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Africa Connected

DIGITAL TRANSFORMATION TRENDS AND CHALLENGES

DLA PIPER
AFRICA

Contents

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Connecting you to Africa

Digital transformation trends and challenges in Africa is the theme of this edition of Africa Connected.

In this edition we have articles on issues ranging from the use of artificial intelligence tools in the legal sector as well as regulatory challenges to satellite broadband providers, to open banking and financial inclusion across the continent.

Please send us your feedback on Africa Connected, including topics you'd like to see covered in future editions:

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Aiscension: AI in the legal sector

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The rise of technological developments has brought with it increased, and new forms of, risk. In today's digital world, we are creating more data year on year. Data storage, ease of communications (including the use of email and chat), along with the ubiquity of photo and video sharing means that data volumes are increasing exponentially. New technologies pose new challenges and require new regulatory solutions. This backdrop makes it harder for businesses to monitor existing risks.

There are two concurrent and somewhat symbiotic developments taking place in the legal sector that address this. On the one hand the sector "must move beyond providing cost-efficient legal advice, and focus on the speed with which it develops appropriate guidance and efficient governance so business partners can quickly make good risk-adjusted decisions and pivot with changing conditions[1]." On the other, the use of AI in legal practices is already occurring and is poised for even greater adoption. Like other technological advances before it, AI is "evolving the practice of law and improving how in-house teams work and process information. AI can help legal departments streamline and automate tasks and processes, and in turn reduce costs and increase productivity[2]."

One area of risk which AI can help mitigate, and detect, is cartel activity. DLA Piper has recently launched Aiscension to help detect and prevent cartel activity in collaboration with Reveal Data. Before exploring Aiscension further, let's first take a closer look at the problem it solves.

Cartel enforcement in Africa

A cartel is an agreement between competitors to rig the market in some way. The most common forms of cartel conduct result in price fixing, market allocation, bid rigging and collective boycotts. Cartels reduce firms' incentive to innovate and/or to price competitively. Consequently, they cause consumer harm, and are considered to constitute the most serious form of competition law non-compliance.

Competition law enforcement in Africa has developed rapidly over the past few years. We continue to see the establishment of new domestic and regional competition authorities, as well as existing competition authorities introducing amendments to competition legislation strengthening their enforcement powers. The focus of newly established competition authorities is typically to build capacity and experience through merger control work. The focus of newly established competition authorities is typically to build capacity and experience through merger control work, and over time the focus has then shifted to the enforcement of restrictive practices such as cartels.

The Competition Commission in South Africa has achieved great success in combating cartels. A significant part of its success

[1] The future of Legal – Six Shifts GC Must Make by 2025 (Gartner, 2021)

[2] Ready or not: artificial intelligence and corporate legal departments (Thomson Reuters Legal, https://legal.thomsonreuters.com/en/insights/articles/artificial-intelligence-ai-report)

is due to its corporate leniency policy offering whistleblowers immunity (or a significant discount) from fines if they cooperate with the Commission and provide credible information to prosecute the remaining cartelists. Administrative penalties of more than ZAR300 million were imposed by the South African competition authorities for each of the past couple of years, while in 2016/2017 penalties of more than ZAR1.6 billion were imposed. Aside from the financial implications of being found guilty of cartel conduct, the reputational harm caused to firms is severe and long-lasting.

South Africa is certainly not the only African country focused on prosecuting cartel behavior. Investigations into cartel behavior (including the carrying-out of dawn raids) and the prosecution of firms have taken place in many other countries, including Botswana, Egypt, Kenya, Mauritius, Malawi, Namibia, Tanzania and Zambia. Industries that have been subject to investigations include insurance, healthcare, construction and oil & gas. Many of the African competition authorities have existing corporate leniency programs or introduce them once they have identified a specific sector or industry they intend to investigate. Administrative penalties of up to 10% of turnover can be imposed, and criminal sanctions are available in a number of jurisdictions (for example in Botswana, South Africa and Zambia).

Aiscension for cartels

Cartels are also, by their very nature, secretive and hard to detect. However, the introduction of AI to this space changes that. By using the power of Reveal Data's first class neural-net AI, along with the data and know-how available within a global law firm like DLA Piper, the AI has been taught to spot these cartel risks and enable our lawyers to quickly run a review and advise clients of their cartel risks. Specifically, Aiscension has been trained to uncover the following forms of cartel behavior: price fixing; bid rigging; market sharing; collective boycotts and exchanging competitively sensitive information.

Aiscension provides the ability to detect risks and helps to:

- identify cartel risks within businesses before they become regulatory investigations;
- maximize the chances of securing regulator leniency or immunity; and
- minimize disruption to core operations in a cost-effective manner.

Human versus machine

"AI and cognitive computing or machine learning are generally interchangeable terms that all refer to how computers learn from data and adapt with experience to perform tasks. In-house attorneys' anxiety over AI often stems from concerns that it will replace them or the work they do. Where the evolution of AI can play a significant role in the legal industry is by augmenting lawyers' work and help increase their productivity – not replace them"[3]. Aiscension is the perfect example of this in action. The combination of AI and DLA Piper's experience sets Aiscension apart from other solutions. Aiscension is a closed-loop system that harnesses proprietary lawyer-trained AI models to detect risk factors in vast sets of data – with lawyers assessing the results to advise companies on how to proceed. This represents the best of both worlds.

For more information on cartel trends across Africa and Aiscension, please contact Werner Rysbergen and Ilan Sherr.

3 Ready or not: artificial intelligence and corporate legal departments (Thomson Reuters Legal, https://legal.thomsonreuters.com/en/insights/articles/artificial-intelligence-ai-report)

Expanding into Africa: Regulatory challenges for satellite broadband providers

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Over the last several years Africa has been, and continues to be, touted as having multiple opportunities for the expansion of broadband and digital services. This, and the nature of the region geographically, has presented many opportunities for novel technologies to be used for the rollout of broadband to support digital services such as fixed wireless and satellite.

Despite the optimism this creates, the nuances of the regulatory regime in some African jurisdictions can present a barrier to market entry.

In this article, we set out some examples of challenges for satellite broadband service providers expanding into Africa, by reference to specific African jurisdictions and identify potential workarounds, where available. We will focus only on the regulatory regimes applicable to the provision of telecommunications services and operation of terrestrial ground stations.

Broadband services in Africa

Only 27% of the population in Africa has internet access[1]. While there is no shortage of fiber optic cable around coastal areas of Africa to support fiber networks for the provision of broadband services, there is not much fiber inland, and terrestrial broadband networks are typically limited to urban areas. This is because the vast size of the African land mass and the defined distinction between urban and rural areas can make broadband network rollouts outside of saturated urban areas logistically difficult and uneconomical.

However difficulties that apply to traditional terrestrial broadband networks are not applicable to telecommunications satellite systems, where uniform coverage over a given area is guaranteed from a single point in space[2].

As such, satellite has become a key solution to the low availability of internet access in Africa, and there are numerous satellite broadband providers globally looking to take up opportunities for expansion into Africa.

Regulatory challenges

While there may be opportunities for expansion of satellite broadband services into Africa, there are a number of regulatory challenges that should be considered before any expansion decision is made. These include:

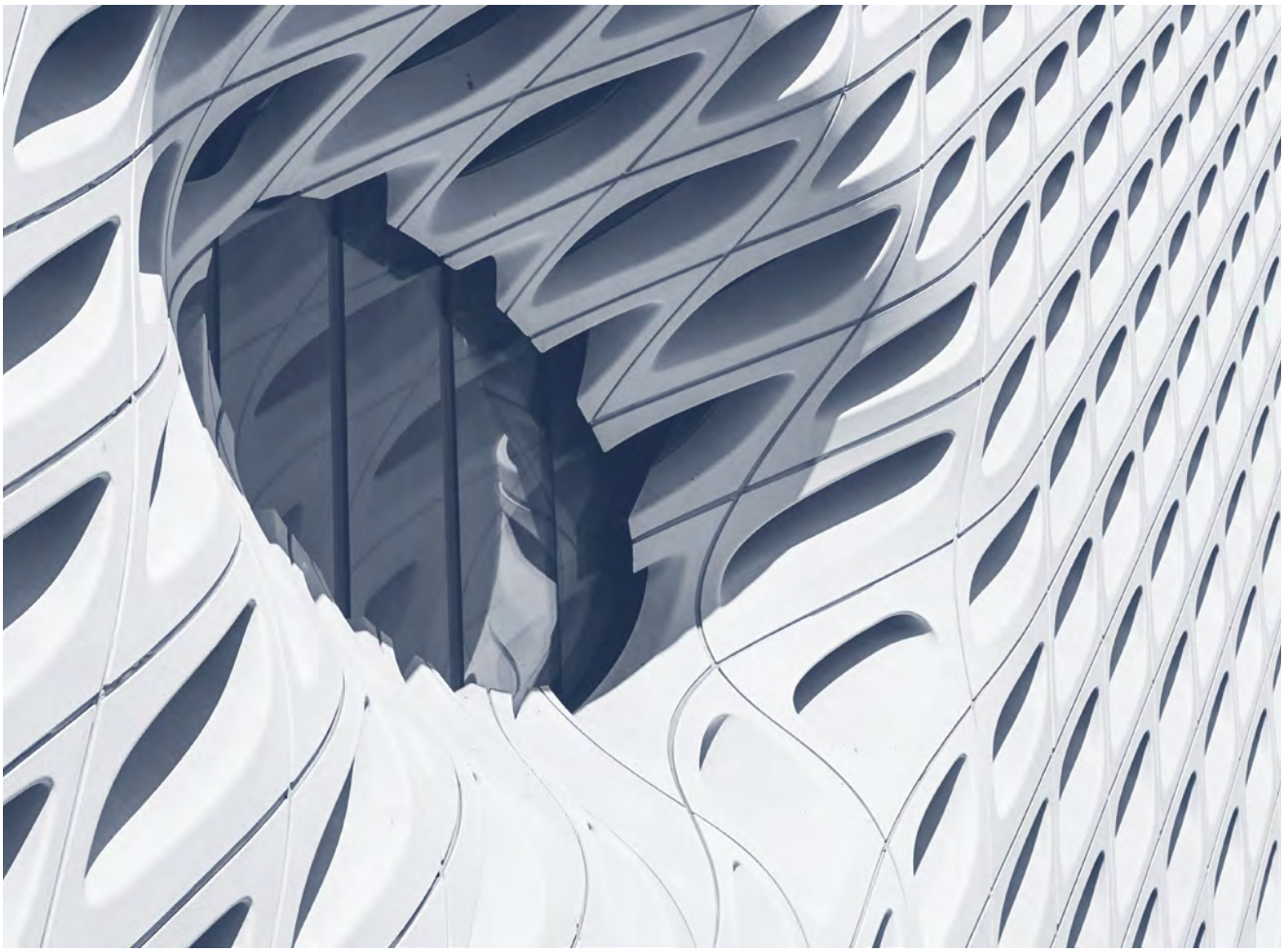
1. LICENSE UNAVAILABILITY

Ethiopia

Before liberalization of its telecommunications markets in 2019, Ethiopia was a closed market with a single state monopoly telecoms provider, Ethio Telecom. A new telecommunications regulatory and licensing regime has now been established; however, the nature of the liberalization process means there are still barriers to entry into Ethiopia for providers of satellite broadband services.

