally skilled workforce that is grounded in sound ethical practices and sociocultural values.

Each strategic pillar consists of goals and objectives (what is to be accomplished) and a list of indicators (how to measure accomplishment, with most of the indicators as either numerical or yes/no metrics).

One of the three key areas of Strategic Pillar 2 (digital business) is digital trade, and the main goal is to have a digital economy where citizens and businesses can easily trade goods, services and labour. To support this aspiration, the blueprint calls for
an identity for each person and a global addressing scheme for the country. To
capture the transboundary potential of e-commerce, the blueprint also proposes
further regional integration of African economies to create a single digital market.

*Nigeria’s National Digital Economy Strategy*

The National Digital Economy Strategy was developed by Nigeria’s newly renamed
Federal Ministry of Communications and Digital Economy (previously Federal
Ministry of Communications) and unveiled in November 2019. Its stated goal is to
ensure that the population has access to and regularly uses digital technologies in
their everyday lives. It envisions that, by the end of the next decade, every Nigerian
is digitally literate, owns a digital device, has access to the internet, owns a bank
account that can be operated online and can conduct many activities—including
accessing public services—digitally. The strategy lays out eight pillars:

1. Developmental regulations.
2. Digital literacy and skills.
4. Service infrastructure.
5. Promotion of digital services.
7. Digital society and emerging technologies.
8. Indigenous content development.

Pillars 5, 7 and 8 most directly contribute to the further development of Nigeria’s
burgeoning e-commerce sector since they call for increased digitization of the
economy, for policies to support start-ups and innovators to develop and deploy
their products in Nigeria, and for more young people to build local solutions for
the local market. The rest of the pillars provide a supporting environment for
e-commerce by seeking to improve internet connectivity throughout the country
and by developing a more digitally literate customer base.

*Digital Senegal 2016–2025*

Digital Senegal 2016–2025 is a national digital economy development strategy
with a vision of “Senegal in 2025: digital for all and for use in everything, with
a dynamic and innovative private sector within an efficient ecosystem.” The
stated goals are to raise the contribution of digital technologies to GDP by 10
per cent and to create 35,000 direct jobs by 2025. Though not exclusively
about e-commerce, the strategy has an e-commerce component: the fourth
pillar recognizes e-commerce and digital financial services as two of the priority
economic sectors in which the use of digital technologies is to be supported.
Among the actions to be implemented under this pillar are: updating laws to
spur e-commerce activities; developing a digital payment and financial services ecosystem with an emphasis on ensuring interoperability among platforms; and creating and promoting e-commerce businesses, especially those selling local products.\textsuperscript{565}

The review of these four national strategies and policies identifies some common best practices. The first and most obvious is that, for all four documents, their formulation follows a vision-based approach to planning in which strategic goals (or strategic pillars) and detailed action plans are derived from a broad vision for an explicitly stated future.\textsuperscript{566} This allows governments to articulate a clear and single stance on e-commerce and digital economy issues. Although each country had one lead ministry for the process—the ministry of trade in the case of Senegal and ministries of ICT in Egypt, Kenya and Nigeria—other relevant government ministries took part in developing the strategies and policies. Although level of detail varies, a second theme is that all four documents list the actions needed to achieve the visions and goals. While Egypt’s strategy assigns each action to responsible ministries or organizations, Kenya leaves implementation of the overall digital economy blueprint to a secretariat. A third theme proposes well-defined governance structures for implementing each strategy and policy. In Egypt, a new Ministerial E-Commerce Committee—chaired by the Minister of Communications and Information Technology and with membership of other relevant ministers—is the lead governance body for the strategy.\textsuperscript{567} Both Kenya and Senegal adopt a more consultative approach, where the bodies responsible for implementation are made up of members drawn from the government and from the private sector, academia and civil society.

