



WORLD TRADE
ORGANIZATION



WORLD BANK GROUP

DIGITAL TRADE FOR AFRICA



**Digital Trade for Africa (DTA)
WB–WTO Joint Project**

Nigeria

**Digital Trade Review
and Next Steps**

The WTO–World Bank joint work on Digital Trade for Africa (DTA) seeks to support greater engagement in digital trade by African countries. The project seeks to help African countries share fully in the benefits that digital trade brings and improve their development prospects. It builds on a joint World Bank and WTO policy note entitled “Turning Digital Trade into a Catalyst for African Development” (2023), which finds that digital trade offers new opportunities to boost trade-based growth for African countries, especially for SMEs, but requires a supportive ecosystem comprising connectivity infrastructure and a conducive policy and regulatory environment, as well as strengthened international assistance.

Disclaimers

For the WTO, this report has been prepared under the WTO Secretariat’s own responsibility. It does not necessarily reflect the positions or opinions of WTO Members and is without prejudice to their rights and obligations under the WTO agreements. The opinions expressed and arguments employed herein are not intended to provide any authoritative or legal interpretation of the provisions of the WTO agreements and shall in no way be read or understood to have any legal implications whatsoever. The terms and illustrations used in this report do not constitute or imply an expression of opinion by the WTO Secretariat concerning the status or boundaries of any territory.

For the World Bank, this work is a product of The World Bank in collaboration with the WTO. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the Executive Directors of The World Bank or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colours, denominations, links/footnotes and other information shown in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. The citation of works authored by others does not mean the World Bank endorses the views expressed by those authors or the content of their works.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

CONTENTS

EXECUTIVE SUMMARY	4
1 INTRODUCTION	6
2 BACKGROUND	7
2.1 Digital connectivity foundations	7
2.2 Participation in digital trade	10
3 GENERAL POLICY FRAMEWORK RELEVANT FOR DIGITAL TRADE.....	14
3.1 Trade agreements	14
3.1.1 Nigeria's participation in relevant WTO agreements and negotiations	14
3.1.2 Nigeria's participation in regional trade agreements	16
3.2 Applied trade policy regime.....	17
4 WORLD BANK'S ASSESSMENT OF THE DIGITAL TRADE-SPECIFIC REGULATORY FRAMEWORK.....	18
4.1 Data governance	20
4.2 Online consumer protection safeguards	22
4.3 Regulation of electronic transactions	23
4.4 Intermediary liability.....	25
4.5 Other regulatory and policy challenges.....	27
5 MAIN FINDINGS AND NEXT STEPS	28
5.1 General observations and main findings	28
5.2 Maximizing the benefits of trade agreements	28
5.3 Policy and regulations	29
5.4 Digital infrastructure	32
5.5 Potential future work	33
ANNEXES.....	34
ANNEX 1 – WORLD BANK'S DIGITAL TRADE POLICY GAP ANALYSIS.....	34
ANNEX 2 - WORLD BANK–WTO STRI, SELECTED SECTORS	48
REFERENCES	53
ABBREVIATIONS	54

EXECUTIVE SUMMARY

Nigeria has significant potential to harness digital trade for economic growth, but key challenges need to be addressed. Despite improvements in digital infrastructure, Internet penetration in Nigeria remains uneven, with rural areas facing limited broadband access and high service costs. Expanding fibreoptic infrastructure and enhancing last-mile connectivity are crucial to bridging the urban-rural digital divide and fostering a more inclusive digital economy. Additionally, strengthening competition in the telecommunications sector can further drive affordability and service quality for businesses and consumers.

The services sector plays a crucial role in Nigeria's economy and digital services trade provide an important avenue to drive economic development and digital transformation.

Nigeria's exports of digitally delivered services have experienced fluctuations, particularly between 2019 and 2021, when financial and insurance service exports declined. However, exports of all major service sectors have shown steady growth since 2021, signalling the country's increasing integration into global digital markets. While Nigeria has lagged behind regional competitors such as Ghana, it has outperformed other ECOWAS countries in digital services trade, reflecting its strong potential in the sector. After a period of decline, imports of digitally delivered services have rebounded.

Nigeria is party to international and regional trade agreements that impact digital trade.

At the WTO, the country has ratified the Trade Facilitation Agreement (TFA) and undertaken GATS commitments in a number of digital trade-enabling service sectors, including, notably, telecommunication services. Additionally, Nigeria participates, alongside various WTO Members, in two rule-making initiatives of relevance to digital trade. The initiatives resulted in, respectively, the Agreement on Electronic Commerce, which aims to foster an enabling environment for digital trade, and the Investment Facilitation for Development Agreement, whose objective is to improve the investment and business climate, making it easier for investors in all sectors of the economy, including those of digital trade relevance, to invest, conduct their day-to-day business and expand their operations. The incorporation of these two Agreements in the WTO rulebook is currently being pursued. However, Nigeria has not bound its trade regime for other key digital trade enabling services, such as computer, distribution, or postal services, nor has it eliminated tariffs on information technology goods under the WTO's Information Technology Agreement (ITA). Nigeria also participates in two regional agreements, namely ECOWAS and the AfCFTA.

Nigeria has adopted meaningful steps in the regulatory framework for digital trade, especially in the areas of data protection and cybersecurity. These efforts are particularly valuable given the nascent nature of the digital sector in the country and reflect a vision to leverage digital trade as a pillar of economic growth. Nevertheless, the World Bank's Digital Trade Policy Gap Analysis points to a number of regulatory and institutional initiatives that would further help fostering digital trade by reducing impediments, increasing trust in digital markets, and increasing transparency in platform regulations. Relevant measures include issuing guidance to clarify the scope of data storage and processing requirements for cross-border data exchange, encompassing personal data as well as other types of data relevant to digital trade and regulatory compliance ("data sovereignty"), improving the regulatory and institutional framework for online protection and consumer rights, implementing regulations on electronic transactions and e-signatures, and adopting a balanced framework for platform liability.

ACKNOWLEDGEMENTS

This country report is an analysis by the World Bank and the Secretariat of the World Trade Organization (WTO). The report has been conducted under the framework of the [Digital Trade For Africa](#) joint project, and was co-authored by Antonia Carzaniga from the WTO and Nigorakhon Sadikova and Martín Molinuevo from the World Bank. Additional contributions were provided by Zsofia Tvarusko, Ishrat Hans and Oscar Douglas from the WTO. The report benefitted from the supervision of Abebe Adugna (Regional Director), Mona Haddad (Global Director), Mehnaz S. Safavian and Sébastien Dessus (both Practice Managers) at the World Bank, and Johanna Hill, Xiangchen Zhang (both Deputy Directors-General), Xiaolin Chai (former Director, Trade in Services and Investment Division), at the WTO.

The authors are grateful to colleagues from both institutions for their useful comments and guidance during various stages of preparation of the report. At the WTO, the authors wish to thank Claudia Locatelli, Joscelyn Magdeleine and Martin Roy for their comments, and former colleagues Alex Beyleveld and Andrea Bulnes for their research assistance. At the World Bank, special thanks are owed to Jana Kunicova, Bertine Kamphuis, Aleksandar Stojanov, Maryam Lawal, Ida Mboob, Daria Lavrentieva, Ruchita Manghnani, Hyea Won Lee and Marc Jean Yves Lixi for their valuable inputs and suggestions.

1 INTRODUCTION

Digital trade¹ has become a cornerstone of global economic activity. Digital technologies reduce the cost of engaging in international trade, allow direct connections between producers and consumers around the world, help diffuse ideas and technologies, and facilitate the co-ordination of global value chains. In Africa, the potential for digital trade to spur economic growth and development is particularly significant. While Africa represents a small share of global trade in digitally delivered services (less than 1%), exports of digitally delivered services are the fastest growing segment of African trade, showing fast and continued growth in the last 15 years.² The World Trade Organisation (WTO) estimates show that global exports of digitally delivered services have more than quadrupled in value since 2005, and they have registered an 8.3% yearly growth rate between 2005 and 2024, outpacing exports of goods (4.5%) and other services exports (4.9%).

Nevertheless, challenges for digital trade abound, ranging from connectivity investment to policies and regulations. Connectivity infrastructure, though it has advanced greatly in the last decade, remains a hurdle. Estimates obtained using the WTO Trade Cost Index show that improving digital connectivity in Africa reduces the costs of trading both goods and services in Africa, especially for business and professional services.³ Yet connectivity is only one (important) piece in a large and complex puzzle, with other challenges to be addressed including lack of affordability, digital skills, and competition.

Digital trade demands a supportive ecosystem, starting with a solid digital connectivity infrastructure. It is critically important that advances in connectivity infrastructure go hand in hand with policy and regulatory reforms to ensure that digital communications are affordable, the population has the necessary digital and entrepreneurial skills, and businesses can leverage those opportunities. Trade policy is an important component of this ecosystem, as it fosters policy predictability and promotes access to global digital markets while advancing broader public policy goals.

Nigeria's nascent digital economy stands to reap substantial gains from increased trade integration. As Nigeria strengthens its digital economy, increasing participation in digital trade could drive job creation, economic inclusion, and business innovation. The country has recently undertaken regulatory reforms to better support its digital sector. Nevertheless, Nigeria's share of digital services in total service exports remains low at 16.6%, significantly behind Ghana (70.5%), Kenya (37.4%), and South Africa (48.8%) (WBG, 2019). These disparities highlight the need for more targeted policies and investments in digital trade infrastructure to close the gap and enhance Nigeria's digital competitiveness.

While Nigeria has made progress in advancing its digital economy, further policy interventions are necessary to bridge the gap with regional peers and leverage digital trade as a driver of economic transformation. Empirical findings⁴ based on the gravity model indicate that enhancing Nigeria's digital trade framework could yield substantial economic benefits. Estimates suggest that digital trade reforms could increase GDP by 1.5-2.5%, while further digitalization efforts could generate up to 10 million new jobs by fostering a stronger startup ecosystem. Additionally, expanding broadband infrastructure could reduce poverty by 4-7%, significantly improving household incomes.

¹ Digital trade is defined in this report as all trade that is digitally ordered and/or digitally delivered, as per the IMF/OECD/UNCTAD/WTO (2023), *Handbook on Measuring Digital Trade*. The terms digital trade and electronic commerce are used interchangeably. See also Box 1.

² WBG/WTO (2023a).

³ Ibid.

⁴ DE4A

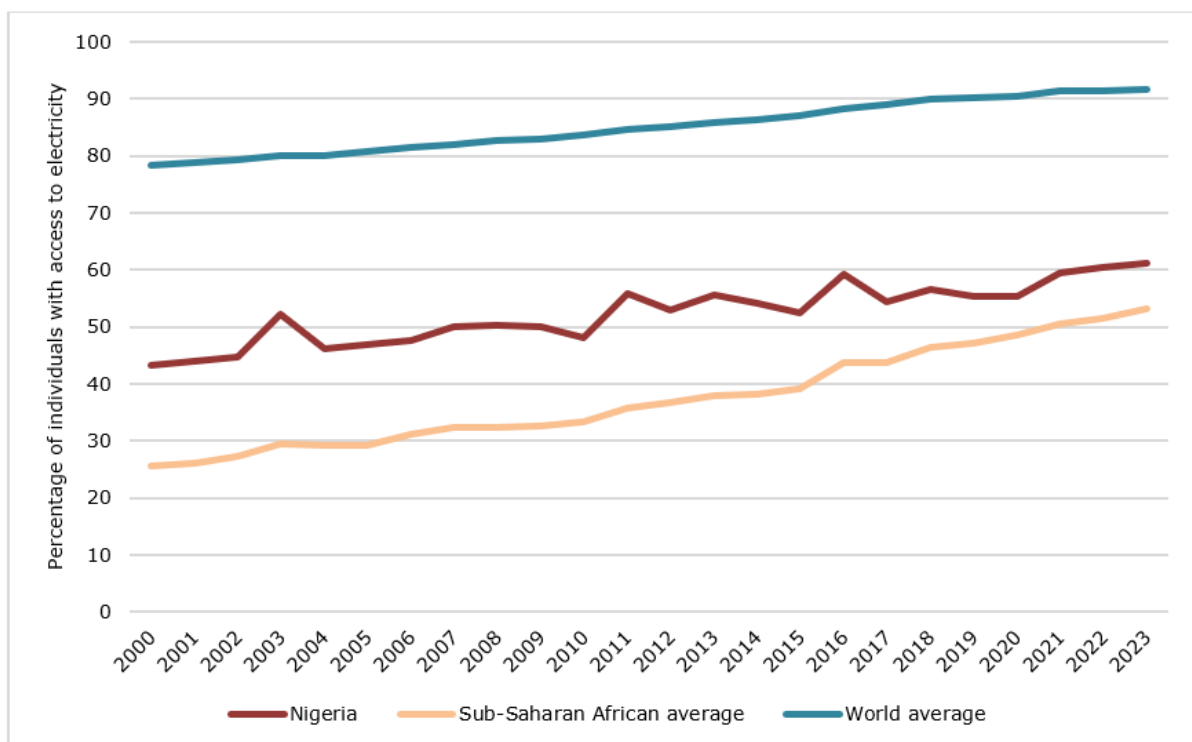
This report assesses the policy frameworks relevant for digital trade in Nigeria from two perspectives.⁵ First, it examines general trade policy frameworks that, while not directly targeting digital trade, can be a key facilitator of this trade. As a point of reference, the analysis looks into enabling services trade regimes, tariffs on ICT goods and facilitation of border processes, amongst others. Second, it reviews regulatory domains specifically related to key aspects of digital trade. This analysis draws on a range of sources⁶, including the World Bank Digital Trade Regulatory Readiness (DTRR) database and the World Bank-WTO Services Trade Restrictions Index (STRI), joint WB-WTO field missions, consultations with policy-makers, stakeholders and various experts, and additional research to provide a holistic view of the digital trade landscape in Nigeria.

2 BACKGROUND

2.1 Digital connectivity foundations

Access to electricity in Nigeria has improved, but it still considerably below the world average. In the early 2000s, the percentage of individuals with access to electricity was just below 45%. This figure surpassed the 50% threshold in 2010 and reached around 61% in 2023. Nigeria's access rate has remained higher than the Sub-Saharan Africa average throughout this period, although the gap has narrowed over time, pointing to a slowdown in progress. Although electricity access has continued improving in Nigeria, significant room for improvement remains, as the country still trails behind the global average by a large margin (see Figure 1). The devices, servers, and communication infrastructure necessary to connect Nigerian people to the Internet require a reliable electricity supply. Without it, these components cannot function, limiting access to the Internet and, in turn, to digital trade.

Figure 1. Electricity access in Nigeria (2000-2023)



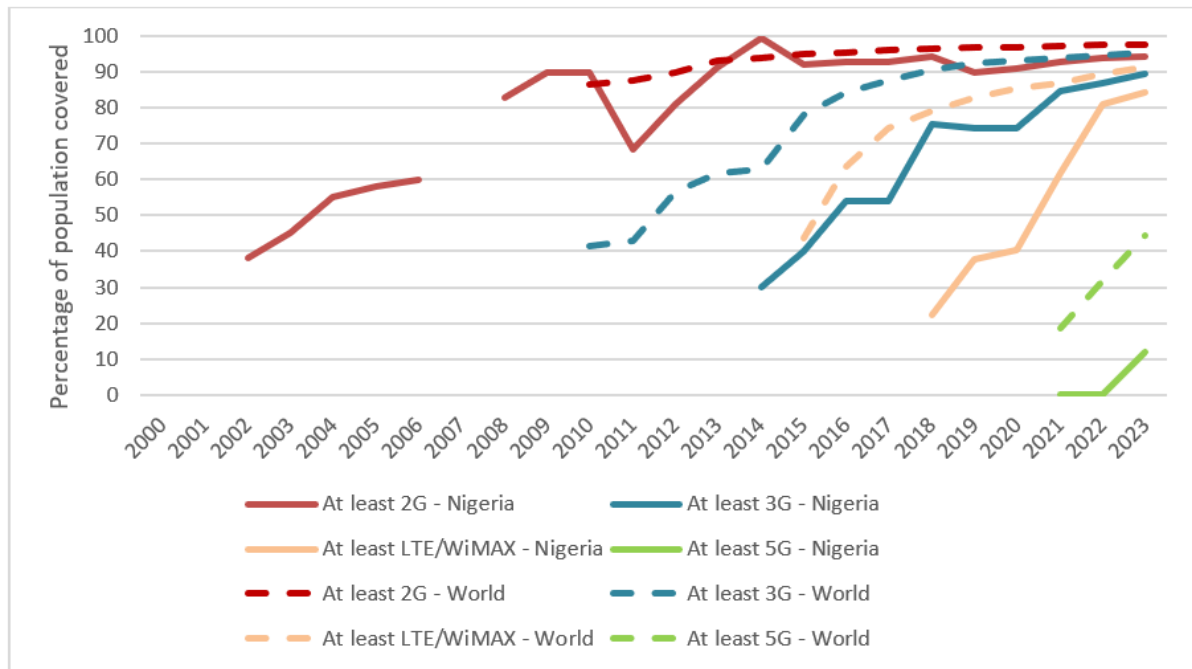
Source: World Bank Development Indicators.