1 http://pubdocs.worldbank.org/en/312571561424182864/062519-digital-economy-from-africa-initiative-Tim-Kelly.pdf

2 https://www.esa.int/Enabling_Support/Space_Transportation/Can_satellites_help_bridge_the_digital_divide



In particular:

- Despite the creation of a new regulatory regime, the market is being opened gradually and the new regulator (the Ethiopian Communications Authority) currently only has plans to permit entry into the market of two additional players, with the award of two Telecommunications Service Licenses by way of public tender. In our view, it is very likely that these two licenses will be won by mobile network operators.
- While the new regulatory regime does contemplate other licenses being available, there is currently no clarity around when such licenses will be offered.

On the basis of the above, direct entry into the Ethiopian market as a license holder and service provider is currently unlikely to be a realistic opportunity for satellite broadband providers.

Despite this, satellite broadband providers wishing to enter into the Ethiopian market may wish to explore indirect entry into the market, such as through a partnership arrangement with a local operator. For example, rather than being the direct provider of services, operators could instead structure their business to be a "subcontractor" to a licensed operator, providing and operating infrastructure on behalf of the licensed operator.

Morocco

Under the local regulatory regime in Morocco, licenses are only granted following public tender. As at the date of this article, there is no intention of the local regulator (the Moroccan National Telecommunication Regulatory Agency) to launch a tender for a further public network operator.

In light of the above, direct market entry as a licensed network operator and service provider may not be feasible. As with the position in Ethiopia, an option that can be explored by satellite broadband providers could be to partner with a local licensee, and structure their business as a subcontractor to the licensed operator.

2. LACK OF UBIQUITOUS/ BLANKET LICENSING

The standard rollout of satellite broadband services for consumer use relies on the deployment of very small aperture terminals (VSATs) at end users' homes. VSATs are similar to a small satellite dish that send and receive satellite signals. For such a network, multiple VSATs will be deployed by a satellite broadband provider to facilitate receipt of services by each end user.

While in some more developed jurisdictions, like the US and Europe, a much simpler blanket approach is taken to VSAT licensing (where each individual VSAT does not need licensing/certification, and instead can be deployed and configured based on technical criteria that eliminate the risk of interference), in some African jurisdictions (such as Tanzania and Zambia), each VSAT requires registration or licensing.

While jurisdictions without blanket licensing may have a "mass application process," not all VSATs requiring licensing can be identified in the one go – especially for rollouts where customers are signing up and having VSATs installed at different times. This can significantly increase the burden for satellite broadband operators and become a barrier to efficient commencement of live services to end users.

Not much can be done in response to the unavailability of blanket licensing, and satellite broadband providers will need to consider how the lack of blanket licensing affects their service rollout, and any guarantees they make to end users around service commencement timeframes.

3. IN-COUNTRY INFRASTRUCTURE REQUIREMENTS

Satellite broadband providers looking to enter a market in Africa may already have existing gateway/ earth station infrastructure in other countries or regions and may wish to use such "out-of-country" gateways in conjunction with the provision of services "in-country." However, some jurisdictions in Africa have local infrastructure requirements which can present a challenge to using existing infrastructure.

For example:

- in Senegal, it is a specific condition for local gateways to be used; and
- in Zimbabwe, there is no requirement to specifically use gateways "in-country," but if a gateway is to be located within the jurisdiction, existing infrastructure of a local operator must be used (with the relevant agreement entered into with the local operator needing to be approved by the regulator (POTRAZ)). A satellite broadband provider could not establish its own gateway in Zimbabwe.

A satellite broadband provider seeking to use its own "out-of-country" gateways in these jurisdictions could seek to obtain a waiver from the local regulator, but this would be entirely at the regulator's discretion.

4.EXORBITANT LICENSE FEES

In some jurisdictions, licenses are available that would cover the provision of satellite broadband; however, it is expected that more traditional operators and service providers will apply for those licenses. As such, the applicable fees are set at a level which contemplate business models involving technologies which already have highly saturated demand and revenue streams, such as mobile network services. Such fees can be prohibitive for satellite network providers.

For example, in Zimbabwe an internet access provider license carries an upfront fee of between USD2.7 million and USD5.5 million.

The requirement to pay such high a fee, combined with the fact that this will add to the upfront investment required by a satellite broadband provider, can be prohibitive to market entry.

Conclusion

As has been shown by this article, while a satellite broadband provider may have plans to expand into Africa, there are a number of nuances to the local regulatory regime in a variety of African jurisdictions which will need to be considered by a satellite broadband provider before choosing to enter a market.

Ultimately, while there can be challenges to entry, there are workarounds available; however, these workarounds may mean a satellite provider may not be able to enter in the model they originally planned.

Digitization: Facilitating the implementation of AfCFTA

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The African Continental Free Trade Agreement (AfCFTA) is an agreement among African Union (AU) Member States who have signed and ratified the agreement, to create a single liberalized African market. The combined African market (GDP) of the 55 Member States is valued at USD3.4 trillion with a population of 1.3 billion people, the majority of which are youths and women[1].

AfCFTA represents a potential turning point for the African continent, as it could deepen, transform and accelerate intra-African trade and consequently promote Africa's global market position by unifying the continent under one voice, especially in the space of global policy trade negotiations. The establishment of a unified African market creates a cooperative and collaborative environment that facilitates trade, movement and overall accessibility to African markets, goods and services, firstly, by regulating the export taxes and duties charged and secondly, by facilitating the movement of supplies and people.

AfCFTA is aligned with Agenda 2063. Agenda 2063 is the AU's blueprint for transforming the African continent into a global player that prioritizes and actively and strategically invests in inclusive growth and sustainable development, good governance, the rule of law, African peace and security, and a united and common African cultural identity. Pursuant to Agenda 2063, the AU intends to create platforms of empowerment and utilize the power of a united Africa to accelerate the continent into being a resilient global player and partner[2]. One of the aspirations of Agenda 2063 correlates with the objectives of AfCFTA; namely, a continental market that enables the free movement of people, capital, goods and services[3].

At present, 54 of the 55 AU Member States have signed the AfCFTA, and as at February 2021, 36 AU Member States had deposited their instruments of ratification[4].

Can digitization provide solutions to facilitate the implementation of AfCFTA?

Digitization and the use of technology presents a major opportunity for the African continent in the implementation of AfCFTA. Pre-existing challenges in the nature and extent of infrastructure on the continent can be avoided. Efficiencies can be leveraged. Innovative solutions suitable to the African continent can be harnessed.

The point was recently demonstrated by the global COVID-19 pandemic, which caused most of the world to close its borders and limit the movement of

1 The African Continental Free Trade Area: https://www.worldbank.org/en/topic/trade/publication/the-african-continental-free-trade-area

2 Goals & Priority Areas of Agenda 2063, African Union. Available at http://www.au.int/en/agenda2063/goals (accessed March 2021).

3 Preamble of the Agreement Establishing the African Continental Free Trade Area.

4 The AU Member States that have deposited their instruments of ratification are Angola, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Egypt, Eswatini, Ethiopia, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Malawi, Mali, Mauritania, Mauritius, Namibia, Niger, Nigeria, Republic of Djibouti, Rwanda, Sahrawi Arab Democratic Republic, São Tomé & Príncipe, Senegal, Sierra Leone, South Africa, Togo, Tunisia, Uganda, Zambia and Zimbabwe.

people and in some cases, goods, ultimately delaying the operational commencement of trading under AfCFTA. However, the pandemic resulted in a societal shift to digital platforms and an online world, which is now a way of life for many.

Inclusive digital technology and value chains will be key to integrating African countries into one major market and scaling up the movement of goods and people, and an opportunity to mobilize African youths into self-employment. In this regard, while the rest of the world faces an aging population, Africa has the most youthful population in the world, accounting for an approximate 20% of the world's youth. Africa's youth bulge is predicted to grow exponentially over the coming years[5].

African youth maintains a solid presence in digital innovation. The ability of the youth to champion digital migration was demonstrated recently in the development of the "Stop Corona" contact tracing App developed by El Hacen Dia, Mamadou Dia, Aliou Dia and Abdellahi Dia from Mauritania and other homegrown African innovations for tackling COVID-19[6].

In African countries where economic resilience must be strengthened, jobs must be created and entrepreneurship must be facilitated, digitization and AfCFTA provide tools to these ends.

Cryptocurrency

At present, Africa does not have one uniform currency.

The ambitious trade objectives of AfCFTA present an opportunity for the use of cryptocurrency to facilitate the ease of trade across the territories of state parties – without the need to implement a uniform African currency.

Cryptocurrency can be used for the reliable flow of funds that can fast track economic activity and efficiency, without the limits of geographic boundaries and without the expense of structures required by the traditional banking system. It can also mitigate the trade effects of fluctuating exchange rates, which sometimes adversely affect emerging markets and cross-border trade.

Financial technology and digital currency can reduce the waiting time for implementation of cross-border transactions, which results in efficiencies for businesses and better service delivery to consumers[7]. Cryptocurrencies can be developed in light of the needs of a particular market. There are many different cryptocurrencies with different design goals[8]. However, cryptocurrency will likely only be relied upon by mainstream corporate players if it is properly regulated. Regulation (and not over-regulation) should be considered by the AU members states soon, in order to facilitate intra-African trade.

Digital passports

Digital passports will assist to facilitate ease of movement for people across states that are members of AfCFTA.

The global transition to digital passports has been taking place since 2005. As of mid-2019, more than 150 states around the world have begun issuing digital passports[9]. Electronic passports have a microprocessor which stores a digital version of what would be found in a paper passport. It also stores digital versions of identity photographs and can store digital fingerprints, referred to as a "biometric passport"[10].

Countries such as South Africa have already seen the efficient transitioning to smart identity documents (Smart ID), although not

5 "According to the United Nations, 226 million youth aged 15-24 lived in Africa in 2015 representing nearly 20% of Africa's population, making up one fifth of the world's youth population. If one includes all people aged below 35, this number increases to a staggering three quarters of Africa's population. Moreover, the share of Africa's youth in the world is forecasted to increase to 42% by 2030 and is expected to continue to grow throughout the remainder of the 21st century, more than doubling from current levels by 2055." Available at https://www.un.org/en/africa/osaa/peace/youth.shtml (Accessed March 2021).

