How to leverage Africa's digital transformation in the context of the African Continental Free Trade Area (AfCFTA) Agreement and for the sustainable recovery from COVID-19

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This think piece builds on the discussions from the 7th Africa Think Tank Summit "Implementing the African Continental Free Trade Area (AfCFTA) Agreement: Assessing country readiness and the implications for capacity building" organised in November 2020 by the African Capacity Building Foundation. It aims to identify the potential and challenges of digital trade in the context of the implementation of the AfCFTA in 2021 and provide fit-for-purpose policy recommendations to scale up the benefits.

An assessment of COVID-19's implication on African economies

The economic recession triggered by the COVID-19 pandemic hit African countries hard. Struck by the COVID-19 pandemic, the global economy will contract by at least 4.5% in 2020. The African continent, highly exposed to external shocks, will experience its first recession in 25 years, with a decline in GDP of between 2.1% and 4.9% according to scenarios mapped out by the African Union in July 2020 in collaboration with the OECD Development Centre (AUC/OECD, 2021). Overall, 41 of the 54 countries entered into a recession in 2020, according to the IMF forecast (October 2020). By contrast, when the global financial crisis hit the continent in 2009, only 11 countries went into recession.

This crisis has exposed Africa's reliance on the global economy, notably through supply chains disruptions. By 2019, global markets accounted for 88% of Africa's exports, mostly in oil, mineral resources and agricultural commodities. As of October 2020, the World Trade Organization (WTO) forecasted a drop of 9.2% in international trade (WTO, 2020a). In Africa, trade volumes were projected to decrease by at least 35% from the level reached in 2019, with a loss in value estimated at around USD 270 billion (Banga et al., 2020, WTO 2020b). Domestic demand and regional trade suffered from confinement measures with at least 42 countries imposing partial or full lockdowns on economic activities and movements of people during the second quarter of 2020 (UNECA, 2020).

COVID-19 might intensify the ongoing shift in international supply chains. Since 2010, international firms have been gradually using more local and regional inputs in their production. The volume of world merchandise trade has been steadily declining since the 2008-09 global financial crisis. The 'erosion' in globalisation – the reduction in the average length of supply chains – has been estimated at 52 kilometres per year since

2012 (Miroudot and Nordstrom, 2019). The increased need for more resilient supply chains in the post-COVID-19 period, combined with the imperative of reducing the carbon footprint of production could result in the "regionalisation" of complex global value chains and disrupt global FDI flows. The Association of Southeast Asian Nation (ASEAN), for instance, set a clear objective to strengthen regional supply chains in its recovery framework adopted at the 37th ASEAN Summit in November 2020 (ASEAN, 2020).

The development of African value chains – notably through the implementation of the AfCFTA – can stimulate a sustainable recovery

African value chains had much scope for growth prior to COVID-19. Regional markets were growing fast, with demand for processed goods expanding 1.5 times faster than the global average (AUC/OECD, 2019). Leveraging these opportunities would be key for diversifying and accumulating new capabilities, particularly for SMEs. African firms' exports to intra-African markets are 4.5 times more diversified than those to non-African markets. In Senegal, firms are 8% more likely to upgrade to more sophisticated products when they export to regional market than when exporting to OECD markets. Expanding intra-African trade would likely benefit more broad-based and inclusive growth. Between 2015 and 2017, exports of manufactured goods accounted for 45% of intra-African exports, compared to only 20% of exports from Africa to the rest of the world (UNCTAD, 2019).

Despite these opportunities, most African firms were losing out to competitors in tapping demand both at home and in emerging markets. So far, the average level of regional sourcing in Africa remains under 16%, compared to almost 60% in Asia and 68% in Europe (UNCTAD, 2020). Despite growing demand, African exports of consumption goods to African markets decreased from USD 12.9 to 11.8 billion between 2009 and 2016, while imports from the rest of the world grew from USD 11.2 to 19.0 billion. In emerging markets such as China, African exporters also lagged behind competitors from Asia and Latin America in tapping the demand. African exporters accounted for only 0.3% of the increase in China's consumption imports, compared to 12.0% from ASEAN countries and 5.1% from Latin America and the Caribbean**.** Interestingly, different export patterns appear depending on targeted market. African firms tend to export for lower value, spreading across multiple products to intra-African markets compared to global markets. On average, an African exporter sends 7.4 products to African markets, compared 1.6 products to China. However, average exports value to China is over 8 times higher than for African exports (AUC/OECD, 2019).