There are two important areas of discussion missing from the reviewed strategies and policies. First, all four countries have ambitions to become regional and even global leaders in certain areas. Kenya wants to become a “regional and global Innovation Leader driving a strong sustainable economy and a better society.”\textsuperscript{568} And one of the strategic goals of Egypt’s National E-Commerce Strategy is to turn the country into a regional logistics hub. Given how central these ambitions are to each country’s vision, the issues of regional and international competition and cooperation are not sufficiently covered in their national strategy documents. Second, while all the strategies and policies propose major actions and projects, they do not elaborate on costs or sources of funding. And there are no comprehensive cost-benefit analyses. The exception is Senegal with an estimate of €2.5 billion for the 28 reforms and 69 projects called for in its strategy.\textsuperscript{569}

Other national e-commerce initiatives

E-commerce transactions are only possible when several enabling factors are in place: access to the internet, trust in e-commerce platforms and logistics and order fulfilment. In addition to overarching national strategies and policies, various governments in Africa have also undertaken targeted interventions to support e-commerce in these areas.
Continental efforts to improve ICT in Africa can be traced back to the African Information Society Initiative launched by ECA in 1996. This led to the development of national ICT plans and strategies in many countries. Going online, however, is still out of reach for many.

While wider internet access should remain a priority for Africa, improving the trust in e-commerce platforms is also crucial. According to UNCTAD, only 13 per cent of internet users in Africa made an online purchase in 2017, compared with 68 per cent in the European Union. To create trust in e-commerce transactions, African governments have made efforts to strengthen their legislative frameworks. UNCTAD identifies four key pieces of e-commerce legislation: electronic transactions, consumer protection, privacy and data protection and cybercrime. Currently 54 African countries have some form of e-commerce legislation: 33 have laws on electronic transactions (setting legal equivalence between paper-based and electronic forms of exchange), 28 have privacy and data protection laws (governing the collection, processing, use and sharing of personal information), 28 have cybercrime laws (creating rules and enforcement agencies to shield consumers from online fraud and crime) and 20 have consumer protection laws (safeguarding consumers against unfair business practices). Nine countries have all four: Côte d’Ivoire, Ghana, Madagascar, Morocco, Mozambique, Senegal, South Africa, Tunisia and Zambia.

Another prerequisite for trust in e-commerce platforms is the ability to unambiguously establish the identity of buyers and sellers. This remains problematic in Africa where half of all births are not registered. As a result, these unregistered people lack any form of identification and are not able to fully participate in social life (qualifying for public services or subsidies), political life (registering to vote), or economic life (meeting know-your-client requirements to open a bank account). As economic activities become digitized, participation in the digital economy increasingly hinges on not just having a legal identification but possessing of a “good digital ID.” According to a set of criteria proposed by the McKinsey Global Institute, a good digital ID is “verified and authenticated to a high degree of assurance over digital channels, is unique, is established with individual consent, and protects user privacy and ensures control over personal data.”

For e-commerce transactions, it is not enough for individuals to have just a legal identity, it is also imperative for them to be able to prove who they are online. Recognizing this, several countries in Africa—Algeria, Ghana, Liberia, Nigeria, Rwanda and Senegal—have launched digital ID initiatives. Rwanda’s national ID system now incorporates biometric data and covers more than 95 per cent of the eligible population (ages 16 and older). Public institutions and companies are connected to the system and can authenticate the identity of individuals in real time.
Last but not least, last-mile delivery is a major challenge for e-commerce operators in Africa. Street address systems on the continent are often incomplete, inconsistent, or both. As a result, mail and packages are often lost or delayed. On the Universal Postal Union’s Integrated Index for Postal Development (2IPD)—a score on a 0–100 scale of postal reliability, reach, relevance and resilience—Africa scored only 21 in 2019. But not all countries do badly. As part of its Mail for Every House Initiative, Nigerian Post (NIPOST) sought to improve the country’s address system by adopting a solution from UK-based start-up What3Word. Their technology divides earth into 3-meter squares (57 trillion in all) and assigns a three-world label (available in 26 languages) to each of them (for example, the label for the address of the Economic Commission for Africa in Addis Ababa is “cookbooks. showrooms.label”). For most people, this label is much easier to remember than a GPS coordinate. Because of this system, Nigeria ranks first in Africa on the 2IPD index, and average delivery time is relatively good at 3.6 days for letters, 4.4 days for parcels and 2.0 days for express mail.

Regional initiatives, policies and regulations

Several of the continent’s regional economic communities (RECs) have also introduced strategies, instruments and initiative to increase cross-border e-commerce transactions among their members.