6 https://www.paperturn-view.com/uk/ai4development/africa-innovates-magazine-ai4dev?pid=MTE1141208v=1.8

7 Available at https://www.africaoutlookmag.com/industry-insights/article/1128-can-cryptocurrencies-make-the-afcfta-more-efficient (Accessed March 2021).

8 "Cryptocurrency market. Growth, Trends and Forecast (2020-2025)". Available at https://www.mordorintelligence.com/industry-reports/cryptocurrency-market?gclid=EAIaIQobChMIkaCasreW7wIVjv93Ch3_EwbnEAAYASAAEgIc_fD_BwE (Accessed March 2021).

9 "Electronic And Biometric passports. Available at https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/passport/electronic-passport-trends (Accessed March 2021).

10 Id.

yet digital passports. The adoption of Smart ID, launched in July 2013, has enhanced government department efficiency and citizens' access to government services through faster turnaround time, reduced fraud and fortified identity theft protection due to high levels of security and a superior data protection mechanism[11].

The transition from paper to digital passports requires robust technology infrastructure to mitigate identity theft and fraud. It will require a dual smart- and paper-based system from government departments at border entry ports but in the long-term, the smart system can be adopted alone.

Although officially launched in 2016, the roll-out of the AU passport is expected to take place during 2021 at the earliest. The aim of the passport is to exempt AU passport-holders from the need to obtain visas for all of the 55 Members States. This again ties into the objectives of AfCFTA and Agenda 2063 to aspire to one integrated Africa and African people. Provided the necessary measures are implemented to secure data, the implementation of a digital African passport provides a great opportunity to promote the objectives of AfCFTA and Agenda 2063. The introduction of modern data privacy laws in Member States will be an important protection mechanism to facilitate the use of digital passports.

A digital passport can also be used to record and manage whether travelers have been inoculated against diseases such as COVID-19 and yellow fever, thereby reducing the health risk that is associated with the movement of persons across country borders, and facilitating the ease of entry into African countries.

Facilitating the movement of goods

Supplying goods across borders is a major hurdle for African cross-border trade. Digitization can facilitate the movement of goods and ensure adherence to proper checks and balances.

Specification management requires quick, on-hand information, which can only be achieved through digitizing and digital mapping of data from all supply chain points. This allows the live monitoring of the movement of the supply and its current state, allowing one to adapt the conditions digitally, communicate with stakeholders at the said key point or location and mitigate financial loss and or wastage.

Facilitating collection of export taxes

The export taxes chargeable pursuant to AfCFTA can be recorded, levied, collected and otherwise managed through digital systems.

Digital supply chain systems can potentially link into the system of the revenue service of each country. This will facilitate collection of export taxes and duties and can improve efficiencies and limit corruption, although state parties will need to invest significantly in technological solutions and the necessary IT infrastructure upgrades.

SADC readiness

The Southern African Development Community[12] (SADC) has in place a Protocol on Trade (SADC Protocol)[13].

Similar to AfCFTA, the SADC Protocol was established to be a stepping stone in intra-African trade. The government of the Seychelles, for example, stated that its reintegration into SADC and ascension into the SADC Protocol, which adheres to World Trade Organization rules, provides for predictability for business through more harmonized trading conditions and regional supply and economic linkages.

South Africa has displayed its active commitment to be a part of AfCFTA, through the deposition of its ratification instrument, and its active plans to incorporate AfCFTA objectives into legislation. For example, the South African Revenue Service (SARS) has expressly stated that the coming into force of AfCFTA will have an impact on its legislation such as the Customs and Excise Act, 1984, systems, customs operations and training of officers[14].

11 THALES. Available at https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/customer-cases/south-africa (Accessed March 2021).

12 Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.

13 Southern African Development Community Trade Protocol.

14 Agreement Establishing The African Continental Free Trade Area (AfCFTA). Available at https://www.sars.gov.za/Legal/International-Treaties-Agreements/Trade-Agreements/Pages/AfCFTA.aspx (Accessed March 2021).

SARS has already started implementing certain of the mechanisms in AfCFTA. Companies from African countries that have ratified AfCFTA and whose tariff offers have been accepted and published according to domestic legislation, will receive preferential imports from South Africa[15]. SARS is also facilitating education and up-skilling on the AfCFTA by holding technical workshops until June/July 2021 for entrepreneurs and all stakeholders who will be exploiting the opportunities under AfCFTA.

Various other systemic and administrative mechanisms are being put in place by the South African ministries to efficiently accommodate natural and juristic persons who will be trading under the AfCFTA.

The Finance Minister of Namibia has stated that Namibia's customs administration will be an integral part of the domestication and implementation of AfCFTA. The minister went on to say that the customs administrations would be agile and dynamic. Some of the initiatives anticipated are the introduction of a new clearing agent and risk management policies, the establishment of the container control program and an electronic data interchange center. The use of technology, and by inference digitization, is anticipated to be an integral part in the adoption of these new policies and their consequent efficiencies.

Zambia ratified and deposited its instrument to the Agreement in 2021, being one of the most recent AU member states to do so. Zambia has established a national AfCFTA strategy which will serve as the compass in its implementation. A World Bank Group report assessed Zambia's strengths and weaknesses with respect to digitization under five categories; namely, digital infrastructure, digital skills, digital entrepreneurship, digital platforms and digital financial services[16]. While substantial population migration towards digital platforms was noted, there were also gaps that were highlighted in digital skills and digital entrepreneurship. A skill gap in terms of the government's ability to develop, maintain and use digital systems was also noted.

Zimbabwe has also acceded to AfCFTA. In October 2019, a two-day workshop was held in Harare to validate the country's national AfCFTA strategy. The Permanent Secretary of the Ministry of Foreign Affairs and International Trade stated that it is anticipated that the AfCFTA will reinforce sustainable intra-African value chains, promote Zimbabwe's economic diversification and bridge skill gaps, imploring the private sector to take advantage of and exploit the opportunities that come with the Agreement[17].

Conclusion

The opportunity is there for the taking and in a post-COVID-19 economy, stakeholders must leverage all tools available to stimulate economic growth and development.

In 2017, only 17% of trade in Africa was intra-African trade, while intra-regional trade in regions such as Europe and Asia exceeded 50%. The difference is staggering.

It is estimated that the implementation of AfCFTA has the potential to boost intra-African trade by 52% by 2022[18]. AfCFTA also provides greater opportunities for the 15 landlocked African countries, which are occupied by 17% of the total African population and only 7% of GDP[19]. The positive knock-on impact for other African states is obvious.

15 Id.

16 World Bank. 2020. Accelerating Digital Transformation in Zambia : Digital Economy Diagnostic Report. World Bank, Washington, DC. © World Bank. Available at https://openknowledge.worldbank.org/handle/10986/33806 License: CC BY 3.0 IGO. (Accessed March 2021).

17 https://www.un.org/africarenewal/news/zimbabwe-expects-positive-transformation-its-economic-landscape-full-afcfta-implementation (Accessed March 2021).

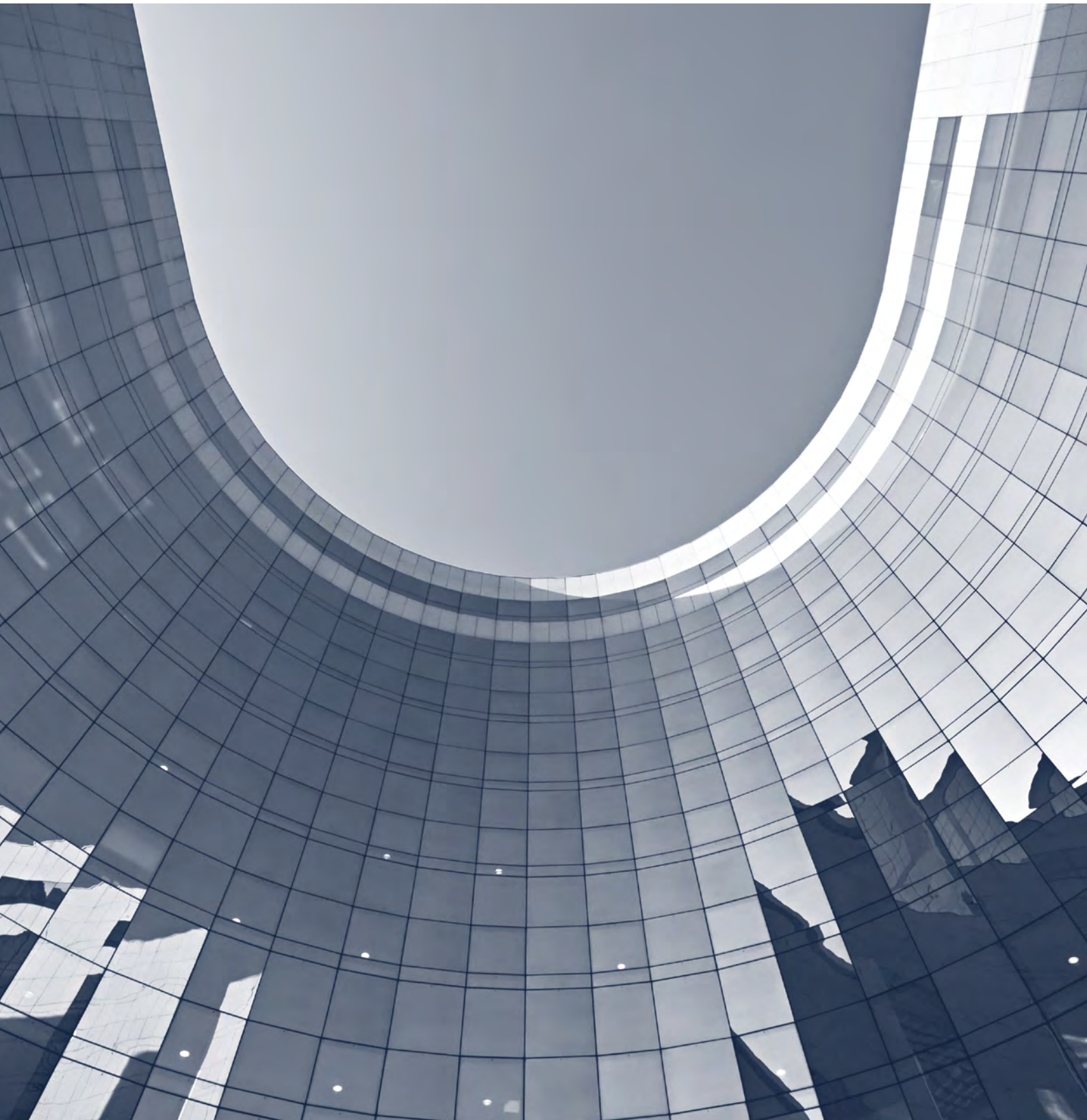
18 Id.