Effective implementation of the African Continental Free Trade Area (AfCFTA) agreement could help strengthen regional value chains and build economic resilience against future crises. Strengthening regional value chains could significantly improve Africa's resilience beyond COVID-19. Recent analysis of the impact of the pandemic on East African trade already highlighted greater resilience of intra-regional trade within the East African Community in the second quarter of 2020 compared to extra-regional trade (UNECA, 2021). In January 2021, 35 African countries started trading under the AfCFTA. The agreement aims to connect 1.3 billion people across 55 countries with a combined gross domestic product (GDP) valued at USD 3.4 trillion (World Bank, 2020). The hopes and aspirations attached to the AfCFTA – for trade, industrialisation and addressing the effects of COVID-19 – place it high on the agendas of African policymakers, but also of their partners who support the process. Overall, realising the potential of regional value chains will require greater co-ordination of national industrial policies, regional industrialisation strategies, and corporate strategies of domestic and transnational firms operating across the region.

Africa's digital transformation can be a powerful lever to accelerate continental integration and boost intra-African trade

Prior to the pandemic, digitalisation was already well underway in Africa. The rapid expansion of financial technologies provides an illustrative example: Africa registered over 450 million mobile money accounts by 2019, more than any other world regions. Building on this success, innovation hubs and incubators flourished across the continent. By 2019, 643 tech hubs were active across Africa, up from 314 in 2016, and only a handful in 2010. According to recent estimates, Africa's Internet economy accounted for 4.5% of Africa's GDP in 2020 and could reach USD 180 billion (5.2% of GDP) by 2025. With the implementation of supportive policies to accompany this development, the potential contribution of the Internet economy could amount to USD 712 billion or 8.5% of the continent's GDP by 2050 (Google Analytics/IFC, 2020).

COVID-19 gave an impetus to accelerate Africa's digital transformation. Africa's private sector, with the support of policy-makers, implemented a host of digital solutions to increase effectiveness of public policies in different sectors such as healthcare, education and finance. For instance, the COVID-19 pandemic underscored Africa's weakness in crucial sectors such as pharmaceuticals, medical supplies, and equipment. To respond to this challenge, the Africa Centres for Disease Control and Prevention – in collaboration with 20 international partners and foundations – launched a not-for-profit continental e-platform to help African governments procure diagnostic tests and medical equipment from certified suppliers on the global market. Many businesses strived to adapt to the "new normal" by accelerating their adoption of technologies. In Ghana

for instance, a survey on the impact of COVID-19 across 4311 firms found that more than a third (37.5%) of them started or increased their use of mobile money during the pandemic (GSS/UNDP/World Bank, 2020). In Rwanda, person-to-person mobile money transfers increased fourfold in just five weeks following Central Bank's decision to implement a three-months fee waiver on transfers during lockdown (MFW4A, 2021)

The African Union's Digital Transformation Strategy 2020-2030 set the objective to create a digital single market by 2030 (AUC, 2020). The Digital Transformation Strategy for Africa aims to build on the existing initiatives and frameworks, such the AfCFTA among others, to create a Digital Single Market where free movement of persons, services and capital is ensured and individuals and businesses can seamlessly access and engage in online activities. Although the AfCFTA Agreement first focused on tariffs and did not prioritise the digital economy, digital considerations cut across many aspects of trade in goods and services. The acceleration of Africa's digital transformation in the light of COVID-19, led African policy makers to push for the adoption of a continental Protocol on E-commerce, which will be formally negotiated in 2021 under Phase 3 of AfCFTA negotiations (see Figure 1). The objective will be to establish common positions on e-commerce, harmonise digital economy regulations and leverage the benefits of e-commerce (ECDPM, 2020).