⁵ The analysis seeks to inform engagements by the World Bank and the WTO. The primary goal of the report is not to offer general policy recommendations to Nigerian authorities but to identify specific areas where the two global institutions may direct their joint technical cooperation efforts.

⁶ Table of sources provided in Table A3, Annex 1.

Mobile networks are the dominant technology to access the Internet in Nigeria. Nigeria has achieved extensive coverage in 2G and 3G technologies, and to a lesser extent in LTE/WiMAX (see Figure 2). Even though it is still falling slightly short, it appears to be converging towards the global benchmarks for the respective technologies. In 2022, there was no 5G coverage in the country, compared to a global average of 30.6% of population coverage. By 2023, Nigeria's 5G coverage had increased to 11.8%, compared to a global share of 44.5%. It should be noted, however, that 5G technology only became generally available shortly before 2022. When more recent figures become available, it would be reasonable to expect higher shares of 5G penetration.

Figure 2. Population coverage, by mobile network technology (2000-2023)

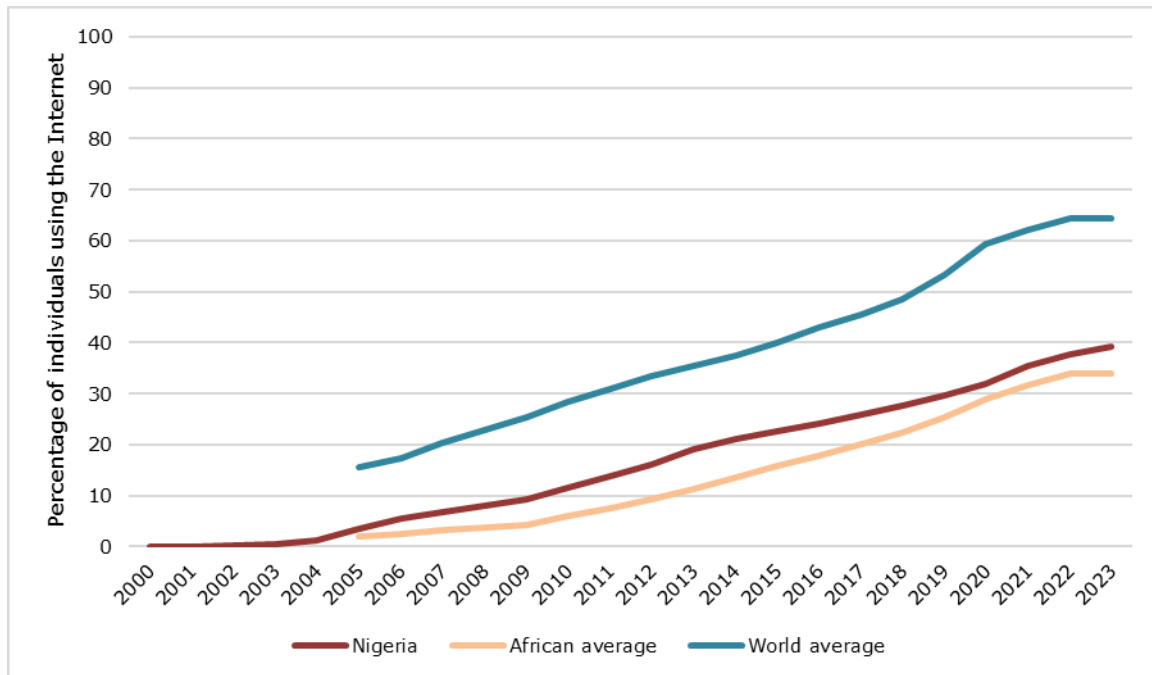


Source: Compiled with data from ITU DataHub.

Internet usage has increased significantly in Nigeria, but the country lags behind the global average. According to International Telecommunication Union (ITU) data, less than 0.1% of the Nigerian population used the Internet in 2000 (see Figure 3). By 2005, this figure had increased to 3.5%, compared to a global average of 15.6%. By 2015, usage had grown to 22.5%, though it remained significantly below the global average of 39.9% at the time. By 2023, the latest year for which ITU data is available, 39.2% of Nigerians were using the Internet, whereas the global average had risen to 64.4%.

While Nigeria's Internet usage exceeds the continental average, the gap has narrowed significantly in recent years. Since 2005, Nigeria's Internet usage rates have been higher than the African average, though by varying margins. However, by 2023, the difference between the two figures had diminished, with Nigeria at 39.2% compared to 33.9% for Africa. This suggests that while Nigeria continues to see growth in Internet adoption, other African nations have been catching up, leading to a more level playing field in terms of digital inclusion across the region. It also indicates the pace of rise in the Internet adoption in Nigeria is not as fast as the regional average, pointing to room for accelerating the effort to increase Internet adoption through tackling both supply and demand issues.

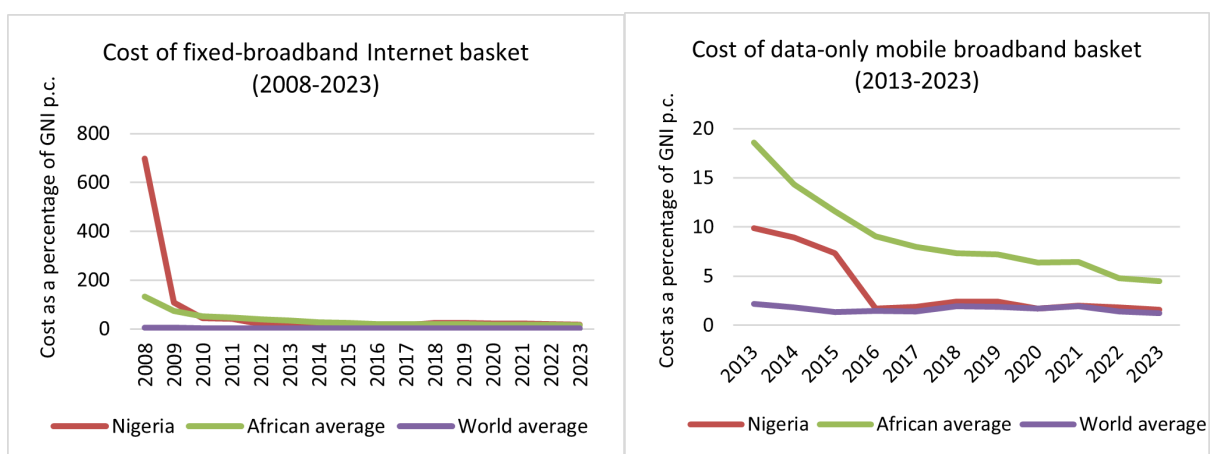
Figure 3. Internet usage in Nigeria (2000-2023)



Source: Compiled with data from ITU DataHub.

Internet affordability has improved dramatically over the course of the last decade, with costs converging to global levels. The cost associated with connecting to the Internet in Nigeria has declined significantly in recent years (see Figure 4). ITU data indicate that the cost of an entry-level fixed-broadband basket stood at a 698.11%⁷ of Gross National Income (GNI) per capita in 2008, compared to a global average of 5.2%. By 2023, this had fallen to 17.34%, compared to the then global average of approximately 3%. A data-only mobile broadband basket cost Nigerians 9.89% of per capita GNI in 2013 (compared to a global average of 2.2%), and it progressively fell to 1.61% by 2023 (compared to a global average of about 1.2%).

Figure 4. Internet access cost trends in Nigeria



Source: Compiled with data from ITU DataHub.

Despite progress in affordability, challenges remain. While the telecommunications sector has benefited from increased competition and greater tele-density thanks to streamlined regulation and

⁷ This figure is not a reported value but an estimate, and should be interpreted with caution due to potential limitations in data availability.

privatization efforts⁸, competition and price accessibility remain a challenge in the sector, especially for broadband Internet access through fixed lines, the type of connectivity typically required for businesses operations. Additionally, access remains uneven among the population. In many Sub-Saharan African countries, the cost of entry-level internet-enabled devices remains prohibitively high - almost as much as the average monthly income of the poorest 20% of the population - limiting access for low-income users.⁹

Even when access to the Internet is available, adequate, and affordable, a lack of digital literacy and necessary skills can still impede the ability to participate in digital trade. While the digital economy in Nigeria is growing, significant challenges relating to digital literacy and skills remain, particularly in terms of low and uneven access. According to the 2015 Nigeria Education Data Survey, the Gross Enrolment Rate for primary education in Nigeria stands at 87% compared to the 100% average for Sub-Saharan Africa. For junior secondary education, the enrolment rate is 65%, which is above the Sub-Saharan average but still falls short of the global average. Additionally, the quality of basic education remains a concern, particularly in terms of literacy and numeracy skills. Data from the National Bureau of Statistics indicate that less than half of students graduate with at least five credits, including in English and Mathematics. These gaps in foundational skills will continue to hinder efforts to improve digital literacy in Nigeria, limiting the potential opportunities offered by the digital economy (WBG, 2019).

2.2 Participation in digital trade

The measurement of digital trade is challenging. Measuring the exact participation of any economy in digital trade is complicated by the lack of internally comparable statistics for digitally ordered trade (see Box 1). However, the WTO provides estimates for digitally delivered services trade, which allow for an assessment of Nigerian participation in this segment of digital trade.

Box 1. Digital trade and electronic commerce – Fundamental concepts and statistical definitions

Over the years, different concepts and definitions relating to e-commerce and digital trade have been developed and used in international fora. The IMF/OECD/UNCTAD/WTO (2023) *Handbook on Measuring Digital Trade* clarifies the linkages between these concepts by providing a statistical definition of digital trade. It defines digital trade as “all international trade that is digitally ordered and/or digitally delivered.”

Digitally ordered trade covers transactions in both goods and services conducted over computer networks by methods “specifically designed for the purpose of receiving or placing orders.” These would include ordering a pair of shoes from abroad through a retailer’s website or booking a hotel room in another country through a digital intermediation platform. Digitally delivered trade, on the other hand, is defined in the Handbook as covering only services trade, which may take place via email, voice and video calls, apps and intermediation platforms. Examples range from computer services to medical transcriptions; from banking services to remote learning platforms.

Official data for digitally ordered trade are sparse and not comparable across economies. Statistics on online sales do not typically distinguish between domestic and international trade. However, WTO estimates on exports of digitally delivered services provide a measure of digitally delivered trade (WTO 2023) and a picture, albeit partial, of digital trade.

The definition of digital trade in the Handbook is compatible with the WTO definition of electronic commerce agreed under the Work Programme on Electronic Commerce, which refers to “the production, distribution, marketing, sale or delivery of goods and services by electronic means”.

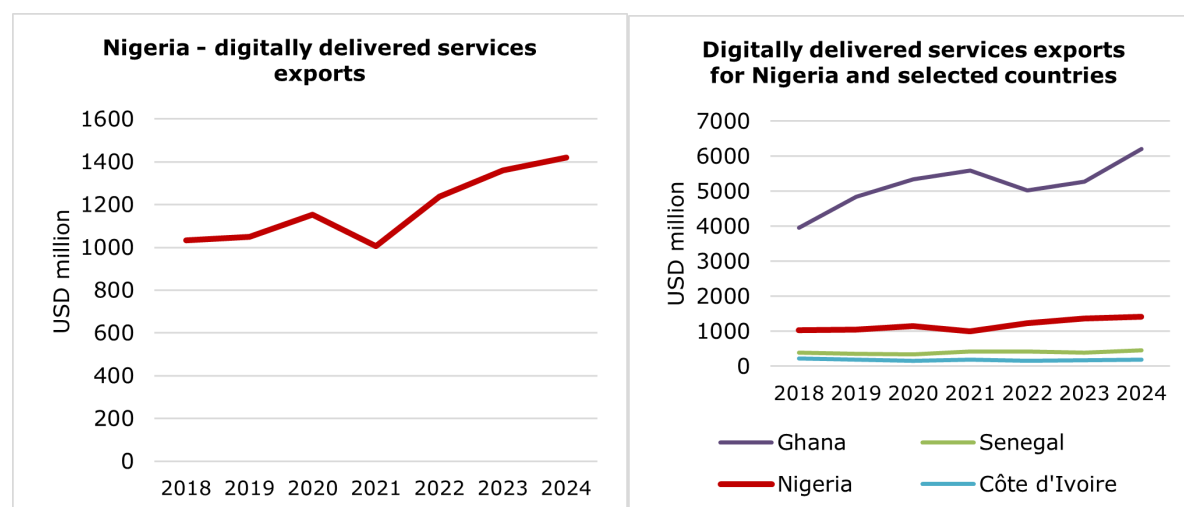
Source: Adapted from Box B.1. of IMF/OECD/UNCTAD/World Bank/WTO (2023).

⁸ WTO Trade Policy Review (2017).

⁹ See <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/blog/despite-improvements-sub-saharan-africa-has-the-widest-usage-and-coverage-gaps-worldwide/>

Nigeria's exports of digitally delivered services¹⁰ experienced a dip in 2021 but have recovered since. After an initial fall in 2021, exports have steadily trended upwards. While Nigeria is outperformed by Ghana, which records a much higher value of exports of digitally delivered services, it performs better than Côte d'Ivoire and Senegal, fellow members of the Economic Community of West African States, (see Figure 5a). An analysis of export composition (see Figures 5b and 5c) reveals that the major explanation for Nigeria's recent export dip stemmed mainly from the drop in insurance and pension services exports in 2021, which have remained fairly subdued ever since. Starting from 2021, however, financial services have exhibited particularly strong growth, more than compensating for the fall in insurance and pension services exports and driving the overall strong export performance for digitally delivered services. In 2024, the sector alone accounted for 73.9% of Nigeria's digitally delivered services exports.

Figure 5a. Nigeria's digitally delivered services exports from a comparative perspective, 2018-2024

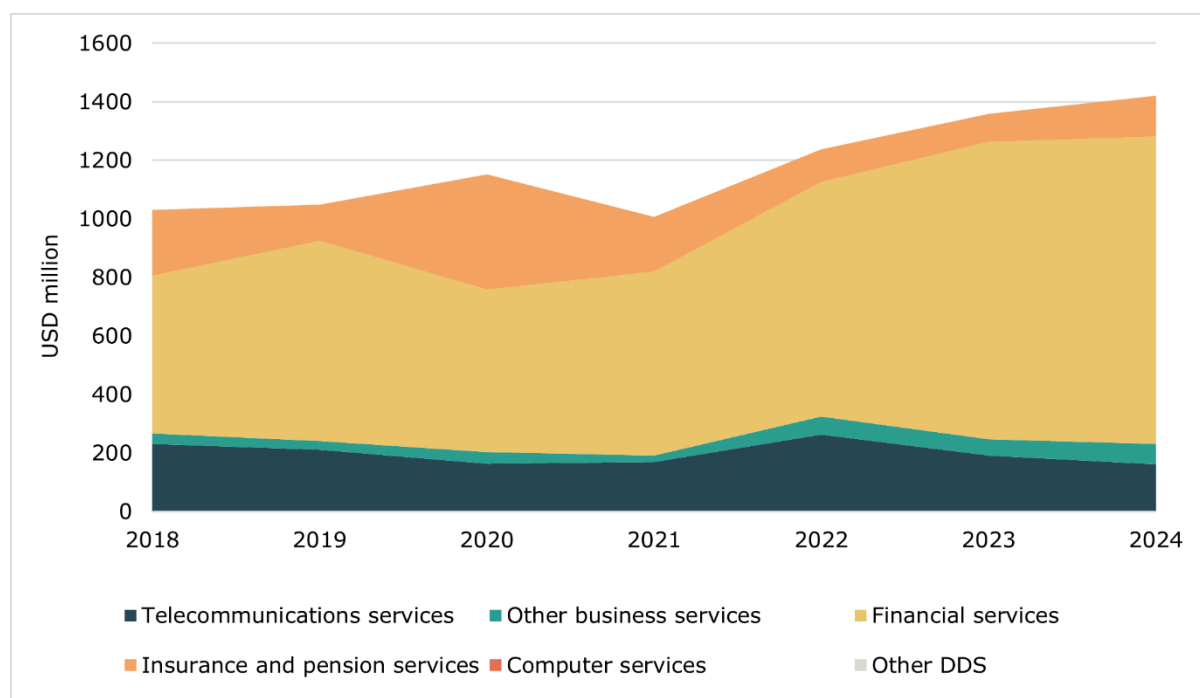


Note: Comparator countries have been selected on the basis of their membership in ECOWAS.

Source: [WTO | Statistics - Global Services Trade Data Hub](https://www.wto.org/press/2024/01/24-2024-services-trade.htm).