19 Above at Note 2.

However, digitization does not come without its own exigencies. Continuous investment and development in the establishment, maintenance and upgrade of digital infrastructure and technology has the potential to exponentially accelerate the objectives envisioned by AfCFTA. Training and upskilling will be necessary in the public and private spheres.

Data privacy and cybersecurity will need to be managed carefully. Harmonized policy-making, accountability structures and some regulation of digitization will be helpful in providing reliable and credible systems that business can then rely upon, regardless of the jurisdiction.

While the timelines for implementation of AfCFTA are tight, there is no doubt that this is achievable if the African state parties work together towards the same objectives and more so if they leverage the opportunity presented by digitization.



Smart contracts and trust in Africa's e-commerce revolution

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Smart Contracts and Trust in Africa's E-Commerce Revolution

The coming into effect and promulgation of the African Continental Free Trade Area (AfCFTA) has ushered in a new and exciting era for the continent. AfCFTA aims to enhance intra-African trade by providing a complete and mutually beneficial trade agreement among Member States. It covers goods and services, investment, intellectual property rights and competition policy[1]. On December 5, 2020, the African Union Assembly approved the start of trading under AfCFTA as of January 1, 2021[2].

AfCFTA works to bring together all 55 Member States of the African Union, covering a market of 1.2 billion people with a combined gross domestic product (GDP) of USD3.4 trillion[3]. AfCFTA will see to a reduction of tariffs among member countries and cover policy areas such as trade facilitation and services, as well as regu¬latory measures such as sanitary standards and technical barriers to trade. The complete application of AfCFTA would restructure markets and economies across the continent and boost output in the services, manufacturing and natural resources sectors[4].

In 2019 participants at UNCTAD's e-commerce week were told that e-commerce can significantly boost free trade across Africa, and Ajay Kumar Bramdeo, the African Union's ambassador to the United Nations, said "e-commerce has the potential to lift intra-African trade from the current rate of 18% and boost Africa's share of global trade[5]."

Other think tanks share this optimism, and in September 2019 the World Economic Forum and the International Trade Centre published an Africa E-Commerce Agenda Roadmap for Action where they say that online market places have the potential to drive inclusive growth across the continent, predicting that e-commerce is likely to create as many as 3 million jobs[6].

E-commerce has big potential in Africa, and was valued at USD16.5 billion in 2017[7], with a McKinsey report predicting that this value could rise to USD75 billion by 2025[8]. The entry into force of the AfCFTA, which seeks to create an integrated market of 1.27 billion consumers, will undoubtedly stimulate the African Union's aim to build a digital single market in Africa by 2030.

1 https://www.tralac.org/resources/our-resources/6730-continental-free-trade-area-cfta.html

2 https://www.tralac.org/resources/our-resources/6730-continental-free-trade-area-cfta.html

3 https://www.tralac.org/resources/our-resources/6730-continental-free-trade-area-cfta.html

4 https://www.worldbank.org/en/topic/trade/publication/the-african-continental-free-trade-area

5 https://unctad.org/news/e-commerce-holds-huge-promise-enhancing-free-trade-africa

6 http://www3.weforum.org/docs/WEF_Africa_EComm_EN.pdf

7 https://www.statista.com/statistics/996525/mena-region-ecommerce-market-size/

8 https://www.mckinsey.com/~/media/McKinsey/Industries/Technology%20Media%20and%20Telecommunications/High%20Tech/Our%20Insights/Lions%20go%20digital%20The%20Internets%20transformative%20potential%20in%20Africa/MGI_Lions_go_digital_Full_report_Nov2013.pdf

African e-commerce businesses will need to ensure they find ways of transacting that are safe, secure and not liable to manipulation. They will need to find a method of transacting that will provide their customers with a guarantee that will ensure that, for instance, once the customer fulfils certain obligations, the e-commerce business will equally fulfil its obligations to the customer through the delivery of goods and/or services.

However, at various stages of the buying process, there are numerous obstacles that slow the adoption and progression of e-commerce in Africa. The four main obstacles are identified by the UNCTAD are access to the internet, trust towards online businesses, logistics and infrastructure challenges, and payment systems.

The focus of this article is trust, and the question of whether smart contracts offer a unique opportunity for the issue to be addressed in African e-commerce.

The problem of trust

There is little trust towards online businesses in Africa tracing back to various scams (email phishing or advance-fee scam) and the uncertainty of ever seeing whatever is ordered online. This lack of trust still permeates the e-commerce landscape as Mrs. Amani Abou-Zeid identified at the 2019 UNCTAD's e-commerce week[9].

Trust in the context of e-commerce has generally been treated as more significant than in other settings because of the lack of personal contact and social cues[10]. The trust and distrust relationship is conducted by two parties, the trustor and the trustee. In e-commerce, those two parties do not participate in a human-to-human relationship, but rather a human to computer-interface relationship.

In an e-commerce transaction, a trustor cannot see or touch a trustee's products or services or ask questions face-to-face. The trustor must deal with an unfamiliar intermediary and must overcome perceptions of risk and insecurity, such as by submitting personal information, wiring money, and providing credit card information.

Trust can be divided into three parts: intrapersonal-level (dispositional) trust, system-level trust, and interpersonal-level trust. In e-commerce, a trustor who is the buyer (intrapersonal-level) faces two trustees that are the intermediaries (system-level/intermediary) and the seller (interpersonal-level/vendors).

Intrapersonal-level trust refers to the tendency to believe (or not to believe) in others. System-level trust plays a role of assurance that convinces a trustor to submit personal and financial information and to buy products or services from an unfamiliar seller. Interpersonal-level trust is associated with the seller's trust in the counterpart of a transaction that delivers products or services. Structural assurance, a part of system trust, is an institutional trust in which a buyer perceives robust structures that ensure a successful e-commerce transaction will take place under safe and secure circumstances.

A report by Alastair Tempest of the South African Institute of International Affairs[11] says that businesses and consumers in Africa are not used to mail-order distance selling and have concerns about paying online, the quality of the goods, delivery, return of damaged or unaccepted goods, lack of consumer protection regulations, hidden costs (eg taxes and customs duties) and general suspicions of buying goods without the ability to touch and feel them.

In e-commerce, perceived risk may act as a barrier to entry. Contrary to a retail shop, in e-commerce, the potential buyer must make a decision armed only with information provided by a website. Trust and distrust affect the willingness to purchase, intention to use, and willingness to share information.

[9] https://unctad.org/news/e-commerce-holds-huge-promise-enhancing-free-trade-africa

[10] Gefan et al., 2003a

[11] https://saiia.org.za/research/the-digital-economy-and-e-commerce-in-africa-drivers-for-the-african-free-trade-area/

Are smart contracts the answer

For African e-commerce businesses, the answer to the issue of the lack of trust may be in the use of smart contracts. Smart contracts are a relatively new concept, with their origins being traced to 1994 when a computer scientist by the name of Nick Szabo discussed how contracts could be embedded in computer codes[12]. Blockchain technology has made this an even more feasible prospect[13].

A smart contract is essentially a contract that is set out in electronic form and is rooted in computer codes. They have been referred to as self-executing contracts due to the fact that they are able to perform a given transaction upon receipt of a given trigger or input. Blockchain smart contracts are digital protocols similar to traditional contracts by their functions. They are created to enable transactions between parties, contain terms of agreement and are executed automatically. Smart contracts eliminate third parties from the transaction-making process, making it private, fast and more secure. Additionally, digital contracts are only executed if rules and conditions are respected by both parties, which reduces the risk for all involved.

Smart contracts work by being programmed onto a decentralized blockchain network which defines the terms of a particular transaction. One way to think of a smart contract is as a computer executing on "if/then" or conditional, programming[14].

The example of the vending machine is often chosen to explain the functionality of smart contracts. The buyer chooses the desired product, puts the amount of the indicated purchase price into the machine and, as a final step, the vending machine releases the desired product. Smart contracts work in a similar manner.

One of the attractive features of a smart contract is that they are a highly secure way of transacting as they cannot be altered or manipulated. It is said there is no way to covertly manipulate smart contracts without drawing the attention of the network[15]. Smart contracts work in such a way that they permit trusted transactions and agreements to be carried out among disparate, anonymous parties without the need for a central authority, legal system, or external enforcement mechanism. In so doing, they reduce any administrative overhead costs involved[16].

Smart contracts are therefore a great way of transacting, as once certain conditions are met – for example goods arrive in a port, two parties agree to an exchange – they can automate the transfer of bitcoin, alt coins, fiat money, or the receipt of a shipment of goods that allows them to continue the transaction; and underneath it all: a blockchain ledger that stores the smart contract[17].

The analysis of whether the contractual conditions have been satisfied is completed by the software. This is particularly advantageous when the parties do not know each other personally, as is often the case in an e-commerce transaction. With the use of smart contacts, trust is no longer an issue among the parties involved.

Building a trust system based on blockchain technology is conducive to improving social and economic efficiency, ensuring financial security, and enhancing the core competency of the system. Blockchain can improve the accuracy of credit evaluation, clarify data ownership, broaden the coverage of credit assessment, and ensure data security and privacy protection. Blockchain-based trust systems guarantee that data cannot be tampered with taking the question of trust completely out of the equation[18].

[12] https://www.kaleido.io/blockchain-blog/5-examples-of-blockchain-smart-contracts

[13] Blockchain refers to a system of recording information in a way that makes it difficult or impossible to manipulate. Euromoney.com defines blockchain as: "a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system. A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain." https://www.euromoney.com/learning/blockchain-explained/what-is-blockchain#:~:text=Blockchain%20is%20a%20system%20of,computer%20systems%20on%20the%20blockchain.

[14] https://www.computerworld.com/article/3412140/whats-a-smart-contract-and-how-does-it-work.html

[15] https://medium.com/coreledger/what-are-smart-contracts-a-breakdown-for-beginners-92ac68ebdbeb#:~:text=For%20example%2C%20a%20smart%20contract,for%20holders%20of%20digital%20assets

[16] https://www.investopedia.com/terms/s/smart-contracts.asp

[17] https://www.computerworld.com/article/3412140/whats-a-smart-contract-and-how-does-it-work.html

[18] https://iopscience.iop.org/article/10.1088/1755-1315/252/4/042126/pdf

Conclusion

Given the safe and secure manner in which smart contracts work, they certainly might be the answer for e-commerce businesses in Africa to overcome the hurdle of fraud and allow businesses to safely transact with their customers and thereby continue on their path of growth, by among other things, taking advantage of the opportunities that AfCFTA currently offers them.

In spite of the benefits that are likely to arise from AfCFTA for e-commerce businesses, it is important to keep in mind that the agreement currently does not have a framework for e-commerce businesses themselves. In this regard, e-commerce has only recently been included in AfCFTA through a decision of the African Union Heads of State and Government Assembly in February 2020 and it will be integrated through a third phase of negotiations[19]. The decision will definitely be another contributing factor to the continued growth of the African e-commerce market.