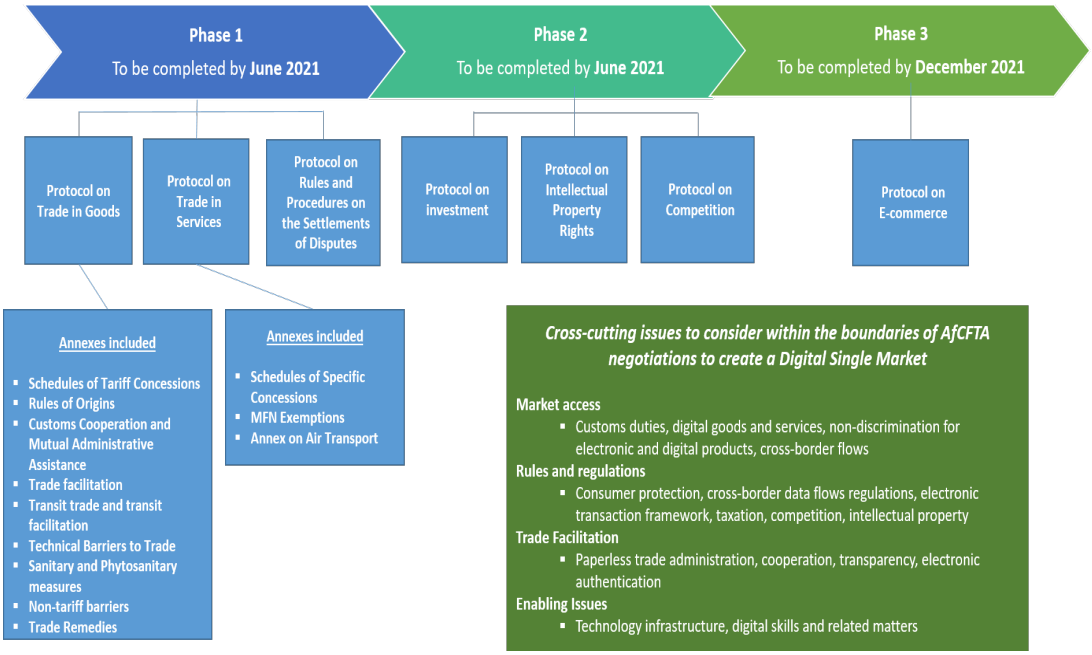


Figure 1. AfCFTA negotiations phases and potential for the Digital Single Market

Source: Authors' adaptation based on Signé and Van der Ven (2019) *Keys to success for the AfCFTA negotiations* and Tralac (2020) *An Agenda for the AfCFTA Protocol on E-Commerce*

Overall, the combination of growing digitalisation and the AfCFTA implementation – through its protocol on E-commerce – could deliver additional trade gains. A modelling exercise across 160 countries demonstrates that when combined with a regional trade agreement, a 10% increase in digital connectivity increases exports by an additional 2.3% (López González and Ferencz, 2018). Similarly, a review of 10 international data agreements, conventions and guidelines covering 63 countries show that the benefits associated with such agreements - higher trust and higher interoperability of legal frameworks - are bigger than its costs - restrictions to the free flow of data and complaisance costs (Spiezia, V. and J. Tscheke, 2020). This highlights the crucial role that discussions around data governance will play under Phase 3 of the AfCFTA negotiations.

Understanding digitalisation's implications on trade and production

Africa's e-commerce activities are on the rise, despite challenges in measuring the extent of digital trade (see box 1). Since 2015, electronic transmission has become the dominant mode used in Africa's trade in professional services (such as finance, insurance ICT and technical support). It accounted for USD 18.8 billion, or 57% of Africa's export in professional services in 2017, up from USD 8.0 million in 2005. In like manner, Business-to-Consumer (B2C) e-commerce increased in recent years but has still much scope for growth. Estimated at USD 5.7 billion in 2017, the continent's consumer e-commerce market represented less than 0.5% of its combined GDP, compared to a global average of 4% (UNCTAD, 2018).

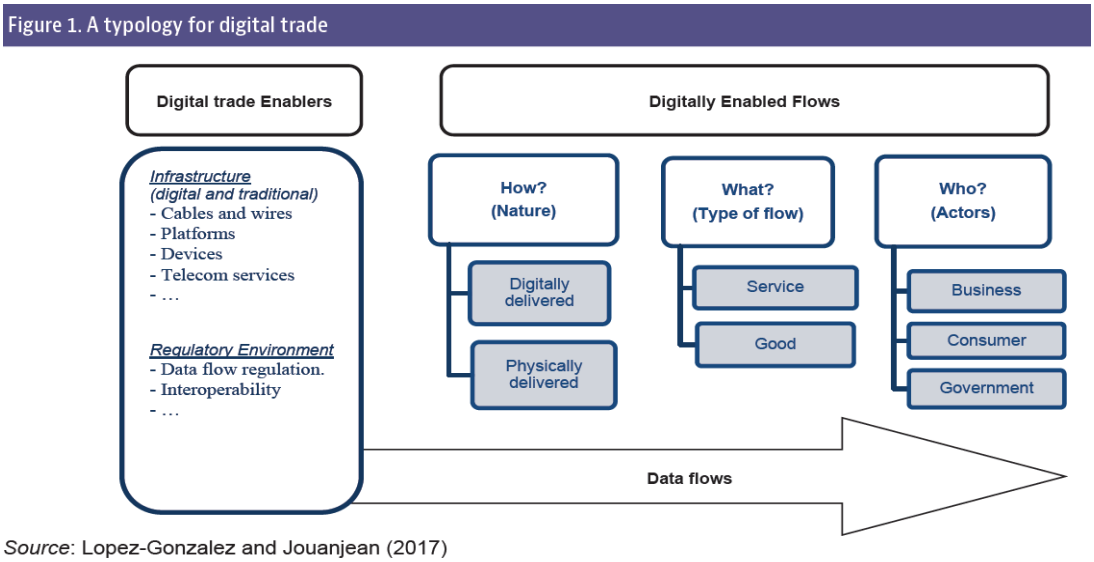
Box 1. What is digital trade?