Common Market for Eastern and Southern Africa Digital Free Trade Area

Building on the foundation of its 2000 Free Trade Area, the Common Market for Eastern and Southern Africa (COMESA) rolled out a Digital Free Trade Area (DFTA) in 2018. The DFTA includes three components:

- E-regulation introduces two initiatives: a supportive regulatory environment for paperless trading (e-signature, contracts and so on) and online legislation and government services.

- E-logistics makes it easy to digitize trade documents (invoices, packing lists, certificates of origin) and improve cross-border logistics through automation and the use of digital technologies.

- E-trade enables smoother e-commerce through the provision of an e-payments gateway, regional clearing and settlement arrangements and an e-commerce platform for small traders.

The DFTA also makes it possible for exporters to apply for electronic certificate of origin (e-CoO) through a website, replacing paper versions. The use of e-CoO is expected to boost cross-border trade volume. It reduces goods clearing time by customs authorities, who now have less paperwork and can authenticate e-CoO digitally.
e-SADC Strategic Framework

In collaboration with ECA, the Southern African Development Community (SADC) Secretariat developed the e-SADC Strategic Framework which was adopted by the Conference of SADC Ministers responsible for telecommunications, postal and ICT in May 2010. The main objectives of the framework are “promotion of ICT use for regional economic integration; enhancement of connectivity and access to ICT among and within SADC Member States; development of applications including e-government, e-commerce, e-education, e-health, e-agriculture, and addressing policy, legislation, regulation, human and financial issues.” The framework consists of three themes and seven strategic objectives (table 6.3).

Table 6.3 e-SADC strategic framework themes and strategic objectives

<table>
<thead>
<tr>
<th>THEMES</th>
<th>STRATEGIC OBJECTIVES</th>
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<tbody>
<tr>
<td>• Delivery of quality ICT services</td>
<td>• Create a conducive legal, policy and regulatory environment for the development of an ICT culture</td>
</tr>
<tr>
<td>• E-application and innovation</td>
<td>• Develop ICT infrastructure and security</td>
</tr>
<tr>
<td>• Governance of e-SADC strategy</td>
<td>• Invest in human resource development</td>
</tr>
<tr>
<td></td>
<td>• Develop e-applications, including e-government</td>
</tr>
<tr>
<td></td>
<td>• Increase the use of ICT in business</td>
</tr>
<tr>
<td></td>
<td>- Develop an ICT industry</td>
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<td></td>
<td>- Develop institutional mechanism</td>
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Detailed action plans for e-applications and business use of ICT are meant to spur e-commerce activities both within and among Member States. For example, require the development of common standards—including in banking and financial services—to facilitate regional transactions and to provide incentives for developing innovation e-applications relevant to regional needs. For business use of ICT, one of the actions recommended is the introduction of regional measures on certification and authentication to ensure trust in the use of e-services and e-commerce.

**Economic Community of West African States rules on electronic transactions, cybercrime and data protection**

Although it does not have a comprehensive regional e-commerce strategy, Economic Community of West African States (ECOWAS) has been proactive in introducing legislation to support online transactions. For example, it is one of the most active RECs in cybercrime and cybersecurity. In 2011, it adopted a Directive on Fighting Cybercrime (directive 1/08/11) with the objective of updating the criminal laws of Member States to address cyber issues, such as violations of computer systems, data breaches and possession of child pornography. ECOWAS has also enacted key legal instruments on personal data protection and electronic transactions, both in 2010, to harmonize members’ legislation frameworks in these areas.
Regional payment system initiatives

Payments for goods and services in cross-border transactions can be a significant burden for importers and exporters, especially if they must deal with multiple currencies and rules. In Africa, there are a few regional initiatives to address this issue, including the COMESA Regional Payment and Settlement System (REPSS), the East African Payment System (EAPS) and the SADC Integrated Regional Electronic Settlement System (SIRESS). EAPS, for example, was launched in 2013—originally by Kenya, Tanzania and Uganda, with other countries set to join later. All three settlement systems enable real-time cross-border payments in multiple currencies and are designed to bolster intra-regional trade by reducing transaction time and costs. In countries participating in SIRESS, for example, payment clearing time dropped from 2–3 days to just under 24 hours.