AfCFTA's lack of a comprehensive framework for the African e-commerce market suggests that whatever positive effects AfCFTA is likely to have on the growth of the African e-commerce market, they are likely to be somewhat indirect. There are therefore calls for a framework that deals directly with the e-commerce market.

Karishma Banga, Mohamed Gharib, Max Mendez-Parra and Jamie Macleod in a report for the Overseas Development Institute recommend that AfCFTA e-commerce specific negotiations should consider, among others, digital business taxation, by trying to provide a framework for harmonising indirect taxes on digitally traded goods, to promote digital industrialisation, ensure a level playing field among local and foreign suppliers and to bolster revenue[20].

[19] https://www.tralac.org/blog/article/14692-an-agenda-for-the-afcfta-protocol-on-e-commerce.html

[20] https://www.odi.org/sites/odi.org.uk/files/resource-documents/e-commerce_in_preferential_trade_agreements_report.pdf https://www.odi.org/sites/odi.org.uk/files/resource-documents/e-commerce_in_preferential_trade_agreements_report.pdf

Digital transformation and financial inclusion in Nigeria

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The fintech industry is popular for its dynamic approach to delivery and relies on technological advances. Innovations such as blockchain, mobile payments and savings, peer-to-peer lending platforms, crowdfunding and similar internet-based solutions have radically transformed the financial services landscape in Nigeria, challenging its traditional business models and regulatory infrastructure. However, beyond the noteworthy advancements in this sector, a key concern is giving the country's growing population access to these innovative solutions.

Financial inclusion

Financial inclusion, as defined by the World Bank[1], means that individuals and businesses have access to useful and affordable financial products and services that meet their needs (transactions, payments, savings, credit and insurance) delivered in a responsible and sustainable way. Indeed, the thrust of these innovative solutions is providing easy and quick access to financial services. But this is still elusive because of the realities faced in certain economies which have limited infrastructure and skills to support these innovative solutions. Undoubtedly, digital transformation remains at the heart of driving financial inclusion.

Financial inclusion has been identified as key in realizing 7 of the 17 Sustainable Development Goals. It is seen as a tool for economic development, particularly in the areas of poverty reduction, employment generation, wealth creation and improving welfare and general standard of living[2]. As such, the importance of financial inclusion to a country like Nigeria cannot be over emphasized. Realizing this, on October 23, 2012, the Central Bank of Nigeria (CBN) launched the National Financial Inclusion Strategy. In 2018, the CBN issued a Revised Strategy[3] aimed at further reducing the exclusion rate of the unbanked to 20% by 2020. Specifically, the aim was to increase the number of adult Nigerians with access to payment services from 21.6% in 2010 to 70% in 2020, while those with access to savings should increase from 24% to 60%, access to credit from 2% to 40%, access to insurance from 1% to 40% and access to pensions from 5% to 40% in the same period. Even though the nation was only able to achieve a 60% rate of financial inclusion at the end of 2020, stakeholders remain optimistic that if the government's digital transformation policies are effectively driven, a much wider access to and use of financial services can be achieved.

Impact of digital transformation on financial inclusion

Digital transformation of the financial services industry facilitates increased broadband penetration, which promotes financial services delivery in rural areas, provides consumers with bespoke services (digital banking, mobile lending and savings), promotes access to credit for small and medium-sized enterprises (SMEs), leads to increased efficiency of traditional financial institutions and, more fundamentally, drives financial inclusion[4]. The EFInA 2020 Report lists actions that could lead to a higher number of people

[1] The World Bank, "Financial Inclusion" Financial Inclusion Overview (worldbank.org) accessed February 10, 2021

[2] The Central Bank of Nigeria, "Financial Inclusion" Central Bank of Nigeria: Financial Inclusion (cbn.gov.ng) accessed on February 10, 2021

[3] National Financial Inclusion Strategy.cdr (cbn.gov.ng)

[4] Mark Carney, "The Promise of FinTech – Something New Under the Sun?" (G 20 conference on "Digitising finance, financial inclusion and financial literacy," Wiesbaden, January 25, 2017)www.bankofengland.co.uk/speech/2017/the-promise-of-fintech-something-new-under-the-sun accessed February 10, 2021

being included in the financial system and identifies the following as having the highest potential impact if well executed: innovation enablement, digital ID, credit infrastructure, digital infrastructure and technology talent pipeline. The report also highlights instances where fintechs are leveraging technology to address unmet customer needs in Nigeria:

- Using the data that smartphones provide, Bank Verification Numbers (BVN) and phone number verification to provide loans to customers and algorithms on the customer's mobile transactions to determine credit risk.
- Mobile data and user experience (UX) have allowed fintechs to develop products and go to market directly, leveraging app stores as a distribution platform to reach over 23 million smartphone users.
- Increased access to micro loans for SMEs.

Digital onboarding is becoming easier as banks and fintechs invest in customer education and leverage agents for one-on-one guidance to drive financial inclusion[5].

Nigeria's digital transformation drive

While digital transformation has been largely private sector driven, the Nigerian government also has a role to play and introduced initiatives to promote it. In a bid to achieve a digital economy, the government re-designated its Federal Ministry of Communications as the Federal Ministry of Communications and Digital Economy with a mandate to develop and implement a harmonized and well-coordinated digital economy policy and strategy. The ongoing data registration exercise for the National Identity Number is promising and could very well transform the financial services industry as it will provide a digital database for identification, easier onboarding process, access to micro loans and other financial services for the unbanked. Nigeria has also introduced a number of policies to promote digital transformation across the economy:

- The National ICT Policy[6] aimed at increasing broadband penetration, empowering Nigerians to participate in software and IT development and building a mass pool of IT literate manpower.
- The Nigerian National Broadband Plan 2013-2018 through which a relatively low 30% broadband penetration was achieved.
- The Nigerian National Broadband Plan (2020-2025) which has led to increased broadband penetration from 35.1% in mid-2019 to 40.1% mid-2020 and to 45.43%[7] as at November, 2020.
- Harmonization of Right of Way (RoW) charges across states leading to a 97% reduction or complete waiver of RoW charges, leading to increased broadband penetration.
- The Digital Economy Policy and Strategy (2020-2030)[8] which aims at providing a plan for using digital technology as a platform for stimulating growth in all sectors of the economy through the development of a digital economy for the country.

The introduction of these policies conveys a message that the government is forward-looking and it is evident that there has been a considerable level of growth in technology. To deliver financial services at the last mile, however, there are still critical areas that need attending to, such as adequate infrastructure and internet penetration in rural areas. An effective implementation of these policies in the coming years will not only help the country arrive at a truly digital economy but also drive financial inclusion, facilitating access to financial services by the unbanked.

The CBN has implemented regulations to promote digital transformation and ultimately financial inclusion in Nigeria. Some of these interventions include:

[5] EFInA, "Fintech Landscape and Impact Assessment Study 2020" https://www.efina.org.ng/wp-content/uploads/2020/08/Fintech-Landscape-and-Impact-Assessment-Report.pdf accessed February 10, 2021

[6] National-ICT-Policy11.pdf (nitda.gov.ng)

[7] Broadband penetration hits 45.43% in Nigeria – Nigerian Investment Promotion Commission (nipc.gov.ng)

[8] National-Digital-Economy-Policy-and-Strategy2.pdf (nitda.gov.ng)

- the establishment of a regulatory sandbox[9], which allows live tests of new, innovative products, services, delivery channels, or business models in a controlled environment to ensure an enabling environment for innovation without compromising on consumer safety and the overall payments system;
- the downward review of the Merchant Service Charge[10] 0.75-0.5% to increase accessibility to electronic payment solutions; and
- the introduction of agent banking[11] and payment service banks[12] which leverage technological solutions to provide easier and quicker access to banking solutions, and accelerate financial inclusion in rural areas.

Financial inclusion is a huge task and digital transformation is only one of the drivers for achieving this. There is also need for an extensive and continuous customer-centric approach to product development and an enabling regulatory landscape.

[9] Framework for regulatory sandbox operations.pdf (cbn.gov.ng)

[10] Review of process for merchants collection on electronic transactions.pdf (cbn.gov.ng)

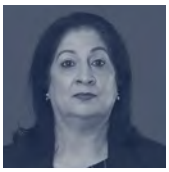
[11] Guidelines For The Regulation Of Agent Banking And Agent Banking Relationships In Nigeria (cbn.gov.ng)

[12] Approved Reviewed Guidelines For Licensing And Regulation Of Payment Service Banks In Nigeria-27AUG2020.pdf (cbn.gov.ng)

[13] Prof. Yinka David-West, "Financial Inclusion Holds the Key to Transforming Poverty into Prosperity" Financial Inclusion Holds the Key to Transforming Poverty into Prosperity | Lagos Business School (lbs.edu.ng) accessed February 11, 2021

[14] Lagos Business School, State of the Market Report 2020," https://mcusercontent.com/f56f1a382462033ba0949288e/files/1c6f53bb-cb6d-4f92-a5f0-37e72987e236/SOMR_2020.pdf, accessed on February 11, 2021.

Open banking in Africa after COVID-19



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Open banking is a system where banks allow or authorize third parties, such as financial technology or fintech companies, to access their clients' financial data to build applications or services. Anchored on providing better customer experiences, open banking has stirred a lot of interest in Africa, including banking apps with detailed analytics of finances, the ability to send money from one bank to another using mobile phones, or the ability to transfer money from one telecoms network to another.

COVID-19 affected many businesses, with the banking industry among the first to feel its effects. In December 2020, Kenya's Central Bank released its four-year strategy and highlighted Open Infrastructure as one of its main strategic objectives[1]. Earlier in 2019, two large South African banks embraced open banking[2] and at the height of the pandemic, South African and Nigerian startups TrueID and Okra, respectively, announced[3] they had received significant funding to develop open banking infrastructure.

This article looks at how open banking is gaining traction in Africa, its regulatory frameworks and what this transformation means for the continent in a post-COVID-19 world.

Open banking enablers

Among the assets a bank may have, customers' financial data is one of the most valuable. Information such as spending patterns, financial capabilities and lifestyle preferences are potential gold mines of data. However, in the past five years, fintech companies have arrived on the scene, armed with the capability of providing new products and better customer experiences. With this new wave, banks have started participating and outsourcing innovation to authorized third parties by opening up their customer data to them.

M&A activity has also created investor excitement in the area. VISA's announcement[4] of its intention to purchase US open banking platform Plaid for USD5.3 billion surprised many. Regional mobile telecom company MTN recently launched its API[5] marketplace, Chenosis[6], as did Kenya's Co-operative Bank with its open APIs, while Safaricom continues to take an open approach through its Daraja API. Several African startups have also been founded and successfully funded to build open banking infrastructure. These include Nigeria's Okra, OnePipe and Mono, and South Africa's Stitch.