There is no single, recognised and accepted definition of digital trade. The African Union's *Digital Transformation Strategy 2020-2030* recognises the definition proposed by the OECD, IMF and WTO: "Digital trade encompasses digitally enabled transactions in trade in goods and services that can be digitally or physically delivered. This includes digitally delivered software, e-books, data or database services; and digitally enabled but physically delivered goods and services, such as a purchase of a good on an online marketplace or the booking of a hotel through a matching service. Digital trade involves business-to-business transactions within Global Value Chains (GVCs), as well as transactions between consumers or businesses purchasing from each other through online platforms. All of these transactions are underpinned by data, which is the lifeblood of digital trade" (see figure 2).

The nature of the links between growing digitalisation and trade and therefore the scale of the policy challenges remains difficult to assess. Even if traditional trade statistics for goods record many digitally enabled trade transactions, they do not differentiate goods transactions according to whether they have been digitally enabled or not. Similarly, in services, measuring cross-border transactions is difficult. In regards to digital trade,

the need to identify digitally ordered as well as digitally delivered services compounds this challenge by. The rise of 3D printing is also set to raise challenges in capturing digital delivery for products that arguably encompass both services and goods. An additional challenge is that cross-border trade flows are mostly informal and not measured. By some accounts, about a third of Africa's traditional trade flows are unaccounted for. Until better measures for "traditional" and digital trade are available, analysis has to proceed carefully, using existing statistics to shed light on particular aspects of trade in the digital era.

Figure 2. Typology for digital trade



Source: López González and Jouanjean (2017); OECD/WTO/ IMF (2020)

More broadly, the use of digital technologies increases firms' productivity, which is likely to lead to an expansion in output and exports. Several studies have highlighted the positive impact of digital technologies on firm performances in developing countries (see figure 3). A landmark study by Hjort and Poulsen (2019) shows that for 12 African countries, the arrival of high-speed Internet to a region, a proxy for the level of digital development, positively increases the employment rate for both workers with high and low education. Building on this approach, empirical findings on more than 30 000 firms from 38 developing countries – including 9 countries in Africa – show that a 10% increase in e-mail use by firms raises their total annual sales by 37-38%, sales per worker by 22-23% and the number of full-time workers by 12-14% (Cariolle, Goff and Santoni, 2019).

Figure 3. Impacts of digitalisation on firm performances in Africa and other developing countries

Note: This is a summary of econometric findings. The data presented here show the marginal impact of digitalisation (infrastructure development, speed of the Internet connection and Internet usage among the population) on job creation, firm-level performance, and financing for firms in Africa and other developing countries.

Source: OECD/AUC (2021)'s illustration based on Hjort and Poulsen (2019), "The arrival of fast internet and employment in Africa"; Cariolle, Goff and Santoni (2019), "Digital vulnerability and performance of firms in developing countries"; and D'Andrea and Limodio (2019), "High-speed internet, financial technology and banking in Africa"

Digital technologies can lead to diversification and movement into more sophisticated products. So far, many African countries lag behind other developing regions in terms of product complexity according to the Economic Complexity Index (Harvard University, 2018). Increased adoption of digital technologies could help firms produce more diverse and complex products and overcome some productive capabilities challenges. In Kenya for instance, Megh Industries, an automotive firm heavily invested in new technologies and managed to move from manufacturing of transport equipment and parts to full transport seating and van conversions (Banga and te Velde, 2018a). Similarly, Banga (2021) finds that increasing use of digital technologies significantly raised the average product sophistication level of Indian manufacturing firms participating in GVCs. Evidence from five Asian least developed countries—Bangladesh, Cambodia, Laos, Myanmar, and Nepal—also suggests that online trade is more diversified and value-added in nature than offline trade (WTO, 2018).