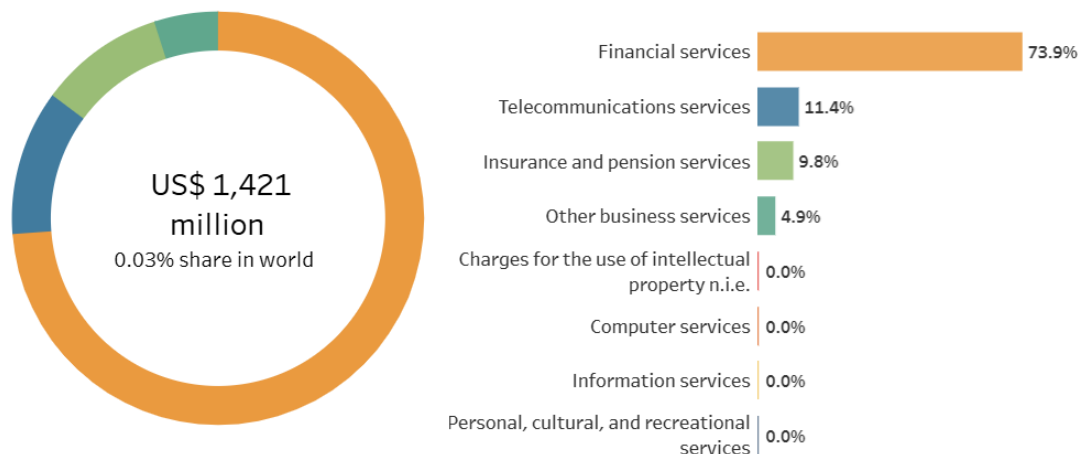
¹⁰ Digitally delivered services include other business services, computer services, financial services, charges for the use of intellectual property not included elsewhere, insurance and pension services, telecommunications services, personal, cultural and recreational services, and information services.

Figure 5b. Breakdown of Nigeria's digitally delivered services exports, 2018-2024



Source: [WTO | Statistics - Global Services Trade Data Hub](https://www.wto.org/trade/press/2024/240320_nigeria.htm).

Figure 5c. Structure of Nigeria's digitally delivered services exports, 2024

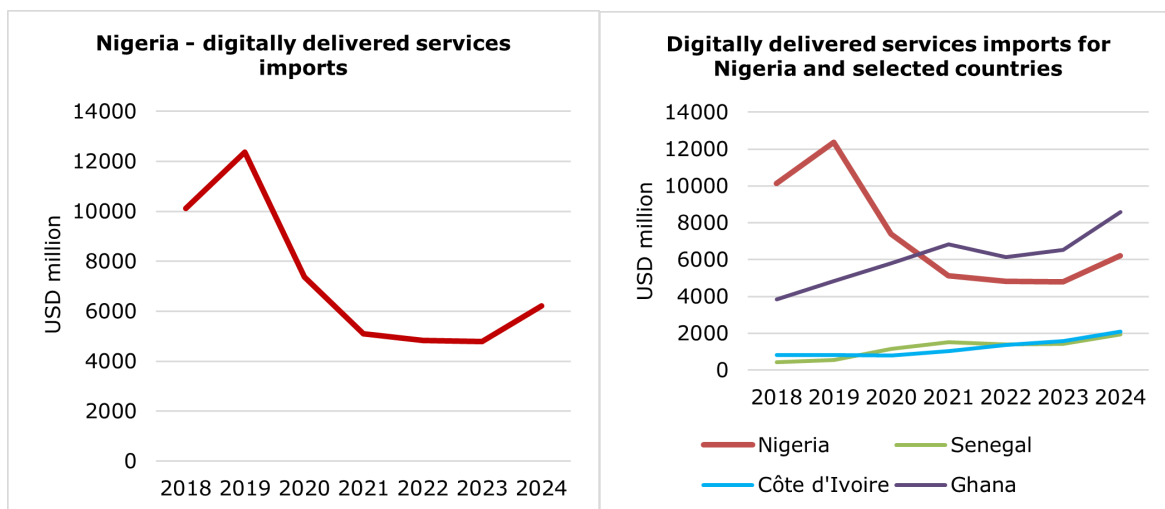


Source: [WTO | Statistics - Global Services Trade Data Hub](https://www.wto.org/trade/press/2024/240320_nigeria.htm).

Many digitally delivered services are key inputs for overall economic activity. Importing these services provides an avenue for domestic firms to access greater choice, higher-quality and lower priced inputs, thus strengthening their competitiveness and enhancing their overall digital trade performance.

Nigeria's imports of digitally delivered services peaked in 2019, followed by a sharp decline that only reversed in 2023 (see Figure 6a). The severe reduction in imports of 'other business services' explains this outcome. This pattern is very different than that recorded for other ECOWAS members, whose imports exhibited a much more stable upward trend. Still, in 2024, Nigeria's imports rebounded, primarily led by increased imports of financial and 'other business services' (see Figures 6b and 6c). With estimated import values reaching USD 6.2 billion, Nigeria ranked as the 4th largest importer of digitally delivered services in Africa in 2024.

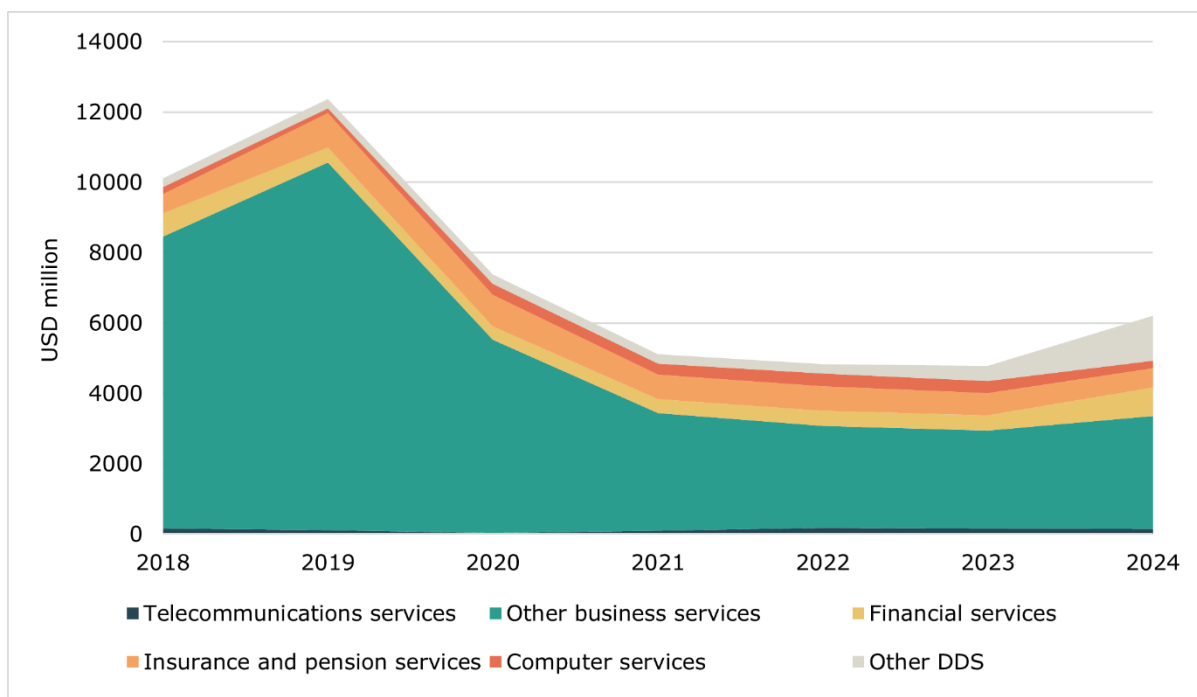
Figure 6a. Nigeria's digitally delivered services imports from a comparative perspective, 2018-2024



Note: Comparator countries have been selected on the basis of their membership in ECOWAS.

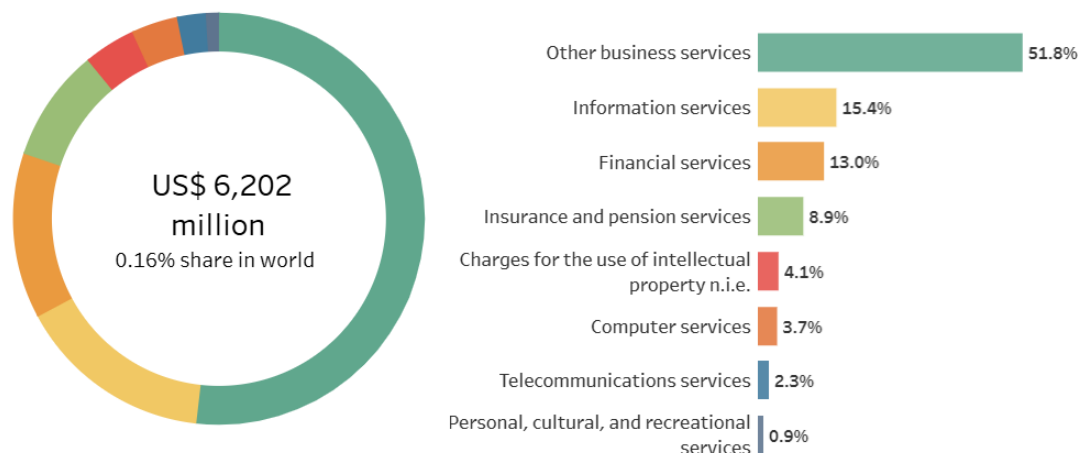
Source: [WTO | Statistics - Global Services Trade Data Hub](https://www.wto.org/press/2024/01/24-01-2024.htm)

Figure 6b. Breakdown of Nigeria's digitally delivered services imports, 2018-2024



Source: [WTO | Statistics - Global Services Trade Data Hub](https://www.wto.org/press/2024/01/24-01-2024.htm)

Figure 6c. Structure of Nigeria's digitally delivered services imports, 2024



Source: [WTO | Statistics - Global Services Trade Data Hub](#)

3 GENERAL POLICY FRAMEWORK RELEVANT FOR DIGITAL TRADE

3.1 Trade agreements

Trade agreements foster predictability by providing an opportunity to anchor enabling policies and guarantee market opening for digital trade. This section presents Nigeria's participation in trade agreements and negotiations, both at the WTO and in regional contexts, in terms of the main obligations and commitments of relevance to digital trade.

3.1.1 Nigeria's participation in relevant WTO agreements and negotiations

Existing WTO rules and commitments apply to digital trade and additional ones are being developed by groups of WTO Members. In fact, WTO agreements do not distinguish between the different technological means through which goods or services may be traded. Several of Nigeria's commitments at the WTO, as well as its engagement in relevant discussions, are therefore significant factors in shaping its digital trade ecosystem.

Nigeria has ratified the WTO's Trade Facilitation Agreement (TFA), which expedites the movement, release and clearance of goods across borders. This faster border passage facilitates digitally ordered trade in goods, which involves goods that are marketed, purchased and/or paid for online but then delivered across borders physically. By simplifying and harmonizing international trade procedures, the TFA reduces red tape and improves the speed and efficiency of customs processes, to the benefit of digital trade activities that rely on quick delivery.¹¹

Nigeria has not chosen to eliminate tariffs on information technology (ICT) goods that underpin the physical infrastructure of digital trade. The WTO's Information Technology Agreement (ITA)¹² has abolished tariffs on a wide range of goods, including computers, telecommunications equipment and semiconductors that are critical components of the physical infrastructure which make digital trade possible. By reducing the cost of ICT goods, the ITA has the capacity to promote greater accessibility and adoption of technology worldwide. Not only is Nigeria

¹¹ Nigeria ratified the TFA in January 2017 and committed to a phased implementation of various trade facilitation measures, aiming for full implementation by 2029. As of 30 June 2025, the country has achieved an implementation rate of 94.1%, covering most of the TFA's facilitating measures, except for a few, including test procedures, use of international standards and single window. (see [Nigeria | TFAD - Trade Facilitation Agreement Database \(tfadatabase.org\)](#)).

¹² Eighty-two economies participate in the ITA, and a further 50 Members have agreed to expand the agreement (see https://www.wto.org/english/tratop_e/inftec_e/inftec_e.htm).

not a party to the ITA, but it has not bound tariffs on key ITA products, like computers and smartphones, in its General Agreement on Tariffs and Trade (GATT) schedules.

Services are another critical backbone of digital trade. Telecommunications and computer services, postal and courier services, distribution, financial and transport services are some of the key sectors for supporting digital trade. A "typical" digital trade value chain would start with a consumer accessing the Internet (telecommunication service), performing an Internet search (computer services), ordering a product online (distribution and payment services). The product is then delivered either physically (through postal, courier, and freight transport services) or digitally (through telecommunication services), such as in the case of purchase of software or the streaming of a movie.

The General Agreement on Trade in Services (GATS) disciplines provide guarantees for trade in these backbone services. The Agreement, which applies to measures affecting trade in services¹³, includes a key, generally applicable obligation that WTO Members must not discriminate between foreign services and services suppliers of different origins. Aside from this obligation, however, the main trade liberalizing disciplines of the GATS apply only in the sectors that each Member selects and to the extent set out in individual schedules of commitments.

Liberalizing trade in services has been shown to have a positive impact on digital trade. For instance, open telecommunications markets have been found¹⁴ to result in higher penetration rates for broadband Internet, lower prices and higher-quality services, thus increasing connectivity for a larger section of the population. The WTO and the World Bank estimate that if all of Africa improved its mobile broadband connectivity to the level of South Africa, which has the continent's best mobile broadband access, this would reduce the average cost of trade by 7% in goods and 9% in business and professional services. Moreover, in an open regulatory environment, these trade cost reductions would be even greater, amounting to 17% and 25%, respectively.¹⁵

Binding this trade liberalization in GATS commitments has the additional advantage of guaranteeing market openness to foreign services and service suppliers. This provides certainty and predictability of trading conditions and may help attract more investment, including in key enabling services, thus enhancing a country's ability to leverage the opportunities offered by digital trade.

Nigeria has undertaken GATS commitments in some digital trade-enabling services, notably in telecommunications. The commitments cover mobile communications, sale/installation of terminal equipment, operation of pay phones, and value-added services. For services such as data transmission and online information, Nigeria undertook no commitments, however. This is a significant gap when seeking to establish an enabling framework for digital trade. Even if access conditions in the sector are, in practice, quite open (see Section 3.2), GATS commitments provide a mechanism to guarantee against potential policy reversals, which is especially valuable to foreign investors. Furthermore, Nigeria has not subscribed to the pro-competitive disciplines contained in the Basic Telecommunications Reference Paper in its GATS schedule.¹⁶ The Reference Paper, an optional set of regulatory principles undertaken by around 105 WTO Members, addresses issues such as anti-competitive cross-subsidization, the terms of interconnection, the misuse of information, licensing criteria, transparency and other matters relevant to the prevention of abuse of dominant market positions with respect to basic telecommunication services. By promoting competitive conditions in the supply of basic telecommunication services, the adoption of the Reference Paper contributes to achieving affordable and efficient infrastructure.

Nigeria has also included financial and maritime transportation services in its GATS commitments. The level of liberalization bound for these services varies. Nigeria has not undertaken commitments in cross-border maritime freight transport services, for instance, but it

¹³ GATS defines trade as four ways (or modes) in which a service can be supplied internationally: mode 1 describes "cross-border trade" (e.g. through the Internet); mode 2 describes "consumption abroad" (e.g. through tourism); mode 3 describes "commercial presence" of an enterprise (e.g. through foreign direct investment); and mode 4 describes the "movement of natural persons" (e.g. through temporary labour mobility).

¹⁴ WBG/WTO (2023b).

¹⁵ WBG/WTO (2023a).

¹⁶ See https://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm.

has fully liberalised trade in this sector conducted through the establishment of a commercial presence. Cabotage is excluded from the commitments on maritime transport services. Nigeria has scheduled its commitments in financial services in accordance with the "Understanding on Commitments in Financial Services", which implies a high degree of market openness, including full liberalization of trade through commercial presence and consumption abroad.

Nigeria did not commit to open trade in other digital trade-enabling services in the WTO but did subscribe to the disciplines on "services domestic regulation" (SDR). The country has no GATS bindings in computer, distribution, postal and courier, and transport services other than maritime transport. However, Nigeria has decided to adopt the SDR disciplines, developed in 2021 by a group of WTO Members.¹⁷ These disciplines are aimed at increasing transparency, predictability, and efficiency of procedures for authorization of service suppliers, including those involved in digital trade. Although Nigeria has committed to incorporate the services domestic regulation disciplines into its schedule of specific commitments, it has not yet completed the necessary WTO certification procedures.

Nigeria is one of many WTO Members who recently finalized negotiations on disciplines specifically targeted at, and aimed at facilitating, digital trade. These negotiations were launched in 2019 with the objective of developing provisions on the trade-related aspects of e-commerce that build on existing WTO rules, with the participation of as many WTO Members as possible. The outcome of these negotiations, namely the Agreement on Electronic Commerce (AEC), was circulated to all Members on 26 July 2024.¹⁸ Relevant disciplines fall under issues such as an enabling environment for digital trade (e.g. e-authentication and e-signatures, electronic contracts, electronic invoicing and paperless trading), openness (e.g. prohibition of customs duties on electronic transmissions and open government data) and trust (e.g. online consumer protection, personal data protection and cybersecurity). The AEC also provides for certain additions to the regulatory obligations of the Reference Paper on telecommunication services. In addition, there are provisions on transparency and cooperation, as well as disciplines on development. Nigeria participated in its negotiations since their launch in 2019, shaping the discussions on digital trade rules but without any binding commitments until formal adoption and ratification occur. At the time of writing, Nigeria has not signed up to the request of incorporating the AEC into the WTO rulebook.¹⁹

Under the Investment Facilitation for Development (IFD) Agreement, Nigeria would take on board disciplines enhancing the transparency and efficiency of investment procedures, which will also cover investment in key digital sectors. The country participated from the beginning of the negotiations of the Investment Facilitation for Development Agreement and is currently part of the group of WTO Members who requested the incorporation of the IFD Agreement into the WTO legal architecture. The IFD Agreement is presently endorsed by three quarters of the WTO Membership, but there is yet no consensus on its incorporation in the WTO rulebook.²⁰ The agreement is aimed at improving investment procedures and facilitating the operations of investors in all economic sectors.²¹ As such, the agreement could also help attract more and higher-quality investment in digital connectivity infrastructure and other sectors relevant to digital trade.