Continental initiatives, policies and regulations

In response to increased cross-border e-commerce, and beyond private electronic payment platforms, digital payment systems have also emerged to reduce the cost and time associated with cross-border trade. The REC initiatives just described are among these efforts. Private examples include Flutterwave and Wari, which connect various types of payment systems (bank transfers, mobile money) to enable cross-border payments. Mobile money has also been a solution for those who do not have access to formal banking payment platforms, which is the case for many informal cross-border traders.

At the continental level, Afreximbank has been developing a Pan-African Payments and Settlements Platform (PAPSP) as a solution to the current status, where intra-African trade is transacted in foreign currencies, posing an additional cost for traders and consumers. The platform supports cross-border payments where both the sender and receiver transact in local currencies and on mobile devices, facilitating the clearing and settlement of trade transactions. The platform thus reduces the costs and procedures of bank relationships, while supporting customer and interbank transfers for trade and retail payments.

The PAPSP represents a move towards a uniformed payment system in Africa to facilitate intra-African trade and supports the formalization of informal cross-border trade. The platform could slash annual payment transaction costs by $5 billion on the estimated $50 billion in informal cross-border trade. The PAPSP was presented to the AU in early 2019 and was subsequently launched during the AU Extraordinary Summit in July 2019, backstopping the initiation of the operational phase of the AfCFTA. The PASPS was initially piloted in six countries of the West African Monetary Zone (WAMZ), and is expected to scale up to the rest of the continent.

In recognition of the need for a continental solution to the challenges Africa faces in the digital space, in January 2019 the Executive Council of the AU mandated the African Union Commission, the ECA and other stakeholders develop a Comprehensive Digital Trade and Digital Economy Strategy, to be considered by the AU Heads of State Summit in February 2020. The Digital Transformation
Towards a Common Investment Area in the African Continental Free Trade Area

Strategy (DTS) was subsequently developed by the AUC in partnership with the ECA and other institutions and adopted by the AU Executive Council in January 2020. Its main aim is to enable Africa to fully benefit from the Fourth Industrial Revolution through a holistic approach, recognizing the various initiatives and developments that exist.

African Union Member States are now expected to initiate the implementation phase of the DTS. The strategy is expected to complement existing strategies and policies at regional and national levels, as well as trigger the development of sectoral components of the strategy on digital industry, digital trade, financial services, digital governance and digital education, health and agriculture.

Other continental instruments and initiatives, such as the AU Convention on Cyber Security and Personal Data Protection, will interact with the continental digital strategy, which is positioned to revolutionize digital production and trade. At the continental level, support for these instruments could come from already existing initiatives such as the Security Guidelines for Africa, the Guidelines on Privacy and Personal Data Protection (PPDP) and the Malabo Convention on Electronic Transactions, Cyber Security and Personal Data Protection.

The AU Convention on Cyber Security and Personal Data Protection can play an important role in improving consumer trust in e-commerce transactions, which is still low. The Convention reflects Member States’ commitment to building an information society on the continent, aiming to protecting the fundamental rights and freedoms of citizens. It prescribes a set of security rules and principles that are “essential for establishing a credible digital space for electronic transactions, personal data protection and combating cybercrime.” It also seeks to harmonize legislation in these areas and guides the establishment of national data protection authorities. To protect consumers, the convention lays down six broad principles to govern processing personal data:

- Consent and legitimacy.
- Lawfulness and fairness.
- Purpose, relevance and storage.
- Accuracy.
- Transparency.
- Confidentiality and security.

The convention also assigns a set of rights to the owners of data that are being processed, including the right to information, right to access, right to object and right of rectification or erasure. Though adopted in 2014, the convention has yet to come into force, since it has not reached the threshold of 15 ratifications by national parliaments.
Recent discussions in academic and policy circles have focused on the General Data Protection Regulation (GDPR), the European Union’s (EU) legislation governing the online collection, processing and storage of EU citizens’ data. Some have argued that the GDPR is a global gold standard for data privacy, with its requirements of data protection “by design and by default” and “unambiguous consent.” There is evidence that the GDPR has had some influence on Africa, with several countries on the continent introducing or updating data protection laws that adopt some of the legal provisions introduced by the GDPR. This highlights the unique situation Africa is in, potentially setting regulations ahead of forthcoming user trends by learning from other regions. It is also worth noting that there is overlap in the principles and rights prescribed by the AU convention and the GDPR. Going forward, both instruments can be useful guides for African governments as they seek to legislate national data protection laws and policies.