Increased cross border data flows have also contributed to a wider and deeper "servicification" of manufacturing. Between 2016 and 2020, cross border internet traffic in Africa grew at a compound annual rate of 48%, in parallel to the fast expansion of international internet bandwidth from 3,827 Gbps to 17,536 Gbps –the most rapid growth in the world (Telegeography, 2020). Producing goods now relies on a greater use of service inputs such as engineering, sales and research undertaken in-house or outsourced, domestically and internationally often orchestrated, or co-ordinated, through digital networks and relying aon cross border data flows (Miroudot and Cadestin, 2017). This process of "servicification" helps manufacturers add value and create long-lasting relations with customers. In Ethiopia, Egypt and Kenya for instance, services accounted for 40-42% of the value addition in these sectors in 2015 (OECD/AUC 2019)

Digitalisation can act as a driver of export competitiveness and increase integration in production networks, especially for small and medium enterprises (SMEs). Entering international markets is difficult and costly, especially for SMEs that face a host of constraints including higher relative fixed costs than larger companies, insufficient R&D and

skills training, and insufficient knowledge of foreign markets and regulations. Digital technologies can ease a number of these constraints and reduce SME expenditures in a range of areas, from market research to operational support (OECD/WTO, 2019). Results from an econometric analysis of 27 000 manufacturing SMEs in 116 developing countries — including 31 African countries — confirm that SMEs which adopt digital technologies are more likely to engage in international trade. Having a website is positively associated with a 4.6 percentage point increase in the share of imports among firm inputs and a 5.5 percentage point increase in the share of direct exports in firms' sales (AUC/OECD, 2021).

Digital technologies in transactions and logistics hold potential for generating efficiency gains, reducing trade costs and increasing market access. The use of software and 3D modelling can facilitate product development and customisation; e-commerce platforms, mobile money, and online banking can increase B2B and B2C e-commerce, and digital customs can facilitate exchange of goods. For instance, recent estimations show that online submissions of customs documentation decreased time spent at the border by more than 70% for both imports and exports (WTO, 2018). Similarly, digital platforms can help buyers and sellers from around the world to meet and exchange goods and services, thus lowering their search costs. Interestingly, SMEs participating in e-commerce tend to remain exporters longer than those in purely traditional markets and growth of e-commerce yields productivity gains of 6 to 15 % for SMEs (OECD/WTO, 2019).

Leveraging the potential of digital trade and the AFCFTA to build resilient supply chains in Africa will require co-ordinated policies

Despite this growing potential, readiness for digital trade and adoption of new technologies largely differs across countries and firm size. According to the UNCTAD e-commerce readiness index 2021 – taking into account four indicators enabling e-commerce: financial inclusion, internet use, postal reliability and digital security – African countries still lag behind other regions. Mauritius ranks the highest at position 69 out of the 152 countries followed by South Africa (73), Tunisia (77), Algeria (80), Ghana (81), Libya (85), Kenya (88), Nigeria (94), Morocco (95), and Senegal (99) (UNCTAD 2021a). Among firms from the World Bank Enterprise Surveys, only 59% of all African firms use the Internet to interact with clients and suppliers, and only 50% of small African firms do so. The share of firms having their own website is even lower, at 31% among all African firms and 23% among small ones (AUC/OECD, 2021).

African e-commerce platforms have yet to harness the economies of scale created by the AfCFTA by expanding beyond borders. Research on African marketplaces shows that only 1% of Africa's e-commerce marketplaces are responsible for 60% of the marketplace traffic in Africa

and most of them are found in only five countries (South Africa, Morocco, Tunisia, Egypt and Algeria). In addition, cross border e-commerce remain limited with 80% of marketplaces operating exclusively in Africa and 91% of transactional marketplaces in Africa being solely national in scope (ITC, 2020). For the time being, African firms will need to access global platforms – Amazon, Alibaba, etc. – to reach global markets. In this context, bilateral and regional co-operation across borders will be needed to reduce barriers to entry, ensure that common standards are applied and that information is available to regulators (OECD, 2020)

Taking into account digital aspects of trade in AfCFTA negotiations will be essential to ensure competition in the digital economy. This will include tackling bottlenecks for cross-border e-commerce, supporting international e-payments, cross-border deliveries, standards and certification. For instance, the establishment of a Pan-African Payment and Settlement System (PAPSS) will allow quick settlements of cross-border transactions through digitalised means. Similarly, the AUC and the African eTRADE Group are collaborating to develop a continental e-commerce platform for SMEs. This platform will provide an online trading place and payment settlement for SMEs in order to facilitate cross-border trade and the delivery of products across the continent and reduce transaction costs.

Beyond trade facilitation, greater regional and continental co-ordination on cross cutting issues linked to digital transformation will be vital to scale up regional digital trade. The rise of digital technologies poses new and complex challenges. The fast development of technologies, their global reach and their cross-border nature – to which governments need to respond with "fit-for-purpose" policy frameworks and enforcement mechanisms – magnify these challenges. Most national strategies aim at turning a country into a "regional digital hub" but do not prioritise regional and continental co-operation. The policy areas mentioned below provide some ideas and recommendations on key issues that will need to be addressed to achieve the ambition of the AfCFTA and Digital Transformation Strategy for Africa 2020-2030.