3.1.2 Nigeria's participation in regional trade agreements

Nigeria is party to two regional trade agreements (RTA) that have been notified to the WTO. These are the Economic Community of West African States (ECOWAS) and the African Continental Free Trade Area (AfCFTA). The ECOWAS is a customs union that covers goods only. Under this RTA, the import of some key ITA products, like computers and smartphones, from other member states of ECOWAS is tariff-free.

¹⁷ The disciplines have been adopted by around 72 WTO governments so far (see https://www.wto.org/english/news_e/news24_e/serv_27feb24_e.htm).

¹⁸ See WTO document [INF/ECOM/87](#).

¹⁹ WTO Members that are party to the AEC requested its incorporation into Annex 4 of the WTO Agreement as a plurilateral agreement in February 2025 (see WTO document [WT/GC/W/963](#)), but consensus on this has not been reached yet.

²⁰ The IFD Agreement was finalized in February 2024, and its current number of participants stands at 127 WTO Members (see WTO document [WT/GC/W/927/Rev.3](#)). The Agreement had not been formally incorporated into Annex 4 of the WTO Agreement as a plurilateral agreement at the time of writing.

²¹ See WTO document [INF/IFD/W/55](#).

Nigeria is also party to the Agreement Establishing the AfCFTA. This agreement includes the Protocol on Trade in Goods, the Protocol on Trade in Services and the Protocol on Digital Trade. The goods Protocol has the capacity to further open trade in ICT goods on the continent; however, according to the IFC's analysis²², this impact will likely be very modest unless external tariffs on ICT goods are significantly reduced, as these remain a key obstacle to increasing digital trade competitiveness across Africa. Similarly, the Protocol on Trade in Services could lead to further opening of services trade in sectors that are of importance for enabling digital trade, including communication, financial and transport services, which remain amongst the priority sectors that the AfCFTA negotiations are focused on. Once it is ratified and enters into force, the Protocol on Digital Trade will also take the continent closer to its goal of ultimately establishing a digital single market.

3.2 Applied trade policy regime

Actual trading conditions in Nigeria tend to be more liberal than the bindings and commitments undertaken under trade agreements, particularly at the WTO. However, the relationship between the applied policy regime and Nigeria's GATS commitments can vary by service and mode of supply. This section outlines the trade policy conditions prevailing on the ground. Although generally more open, the access conditions provided in some of the sectors are not guaranteed by WTO bindings and therefore, offer no predictability against trade-restrictive policy reversal. This does not provide the stability and positive impact on trade that international commitments mirroring on status quo trade regimes have been found to provide.

At the same time, Nigeria's applied tariff regime for some information technology products covered by the Information Technology Agreement shows room for improvement. While the country has not made tariff reduction commitments on ICT goods under the ITA, it applies customs duties of between 5 and 10% on key ICT products²³ like computers and smartphones, respectively. These are above the ECOWAS CET levels (where tariffs on these products are zero).

Applied policies in digital trade enabling services sectors are, in practice, more open than indicated in Nigeria's GATS commitments. For instance, although the country undertakes no GATS bindings in computer, distribution, postal and courier, rail and road transport services, these sectors are open to market entry by foreign suppliers on a cross-border basis (mode 1) or by establishing a commercial presence (mode 3). Rail and road transport services are particularly open in practice, with no restrictions on foreign capital participation, forms of establishment, or on the number of suppliers that may establish in Nigeria. However, certain limitations of a horizontal nature may impact the operations of foreign service suppliers in all enabling sectors, such as restrictions on the cross-border transfer of data.

The World Bank–WTO Services Trade Restrictions Index (STRI) provides a synthetic measurement of the restrictiveness of an economy's services trade regime.²⁴ The STRI ranges from 0, for a completely open regime, to 100 for a totally closed one. It covers measures identified as trade barriers under the GATS (i.e. mainly quota-like restrictions and discriminatory measures) as well as other measures that may hinder trade in services (e.g., absence of good regulatory practices or recognition of qualifications, or lack of competition policy).

Nigeria's STRIs in services sectors that help facilitate digital trade paint a positive picture compared to the rest of the continent. For rail and road transport services, Nigeria's STRI scores are considerably lower than the African average, reflecting more open trading conditions than in the rest of the continent.²⁵ For retail and wholesale distribution as well as commercial banking services, the STRI scores are slightly lower than the African average, suggesting that restrictiveness of trading conditions remains aligned to the rest of the continent.²⁶ Lastly, for telecommunications, computer services, and maritime freight transport services, the STRI scores for Nigeria are above the African average.²⁷

²² IFC (2022)

²³ Source: [WTO Tariff & Trade Data](#).

²⁴ See <https://itip-services-worldbank.wto.org/docs/WB-WTO%20STRI%20Methodology.pdf>.

²⁵ See Figures A8 and A9 in Annex 2.

²⁶ See Figures A4, A5, and A6 in Annex 2.

²⁷ See Figures A1, A2, A3, and A7 in Annex 2.

4 WORLD BANK'S ASSESSMENT OF THE DIGITAL TRADE-SPECIFIC REGULATORY FRAMEWORK

A comprehensive and modern digital regulatory framework is essential for supporting digital trade. Regulation plays at least three critical roles for digital transactions. It provides the legal tools needed for concluding valid and enforceable electronic contracts, such as rules giving effect to the electronic authentication of documents and e-signatures. Frameworks for personal data protection, online consumer protection and cybersecurity offer safeguards that enhance trust in digital markets. Finally, regulations on the legal liability of platforms for unlawful or harmful content and rules on the international transfers of data set out basic rules that support a transparent and predictable framework for digital markets.

Figure 7. World Bank's Digital Trade Policy Gap Analysis

	Nigeria
Critical	
Electronic signatures	2
Electronic contracts	1
Cybersecurity	5
Personal information/data protection	4
Cross-border data/information flows	2
Location of computing facilities	2
Intermediary Liability	3
High	
Electronic transactions frameworks	1
Electronic authentication	3
Single Windows	1
Access to and use of the Internet	3
Online consumer protection	2
Telecomm services – Reference Paper	3
Moderate	
Electronic invoicing	1
Paperless trading	2
Open government data	2
Indirect effect	
Unsolicited commercial electronic messages (spam)	4
Cooperation and cooperation mechanisms	n/d
Transparency	n/d

1	No regulation or heavy regulatory restrictions in place.
2	Minimal and inadequate regulation or burdensome restrictions in place.
3	Partial regulatory framework in place. Substantial gaps remain.
4	Broad and adequate regulation in place. Meaningful gaps remain.
5	Comprehensive and modern regulatory framework. Minor improvements may be considered.

Note: Highlighted sections indicate suggested policy areas for priority action.

Regulation can also introduce unwarranted limitations to digital trade. For instance, unnecessarily restrictive or overly cumbersome requirements for cross-border data transfers limit access to certain digitally delivered services. Limitations on the types of products offered online may be warranted by public policy goals (e.g. restrictions on guns or controlled substances) or may add costs and inefficiencies by segmenting markets (e.g. requiring the use of domestic cloud services).

The central challenge for policymakers and regulators is hence to adopt balanced frameworks that minimize restrictions to digital trade while offering a comprehensive framework for digital transactions and sound safeguards for users. By requiring that measures taken in pursuit of public policy objectives not be more trade restrictive than necessary, trade agreements provide useful benchmarks on where to draw this frontier.

Despite its forward-looking policies, Nigeria's policy and regulatory framework specific to digital trade features significant regulatory gaps. Figure 7 summarizes the Digital Trade Policy Gap Analysis conducted by the World Bank. Based on a review of Nigerian regulations, the World Bank's Digital Trade Policy Gap Analysis assesses different policy areas and practices against requirements or standards reflected in trade agreements.²⁸ Nigeria presents major gaps with regard to some of the most important policies for digital trade. These challenges include major limitations to cross-border data transfers, the lack of fundamental rules on intermediary liability, a limited and outdated framework for online consumer protection, and a partial framework for the use of electronic documents and e-signature, including for customs procedures.

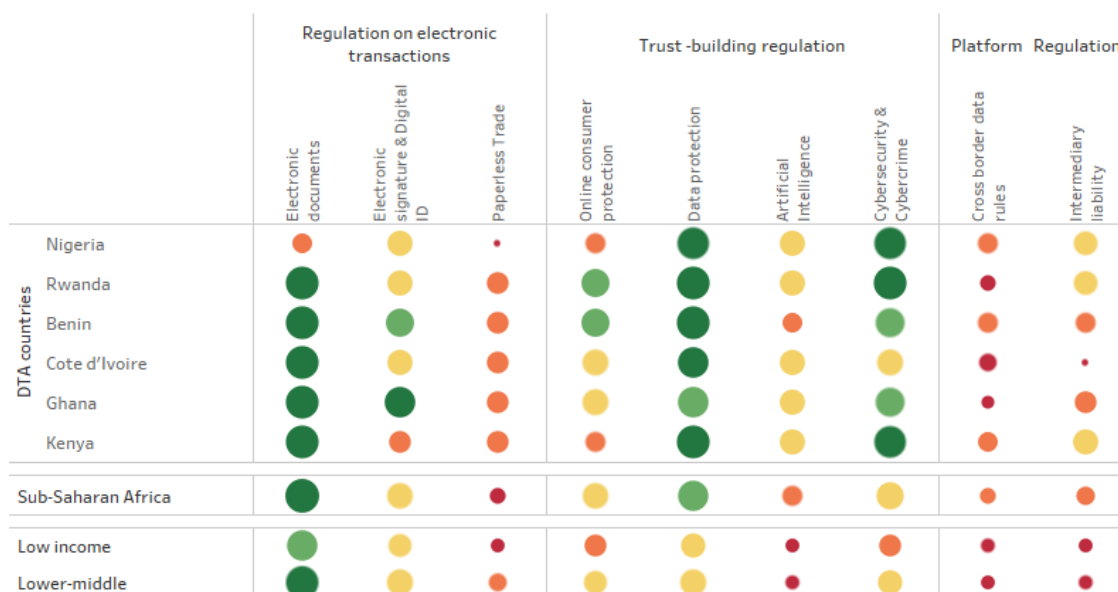
In general, Nigeria exhibits varying levels of readiness in different aspects of digital trade regulation. The country has a strong regulatory framework in a critical area such as data protection but needs significant improvements in others, particularly in data governance, online consumer protection, electronic transactions, intermediary liability, and other regulations related to paperless trade and customs procedures. This comparison highlights the areas where Nigeria can focus its efforts to enhance its digital trade ecosystem and align more closely with leading regional examples. Figure 8 further compares the "readiness" of some of these policies in Nigeria with regional partners and with relevant averages.

- A modern framework for electronic transactions provides the legal tools for concluding electronic contracts as well as for the digitalization of trade procedures. However, pending the approval of the National Digital Economy and E-Governance Bill, Nigeria's lack of a comprehensive framework governing electronic documents, signatures, and contracts creates risks in remote transactions.
- Trust-building regulation is a critical area to foster confidence in digital trade. Nigeria has recently adopted a strong data protection regulation – a welcome development across various countries in the continent, indicating a widespread recognition of the importance of data protection. However, the implementation of data safeguards has been partial, focusing on licensing of data firms and paying limited attention to building users' trust. For online consumer protection, Nigeria and some neighbouring countries show moderate and poor regulatory "readiness", indicating a need for more robust rules to protect digital market consumers.
- Nigeria has gaps in platform regulation, particularly concerning cross-border data policies. There is a need to reconcile inconsistencies between the Data Protection Law 2023 and the Guidelines for Nigerian Content Development in Information and Communication Technology. Additionally, it is crucial to address data sovereignty issues by defining "sovereign data localization" in a way that protects national data while avoiding overly restrictive measures that could hinder international trade. This remains a widespread challenge, as all analysed countries have shown limited progress in this area. In terms of intermediary liability, Nigeria features basic regulations in place. In the Sub-Saharan region, only Nigeria and Senegal have some regulatory measures in place, albeit not comprehensively.

²⁸ The Gap analysis roughly classifies policies based on the degree of their likely effect on digital trade ("critical", "high", "moderate", and "indirect effect") taking into account the policies' scope (whether they apply across the board or to only a form of digital trade) and the nature of the regulation at hand (whether the regulation features a necessary regulatory tool, a restriction to digital trade, or a beneficial-but-not-essential solution). As a result, policies that apply to a broad gamut of trade in goods and services and have a potential to effectively limit or boost it (such as policies on cross-border data flows and measures to facilitate cross-border transactions) are ranked the highest; measures that affect only certain types of digital trade (such as paperless customs procedures that are only relevant to trade in goods), are ranked lower; and policies that don't necessarily have a direct and attributable impact on trade (such as transparency and cooperation) and/or are likely to affect only a limited subsector of digital trade are given the lowest prioritization.

The Government of Nigeria is taking steps to address these gaps with the drafting of National Digital Economy and E-Governance Bill. The Bill, presented in July 2024, seeks to establish a comprehensive legal framework for Nigeria's digital economy, introducing and updating regulations in various areas covered in this analysis, including electronic contracts, e-signatures and timestamps, electronic transferable records and consumer protection. The effective passage of this bill, expected during 2025, would entail a major step up for Nigeria's digital trade regulatory "readiness" and the potential compliance with digital trade agreements at plurilateral or continental level.

Figure 8. World Bank's Digital trade regulatory "readiness" in Nigeria and the region.



Note: Bubbles size and color represent the regulatory "readiness" in each category of the country or grouping concerned, based on the share (in quintiles) of positive answers in that category from 0 to 100%.

Source: World Bank DTRR database (forthcoming 2025)

4.1 Data governance

Robust data protection safeguards are essential to build trust in and promote the growth of digital markets. Users are increasingly conscious of the implications of unrestricted access to personal data. Lack of trust in data management discourages users from engaging in electronic transactions, limiting the growth of digital markets.²⁹ On the contrary, safeguards on when and how firms may collect, process and share personal data help users feel safe and secure when providing their personal information, knowing that its use and sharing will be limited to necessary purposes.

Strong and consistent data protection regulations are crucial for digital trade, particularly in services. Some studies suggest that robust safeguards for personal data protection are associated with greater trade in digitally delivered services.³⁰ This trend is influenced by two factors: consumers feel safer transacting with vendors who are required to offer greater assurances about the use and sharing of their personal information, and countries are increasingly requiring comparable data protection measures to allow data sharing, incentivizing trade with countries that have similar data protection regimes.

Nigeria has established strong data protection regulations. The Data Protection Law 2023 lays out the framework on data protection, which covers fundamental aspects effectively, such as the legal basis for data collection and processing, users' rights to access their own personal data, and having it rectified or deleted. Despite data protection rules having advanced substantially across Sub-Saharan Africa, Nigeria's safeguards are amongst the most comprehensive in the region,

²⁹ WDR (2021).

³⁰ WDR (2021), van der Marel and Ferracane (2021).

featuring less common provisions like special safeguards for sensitive data like biometric information, the ability to withdraw consent, and data portability (see Figure 9).

Figure 9. Data protection rules



Note: For individual countries, bubbles' size and color indicate the existence of such regulatory measure. Green represents positive regulatory measures. Red indicates regulatory restrictions to digital trade. For regional and income groups, bubbles represent the regulatory "readiness" in each category, based on the share (in quintiles) of positive answers in that category from 0 to 100.

Source: World Bank DTRR database (forthcoming 2025)

Nigeria has also made progress addressing cybersecurity and cybercrime regulation. The Cybercrimes Act addresses risks from crime, and armed conflicts that threaten networks, devices and data. The National Cybersecurity Policy and Strategy 2021 provides a framework to strengthen digital infrastructure and mitigate cyber threats, its implementation has faced delays. Notably, the absence of the National Cybersecurity Coordination Centre, which is mandated by the Strategy for institutional coordination, has hindered effective execution. Despite these challenges, efforts continue through initiatives such as the establishment of the Computer Emergency Response Team (CERT) and the adoption of cybersecurity standards and protocols.

Nigeria's regulatory framework for data protection and cross-border flow aligns with global trends but requires clarity on sovereign data localization to balance national security and international trade. The Data Protection Law 2023, under Article 41, introduces an "adequacy" regime that permits cross-border data transfers without direct restrictions. However, the "Guidelines for Nigerian Content Development in ICT"³¹ impose data localization requirements without clearly defining "sovereign" data, leading to inconsistencies between the two regulations.