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[1] Kenya National Payments System (NPS) Vision and Strategy at page 43 https: / / www.centralbank.go.ke / wp-content / uploads / 2020 / 12 / CBK-NPS-Vision-and-Strategy.pdf

[2] Can COVID-19 be a catalyst of open banking in South Africa? http://financialmarketsjournal.co.za/can-covid-19-be-a-catalyst-of-open-banking-in-south-africa/extracted on 24 February, 2021.

[3] 1) Nigerian open banking fintech Okra raises USD1 m from TLcom https: / / www.fintechfutures.com / 2020 / 04 / nigerian-open-banking-fintech-okra-raises-1m-from-tlcom / April 28, 2020 extracted on February 24, 2021
2) Open banking start-up TrueID raises funding to expand customer base https: / / www.fintechfutures.com / 2020 / 06 / open-banking-start-up-truid-raises-funding-to-expand-customer-base / June 16, 2020 extracted on February 24, 2021

[4] Business Wire, "Plaid Acquired by Visa", dated January 13, 2020. Extracted on February 17, 2021 https: / / www.businesswire.com / news / home / 20200113005921 / en / Visa-Acquire-Plaid

[5] API stands for Application Programming Interface. An API is a software intermediary that allows two applications to talk to each other.

[6] https: / / www.mtn.com / mtn-unveils-african-api-marketplace-to-unlock-the-continents-fast-growing-api-industry /

The case for open banking

PAYMENTS

Instant payments, automated bulk payments, government payments as well as checkout points in e-commerce solutions are some examples of how open banking has changed the world of payments. PesaLink, developed by the Kenya Banker's Association fully owned fintech firm IPSL facilitates inter-bank transactions and covers all the above examples. What was previously a fragmented environment from a data perspective appears to bring positive implications of a more connected financial ecosystem.

LENDING

Lending platforms leverage customer financial data, credit scores and access to other data such as social media and online activity using artificial intelligence (AI) and machine learning (ML) to make for better informed data-driven lending decisions. Individuals and businesses applying for loans experience reduced paperwork and approval timelines from days to minutes, dispensing with the need to physically go to banks to apply for loans.

However, online lending has come with its share of adverse negative effects including:

- increased indebtedness by individuals due to multiple loans from different lenders;
- transparency issues on loan terms and conditions such as unclear and often high interest rates;
- hidden fees and clients' lack of ability to compare rates;
- aggressive and sometimes misleading marketing practices;
- customer data privacy issues, including lack of information on data collection practices, lack of control over customer data and in some cases, the misuse of customer information; and
- lack of, or irresponsible credit reporting and consumer complaint management practices[7].

In a bid to boost confidence in this category, players and regulators have begun working together to safeguard customer interests. This can be seen with the passage of data privacy laws across many African countries, the establishment of digital lending associations such as Kenya's Digital Lenders Association (DLAK) and regulators amending their laws to extend oversight to digital lenders[8].

CUSTOMER VERIFICATION AND ONBOARDING

Customer data access has also brought innovation in know you customer (KYC) and risk assessment procedures. The solutions seek to reduce the customer onboarding process while at the same time offering better customer experiences. Examples of regional KYC applications include Nigeria's VerifyMe, South Africa's TrueID and Kenya's Pngme.

Regulatory frameworks

Outside of Africa, open banking is driven by market forces and regulatory interest. Some have pointed to the EU as the "cradle of open banking"[9] because of the Payment Services Directive (PSD2)[10] and the UK's open banking standard which essentially pioneered it.

In Africa, one may observe a similar approach. Most, if not all countries, are yet to implement open banking legal frameworks, but regulators have begun promoting and offering guidelines on the rolling out of these platforms. Kenya's Central Bank (CBK), for example, has prioritized open infrastructure in its 2021-2025 strategy. The policy paper states, in part that "CBK will facilitate development of industry wide standard for open but secure APIs in a way that guarantees access, safety and integrity of data

[7] *International Telecommunications Union, "Discussions and feedback from the Central Banks in Egypt, Kenya, Rwanda, Tanzania, and Zambia on Commonly Identified Consumer Protection Themes for Digital Financial Services"* https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/201703/ITU_FGDFS_Main-Recommendations.pdf

[8] Business Daily, *"New bid to place digital lenders on CBK watch"* February 9, 2021 extracted on February 18, 2021. *https://www.businessdailyafrica.com/bd/markets/capital-markets/new-bid-to-place-digital-lenders-on-cbk-leash-3284284*

[9] Open banking around the world: Towards a cross-industry data sharing ecosystem https://www2.deloitte.com/tw/en/pages/financial-services/articles/open-banking-around-the-world.html

[10] Payment services (PSD 2) - Directive (EU) 2015/2366 https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366_en

sharing systems. These standards will include API specifications for identification, verification, and authentication; customer account information/data access; transaction initiation; and formats and coding languages for APIs. Due to the risk associated with opening up data from financial institutions to third-parties, CBK will define clear risk management frameworks and standards, including providing clarity on liability and consumer protection[11]."

Further, as data sharing forms the basis of open banking, a strong data protection regime is critical to its success. Banks play the dual role of data controller and processor as they are both holders of customer data and processors through their own sandboxes or APIs.

Data protection laws operationalize the constitutional right to privacy and mandate banks and third-party providers to keep customer information confidential even when passed through APIs. This will involve incorporating privacy in the design of these systems to achieve a high level of compliance. This means, in part, being allowed access to data only for lawful purposes and giving the customer their rights back through well-articulated opt-outs and the return and subsequent deletion of their data.

COVID-19 has accelerated digital transformation

The pandemic has brought about a new normal, and open banking can help boost the recovery from its effects, enrich customer experiences and transform banking as we know it.

CUSTOMER EXPERIENCE

Open banking is all about client data. Platforms need to be designed with the customer's experience and interest in mind. The products and services created should consider the customer's journey online and banking must be plugged in wherever required. As an example, EverSend, a Ugandan mobile-only bank that facilitates money transfers for customers anywhere in the world, allows users to instantly set up virtual debit cards that can be topped up with funds to facilitate online shopping.

DATA PRIVACY

Data privacy and security are the most important factors for the success of open banking as the ability to securely process data while complying with data privacy and information security standards and laws will ensure customer confidence and acceptance to the processing of their data and drive the adoption of open banking. Otherwise, regardless of its benefits, consumers will not be convinced to share their personal data.

It will be prudent and crucial for companies to review their data security policies considering the sensitivity of the data exposed. For example, interest rates and exchange rates can be shared without worry of security. On the other hand, personal information such as customer names and account details must have high levels of security such as multi-layered verification features.

While this is purely best market practice, sound regulations need to be passed to complement these efforts. As it stands, there is still a high degree of risk that may impede its success. Data privacy laws are relatively new in Africa with further guidelines and regulations yet to be rolled out. And except for countries like Rwanda and South Africa where open banking is highly regulated, other central banks are yet to follow suit.

Regulators may look at the UK's PSD2 for guidance. PSD2 mandates customer consent to be at the center of these platforms. Authorized third parties must ensure customer consent is freely given in an easily accessible format and in plain language. Further, companies must be able to demonstrate that customers gave their consent as well as putting features that enable the withdrawal of such consent.

The location of processing and storage of this data is another factor regulators and banks must consider. If an open banking platform uses a third party to process customer data, it is crucial that it obtains guarantees from its data processors that they can comply with data protection mandates.

A company may look to perform its own analysis on whether its processors are data protection and information security compliant. For example, any company that processes, stores, or transmits credit card information must be PCI-DSS compliant. This is a global standard that mandates companies to maintain a secure environment before being allowed to handle card data. It would be a red flag if a third party looking to be authorized to undertake open banking is not

[11] I Kenya National Payments System (NPS) Vision and Strategy at page 43 https://www.centralbank.go.ke/wp-content/uploads/2020/12/CBK-NPS-Vision-and-Strategy.pdf

PCI-DSS[12] compliant. However, if the third party they are relying on for processing has that certification, then that may offer comfort to banks and regulators, and by extension, clients.

ACCELERATION OF DIGITALIZATION

Regional lockdowns have pushed bank customers to switch to online channels. With cashless transactions becoming the norm, use of digital products will likely increase. This will push banks to invest in digital products to offer new experiences to their customers. Absa Bank, for example, marked its first anniversary in Kenya by committing a multimillion-USD move to digital services aimed at improving the customer experience[13].

[12] Payment Card Industry Data Security Standard https://www.pcicomplianceguide.org/faq/#1

[13] Absa Marks One Year Since Transition, Commits KSH1.6 Billion into Digital Products, February 11, 2021. Extracted on February 18, 2021 https://kenyanwallstreet.com/absa-commits-1-6-b-into-digital-products

Decision Support Systems: Using technology to enhance decision-making in the African legal industry

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Whether drafting legal documents, litigating, or managing a law firm, legal professionals are expected to predict, with a relatively high degree of certainty, the possible consequences of every step they take and every word they communicate. Then, having considered all the possible consequences, they must decide on the best course of action. Any such decision typically involves having several alternatives, comparing them and evaluating their outcomes[1]. This sounds simple enough when the alternatives are relatively few, do not include too many moving parts, and there are no time constraints on the decision-maker. However, as any legal professional will attest, most decisions taken in practice require consideration of large amounts and varying types of information, involve a complex array of criteria for evaluation, and often allow very little time to process the volumes of information. In these circumstances, trade-offs must be made between competing goals and, many times, it is not uncommon for quality to be sacrificed for speed.

With the increased adoption of digital technologies and digital business processes in Africa, accelerated by the COVID-19 pandemic, businesses have gradually shifted to digital interaction. Legal professionals have had to follow suit to stay competitive in both the local and global markets. This has led to an exponential increase in electronically stored information and, consequently, an increase in the information legal professionals must consider when making decisions.

To meet the difficulties of decision-making in the digital information age, the global legal industry is gradually transitioning to automated systems that use predictive algorithms to support and enhance the decision-making process, generally referred to as decision support systems (DSSs). Adopting these systems can have significant benefits for legal professionals, including cost-cutting, increased accuracy and depth when reviewing information, reduced time and resource expenditure and more time and flexibility for the legal professional to focus on applying the information to solve problems. If the African legal industry is to progress and compete globally, legal professionals in Africa should consider adopting these systems.

Decision Support Systems

A DSS is traditionally used to support managerial decision-making in businesses, but their use has expanded to various industries, including the medical, agricultural and (more recently) legal sectors. A DSS is an approach or methodology for supporting decision-making that uses an interactive, flexible and adaptable computer-based information system specially developed for supporting the solution to a problem[2].