Improving access to international bandwidth infrastructure and services

Addressing bottlenecks in access to the Internet beyond large urban centres is crucial to develop regional value chains. Currently, only 26% of rural dwellers regularly use the Internet, compared to 47% of urban inhabitants. Promoting the spread of digital innovations to intermediary cities could have an important multiplier effect as nearly six in ten (57%) of all African cities that are not connected to the network lie within only 50 km of it; in 2015, they accounted for a total estimated population of 146 million. This could also represent a significant opportunity to fast track the development of regional corridors across the continent. To this end, the Programme for Infrastructure Development in Africa (PIDA) provides an

important framework and monitoring tool. Of PIDA's 114 ICT infrastructure projects, 42 aim to upgrade key Internet exchange points, 37 are dedicated to building new broadband fibre infrastructure across the continent and 34 intend to upgrade key existing terrestrial fibre backbones (AUDA-NEPAD, 2020).

Expansion of communications infrastructure should go hand-in-hand with policies promoting affordable Internet services and devices. Network equipment (fibre-optic cables, routers and switching apparatus) and devices (computers…) are still subject to high tariffs in Africa. Currently, only four African countries (Seychelles, Morocco, Egypt and Mauritius) are part of the WTO Information Technology Agreement (ITA) that ensure duty free access to these goods. In economies that are not participants to the ITA, tariffs are as high as 45% on certain ICT imports (WTO, 2020c). Similarly, in 2018, only 17% of Africa's population could afford one gigabyte (1 GB) of data, compared to 37% in Latin America and the Caribbean, and 47% in Asia. Governments can make data prices affordable by creating new public-private alliances for rural connectivity, improving the use of Universal Service and Access Funds (USAFs) and ensuring fair competition among telecommunication providers.Reinforced international and regional co-operation can lower tariffs on digital equipment, transit costs and interconnection rates, yielding benefits for both coastal and landlocked countries.

Ensuring that Africa's workforce possesses the right skills for the digital era

Despite the progress achieved in education, many entrepreneurs still lack basic capabilities to export. Among entrepreneurs in Côte d'Ivoire and Madagascar, most firms lack basic capabilities: doing basic bookkeeping, laying out a plant, using tools to plan over a multiyear horizon, identifying a relevant technological advance and cultivating human resources (OECD, 2017). Between 2010 and 2020, youth (aged 15-29) receiving post-secondary education grew from 47 million to 77 million. Under business as usual education scenario, this number could reach 165 million by 2040. Despite the progress, persistent skill mismatches persist amoung young workers in labour markets across the continent. Surveys across 11 African countries suggests that nearly one in two youth feels his or her skills are inappropriate for the local labour markets, with 28% of youth feeling underqualified and 17% feeling overqualified (Morsy and Mukasa, 2019).

Africa's education systems will need to enhance the quality of foundational education and equip youth with additional skills for the digital era. Youth will need solid foundational skills, including good literacy, a basic knowledge of science, technology, engineering and mathematics, as well as digital skills to benefit from growing digitalisation.

In Lesotho for instance, close to 60% of respondents identified digital illiteracy as the main reason for not using the Internet (RIA, 2016). In Benin, Liberia, Malawi and Zambia, 60% of employers on average equally value technical skills (efficient use of materials, technology equipment and tools) and soft skills (teamwork and communication) as capital factors for their business development (Arias et al., 2019). Going up the value chain, jobs in activities such as marketing, logistics and quality control as well as in agri-business will require more advanced technical skills including data analytics or digital marketing (ACET, 2018).

Tech hubs, incubators and tech companies can be of great relevance in preparing Africa's youth for labour market requirements. A number of global tech companies are now carrying out initiatives around entrepreneurship and the development of digital skills for young Africans. Tech hubs offer a range of services to the local ecosystem, acting as incubators and accelerators for local start-ups, facilitating networking between digital entrepreneurs and providing co-working spaces. Academic programmes are creating new alliances with these actors. In Nigeria for instance, Facebook launched its NG_HUB in 2018 in collaboration with the Co-creation Hub to provide 50 000 young Nigerians with skills for own-business development and to nurture a strong mutual learning community of entrepreneurs. In North Africa, triangular collaboration between governments, universities and the private sector are facilitating the establishment of technology hubs and incubation centres.