In the build-up to the AfCFTA commencement of trade and African governments’ recognition of the importance of a digital dimension to AfCFTA, countries endorsed negotiating an e-commerce protocol as part of a Phase III of AfCFTA. The DTS will enable African countries to participate in the 4IR and it will facilitate the implementation of the AfCFTA. Countries are now expected to implement the DTS using sectoral implementation strategies and plans in several areas covering digital trade and financial services, which include credit, savings, payments, remittances and insurance services. The internet, mobile phones, automated teller machines (ATMs) and point of sales (POS) terminals are the identified digital channels for financial transactions.

Facilitating digital trade and finance through supportive infrastructure and platforms will be central to operationalizing the AfCFTA, and the African Trade Observatory of the AU Commission will serve as the interface for national and regional trade portals. E-commerce marketplaces are also proposed by the AU Commission and the Universal Postal Union to enable cross-border trade. The Africa Medical Supplies Platform (AMSP), an online market for COVID-related essential medical supplies, is a good illustration of how digital trade can enable stakeholders to work together to solve a common challenge (box 6.1).

Box 6.1 The Africa Medical Supplies Platform: Leveraging digital technologies to enable regional cooperation in the COVID–19 response

The Africa Medical Supplies Platform (AMSP) is a single online marketplace for COVID–19-related medical products in Africa. It was launched on 18 June 2020 by the Africa Centres for Disease Control and Prevention (Africa CDC) in partnership with the African Export-Import Bank (Afreximbank) and the ECA. The platform builds on ECA’s AfCFTA-anchored Pharmaceutical Initiative, which addresses the difficulties African citizens face in accessing affordable, safe and efficacious medicines and supplies. Since its launch in November, the initiative operationalizes and reaps the early benefits of the AfCFTA through localized production, pooled procurement and harmonized regulatory and quality standards.
The AMSP was set up to respond to the unprecedented challenges posed by COVID–19, specifically inadequate access to pharmaceuticals and essential medical supplies across the continent, an issue that was starkly exposed by the pandemic. Leveraging information sharing and efficiency gains made possible by digital technologies, the AMSP is able to tackle this issue through innovative features such as logistics support, quota management, demand aggregation, payment facilitation and access to a bigger base of pre-vetted global manufacturers.

A key component of the AMSP is ensuring adequate quantity and quality of products. The platform onboards manufacturers with certifications from stringent global regulatory institutions such as the US Food and Drug Administration, the British National Health Service, Health Canada, the African Medicine Agency and the World Health Organization’s Quality Assurance Programme. The platform also helps strengthen the capacities of local manufacturers (including agriculture companies) to scale up or repurpose production facilities to fill the demands for ventilators, personal protective equipment (PPE) and other essential medical supplies.

Early results have been encouraging. On the supply side, the platform has built up stocks of critical medical equipment and supplies above Africa CDC’s initial quantity estimates and at below-target sourcing prices. And on the supply side, 32 African governments have joined and begun using the AMSP in the ongoing battle against COVID–19. In addition, 12 of 17 African, Caribbean and Pacific Group of States (ACP) countries are onboard, as are 30 African hospitals, foundations and NGOs.

1 https://amsp.africa.

Against this backdrop, cooperation will be required in various areas, including consumer protection, data, taxation and inter-operability of technology systems. For digital work and business, cooperation will ensure that the digital market is aligned with the vision of an integrated continental market. Cooperation will also ensure a level playing field where businesses and workers can compete fairly. Other areas that will require further regulatory development as the DTS unfolds include taxation, standards, cybersecurity, personal data protection, consumer and worker protection and protection of digital innovations and technology. These will need to be addressed through appropriate frameworks. Some of these issues will be addressed as AfCFTA Phase II issues through the negotiations on the investment, competition and intellectual property rights protocols. In order to achieve consistent and integrated regulatory frameworks, the development of these regulations will need to be aligned with the cybersecurity, privacy and interoperability regulations and policies being developed in the context of DTS.