³¹ Guidelines for Nigerian Content Development in Information and Communication Technology Arts. 12 and 13.

Figure 10. Rules on cross-border data flow

Cross-border data regime													Cross-border data limitations										
DTA countries	57. Explicit framework on cross-border data transfers		58. Data protection in cross-border data transfers relies on evaluation and accountability ...		59. Adequacy determined by		60. Alternatives to for adequacy include:						61. Personal data is explicitly allowed to transfer across border based on consent by the data subject:		Non-personal data		62. Required for cross-border data transfers:		63. Data localization requirements				

Note: For individual countries, bubbles' size and color indicate the existence of such regulatory measure. Green represents positive regulatory measures. Red indicates regulatory restrictions to digital
Source: World Bank DTRR database (forthcoming 2025)

These data flow regulations can slow or hinder digital trade in services, in particular, and limit access to international digital markets. Uncertainty on the regulation governing cross-border movement of personal data can add costs to digitally delivered services, resulting in lower levels of digital trade³² (See Figure 10).

4.2 Online consumer protection safeguards

Consumer protection regulation is key to fostering trust and strengthening digital markets which are still developing. The main reason people avoid online purchases, especially internationally, is the lack of trust in remote electronic transactions.³³ Without face-to-face interaction, consumers may not be able to assess the properties of the goods, miss visual cues such as location and facilities that help assess a vendor's professionalism. In the digital environment, consumers must share sensitive information, such as home addresses or banking details with retailers, online intermediaries or digital platforms. This lack of trust in the security of cross-border online transactions and lack of the availability of remedies when problems occur is a major limiting factor in both developed and developing economies.³⁴

Rules on online consumer protection are essential to address information asymmetries between vendors and consumers in online transactions. Distance shopping poses challenges, such as the inability to physically inspect products before purchase. Online consumer protection laws aim to provide protection comparable to that in offline commerce.³⁵ These laws build on traditional consumer protection principles and adapt them to digital markets, mitigating the challenges of online transactions.³⁶

Consumer protection rules also play an important role in international digital trade, especially for developing countries. As digital markets are still in their infancy, lack of trust in remote electronic transactions remains the top reason for not engaging in online purchases (CIGI-Ipsos Global Survey on the Internet, 2017 and 2019). While often designed for domestic markets, consumer protection rules are particularly important for digital trade, especially for digitally ordered goods, as trust in international orders of goods is typically lower. Online consumer protection regulations can help bridging these trust gaps by ensuring that cancellations and return policies, including internationally, are adequately set up and rules are clearly set out. In addition, requiring

³² Ferracane and Van Der Marel (2021a).

³³ See <https://www.ipsos.com/en/2019-cigi-ipsos-global-survey-internet-security-and-trust>.

³⁴ World Economic Forum (2019).

³⁵ UNCTAD (2017).

³⁶ OECD (2000).

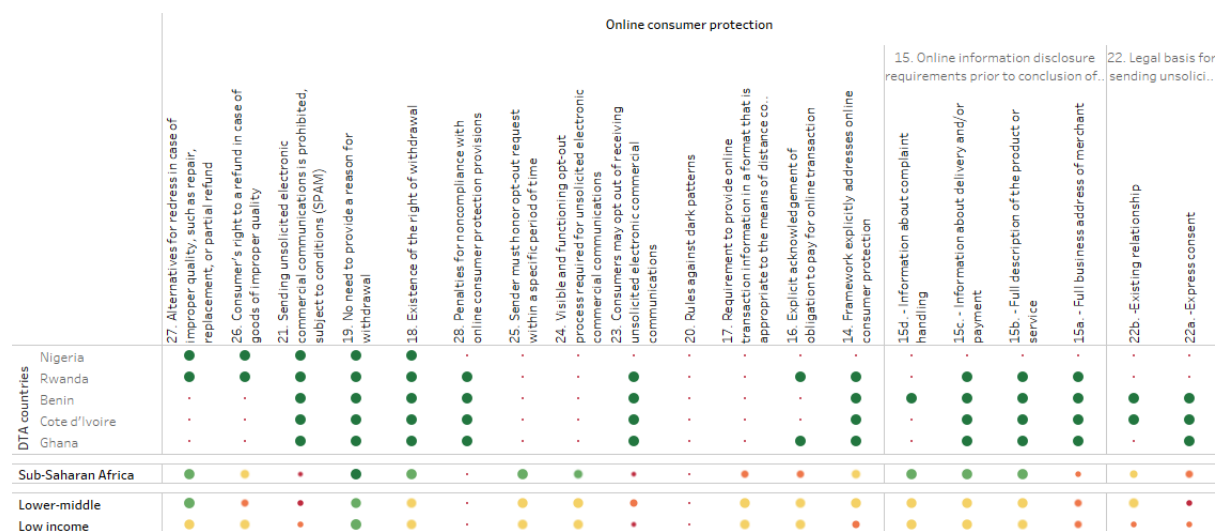
the establishment of online dispute resolution mechanisms also offers an important channel for boosting consumer confidence, especially when it allows the consumer to bring a claim directly to its national consumer protection agencies (Chung and Yu, 2021).

Lack of trust in remote transactions is limiting digital market development in Nigeria. Nigerian businesses view the lack of consumer trust in online platforms and apps as a major barrier to the growth of digital trade. Some digital intermediation platforms seek to address this challenge through their own intervention, such as trainings and awareness campaigns. However, an official consumer protection policy recognizes consumer's rights and ensures a minimum level of good business practices, contributing to an enabling environment for digital trade.

Consumer protection regulation in Nigeria lacks key disciplines for online digital transactions. Nigeria's existing framework is based on the Federal Competition and Consumer Protection Act 2018 but lacks essential regulations for digital markets. While the Act provides a foundation, it does not fully address key challenges in digital markets, particularly in ensuring clear information for online consumers and establishing effective mechanisms to resolve failed transactions.

Nigeria has partially implemented measures to prevent deceptive commercial activities. Figure 11 portrays consumer protection regulations in Nigeria, neighbouring countries and peer-countries average. Nigeria has implemented some important protections for online transactions, such as the ability to cancel a transaction without an explicit reason, as well as consumer's right to a refund in case of goods of improper quality, but lags in addressing important areas such as a penalty for non-compliance with online consumer protection and information disclosure requirements.

Figure 11. Rules on online consumer protection



Note: For individual countries, bubbles' size and color indicate the existence of such regulatory measure. Green represents positive regulatory measures. Red indicates regulatory restrictions to digital trade. For regional and income groups, bubbles represent the regulatory "readiness" in each category, based on the share (in quintiles) of positive answers in that category from 0 to 100 . .

Source: World Bank DTRR database (forthcoming 2025)

4.3 Regulation of electronic transactions

With the surge in electronic transactions, the need for electronic authentication methods and substitutes to handwritten signatures has become increasingly important. E-documents and e-signature laws are essential as they provide legal recognition for electronic transactions, thereby removing obstacles and facilitating their broader adoption and use. The primary global legal framework for electronic transactions is the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Commerce, established in 1996, and

incorporated into the legislation of over 170 jurisdictions.³⁷ The UNCITRAL Model Law aims to harmonize international commercial law, thereby reducing trade costs and improving interoperability. The Model Law offers guidelines for states and jurisdictions to adopt domestic legislation that facilitates electronic commerce, allowing them to tailor the content to fit their specific legal contexts.

Ensuring legal equivalence for electronic tools like e-contracts, e-evidence, e-signatures and e-communications is crucial for treating digital transactions the same as traditional paper-based ones. Transactions with final consumers, such as those on distribution platforms like Amazon.com or Jumia.com, and app-based services like Airbnb, do not typically entail major documentation exchanges and can be concluded even without a specific regulatory framework for electronic transactions. However, for business-to-business transactions that entail customization of goods and services provided over time, such as those that allow suppliers to connect to global value chains or that require peripatetic delivery over extended periods, the ability to conclude or amend contracts across borders in a secure and reliable way is essential to reduce costs and expedite business processes. The legal recognition of e-documents and e-signature and their equivalence with paper documents helps reduce legal uncertainties and risks related to international transactions, facilitating cross-border contracts.

A foundational digital ID system can further support the e-transaction ecosystem, as it facilitates the verification of individuals' identities, ensuring secure and reliable authentication. This system enhances access to e-government services and supports the implementation of e-commerce regulations, such as the legal recognition of e-signatures and electronic tools. Foundational digital ID systems play a key role in verifying legal identities in the digital realm, enabling broader access to rights and services, fostering societal and economic inclusion, and improving interactions with public and private entities. Additionally, robust digital ID systems reduce transactional costs, build trust among stakeholders, and mitigate fraud and identity theft risks.³⁸ With support from the WWBG and other development organization, Nigeria has been advancing in implementing a foundational digital ID system, with a view to supporting access to services through authentication and developing a new national identity management system.

Nigeria's legal framework lacks essential regulations for electronic transactions, creating uncertainty in the recognition and enforcement of e-documents and e-signatures. While electronic contracts are crucial for cross-border business, particularly in B2B transactions, Nigeria has not yet established a comprehensive legal framework for remote contracts and digital transactions. The Bill on Electronic Commerce of 2011 was never enacted, leaving only limited provisions within the Evidence Act of 2011 to address electronic documents. Despite the growing use of digital documents, paper-based transactions still dominate in many areas, emphasizing the need for legal recognition of both formats. Similarly, electronic invoicing remains underdeveloped, as there are no clear legal provisions for its recognition and use in business transactions.³⁹ It is expected that the enactment of the current National Digital Economy and E-Governance Bill will provide for more comprehensive framework for electronic documents and signatures.

The absence of a designated legal authority for electronic authentication and verification further complicates the adoption of e-signatures, leading to uncertainty about their legal equivalence to traditional paper contracts. Additionally, there are no clear mechanisms for recognizing foreign e-signatures, creating challenges for cross-border transactions. Nigeria's digital signature framework needs to be interoperable with international systems to facilitate global trade, particularly by ensuring mutual recognition of foreign digital certificates and electronic signatures. Although Nigeria has a Public Key Infrastructure (PKI) Regulation governing digital signatures, it still lacks crucial provisions. Figure 12 indicates that while Nigeria legally recognizes basic "electronic signatures," such as a typed name at the end of an email, it does not provide clear acceptance for certificates issued by qualified certification authorities. As a result, digital signatures backed by a valid certificate do not carry the same legal weight as handwritten signatures. This lack of alignment contrasts with countries like Côte d'Ivoire, Ghana, and Kenya, where stronger legal frameworks for digital signatures are in place.

³⁷ See

<https://uncitral.un.org/en/texts/ecommerce#:~:text=The%20most%20widely%20enacted%20text,principles%20of%20non%2Ddiscrimination%20against.>

³⁸ World Bank (2018).

³⁹ Pichler and Tomić (2019).

Figure 12. Electronic signature and digital identification



Note: For individual countries, bubbles' size and color indicate the existence of such regulatory measure. Green represents positive regulatory measures. Red indicates regulatory restrictions to digital trade. For regional and income groups, bubbles represent the regulatory "readiness" in each category, based on the share (in quintiles) of positive answers in that category from 0 to 100. 

Source: World Bank DTRR database (forthcoming 2025)

The national digital ID system in Nigeria is fully regulated, as indicated by Figure 12. The system is important for secure and reliable identification, essential for facilitating e-transactions and accessing e-government services.

In summary, while Nigeria has taken steps toward recognizing electronic transactions, significant gaps remain in its legal framework, limiting the effectiveness of digital signatures and electronic contracts. The absence of a comprehensive regulatory framework for electronic documents and signatures creates legal uncertainty. Nigeria also lacks a designated authority to oversee electronic authentication, and there are no clear mechanisms for recognizing both domestic and foreign e-signatures. Additionally, while the PKI Regulation exists, it does not ensure that digital signatures backed by valid certificates hold the same legal status as handwritten signatures. These challenges, along with the lack of clear regulations for trust service providers present significant barriers to fully integrating electronic transactions and strengthening Nigeria's digital economy.

The adoption of the National Digital Economy and E-Governance Bill would go a long way to cover some of these gaps. The Bill includes meaningful provisions on electronic documents and signatures, electronic invoicing and even transferable records, overcoming some of the major gaps highlighted above.

4.4 Intermediary liability

The Internet's ability to connect individuals worldwide has boosted business models based on intermediation between vendors and consumers. Distribution platforms like Jumia and Anka offer goods to consumers from thousands of different providers rather than their own stock. "Gig economy" apps offer services such as taxi rides, lodging, or delivery of food or groceries from firms and individuals. Other services rely on content such as video (YouTube, Vimeo), opinions and reviews of products or services (Yelp, Google), or information (blogs) developed by thousands of users, most of whom remain relatively unknown to the final consumer. The relationship between the intermediary (websites and apps) and the firms or individuals offering their own goods or services is hence essential to the functioning of those digital transactions.

Given the central role of digital platforms, clear rules on intermediary liability are essential to digital trade. Social media and e-commerce platforms are the trademark of digital markets, whose inherent universality provide a natural environment for connecting suppliers and consumers around the world. Further, the network effects involved in digital platforms (i.e. a service becomes more valuable when more people use it) incentivize the growth of a limited number of major global providers. These providers, however, can face significant challenges in the absence of adequate, modern rules on intermediary liability. This can result in severe consequences due to user activities, even when the platforms themselves are not directly responsible. These consequences could include substantial fines, operational restrictions, or even forced shutdowns. Further, those risks disproportionately affect domestic start-ups, who may face potentially prohibitive costs in case of improper conduct by their users. By establishing balanced and transparent rules on intermediary liability, governments can foster a safer online environment for consumers while also ensuring that both dominant platforms and emerging domestic players can operate with legal certainty and fair accountability.

Rules on intermediary liability need to strike a balance between protecting consumer rights and supporting the expansion of digital markets. Intermediary liability rules set out the responsibility that falls upon online intermediaries, such as e-commerce marketplaces, social networks and other platforms for third-party content featured in, or goods and services offered through, their website or apps. Digital intermediaries manage the relationship with the consumer, and they are often the larger more sophisticated party involved in the transaction. As such, regulations can impose liability on intermediaries (jointly with the third party) for fake or faulty goods or services, or for offensive or illegal content, transacted through or featured in their services. On the other hand, intermediaries often do not have full knowledge of everything that is being offered by producers and content developers, who have greater control over it. In this context, well-defined and balanced rules provide assurances to consumers and users that digital platforms have procedures in place to minimize offensive or unlawful content, while they also allow platforms, especially in their start-up stage, to engage in these business models by limiting the legal compliance risk and costs faced by such platforms.

Nigeria has established a basic framework for platform liability but lacks essential provisions. Similar to some of its regional peers, Nigeria has introduced basic rules concerning the liability of digital intermediaries (see Figure 13). The Copyright Act includes safe harbor provisions that protect hosting providers from liability for intellectual property infringements. However, these provisions are minimal and do not provide a comprehensive framework. Critical elements, such as clear limitations on platform liability for unlawful content – such as the distribution of child pornography by users – and the necessary procedural steps for liability exemptions, are absent.

Platforms may hence face heavy costs in legal liability for unlawful content or products submitted by their users and vendors, even when they have taken all due-diligence steps to prevent it. The exemption from intermediary liability does not cover violations of intellectual property rights, such as copyright and brands, so online platforms would be fully liable for counterfeit goods sold by vendors through their platform. Given the limited scope of the provisions, relationships between the platforms, users and third parties related to online distribution of goods are governed by standard tort laws or even contractual terms, which often leads to uncertain and undesirable results. Smaller firms, especially start-ups, may find this legal risk daunting and potentially overwhelming, thus chilling growth and innovation in the local ecosystem for digital trade in services. While responsible businesses tend to adopt measures to monitor and limit potential unlawful content, the lack of explicit rules allows for fraudulent actors to also enter the market reducing trust in online transactions and hampering growth of digital markets.

Figure 13. Rules on intermediary liability



Note: For individual countries, bubbles' size and color indicate the existence of such regulatory measure. Green represents positive regulatory measures. Red indicates regulatory restrictions to digital trade. For regional and income groups, bubbles represent the regulatory "readiness" in each category, based on the share (in quintiles) of positive answers in that category from 0 to 100 .
Source: World Bank DTRR database (forthcoming 2025)

4.5 Other regulatory and policy challenges

Nigeria's trade digitalization progress is hindered by weak regulations and enforcement.

The lack of a comprehensive and well-enforced regulatory framework for digital trade hinders Nigeria's progress in trade digitalization. Key regulations for trade automation, such as e-invoicing, electronic documents, and transferable records, remain weak or non-existent for the time being. The absence of clear legal provisions for these processes creates uncertainty for businesses and limits the adoption of digital trade solutions.

Physical documentation-based border procedures increase trade costs and inefficiencies.

Despite Nigeria's growing digital economy, border procedures remain heavily reliant on paper documentation, increasing trade costs and delays. The lack of an effective single window system for trade facilitation further exacerbates inefficiencies in cross-border transactions. These challenges significantly limit the country's ability to streamline trade processes and integrate with global digital trade frameworks.