Expanding technical and vocational education and training (TVET) programmes could also improve workers' capabilities. For example, Generation Kenya, a public-private programme, works closely with the government of Kenya and TVET institutions to equip youth with technical and employability skills. Since its inception in 2015, Generation Kenya has successfully placed 84% of the 18 000 graduates in employment in multiple sectors (e.g. financial services, distributed sales, customer service manufacturing) through a network of more than 200 employer partners (AUC/OECD, 2019). Similarly, in South Africa, the government set the ambitious target of expanding the TVET college system to 2.5 million enrolments by 2030 as a way to reduce the 3.4 million young people not formally employed nor in education or training (Field, Musset and Álvarez-Galván, 2014)

Harmonising data regulatory frameworks to allow seamless cross border data flows without endangering digital security and personal data protection

Given the international scope of data value chains, African countries cannot cling to isolated national frameworks for data regulation. Despite some regional and continental efforts, the national data regulatory framework in most African countries is below the required level for the

digital era. According to UNCTAD's Global Cyberlaw Tracker (2020), among Africa's 54 countries, only 33 countries have comprehensive legislations on electronic transactions, 25 countries on consumer protection, 27 countries data protection and privacy frameworks and 39 countries address cybercrime.

Reinforcing regional co-operation will better tackle digital security challenges. Serianu (2017) estimates that the cost of cybercrime in Africa was about USD 3.5 billion in 2017, with Nigeria and Kenya alone suffering losses of USD 649 million and USD 210 million, respectively. In 2014, the 23rd Assembly of the AU Heads of State and Government adopted a Convention on Cybersecurity and Personal Data Protection as a first step towards continental co-operation. Yet, as of June 2020, only fourteen (14) AU member states had signed it, and five (5) had ratified it (Ghana, Guinea, Mauritius, Namibia and Senegal). This is still far from the fifteen (15) ratifications required for the Convention to enter into force (AU, 2020).

Greater regulatory coherence across countries is required to navigate global digital data. Too many restrictions on data flows can have trade consequences, when, for instance, they affect the movement of data that is critical for the co-ordination of GVCs. For instance, evidence from a sample of 64 countries between 2006 and 2016, shows that isolated attempts to restrict the cross border movements of data or require local storage of data inhibit trade in services and reduce the productivity of local firms (Ferracane and Marel, 2018). In the case of the EU, barriers to data flows are estimated to reduce GDP by 0.4 to 1.1%, depending on the strength of data localisation requirements (ECIPE, 2014).

Principles for promoting open exchange of data in the context of regulatory heterogeneity can be found in existing trade agreements. First, transparency, both inclusive processes and access to information, is especially important in digital trade with more, and smaller firms, trading in more countries with more complex transactions. Second non-discrimination is critical to ensuring shared benefits and for enabling digital trade to prosper alongside its analogue equivalent, but raises new issues in the digital era. Third, avoiding unnecessary trade restrictiveness is key to finding balance and ensuring that regulatory objectives are fully met in a way that is least restrictive to trade. This is a challenge: in the digital age, local regulation can have global impacts, especially on SMEs. Finally, interoperability and open standards can increase the capacity of different systems to interact. Where harmonisation is not achievable or desirable, interoperability may help overcome issues related to technical and regulatory heterogeneity and enable greater sharing of the benefits of digital trade Casalini, Lopez Gonzalez and Moïsé, 2019).

Adapting taxation to the digital economy requires new tax policies and international co-operation

The digital economy poses a number of challenges to tax collection in. According to Banga et al (2021), African private sector ranks harmonised laws for taxation of cross-border e-commerce as the most important regulation needed to boost intra-regional e-commerce. Currently, many African countries do not have laws and procedures in place to collect value-added tax (VAT) on sales made by suppliers that are not physically present in the consumer's country. This can lead to considerable revenue losses. It can also create unfair competitive pressure on domestic businesses that are required to charge VAT on their sales, while low-value imports are often exempt from VAT. In addition, higher value items are vulnerable to fraudulent undervaluation and miscategorisation by foreign suppliers.

Internationally agreed OECD standards provide examples of solutions for African countries for the effective collection of VAT on cross border e-commerce. The OECD Global Forum on VAT (comprising over 100 countries) has developed standards to address the VAT challenges linked to the digitalisation of the economy; they have been implemented or are being implemented worldwide (OECD, 2019; OECD, 2017). South Africa is one of over 50 countries that have implemented the standards on cross-border supplies of digital services, raising significant revenues (South Africa raised over ZAR 5 billion – approximately USD 276 million – between June 2014 and September 2019). Recognising that online marketplace platforms facilitate a large proportion of online sales, the OECD recommends involving them in the VAT collection process. African countries can benefit from others' experiences in implementing these standards. Most of the major platforms (responsible for the majority of online sales) have already developed systems and processes to comply with the standards.