African countries can deepen and broaden financial markets by supporting the Digital Transformation Strategy and the establishment of the AfCFTA. Both initiatives promise to streamline important policies and regulations on digital payment systems and platforms and further open markets to e-commerce.
Linkages between e-commerce policies and investment

Countries where e-commerce is well developed tend to attract investment. Structural factors that support the growth of digital commerce—such as pervasive access to the internet, strong legislative frameworks that promote trust, and efficient payment and logistics systems—are also those that investors typically look for. According to UNCTAD, for example, several of the 10 top-ranking developing countries in their B2C E-Commerce Index attracted at least $1.7 billion in foreign direct investment (FDI) in their e-commerce sector in 2017.592

Literature and comprehensive data on the links between e-commerce and investment attractiveness in Africa are scarce. If such relationships exist, however, we should expect the list of countries with the most established e-commerce ecosystems and the list of top FDI destinations to overlap (table 6.4). This turns out to be at least partly true. Five countries feature on both lists—Ghana, Kenya, Nigeria, Morocco and South Africa.

Table 6.4 Top 10 countries in the UNCTAD B2C e-Commerce Index and top 10 FDI destinations

<table>
<thead>
<tr>
<th>TOP 10 COUNTRIES IN UNCTAD B2C E-COMMERCE INDEX, 2018</th>
<th>TOP 10 FDI RECIPIENTS, 2018a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mauritius</td>
<td>Egypt</td>
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<tr>
<td>Nigeria</td>
<td>South Africa</td>
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<tr>
<td>South Africa</td>
<td>Morocco</td>
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<td>Tunisia</td>
<td>Nigeria</td>
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<td>Morocco</td>
<td>Kenya</td>
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<td>Ghana</td>
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<td>Kenya</td>
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<td>Uganda</td>
<td>Algeria</td>
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<tr>
<td>Botswana</td>
<td>Cote d’Ivore</td>
</tr>
<tr>
<td>Cameroon</td>
<td>Zimbabwe</td>
</tr>
</tbody>
</table>

a Calculated using a weighted average of number of projects, jobs created and FDI value.
Source: UNCTAD, 2018A; Madden, 2019.

Data on venture capital funding of African tech start-ups also suggest links between competitive e-commerce environments and the value of investment. Three different estimates of venture capital funding of African tech start-ups put the amount between $0.5 billion and $2 billion in 2019. All the studies agree that Egypt, Kenya, Nigeria and South Africa were the top recipients.593 Three of these four countries—Kenya, Nigeria and South Africa—rank in the top 10 in Africa in UNCTAD’s B2C E-Commerce Index.

There are, however, some important qualifications. First, FDI in Africa is unstable from year to year and is driven by a small number of big-ticket projects, typically of the resource-seeking kind. So, it makes sense not to rely too heavily on FDI data for analytical purposes. The list of top FDI destinations (see table 6.4) moderates

Towards a Common Investment Area in the African Continental Free Trade Area | 241
these idiosyncratic factors by creating an index that accounts for not only the value of investment but also the total number of projects and jobs created. Second, it is possible that some confounding variables (size of economies, for example) explain the observed correlation. And third, anecdotal evidence of a link between advances in e-commerce and FDI does not establish a causal relationship—this remains an area ripe for further research.

It is not unreasonable, nevertheless, to hypothesize that the attractiveness of African markets for e-commerce is correlated with their appeal for foreign investment. This may hold true at both country and regional levels. And to the extent that the national and regional initiatives discussed in this section succeed in spurring e-commerce activities, they could also draw in more investments.

**Policy recommendations**

The relationship between the digital economy and investment is complex, multifaceted and bidirectional, calling for a series of targeted and coordinated policies and initiatives across national, regional and continental levels and across policy areas—industrial, infrastructure, consumer protection and others.

At the strategy level, an assessment needs to be undertaken to gauge what digitalization entails for companies and for competitive advantage and what industrial and investment priorities and policies need to be adjusted accordingly. Digital sector investment-related policies need to reflect the changes brought about by digitalization and at the same time foster a thriving digital sector. This requirement increases the complexity of the policy response and necessitates more coordination between different government departments.