Figure 14. Adoption of Key Trade Digitalization Measures in Nigeria

	DTRR	UN GlobL Survey Digital & Sust. Trade
4) Electronic invoicing - No denying the legal effect/validity/admissibility of an e-invoices solely because electronic - Implementation of measures related to invoicing in its jurisdiction is designed to support cross-border interoperability. For that purpose, each [Party/Member] shall base its measures related to e-invoicing on international systems, guidelines or recommendations, where they exist	Not implemented Not implemented	
5) Single Windows Establishment of arrangements by which authorized private entities, such as port community systems, logistic service providers and e-commerce platforms, may exchange data with the single window system in lieu of traders and other trade stakeholders under an agreement to use this private solution		Not implemented

Source: WB staff Digital Trade Policy Gap Assessment

Nigeria has yet to implement essential trade digitalization measures. Furthermore, Nigeria's slow progress in implementing trade digitalization initiatives is reflected in the absence of electronic invoicing and e-single window systems. As indicated in Figure 14, Nigeria has yet to implement

essential digital trade facilitation mechanisms. Without policy action, Nigeria risks falling behind in regional and global trade digitalization efforts.

Implementing and strengthening trade digitalization policies and procedures are important for Nigeria's digital trade future. Strengthening digital trade regulations and implementing key trade automation tools are critical steps for Nigeria to enhance its digital trade environment. Addressing these challenges will enable the country to improve trade efficiency, reduce costs, and foster greater participation in the global digital economy.

5 MAIN FINDINGS AND NEXT STEPS

5.1 General observations and main findings

Nigeria has made good progress in improving the connectivity foundations for digital trade. Access to electricity, Internet coverage and usage have all increased, and affordability has especially improved. Still, key challenges remain, particularly in terms of uneven Internet penetration and digital skills shortcomings.

The country's exports of digitally delivered services experienced a temporary decline in 2021 but have since rebounded. In spite of the setbacks, the country has demonstrated resilience, with financial services strongly driving growth since 2021. The gradual recovery highlights Nigeria's increasing integration into global digital markets and the role of digitally delivered services in economic expansion.

Nigeria has undertaken WTO commitments and participates in ongoing work that contributes to a facilitative environment for digital trade, but gaps remain in some areas. The country has ratified the WTO's TFA, has undertaken GATS commitments in digital trade enabling service sectors such as telecommunication, financial, and maritime transport services, and it is currently in the process of adopting disciplines aimed at increasing transparency and predictability of procedures related to services trade. It also participated in the negotiations of the AEC and the IFD Agreement. However, it does not participate in the ITA. Nigeria is also a participant in regional frameworks such as the AfCFTA, which can also promote digital trade.

Nigeria has taken important steps toward regulating digital trade, with notable progress in data protection and cybersecurity. This regulatory framework has helped establish greater security and trust in digital transactions. However, significant gaps remain in important areas, including the legal recognition of electronic documents, enforceability of digital signatures, consumer protection in e-commerce, and intermediary liability. These regulatory shortcomings present challenges for businesses and consumers, limiting Nigeria's ability to fully capitalize on digital trade opportunities. To address these issues, the government is actively revising its regulatory landscape, with new bills namely "Nigeria National Digital Economy and E-governance Bill" and "National E-commerce Policy and Strategy Bill" under consideration to strengthen digital trade governance and ensure alignment with international standards.

These Bills aim to establish a structured legal environment that enhances digital transactions, e-governance, and trade facilitation. By setting clear legal standards for electronic transactions, cybersecurity, and digital records management, the Bill seeks to improve regulatory certainty and trust in Nigeria's digital economy.

5.2 Maximizing the benefits of trade agreements

Trade agreements offer the opportunity to build, and legally guarantee, policy regimes that are conducive to greater digital trade. Nigeria may consider using existing and emerging trade agreements to anchor its own efforts to increase its participation in digital trade. It can do so at the WTO or in regional contexts. For example, it can bring its commitments closer to its currently applied regimes for services and ICT goods trade, or even commit to the future opening of its trade policy regimes in a manner that increases competition and encourages greater investment in digital trade-enabling sectors. Making these commitments in the context of trade negotiations would have the potential added benefit of helping overcome resistance to domestic reforms by securing market openings in other sectors of domestic economic interest.⁴⁰

⁴⁰ See WTO (2019).

5.3 Policy and regulations

The current World Bank's Digital Trade Policy gap analysis points to a number of regulatory and institutional initiatives (see more details in Table 1) that would further help fostering digital trade by increasing trust in digital transactions. Some specific recommendations⁴¹ resulting from the analysis are listed below. Some of these recommendations are also included in the Nigeria National Digital Economy and E-Governance Bill, which, at the time of writing this report, has not yet been enacted into law.

- **Clarifying data sovereignty and reducing barriers to cross-border data transfers.**

Data localization regulations play a critical role in shaping Nigeria's digital trade environment, particularly for digitally delivered services. While Nigeria has introduced an "adequacy" regime for data protection through its Law On Data Protection 2023, aligning with global trends and allowing cross-border transfers without direct restrictions, ambiguities in existing regulations create uncertainties for businesses and investors. Specifically, the Guidelines for Nigerian Content Development in ICT mandate data localization but fail to clearly define "sovereign" data, leaving room for inconsistent interpretations and enforcement challenges.

The National Digital Economy and E-Governance Bill, 2024, currently under review, presents an opportunity to address these inconsistencies and establish a more coherent data governance framework. While the Data Protection Law 2023 lays a foundation for secure data flows, the Bill could further refine provisions to balance national security concerns with trade facilitation. Nigeria may consider defining "sovereign data localization" more precisely to ensure protection of sensitive national data without imposing unnecessary restrictions that could deter foreign investment or increase compliance costs for businesses.

A more flexible and transparent regulatory framework should be introduced to differentiate between data categories requiring strict localization—such as those related to national security—and those that can be transferred freely under internationally recognized data protection standards. Aligning Nigeria's approach with regional ECOWAS and global best practices would facilitate seamless data flows while safeguarding privacy, security, and economic competitiveness.

- **Ensuring consumer protection policies are operational and well-known.** Despite Nigeria's growing digital marketplace, gaps in enforcement and cross-border dispute resolution hinder consumer trust in e-commerce. The National Digital Economy and E-Governance Bill introduces commendable consumer protection measures, such as vendor information disclosure and contract cancellation rights. However, the lack of strong enforcement mechanisms and clear guidelines for cross-border transactions creates regulatory uncertainty, particularly regarding the jurisdiction of foreign entities selling to Nigerian consumers.

To enhance trust and ensure effective consumer protection in digital transactions, Nigeria should implement a dedicated regulatory framework that aligns the Bill with the Federal Competition and Consumer Protection Act. Strengthening enforcement mechanisms within relevant agencies, such as the Federal Competition and Consumer Protection Commission (FCCPC), will be crucial for ensuring that consumer rights are upheld in online transactions.

Furthermore, an accessible and efficient dispute resolution mechanism for cross-border e-commerce should be introduced to ensure fair outcomes for Nigerian consumers dealing with foreign vendors. A centralized consumer complaint and redress system would also provide a structured process for resolving digital transaction disputes.

Additionally, raising public awareness on consumer rights and protection measures in digital trade is essential. Implementing a nationwide awareness campaign that educates consumers on their rights and available legal recourse would help boost confidence in Nigeria's digital economy. Collaboration between government agencies, private sector stakeholders, and

⁴¹ The recommendations contained in sections 5.3 and 5.4 are from the World Bank only. The WTO Secretariat does not offer trade policy advice or recommendations.

consumer protection groups will be key in ensuring compliance and fostering a more secure and transparent digital marketplace.

- **Implementing electronic transactions and e-signature regulations.** Nigeria's regulatory framework for electronic transactions remains incomplete, limiting the adoption of digital authentication and e-signatures. While digital authentication and electronic signatures play a crucial role in enabling cross-border contracts, particularly in B2B transactions, Nigeria lacks a comprehensive legal framework to regulate their use. The absence of a dedicated e-commerce law leaves a significant gap in the country's digital trade governance. To facilitate digital trade and attract investment, Nigeria should establish a legally binding framework for e-documents and e-signatures.

The National Digital Economy and E-Governance Bill, 2024, represents an opportunity to formalize the legal recognition of electronic signatures and ensure that Nigeria's framework is interoperable with international systems. The Bill currently recognizes two types of digital signatures, but further clarity is needed to facilitate their use in commercial transactions and cross-border agreements. The government should align the Bill with the existing PKI Regulation to ensure coherence between different regulatory instruments governing electronic authentication.

Additionally, the mutual recognition of foreign digital certificates and e-signatures should be a priority to enable seamless participation in global trade. Legal recognition of digital authentication and its admissibility in court will provide greater confidence for businesses and individuals, fostering a more dynamic and secure digital economy in Nigeria.

- **Adopting a balanced framework for intermediary liability.** A modern and balanced regulation to address the rights and obligations of intermediary platforms would support good practices and trust in the digital environment, while reducing legal risks faced by start-up platforms.
- **Enhancing Trade Digitalization.** Nigeria has made progress in trade digitalization, but key gaps remain in automation and regulatory alignment. Paper-based customs clearance and limited electronic invoicing continue to increase costs and inefficiencies. To accelerate digital trade, Nigeria must fully implement an integrated single window system and automate border procedures. The National Digital Economy and E-Governance Bill, addresses most of the required provision to establish a clear regulatory framework, and alignment with global best practices. A coordinated approach involving government agencies and private sector stakeholders will drive efficiency, transparency, and Nigeria's integration into the global digital trade ecosystem.

Table 1: Detailed summary table of WB policy and regulatory recommendations

	Challenges	Possible Actions	
		Short term	Medium/Long term
Data protection and cross-border data flow	Lack of clear definition for "sovereign data" in existing regulations, leading to uncertainty in data localization and cross-border transfers.	Clarify the definition of "sovereign data" in the Guidelines for Nigerian Content Development in ICT. Align data protection requirements with the Data Protection Law 2023 to eliminate inconsistencies.	Establish a framework that enables secure cross-border data transfers while ensuring compliance with national security and privacy standards. Harmonize data governance with ECOWAS digital trade policies.
Consumer protection	Lack of trust in e-commerce platforms; little public awareness about consumer rights	Implement awareness campaigns on consumer rights in digital transactions.	Introduce stronger cross-border e-commerce dispute resolution mechanisms.
	Weak enforcement mechanisms for online consumer protection and lack of clear jurisdiction in cross-border e-commerce disputes.	Strengthen enforcement mechanisms for online consumer protection laws. Establish a consumer protection agency dedicated to digital trade to monitor compliance and resolve disputes.	Inadequate resources and technical capacity increase funding and training for agencies responsible for enforcing digital trade laws. Develop a long-term capacity-building strategy to equip regulators with digital trade expertise. Allocate resources for digital infrastructure and cybersecurity.
Electronic transactions and e-signature regulations	Uncertainty about the legal validity of electronic contracts and absence of a structured regulatory framework.	Adopting a comprehensive framework for e-documents and e-transactions Appoint and empower implementing agency for electronic authentication and signatures. Pass regulation or guidance setting out requirements and procedures for recognition of foreign signatures.	Ensure legal recognition in courts by updating judicial guidelines.
	Need for flexible e-signatures for commercial use.	Introduce alternative regime for digital signature for commercial purposes that facilitates private adoption.	
Intermediary liability	High legal liability risks for platforms for content	Introduce an intermediary liability framework that balances platform accountability with protections for digital service providers.	Foster dialogue between regulators, digital platforms, and stakeholders to ensure compliance with evolving digital trade laws.
Trade Digitalization	Lack of fully integrated online single window system and reliance on paper-based customs procedures.	Develop a comprehensive online single window system to streamline trade processes.	Fully implement a national single window platform integrated with regional and global trade networks.
		Expand electronic documentation and automation in customs procedures.	Establish an interoperable digital trade system aligned with AfCFTA and ECOWAS digital trade initiatives.

5.4 Digital infrastructure

As noted in Section 2, Nigeria has made significant strides in developing its digital infrastructure; however, challenges persist in achieving widespread adoption of digital technologies, particularly in bridging the urban-rural divide and enhancing services for vulnerable populations. To address these issues, the Nigerian government has outlined several strategic initiatives:

- **Expanding Fiber Optic infrastructure:** The government aims to add 90,000 km of fiber optic cables to enhance both backbone and last-mile connectivity, as detailed in the national strategic blueprint “Accelerating our collective prosperity through technical efficiency⁴²” and the white paper “Broadband Access for All – Deepening Nigeria’s National Backbone and Middle Mile Infrastructure.”⁴³ The strategic blueprint commits to achieving 70% broadband penetration rate by 2025 and the deployment of 95,000 KM of fibre optic cables by 2027. The blueprint also commits to 80% broadband population coverage by 2027 and decreasing the gap of unconnected Nigerians from 61% to 20% by 2027. This expansion focuses on connecting educational institutions, healthcare facilities, and other government entities to high-speed Internet, addressing the current scenario where less than 10% of schools have reliable Internet access.⁴⁴ Expanding fiber optic infrastructure is crucial for Nigeria’s digital advancement, as it offers high-speed and reliable Internet connectivity essential for various sectors, including education, healthcare, and commerce. In furtherance of this goal, the Government has, through the Federal Executive Council (FEC) approved the establishment of a Special Purpose Vehicle (SPV) to deploy the national backbone/middle mile in collaboration with the private sector. Fiber optics provide faster data transmission and greater bandwidth compared to traditional copper cables, enabling seamless digital experiences and supporting data-intensive applications, hence spurring demand for Internet usage. This expansion addresses current challenges such as limited Internet access in rural areas, high latency, and network unreliability which can, in turn, bridge the digital divide, enhance service quality, and foster economic growth through improved digital infrastructure.
- **Strengthening the regulatory framework to improve competition in the telecommunication sector:** Competition in the telecommunication sector brings down costs of basic digital infrastructure that would benefit the society as a whole and the most remotely connected (spatially and/or socially) in particular. Competition in general is crucial for productivity gains which is the key for long-term growth. It is especially important for telecommunications and digital development for their significant impact on downstream sectors, private sector development and consumers.

Recognizing that competition in the telecommunications sector is pivotal for reducing the costs of digital infrastructure, Nigeria has undertaken significant liberalization efforts. The establishment of the Nigerian Communications Commission (NCC) in 1999 ended the monopoly of the incumbent operator, NITEL, facilitating the entry of new players through transparent licensing processes.⁴⁵ This strategic liberalization has led to the emergence of major operators such as MTN, Globacom, Airtel, and 9mobile, enhancing service availability and quality across the country. Despite these advancements, challenges persist. To further increase affordability and service quality, Nigeria could strengthen its legal and regulatory framework to ensure fair competition, particularly in the fixed broadband market. One key area could include Nigeria amending Section 92 of the Nigerian Communications Act, 2003 or its regulations, to require Nigeria Communications Commission (NCC) to carry out market analysis on a timebound schedule and impose, monitor and enforce regulatory obligations on dominant operators. As also noted in Section 3.1.1, upgrading bindings for telecommunications services in trade agreements could help guarantee market openness and regulatory certainty, which can in turn support investment in key enabling services and strengthen the country’s ability to capitalize on digital trade opportunities. In addition, Nigeria could incentivize infrastructure sharing with non-telecom utilities, such as electric

⁴² <https://fmcide.gov.ng/wp-content/uploads/2023/11/blueprint.pdf>

⁴³ https://drive.google.com/file/d/1fpXV5y1GGePQrHCaW_hy6tEc9W7-T3f/view

⁴⁴ World Bank, 2019.

⁴⁵ World Bank, 2019.

power providers, and opening the market to innovative entrants. Engaging in public consultations with key stakeholders—including government agencies, private sector representatives, and civil society organizations—will be crucial to align efforts and drive the sector forward. One step in this direction has been the establishment of the national broadband alliance for Nigeria (NBAN), launched in February 2025. The goal of NBAN is to bring together public, private, State Governments, NGOs, CSOs and development partners to support the growth of the digital economy and to implement initiatives to enable fibre deployment, address non consumption and regulatory obstacles.

5.5 Potential future work

The WTO and the World Bank are ready to undertake a joint action programme, tailored to Nigeria's needs. The two institutions can complement each other's assistance initiatives and offerings in a manner that strengthens Nigeria's ability to leverage the promise of digital trade.

The World Bank is engaged with Nigeria both through lending operations and advisory and analytical services, and WTO technical assistance can complement these efforts. Implementing the World Bank's recommended policy and regulatory reforms would involve initiating technical assistance activities aimed at refining diagnostics for each reform area to support digital trade. The World Bank's engagement would include conducting in-depth analyses, proposing concrete regulatory changes through normative draft texts, facilitating extensive consultations with stakeholders and supporting the adoption of reforms. The WTO offers training and technical assistance (TA) activities that could reinforce policymakers' awareness and understanding of the trade disciplines applicable to digital trade. This is an area which WTO TA recipients have indicated as a priority in a recent survey.⁴⁶

Technical assistance can be tailored to the specific needs of Nigeria. Depending on the nature of the reforms envisaged – whether requiring legislative amendments or infra-legal regulations like decrees – World Bank technical assistance could be structured as standalone initiatives, initiated upon government request, or integrated into existing or future lending operations with a dedicated technical assistance component. WTO technical assistance activities can, for their part, provide a catalyst to engage a diverse range of domestic stakeholders in a dialogue centred on digital trade. They can also help foster greater domestic inter-agency coordination and may contribute to the development of a more encompassing and coherent approach to digital trade policymaking.