1 Eilon S. 1969. What is a decision? Management Science, Dec 1969, Vol. 16, No. 4. Application Series. B-172.

2 Turban et al. 2005. Decision Support Systems and Intelligent Systems 7th Ed. p 103.

A DSS leverages electronically stored information to support all phases of the decision-making process. It does this by extracting the information from a database (intelligence phase), analyzing the information, identifying patterns and relationships, and constructing a model used to evaluate alternative courses of action based on set criteria (design phase), presenting the best alternatives to the end-user (choice phase) and simulating the possible outcomes of those alternatives (implementation phase). The essential components of a DSS include:

- a centralized database such as that used in an enterprise resource planning system or a data warehouse;
- software tools for analyzing information and constructing appropriate models; and
- an interactive user interface that allows decision-makers to input queries and access reports, among other things.

A key feature in a modern-day DSS is the use of machine learning techniques that allow the DSS to carry out each phase of the decision-making process automatically by training the system on a sample set of relevant data and/or information. In this regard, an important distinction must be made between data and information. Data refers to individual values (facts, figures, etc.), whereas information describes the relationship between several data points (i.e. information puts data into context). During training, the machine learning algorithm develops rules based on the relationships between data points that it will use to identify new information similar to the information contained in the training set. Thus, the algorithm predicts what information is relevant and what may be discarded as well as how that information may be applied to solve a particular problem.

Use of DSS by legal professionals in Africa

Legal professionals are making use of DSSs in varying forms. For example, DSSs are used in legal citation systems and systems used for legal research to identify and analyze relevant case law. Legal research services that make use of such systems are available to legal professionals in Namibia and South Africa, among others. DSSs are also used in practice management systems where the information from various departments in a firm is centralized and machine learning techniques are used to generate reports that help legal professionals make decisions about the business of their firms. For example, practicemanagement systems use analytics and machine learning to determine the most efficient way for a firm to allocate its resources by, for example, tracking how work is divided in the firm and identifying who has the capacity and skills to take on new instructions, or by tracking estimated fees and actual time spent on instructions to generate more accurate fee quotes. Such systems are likewise available to legal professionals in Namibia, South Africa and other jurisdictions.

Similarly, DSSs are used in the drafting of contracts and other legal documents. This usually involves a database of contract precedents with relevant clauses and a system that identifies those clauses based on information provided by a client. Complete contracts are then generated in seconds and often require very little amendment to meet their specific needs.

Furthermore, DSSs are being used in litigation to support e-discovery[3], generally referred to as technology assisted review[4]. These systems use machine learning techniques to classify and predict which of the many electronic documents subject to discovery in litigation should be withheld, due to their privileged or confidential nature, or produced to respond to the opposing side[5].

Adopting Decision Support Systems: Benefits and drawbacks

At the forefront of adopting a DSS is the cost-cutting benefit. The tasks of document review and information organization are "delegated" to a DSS, leaving the legal professional free to focus on higher level tasks and reducing the costs associated with those tasks[6]. A further benefit is that automated systems are often less biased, more consistent and more predictable than human

3 See https://www.researchgate.net/publication/284173757_Ediscovery_in_South_Africa_and_the_Challenges_it_Faces

4 Klutz, D.N et al. 2019. Automated Decision Support Technologies and the Legal Profession. p 853.

5 Ibid: 853.

6 Ibid: 872.

beings[7]. Thus, the relative accuracy of a DSS, and the depths it may achieve, far exceeds that of a human being and such a system can do the same amount of work in a fraction of the time.

One of the major drawbacks of a DSS is that it may produce unintended and varying results depending on the specific algorithms and training data used. As each system is designed to solve a specific problem or problems based on defined criteria, the system may not produce the intended results if the criteria are poorly defined and the algorithm and training data do not align with the purpose of the system. The interconnectivity of a DSS means that a failure in one part of the system, such as analyzing information based on incorrect criteria, could corrupt the entire system.

Challenges in adopting a DSS

The initial capital investment of developing and implementing a fully operational DSS can be prohibitively high for certain legal departments and smaller law firms. The benefits of adopting such a system are not always measurable with traditional business metrics and as such the investment in the system may be difficult to justify, especially to those unfamiliar with how the system works. The systematic or phased adoption of a DSS may help reduce the initial costs of developing and implementing a DSS. The starting point would be to set up a database where information relevant to a particular problem is electronically stored. Many legal professionals are already doing this by uploading documents to cloud-based storage services or to on-premises storage facilities. Gathering and centralizing information is the first step in developing and implementing a DSS as this will allow easy access to relevant information for analyses. Gradually, legal professionals may move towards adopting analytical tools to analyze and interpret their stored information. This may mean having custom analytics software developed or purchasing an off-the-shelf product. Such software will usually include a user interface and options for how information will be presented to the end user (i.e. what reports will be generated to support decision-making).

The technical aspects of a DSS can present another challenge to adopting the system. People generally, and legal professionals specifically, find it difficult to trust what they do not understand. Thus, the adoption of a DSS may be dismissed before it is even brought to the table. Those who do understand the systems are often the young legal professionals who cannot afford or do not have the authority to implement the system. Some legal practitioners may feel that automated systems will "take-over," making human input redundant. However, DSS are not intended to replace human beings. Human judgment is still necessary to evaluate the results produced by the DSS and physically implement the suggested course of action. Furthermore, the design principle of contestability has been suggested as a means to address the issue of human involvement in the DSS process[8]. Contestability refers to mechanisms integrated into the DSS that allow users to understand, construct, shape and challenge model predictions. The goal of this is for the DSS, and particularly the predictive algorithms that drive them, to enhance and support human reasoning in the decision-making process. Such interactive, contestable systems can also improve user understanding and allow the user to provide deep and useful feedback to improve algorithms[9].

The challenges presented above are those typically experienced by legal professionals in the adoption of a DSS. In the African legal industry, these challenges are magnified by a lack of investment in technology by legal professionals and slow adoption of technical systems. Furthermore, technical proficiency is generally lacking among legal professionals and the adoption of technical systems may not be seen as a priority. However, this may be due in part to the lack of understanding of the benefits that such systems can bring.

7 Ibid: 875.

8 Ibid: 887.

9 Ibid: 888.

Data collection in the health and education sectors: An African perspective

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Many African countries are still grappling with the impact of the lockdown initiatives caused by COVID-19[1]. Adapting to the health and safety protocols across Africa has meant a significant increase in the sheer volume of data being processed, particularly in the health and education sectors.

Impact of COVID-19 on service offerings and data processing across health and education sectors in Africa

In Uganda, the Ministry of Education and Sports took measures to encourage and implement learning from home[2]. Some educational programs were broadcast on television and radio stations, and academic materials were printed and circulated. The phased reopening of schools started in October 2020 and is expected to continue in March 2021. In the health sector, the Ugandan government approved more laboratories to conduct COVID-19 testing at border entry points. Digital platforms for testing, tracking and reporting on COVID-19 were adopted by deploying an integrated Electronic Integrated Disease Surveillance Response (eIDSR) tracking system[3] at the border districts to control the spread of the virus.

In Senegal, the government closed schools in March 2020 and educational institutions were advised to set up distance education systems. Some television stations also broadcast classes for students every day. Only private schools were able to set up online classes. The Senegalese health sector also witnessed an upsurge in gathering of data as a result of the pandemic.

In South Africa, online classes were primarily available in private schools (as opposed to public schools). In the health sector, there has been a significant increase in data gathering due to the pandemic.

In Ghana, a few private pre-tertiary and public tertiary institutions with the requisite facilities organized online classes for students. These schools were, however, in the minority as public schools outnumber private schools. The Ghana Education Service rolled out Ghana Learning TV which is a 24-hour televised classroom channel with content covering kindergarten, primary school, junior high school and senior high school lessons. The health sector also witnessed an increase in personal data collection, particularly COVID-19 related data.

In Nigeria, the lockdown and social distancing regulations issued by the federal government meant that schools had to be closed and physical classes could not be held; however, some private schools were able to adopt online classes to continue teaching students. Different education management and online platforms were adopted and a wide range of personal data was collected and processed to actualize this. Public schools, on the other hand, were to some extent reliant on radio, television and tablets loaded with educational material. In the health sector, institutions like laboratories and

[1] A recent Mckinsey report points to emerging evidence that the stress and isolation of online learning is contributing to mental health issues among young people; https://www.mckinsey.com/industries/public-and-social-sector/our-insights/teacher-survey-learning-loss-is-global-and-significant

[2] http://www.education.go.ug/covid-19-sector-response/, http://www.education.go.ug/wp-content/uploads/2020/04/circular.pdf

[3] This system tracks and captures real-time data and monitoring using an application that is downloaded to drivers' mobile phones (www.community.dhis2.org)

hospitals have had to adopt the use of different testing and monitoring applications in their service delivery to patients. The deployment of technology has involved gathering a significant amount of personal/health data of the patients/data subjects.

Data security

There is no doubt that the pandemic has adversely affected education and health services in Africa and elsewhere. The accelerated digitization has led to increased collection of data in all its ramifications. All of these have raised privacy and data protection concerns due to the sheer volume of personal data being collected. This can be challenging for organizations, as it requires successful data integration, efficient analysis as well as ensuring and prioritizing privacy. Digital transformation and COVID-19-inspired innovation have created new security risks with respect to sensitive personal data that organizations in these sectors mostly deal with. Some of the major risks and concerns include human error, malware, phishing, loss of data, cyber-attacks, hacks and data breaches.

In today's world, data security is a vital issue and a major challenge for every organization, underlined by stricter regulations and severe consequences in the case of data loss. In fact, data protection is moving from being an IT task to a strategic business imperative. More than ever, organizations in the identified sectors need to consider the security of the data they collect, store and share as a whole, and must have a strategy that ensures their data and the data subjects' data are safe.

The security strategy should include regular training for employees on digital technologies and cybersecurity, conducting regular infrastructure testing that help uncover potential vulnerabilities, using applications and devices that have built-in security, integrating security systems and choosing the right security software. Knowledge of the applicable laws and regulations and compliance are also critical. Besides external threats like phishing attacks, organizations should also guard their sensitive data against insider threats[4].

Another aspect of digital transformation that must align with data protection is the need to monitor and track data usage within an organization. It is essential to know where each piece of data sits, and who can access it, as well as to tag and track its lineage to understand its usage. This is vital for fulfilling data protection legislation requirements such as subject access requests, but also to locate and move data in accordance with the law[5].