The AU’s recently adopted Digital Transformation Strategy (DTS) envisions “continental ownership with Africa as a producer and not only a consumer in the global economy.” Meeting this ambitious goal requires local and regional champions: African digital businesses that serve the particular needs of African consumers through business models that reflect the socioeconomic realities of the continent. This is only possible with a vibrant start-up ecosystem focused on genuine innovation, and not just imitation of models that have worked elsewhere.

African countries must invest more heavily in research and development. A good start would be meeting the commitment to raise gross expenditure on research and development to 1 per cent of GDP. Intellectual property protection and enforcement also need to be strengthened to ensure entrepreneurs reap the full benefits of their efforts (see chapter 5). Further, governments should review existing policies—including in taxation—for any loopholes that might create more favourable operating conditions for foreign firms than their domestic peers.

More traditional industries also need additional support to take advantage of digitalization. As a recent study revealed, connectivity alone did not result in the
better integration of small East African companies into global value chains. Access to cloud computing infrastructure, the promotion of digital skills—not least among the growing youth population—and business support policies stemming from a situational analysis should also be considered.

Individual policy areas and intervention should best be undertaken at different levels. Phase II protocols on intellectual property, competition and investment will have a significant bearing on the digital world's investment dynamic. While strong intellectual property frameworks can attract investors to enter a new market and innovate, these frameworks may provide incumbents undue market power and over time foreclose markets. In terms of investment protection, specificities of the digital economy can be reflected in deliberations on the assets covered by investment protection and on pre-establishment rules. Policy priorities—such as deploying broadband, setting up e-commerce and competition rules, protecting data and consumers, and accessing finance—could be best addressed at the regional or continental level. In relation to taxation—and tax avoidance in particular—continental and global cooperation appears warranted to stem tax avoidance practices. In contrast, issues related to labour laws and regulation of specific sectors impacted by the digital economy may best be left to national policymakers, who may still benefit from an exchange of best practices.

Digital trade reveals the scale of the challenge facing the digital economy. Digital trade requires infrastructure, such as roads and ports, for both digital and physical connectivity, and skills development, as well as conducive legal, institutional and regulatory environments. The cross-boundary nature of much e-commerce calls for a unified continental approach and rules. Any such regulation, be it at national, regional or continental level, would entail simplification and alignment of rules, which have been traditionally dealt with by country line ministries and regulators.

Access to high-speed internet is an increasingly important factor for both tech and traditional companies, and the development of the associated infrastructure needs to be fast-tracked. Regional approaches and initiatives, including through the Programme for Infrastructure Development in Africa, and involvement of the private sector can drive down the costs of deploying broadband and digital infrastructure. To minimize the rural–urban access gap, alternative methods of providing connectivity—such as balloon-powered mobile broadband (currently piloted by Google Loon in Kenya) and high-throughput satellites—should be considered. Closer involvement by investment promotion agencies in the design and execution of these plans could further enable FDI in internet infrastructure.

Connectivity is a necessary but not sufficient enabler of a thriving digital economy. Trust in digital

Access to high-speed internet is an increasingly important factor for both tech and traditional companies, and the development of the associated infrastructure needs to be fast-tracked.
platforms is just as important in encouraging fuller participation by consumers in online activities such as shopping and accessing critical public services. To promote confidence in cyberspace, African countries need proper legislative and regulatory frameworks governing online transactions, particularly laws on e-transactions, data privacy, consumer protection and cybersecurity. Effort must be made to harmonize rules across the continent to prevent jurisdiction shopping by private firms. In the area of data privacy, for example, this can be done by drafting new laws or updating existing legislation to meet continental standards, such as the AU Convention on Cyber Security and Personal Data Protection, as well as considering international practices such as the GDPR.

Africa must move quickly to capture the benefits of e-commerce and digitalization. Business and employment norms were already being transformed by digitalization, but the COVID–19 pandemic has drastically accelerated the process. In several short months, economic activities have moved online at a rate that would have taken years under normal circumstances. This provides an added rationale for African governments to take advantage of this unique opportunity through two complementary measures: first, merging negotiations for the AfCFTA E-Commerce Protocol with those of Phase II Protocols and, second, giving priority to implementing the DTS.
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