The WTO and the World Bank could also engage other international organizations, academics and donors to further focus technical assistance on the regulatory framework for digital trade. This would offer Nigeria the opportunity to benchmark its regulatory framework against regional and global economic peers with a view to charting a possible course to strengthen it. If so requested, the WTO stands ready to provide tailored technical assistance focused on existing WTO rules, emerging disciplines, and their relation to the digital policy regime in Nigeria.

Digital connectivity is also an established theme of the WTO-led Aid for Trade initiative and, together with digital trade, is an area where financing is flourishing, including in the form of public-private partnerships. The WTO and the World Bank can play an important role in promoting coherence in the deployment of the resources mobilised to address the trade-related constraints identified by developing and least-developed countries. Under Aid for Trade, donors have already announced financing commitments of nearly USD 500 million over the 2023 to 2025 period to support Internet connectivity and the digital economy in various African countries, including Nigeria.

⁴⁶ WBG/WTO (2023a). The most recent survey, which was conducted in the context of planning for WTO training activities in 2026-27, confirmed e-commerce as a priority TA area for African WTO Members.

ANNEXES

ANNEX 1 – WORLD BANK'S DIGITAL TRADE POLICY GAP ANALYSIS

The World Bank's Digital Trade Policy Gap Analysis provides an assessment of Nigeria's digital trade regulations. It is structured into several sections, each focusing on a specific aspect of digital trade regulation such as electronic transactions frameworks, electronic authentication, electronic signatures and electronic contracts, consumer protection, data protection and others (see Table A1).

Table A1. Data sources for desktop review of Gap Analysis

	STRI (WTO-WB)	DTRR	ECIPE DTRI	STRI (OECD)	UNCTAD Cyberlaw tracker	Data Guidance	UN Global Survey Digital & Sust. Trade	OECD Open Gov. Data	Global Open Data Index	Global Trade Alert	DE4A	E-Trade Readiness
Positive or facilitative obligations												
Electronic transactions frameworks	✓	✓		✓	✓						✓	✓
Electronic authentication		✓		✓	✓						✓	✓
Electronic signatures	✓	✓		✓	✓						✓	✓
Electronic contracts	✓	✓		✓	✓						✓	✓
Electronic invoicing	✓	✓									✓	✓
Paperless trading	✓	✓					✓				✓	✓
Single Windows							✓				✓	✓
Open government data								✓	✓	✓	✓	✓
Access to and Use of the Internet				✓								
Online consumer protection	✓	✓			✓						✓	✓
Unsolicited commercial electronic messages	✓	✓			✓	✓					✓	✓
Cybersecurity		✓			✓	✓					✓	✓
Personal information/data protection	✓	✓		✓	✓	✓						
Telecomm services-Reference paper	✓			✓								
Transparency											✓	
Cooperation and cooperation mechanisms											✓	
Cross-border data/information flows	✓	✓	✓	✓		✓					✓	✓
Location of computing facilities		✓		✓		✓						
Intermediary Liability	✓	✓		✓								

The Gap Analysis includes the following steps:

1. **Review and classification of relevant provisions:** The Gap Analysis addresses policies and regulations that are generally covered in trade negotiations, such as the plurilateral WTO Agreement on E-Commerce. The choice of such an instrument is based on its broad (potential) geographical coverage, and the fact that it generally reflects policies and rules on digital trade present in other RTAs already in force. For completeness, however, additional key regulations that were not included in the agreement are also addressed in the Gap Analysis, namely provisions on cross-border data transfers and intermediary liability. Individual provisions of each policy category are separated for individual review, resulting in a total of 66 individual provisions stemming from 19 policy categories.
2. **Assessment of policies with regard to individual provisions:** The analysis then focuses on the regulatory framework of the country concerned, and assesses whether relevant regulations exist and align with the requirements or expected practices outlined in the trade agreement, such as enabling cross-border data flows or providing legal certainty for electronic transactions. The desktop review of the regulatory framework draws upon various standard databases and reports, such as the World Banks' DTRR database (forthcoming 2025), WB-WTO's Services Trade Policy Database, STRIs from OECD and from WB-WTO, and DTRI from the European Centre for International Political Economy (ECIPE), in addition to other available literature and country specific sources of information. For each category, the document lists provisions

and assigns a rating ('Implemented', 'Not Implemented', 'Partially Implemented') based on the current state of the country's regulations.

3. **Assessment of gaps between current regulatory frameworks and best practices at the policy level:** Based on the assessment at the level of each provision, the analysis turns into aggregating such assessment at the policy level, for each of 19 categories in the analysis. This expert assessment is not free from subjective considerations; however, the granular review of each provision provides a solid factual base that limits subjectivity'.

4. **Based on such assessment, identification of recommendations at the provision and policy level** that would support the development of an enabling regulatory framework for digital trade, in particular on the policy categories under review. This systematic approach aims to provide a comprehensive understanding of the country's regulatory "readiness" and eventual compliance with rules on digital trade featured in trade agreements.

Table A2 provides the assessment at the individual provision level, including the sources of information used in each case and the information taken therefrom.

Table A2. Digital Trade Policy Gap Analysis. Assessment of individual provisions / elements for Nigeria

The following provisions/elements are based on several of the disciplines contained in the text of the plurilateral WTO AEC, as well as other agreements, such as the AfCFTA Digital Trade Protocol.

Provisions/elements	Rating	Source: DTRR	Source: UNCTAD Cyberlaw tracker
Electronic transactions frameworks			
Adoption or maintenance of a legal framework governing e-transactions (in line with the principles of the UNCITRAL Model Law on Electronic Commerce 1996).	Not implemented	No provision was identified	No provision was identified
Avoidance of undue regulatory burden on e-transactions.			
Facilitating inputs into the development of the legal framework for e-transactions			
Adoption or maintenance of a legal framework for the use of electronically transferable records (taking into account the UNCITRAL Model Law on Electronically Transferable Records 2017.	Not implemented	No provision was identified	No provision was identified
Adoption of a national policy that either unduly restricts electronic commerce or treats it more restrictively than traditional forms of commerce.	Not implemented	No provision was identified	No provision was identified

Provisions/elements	Rating	Source: DTRR	Source: Digital Economy Initiative for Africa (DE4A)
Electronic authentication			
No denying the legal effect/validity/admissibility for e-seals, e-time stamps and e-registered delivery services, if any.	Partially implemented	Access to Registered Information in the National Identity Database Regulations Secs. 4,7 and 4,8	Registration (DNCR) was set up within the Federal Ministry of Interior (FMI). DNCR was tasked with issuing national identity cards. The program lasted 18 months and was not successful. In 2001, DNCR contracted a private company to issue national identity cards at a cost of USD 236.8 million. The program ran for five years, issued national identity cards to 37.3 million people, and was shelved. In 2007, the government passed the National Identity Management Commission (NIMC) Act and set up NIMC as the government agency responsible for identification in Nigeria. To date, NIMC has generated approximately 31.5 million National Identification Numbers (NINs). Nigeria currently has a highly

Provisions/elements	Rating	Source: DTRR	Source: Digital Economy Initiative for Africa (DE4A)
			fragmented ID landscape—over 13 federal government agencies and at least three state agencies offer ID services in Nigeria. ¹
No prohibiting parties to an e-transaction from determining appropriate e-authentication/e-signature methods (with some exceptions) and from having the opportunity to demonstrate compliance with relevant legal requirements before judicial or administrative authorities.	Partially implemented	Access to Registered Information in the National Identity Database Regulations Secs. 4,7 and 4,8	
Encouragement of use of interoperable e-authentication.			

Provisions/elements	Rating	Source: DTRR	Source: UNCTAD Cyberlaw tracker
Electronic signatures			
No denying the legal effect/validity/admissibility as evidence in legal proceedings of an e-signature solely because it is electronic (except as provided for under domestic laws).	Partially implemented	Evidence Act Sec. 93(2)	
Electronic contracts			
No denying the legal effect, legal validity, or enforceability of an electronic contract solely on the basis that the contract has been made by electronic means (except as provided for under domestic laws).	Not implemented	No provision was identified	No provision was identified

¹ the Department of National Civil Registration (DNCR) was set up within the Federal Ministry of Interior (FMI). DNCR was tasked with issuing national identity cards. The program lasted 18 months and was not successful. In 2001, DNCR contracted a private company to issue national identity cards at a cost of USD 236.8 million. The program ran for five years, issued national identity cards to 37.3 million people, and was shelved. In 2007, the government passed the National Identity Management Commission (NIMC) Act and set up NIMC as the government agency responsible for identification in Nigeria. To date, NIMC has generated approximately 31.5 million National Identification Numbers (NINs). Nigeria currently has a highly fragmented ID landscape—over thirteen federal government agencies and at least three state agencies offer ID services in Nigeria. Many of these capture biometrics and issue ID cards independently without establishing links with other systems, resulting in duplication and a waste of resources. In 2015 Nigeria registered 70 million voters at a cost of USD 627 million for a one-off biometric, voter registration exercise. Based on an illustrative analysis done in 2015, the FGN is on track to spend USD 4.3 billion on IDs across all such programs in Nigeria, of which USD 1.2 billion has already been spent and USD 3.1 billion is in the pipeline toward the current fragmented approach. FGN has indicated a strong desire to harmonize existing identification ecosystems. The government has prepared a Strategic Road Map to develop a foundational identification platform, which can be leveraged to improve service delivery. This has been endorsed by the Harmonization Committee at a second Vice Presidential-Level Workshop held on January 31, 2018. The road map was submitted to the Federal Executive Council for final government endorsement in September 2018. The proposed project will support NIMC and other ecosystem partners to implement the vision of the Strategic Road Map. The proposed ecosystem approach will leverage existing capabilities and enrollment facilities of government agencies, partners, and the private sector in Nigeria to rapidly increase coverage of the NIN.

Provisions/elements	Rating	Source: DTRR
Electronic invoicing		
No denying the legal effect/validity/admissibility of e-invoices solely because it is electronic (except as provided for under domestic laws).	Not implemented	No provision was identified
Implementation of measures related to e-invoicing in its jurisdiction designed to support cross-border interoperability. For that purpose, each [Party/Member] shall base its measures related to e-invoicing on international standards, guidelines or recommendations, where they exist.	Not implemented	No provision was identified

Provisions/elements	Rating	Source: UN Global Survey Digital & Sust. Trade	Source: DE4A
Paperless trading			
Encouragement to eliminate paper forms and documents and facilitate, as appropriate, the transition toward using forms and documents in data-based formats that can be processed electronically without human intervention.	Implemented	Automated Customs System established	Central Portal for Government Services (www.services.gov.ng)
Adoption of any form issued or controlled by customs for import, export, or transit of goods through its territory available to the public in an electronic format.	Partially implemented	Automated Customs System established, however is not fully implemented.	
Acceptance for processing electronically any form issued or controlled by customs and supporting documentation (such as invoices bills of lading packing lists, and money transfers) required by customs for import, export or transit of goods through its territory as the legal equivalent of the paper version of those documents.	Not implemented	Automated Customs System established, however is not fully implemented.	
Encouragement to cooperate, where appropriate, in international fora to promote the use of electronic forms and documents required for import, export and transit of goods.			

Provisions/elements	Rating	Source: UN Global Survey Digital & Sust. Trade	Source: DE4A
Adoption of the standards of, and/or methods agreed by relevant international organizations. Recognize in particular: Electronic phytosanitary certificate (e-Phyto), as defined in the International Standard for Phytosanitary Measures 12 of the Food and Agriculture Organization of the United Nations; Electronic CITES permit (eCITES), for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora; International Air Transport Association (IATA) Electronic Air Waybill (e-AWB) and Cargo XML; United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Data Interchange for Administration, Commerce and Transport (UN/EDIFACT), Electronic SPS Certificate (eCERT).]	Not implemented	At the planning stage	
Single Windows			
Each Party, when creating or maintaining its single window for trade facilitation, should aim to allow the electronic submission of required documents or data for importing, exporting, or transiting goods through a single access point, covering all relevant authorities or agencies involved.	Not implemented	At the planning stage	

Provisions/elements	Rating	Source: DE4A
Open government data		
• Making "government data" digitally available for public access and use	Partially implemented	The Nigeria Open Data Policy presents a great opportunity to increase access and improve accountability. Although the policy is still in the process of being adopted, the draft already contains elements of Open Data principles, including data completeness, timeliness, data propriety, and licensing. It states that government data should be presented in a complete and original or provenance format, "with the highest form of granularity, not in aggregate or modified forms." ²
• Digitally accessible public data, have to be with the following characteristics: (a) made available in a machine-readable and open format; (b) searchable and retrievable; (c) updated, as applicable, in a timely manner; (d) accompanied by metadata that is, to the extent possible, based on commonly used formats that allow the user to understand and utilise the data; and (e) made generally available at no or reasonable cost to the user.		
• To the extent a Party chooses to make government data available for public access and use, avoiding to impose conditions that unduly prevent or restrict the user of such data from: (a) reproducing, redistributing, or republishing the data; (b) regrouping the data; or (c) using the data for commercial and non-commercial purposes, including in the process of production of a new product or service.		

² It also states that government open data must be nonproprietary and should not require registration, which means that it should not be within the exclusive control of any entity. The draft policy, as a framework, indicates further that for data to be open it should be license free. In other words, it should not be "subject to any copyright, patent, trademark, or trade secret regulation.

Provisions/elements	Rating	Source: DE4A
Access to and use of the Internet		
• "Access to Internet" shall not cover the services provided through network infrastructure by natural or juridical persons within their premises, which are used exclusively for individual or organisational needs without any commercial intention to provide any Internet access to third parties or to public	Partially implemented	The National Broadband Policy (2013–2018)
• Ensuring that end-users in their territory are able to: access/distribute/provide and use services and applications of their choice available on the Internet, subject to: -reasonable network management; that does not discriminate between traffic of the same category; and which does not block or slow down traffic based on commercial reasons		
• Recognising that an Internet access service supplier that offers its end-user certain content on an exclusive basis would not be acting contrary to this principle. (b) connect the end-user devices of their choice to the Internet, provided that such devices do not harm the network; and (c) access [transparent and clear] information on the network management [practices / policies] of their Internet access service supplier.		

Provisions/elements	Rating	Source: DTRR	Source: UNCTAD Cyberlaw tracker
Online consumer protection			
Adoption of measures to proscribe misleading, fraudulent and deceptive commercial activities that cause harm, or potential harm, to consumers engaged in electronic commerce.	Not implemented	No provision was identified	No provision was identified
Adoption of measures that aim to ensure: (a) that suppliers of goods and services deal fairly and honestly with consumers; (b) that suppliers provide complete, accurate, and transparent information on goods and services including any terms and conditions of purchase; and (c) the safety of goods and, where applicable, services during normal or reasonably foreseeable use.	Not implemented	No provision was identified	No provision was identified
Promote access to, and awareness of, consumer redress or recourse mechanisms, including for consumers transacting cross-border.	Partially implemented	Federal Competition and Competition Protection Art. 132(2)	Federal Competition and Consumer Protection Act, 2018
Unsolicited commercial electronic messages (spam)			
Adoption of measures that: (a) require suppliers of commercial electronic messages to facilitate the ability of recipients to prevent ongoing reception of those messages; or (b) require the consent, as specified in the laws or regulations, of recipients to receive commercial electronic messages; or (c) otherwise provide for the minimisation of unsolicited commercial electronic messages.	Implemented	Cybercrimes (Prohibition) Act Art. 32(2)	

Provisions/elements	Rating	Source: DTRR	Source: UNCTAD Cyberlaw tracker
Provision to access to either redress or recourse against suppliers of unsolicited commercial electronic messages that do not comply with previous provision.	Not implemented	No provision was identified	

Provisions/elements	Rating	DTRR	UNCTAD Cyberlaw tracker	DE4A
Cybersecurity				
Adoption of provisions for (a) building the capabilities of their respective national entities responsible for cybersecurity incident response; (b) strengthening existing collaboration mechanisms to identify and mitigate malicious intrusions or dissemination of malicious code that affect electronic networks and use those mechanisms to swiftly address cybersecurity incidents, as well as for the sharing of information for awareness and best practices.	Implemented	Cybercrime Act 2015	Cybercrime Act 2015	The national cybersecurity strategy ("Stratégie Nationale de la Sécurité Numérique") was approved in early May 2020 and aims to define a national framework to protect digital users.
Provisions to build capabilities to prevent and respond to cybersecurity incidents by adopting, inter alia, risk-based approaches to mitigating threats that avoid trade restrictive and trade distortive outcomes.	Implemented	Cybercrime Act 2015	Cybercrime Act 2015	In 2014, the federal government of Nigeria developed the National Cybersecurity Strategy and Policy to lay out the roles of Nigeria's current and future institutions and governance for cybersecurity assurance of national critical information infrastructure assets. ³

Provisions/elements	Rating	DTRR	Data Guidance
Personal data protection			
Adoption of measures that provide for the protection of the personal data of users of electronic commerce.	Implemented	Nigerian Data Protection Act 2023	Nigerian Data Protection Act 2023

³ They describe a process of phased institution building that is comprehensive yet fragmented, with overlapping roles and responsibilities. For instance, the de jure mandate for the government's root CA is with the National IT Agency, NITDA; however, the de facto role is being played by the National Identification Management Commission, NIMC. Several new agencies, initiatives, departments, units, and working groups are proposed, without clear definition about delineation of mandates; there appear to be overlaps on capacity building (mandated to several MDAs), liaising with the private sector or creating a National Internet Safety Initiative (NISI).