The *Inclusive Framework on Base Erosion and Profit Shifting* is also bringing together over 135 countries and jurisdictions, including 23 African countries, to develop solutions on taxing the digital economy. Negotiations, with all members on an equal footing, are ongoing and focus on two pillars. The first would create a new taxing right for market jurisdictions, while simplifying the taxation of the profits from certain routine functions of multinational enterprises (OECD, 2020a). The second pillar would ensure the profits on multinational enterprises are subject to a minimum rate of tax to reduce the incentive for companies to adopt aggressive tax avoidance strategies. Both of these pillars offer potential gains for Africa. While the impacts are difficult to accurately predict before the exact policies are known, early estimates suggest that, in relative terms, low-income countries would benefit from both pillars (OECD, 2020b).

More broadly, providing a platform for discussion on tax policies and targeted support could strengthen African countries' capacities to identify best practices and improve tax collection. For instance, the joint OECD/UNDP initiative *Tax Inspectors Without Borders* launched in 2015 provides assistance to strengthen African countries' auditing capacity and multinationals' compliance. To date, *Tax Inspectors Without Borders* initiative has 52 completed and ongoing programmes across 19 African countries. Additional tax revenues attributable to TIWB programmes in Africa now amount to USD 354.1 million, and overall tax assessments in excess of USD 1.58 billion (OECD/UNDP, 2020). In addition, the flagship report *Revenue Statistics in Africa* produced by the OECD, African Union Commission and African Tax Administration Forum (ATAF) provide peer-learning opportunities on tax structures and related policies both among 30 African economies and with OECD, Latin American, Caribbean, Asian and Pacific economies (OECD/AUC/ATAF, 2020).

Learning from regional and international experiences could help identify best practices for the implementation the Digital Single Market

African governments can learn from digital strategies implemented by Regional Economic Communities (RECs). Accelerating the implementation of these initiatives and identifying the key bottlenecks could be insightful to create a continent-wide Digital Single Market. Policy makers could use these initiatives for mutual learning and scaling up (UNECA et al, 2019; Banga et al, 2021):

- The SADC developed a comprehensive regional strategy on the back of most of its members' national ICT strategies. Key pillars of this strategy include components of national e-commerce strategies, legislation, national and sub-regional infrastructure, skills development, payment solutions (the SADC Integrated Regional Electronic Settlement System) and data collection.

- COMESA set up its own Digital Free Trade Area (DFTA), aiming to use ICT to improve efficiency in cross-border trade through development of a platform for online trade, an e-payment gateway and mobile apps for small-scale cross-border traders, the use of ICT to improve logistics and legislation allowing countries in the region to carry out e-transactions and e-payments. It also has a COMESA Regional Payment and Settlement System.

- The EAC developed an Electronic Transaction Bill (2014) to promote electronic transactions. EAC states also adopted e-transactions policy recommendations to be domesticated through the development of regulatory frameworks. The EAC partner states are at varying stages of

introducing new or strengthening existing national ID systems. Kenya, Rwanda and Uganda already recognise each other's national ID as a valid document in lieu of a passport, which can facilitate digital trade

Africa can also learn from other regions such as the European Union, one of the most advanced examples in implementing a digital single regional market. In 2015, the European Commission presented the EU Digital Single Market Strategy, followed by a dedicated resolution by the European Parliament in January 2016 (European Commission 2019a; European Commission 2019 b). Since then, a number of landmark achievements have supported the construction of the European digital single market, including:

- **The end of roaming charges since June 2017**. The so-called roam-like-at-home approach enables all European citizens travelling in the Europe Union to use their mobile phones for calls, SMS and data for the same price as in their country of residence.

- **The removal of geo-blocking barriers to e-commerce since March 2018.** The new rules ensure consumers can access goods and services online without concern for geographically based restrictions to e-commerce, or cross-border transactions. This regulation increased real cross-border e-commerce activity inside the EU by between 9% to 13% (European Commission 2020)

- **The cross-border portability of online content since April 2018**. Europeans can access their online subscriptions to films, sports events, e-books, video games and music services while travelling to another member state.

- **The modernisation of data protection since May 2018**. The data protection reform is a legislative package that includes the General Data Protection Regulation.

Overall, multilateral development co-operation can support Africa's digital transformation even further. Many lessons can be learned by sharing experiences from different countries and world regions. The report *Africa's Development Dynamics 2021: Digital transformation and quality jobs*, prepared jointly by the African Union and the OECD Development Centre, with the support of other institutions like the African Capacity Building Foundation (ACBF), ACET, the European Union or BMZ/GIZ , promotes evidence-based policy dialogue between African policy makers, entrepreneurs, academic communities and the civil society.

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