Lawful data processing

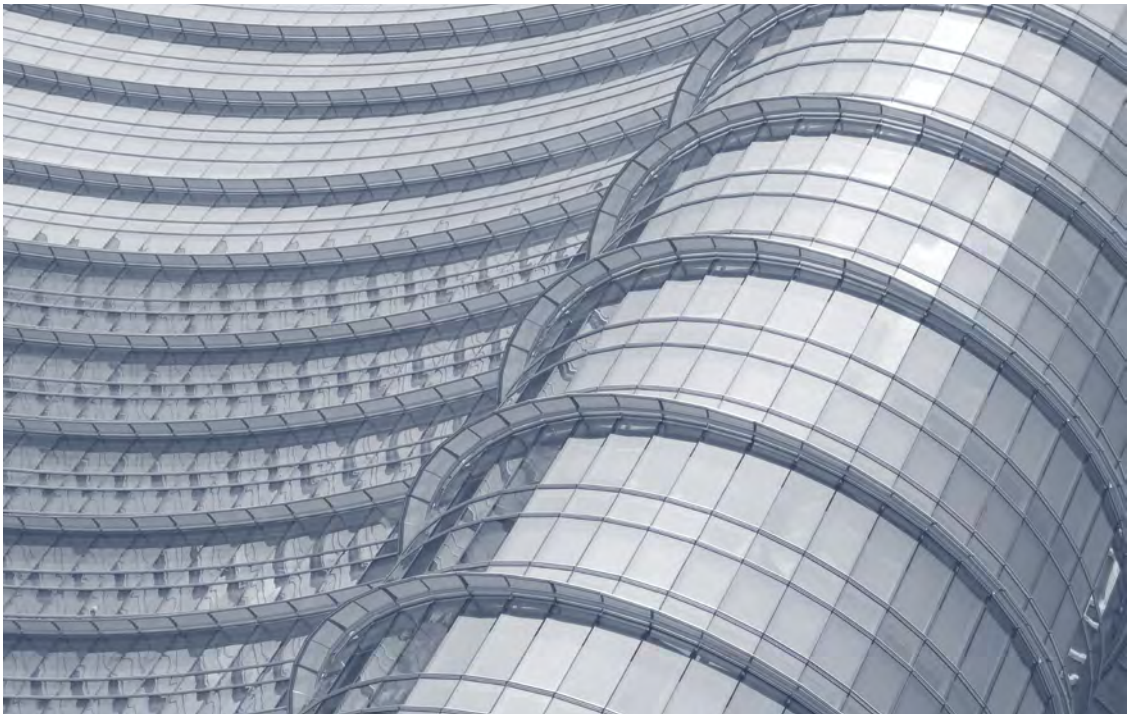
To minimize risks and exposure to cyberattacks, it is imperative that organizations in the health and education sectors adhere strictly to the key principles of lawful data processing. These are:

- Lawfulness, fairness and transparency: ie processing data lawfully and in a transparent manner in relation to the data subject.
- Purpose limitation: data is to be collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes.
- Data minimization: data to be collected should be adequate, relevant and limited to what is necessary in relation to the purposes for which it is processed.
- Accuracy: data is to be accurate and kept up to date.
- Storage limitation: data is to be stored in a form that permits identification of data subjects for no longer than is necessary for the purposes for which the personal data is processed.
- Integrity and confidentiality: data is to be processed in a manner that ensures appropriate security of the personal data, including protection against unauthorized or unlawful processing and against accidental loss, destruction or damage.
- Accountability: data controllers should be responsible and able to demonstrate compliance with all relevant data protection laws.

Organizations that process personal data should comply with the security strategy outlined above and ensure personal data is automatically protected in any IT system or business model (privacy by design).

[4] https://digileaders.com/data-protection-in-the-age-of-digital-transformation/

[5] https://www.information-age.com/digital-transformation-data-protection-123478543/



Key regulations and enforcement of data protection laws in Africa

African countries like Morocco and Ghana have had data protection laws since 2009 and 2012 respectively. Other African countries have followed this trend and introduced laws to protect personal data of citizens and regulate how organizations collect, process and store data. Of the 54 countries in Africa, 27 currently have data protection legislation, 9 have draft data protection legislation and 13 have no legislation[6].
The African Union in 2014 released the African Union Convention on Cyber Security and Personal Data Protection[7]. The convention set a strong intention for the protection of personal data and online security on the continent. However, only five countries have ratified the convention. There are efforts to revive this convention and have more countries ratify it.

It is important to note that harmonizing the data protection statutory and regulatory framework in Africa is still on the agenda of regional organizations and some African states. In addition to protecting citizens' privacy, having a uniform framework is seen as an opportunity to promote the continent's development by allowing free flow of data within Africa, encouraging data transfer from other continents to Africa, thus boosting the use of African-based datacenters, outsourcing services, e-government and other essential tech services. This is even more necessary now that the Africa Continental Free Trade Area (AfCFTA) is effective as its primary objective is to create a single market for goods and services, establish a liberalized market for goods and services and aid the movement of capital and people in Africa.

Recommendations

The sheer volume of data processed in education and health sectors across Africa means that organizations in these sectors must practice good data governance. This refers to the establishment of detailed processes and procedures to manage, use, and protect the data processed by organizations. It helps to make compliance standards easier to maintain, protects against cyberattacks and security breaches, allows for better communication and decision-making, lightens the IT team's data management duties and spreads responsibility throughout the organization. Thus, it is critical for organizations in these sectors to be proactive in compliance with the laws and practice of good data governance.

[6] Please visit https://www.dlapiperdataprotection.com/ for more information on data protection laws in Africa.

[7] Popularly referred to as the Malabo Convention of 2014. Can be accessed via https://au.int/sites/default/files/treaties/29560-treaty-0048_-_african_union_convention_on_cyber_security_and_personal_data_protection_e.pdf

The development of the digital economy: Competition regulation in Africa

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Digital transformation is a driving force for innovative, inclusive and sustainable growth[1]. The digital economy encompasses the economic and social activities that are boosted by platforms such as mobile and sensor networks, including e-commerce[2]. The African Continental Free Trade Area (AfCFTA) represents an opportunity to boost growth, reduce poverty and expand economic inclusion in Africa. The implementation of the AfCFTA will open up a market of 1.3 billion consumers with a combined GDP of USD3.4 trillion, according to data sources[3]. Digital trade will play a key role in boosting intra-African trade[4]. Nowadays, business – like much of the African continent – is characterized by new competitive practices in the digital market, mergers and acquisitions of market shares and new forms of monopolies by major global companies. The question arises as to the state of the digital economy in Africa in the face of these new competitive practices and whether regulation of competition in Africa takes them into account.

Competition laws in Africa and the emergence of competitive practices

In Africa, the digital market is dominated by global research and social media giants. In each digital market, a single company usually has a large majority of users and establishes a dominant position[5]. In this new era of the digital economy, the practice of "winner takes it all" is topical following the monopolization of digital markets by large platforms. Regulation and competition laws for most countries in Africa are not based on these new digital competition practices[6]. As a result, there is insufficient regional competition, and this can affect the growth of the economy in Africa.

The role of data for large platforms and digital information in the digital economy

Companies built on the platform model have a major advantage in the data-driven economy. As intermediaries and providers of certain types of infrastructure, platform owners are able to record and extract data relating to events that occur between the users of the platform.

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[1] Project of a digital transformation strategy for Africa 2020-2030 Page 1 (www.au.int)

2 According to the Australian Bureau of Statistics, the digital economy is: "the global network of economic and social activities which are activated by platforms such as internet, mobile and sensor networks, including electronic commerce. Also activated by efforts to achieve efficiency and productivity in production processes, inventories and knowledge management."

3 https://www.worldbank.org/en/topic/trade/publication/the-african-continental-free-trade-area

4 Digital processing strategy Project for Africa (2020 to 2030; p 32 (www.au.int)

5 C. A., SCHWERER, *competition in the digital challenge*, published by the foundation for political innovation, as part of its work on digital; p7

6 UNCTAD, intergovernmental group of experts on competition law and Policy "*Competition in the digital economy*" contribution by the Competition Commission of South Africa, Geneva, Switzerland, eighteenth session, July 2019,pp1-2 (https://unctad.org/en/PublicationsLibrary).

In the new business models of the digital economy, there are two emerging and related forces: the rise of platforms and the monetization of digital data. These two forces are expanding rapidly. Digital platforms are central players in this economy, and digital data is a key resource in economic processes and can lead to the creation of value[7].

Digital data can be harnessed for development and company can use the processed data to increase the user experience of its services, it can also choose to use the data for offering targeted advertisement campaigns across its service platforms[8].In Africa, lack of possession of digital data remains a major development problem. Competition regulation and competition laws adapted to the digital economy could contribute to the emergence of national or regional platforms in Africa. As a result, it would enable African businesses to easily access digital data. Digital regulation at the continental level would facilitate the control of buyouts, mergers or acquisitions of market shares, contributing to the development of the AfCFTA.

Regulation of mergers and acquisitions of digital market shares

The fact that competition laws as well as other laws and regulations are not adapted to some of the challenges of digital markets has a major impact on the digitization of the economy in Africa.

Regulatory issues and anti-competitive behavior are very different to reality in Africa. Mergers and acquisitions in the e-commerce sector are carried out in most African countries without regulation and without the knowledge of competition authorities. This is a major obstacle to the emergence of African digital champions. Competition issues in African digital markets will continue to distort the digital economy in Africa and foster market dominance by major global platforms.

These types of challenges indicate that a regulatory review process is imperative to allow Africa to "catch up" in the digital age.

Monopolization of markets by large platforms and its influence on digital competition

The structural opportunities behind all business purchases or repurchases are generally the search for growth, the protection of profitability and adaptation to new market conditions[9]. In Africa, large global platforms dominate the digital markets. These global giants pose a particular problem for small markets in developing countries whose own economies are eclipsed by the valuations of these companies. There is limited ability to effectively challenge international mergers or pursue complex market conduct cases given the relative insignificance of African markets for these large platforms[10].

Conclusion

First, a legal instrument at continental and global level should be developed to allow better coordination between competition authorities in the regulation of digital platforms. This would ensure control over the competitive behavior.

Africa's regional or continental coordination is imperative to control and regulate horizontal and vertical mergers and acquisition agreements. This would provide more leverage to address issues that may have a regional or continental dimension, such as development imperatives or digital businesses with a regional presence stronger than their position globally.

Finally, the adaptation of national laws and economic communities to the digital age is essential to promote the development of the AfCFTA and its digitalization.

7 United Nations Conference on Trade and Development (UNCTAD), *Value Creation and Capture: Implications for Developing Countries,* Digital Economy Report 2019.

8 O.,Batura,VN., Nicolai and P.,Larouch, *online platforms and the EU digital single market, a response to the call for evidence by the house of lord's internal market sub-committee*, Rotterdam, Pge4 ,2015(http://www.e-conomics.eu/ http://www.e-conomics.nl/).

9 http://afrigueexpansionmag.com/2018/05/17/fusions-acquisitions-entreprises-fin-de-concurrence/)

10 Intergovernmental Group of Experts on Competition Law and Policy Competition in the Digital Economy Contribution by The Competition Commission - South Africa, 18th SESSION 10-12 July 2019 Room XVII, Palais des Nations, Geneva Thursday, 11 July, 2019 p2 & 3).

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