Provisions/elements	Rating	DTRR	Data Guidance
Adoption of safeguards appropriate to ensure the protection of personal data and privacy, including through the adoption and application of rules for the cross-border transfer of personal data.	Partially implemented	Nigerian Data Protection Act Part VIII	Nigerian Data Protection Act Part VIII
Adoption of measures that ensure the protection of personal data, including the cross-border transfer and processing of personal data and the conditions and requirements relating to it to promote the fundamental values of respect for privacy and protection of personal data	Implemented	Nigerian Data Protection Act Part VIII	Nigerian Data Protection Act Part VIII
Applying principles and guidelines/international standards of relevant international organisations [such as the OECD Recommendation of the Council concerning Guidelines Governing the Protection of Privacy and Transborder Flows of Personal Data (2013)]	Partially implemented	No provision was identified	
Adoption of non-discriminatory practices in protecting users of electronic commerce from personal data protection violations [occurring within its jurisdiction.	No data	N/A	
Adoption of non-discriminatory practices in protecting users of electronic commerce from personal information protection violations occurring within its jurisdiction.	Implemented	Data Protection Act 2023, Art. 2	Data Protection Act 2023, Art. 2
Obtaining the directly expressed individual's consent for cross-border transfer and processing of his personal data.	Implemented	Data Protection Act Art. 43(1)(a)	
Publishing information on the personal data protections it provides to users of electronic commerce, including how: (a) a natural person can pursue remedies; and	No data	N/A	

Provisions/elements	Rating	DTRR	Data Guidance
(b) an enterprise can comply with [any] legal requirements.			
Development of mechanisms to promote compatibility between different regimes.	Implemented	Data Protection Act 2023, Art. 38	
Prohibition using the personal information of natural persons obtained from enterprises operating within their jurisdiction in a manner which constitutes targeted discrimination on manifestly wrongful grounds such as race, colour, sex, sexual orientation, gender, language, religion, political or other opinion, national or social origin, property, medical, birth, or other status, genetic identity, age, ethnicity, or disability.	Not Implemented	No provision was identified	
Any personal information disclosed to a government authority by an enterprise is protected against loss or theft, as well as unauthorized access, disclosure, copying, use or modification	Implemented	Cybercrimes Act Sec. 6, 8, 10, 12, 16	
Any personal information disclosed to a government authority by an enterprise is not accessed, disclosed, used or modified by a government authority in a manner that can reasonably be expected to cause significant harm to a natural person.	No data	N/A	

Provisions/elements	Rating	Source: DTRR
Cross-border data/information flows		
• Not restricting the cross-border transfer of information, including personal information, by electronic means.		No data
• Cross-border data flows shall not be restricted by: (a) requiring the use of computing facilities or network elements in the country's territory for processing, including by imposing the use of computing facilities or network elements that are certified or approved in the territory of the Party; (b) requiring the localization of data in the country's territory for storage or processing; (c) prohibiting storage or processing in the territory of other country; (d) making the cross-border transfer of data contingent upon use of computing facilities or network elements in the country's territory or upon localization requirements in the country's territory.	Partially implemented	Data Protection Act Part VII ⁴

Note:

Green – Implemented

The provision is fully addressed in the country's legal or regulatory framework.

Yellow – Partially Implemented

The provision is addressed in part, but gaps remain in coverage, enforcement, or implementation.

Red – Not Implemented

No relevant legal or regulatory measure has been identified for this provision.

Grey – No Data

The provision could not be assessed due to a lack of available information.

⁴ The new DPL does not have any explicit articles on data loc. However, the Guidelines for Nigerian Content Development in Information and Communication Technology states "the Host all subscriber and consumer data within the country in line with existing legislation".

Table A3. Reference of sources for Nigeria Gap Analysis

Source name:	Link:
WB Digital Trade Regulations Readiness Database (DTRR)	File available upon request.
UNCTAD Cyberlaw tracker	https://unctad.org/page/cyberlaw-tracker-country-detail?country=bj
Digital Economy Assessment Country Report: Nigeria – DE4A	https://documents1.worldbank.org/curated/en/387871574812599817/pdf/Nigeria-Digital-Economy-Diagnostic-Report.pdf
Data Guidance	https://www.dataguidance.com/legal-research/law-no-2009-09-may-222009-dealing-protection
UN Global Survey Digital & Sust. Trade	https://www.untfsurvey.org/economy?id=BEN

ANNEX 2 - WORLD BANK-WTO STRI, SELECTED SECTORS

Figure A1. STRI – Mobile Telecommunication Services (Nigeria and other African countries)

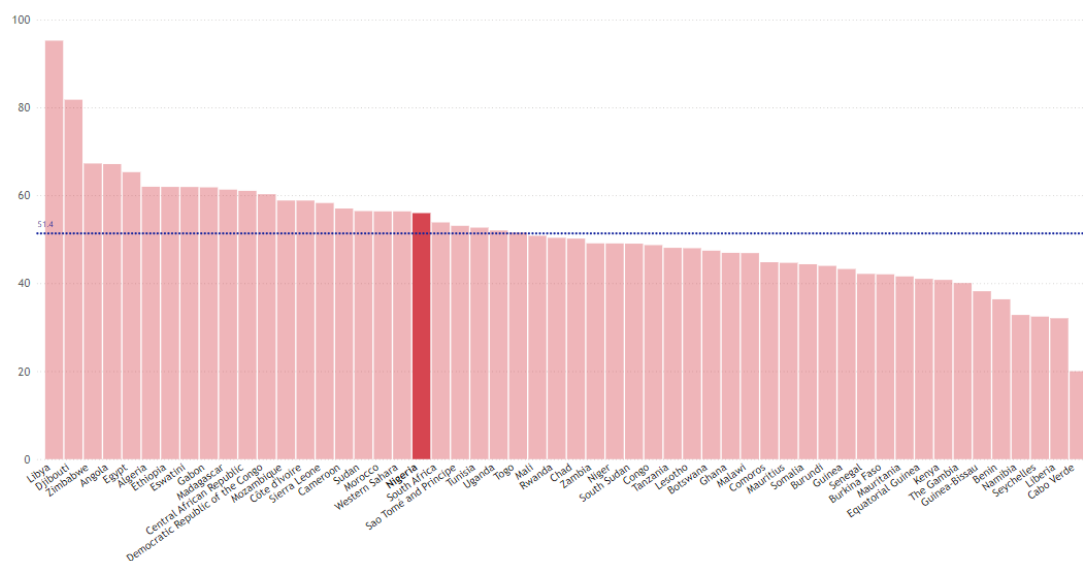


Figure A2. STRI – Fixed-Line Telecommunication Services (Nigeria and other African countries)

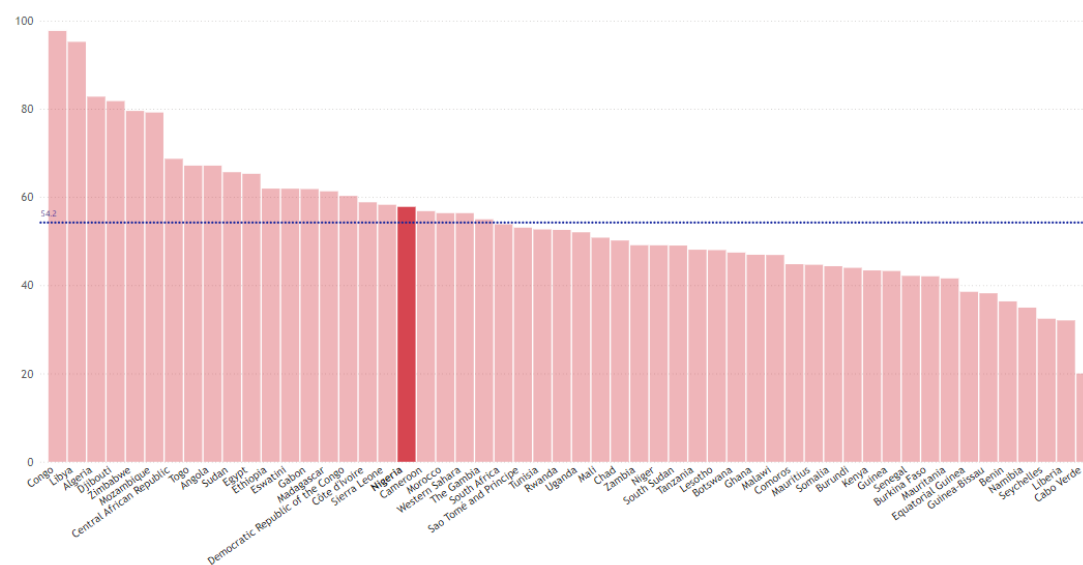


Figure A3. STRI – Computer services (Nigeria and other African countries)

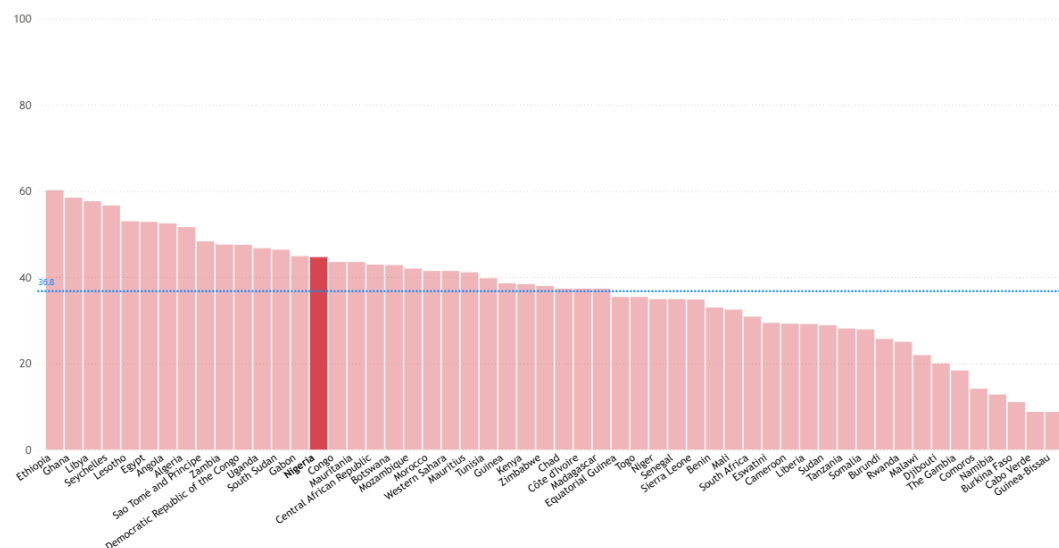


Figure A4. STRI – Retail distribution services (Nigeria and other African countries)

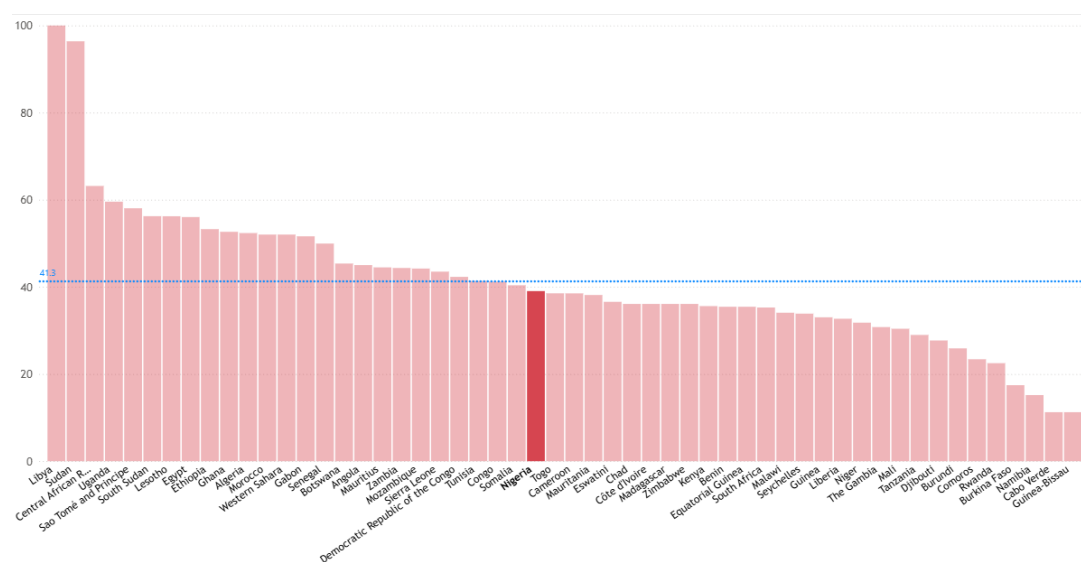


Figure A5. STRI – Wholesale distribution services (Nigeria and other African countries)

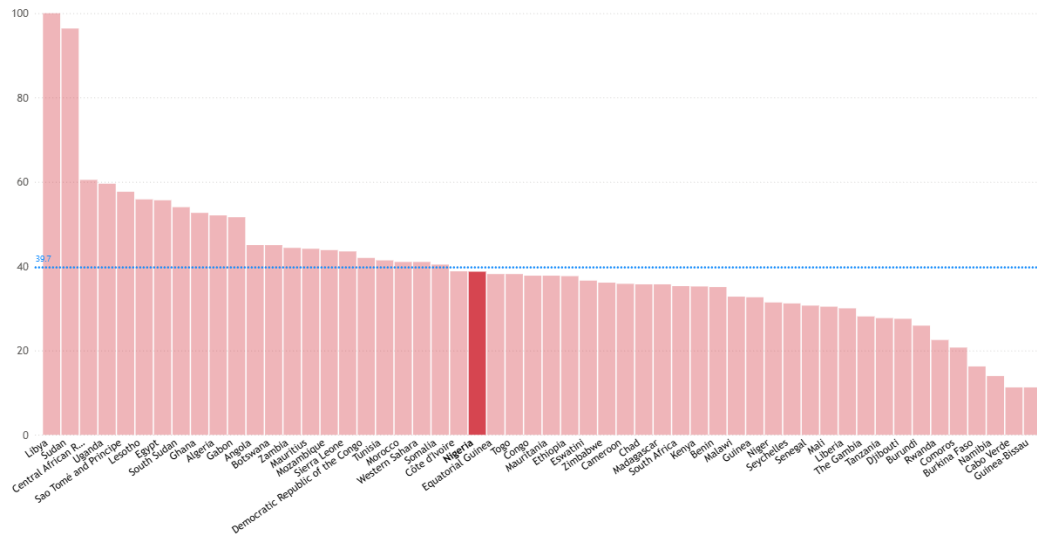


Figure A6. STRI – Commercial banking services (Nigeria and other African countries)

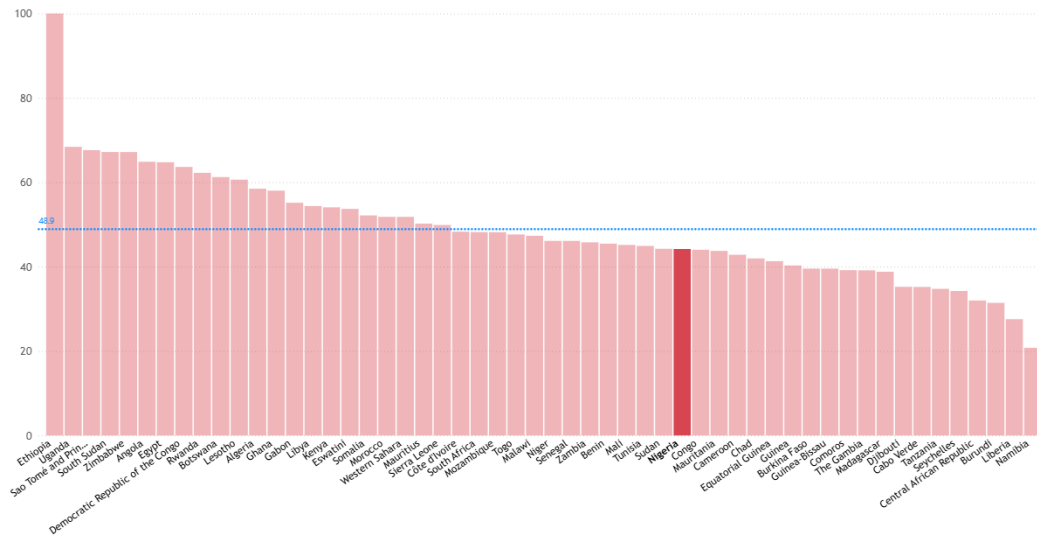


Figure A7. STRI – Maritime transport services (Nigeria and other African countries)

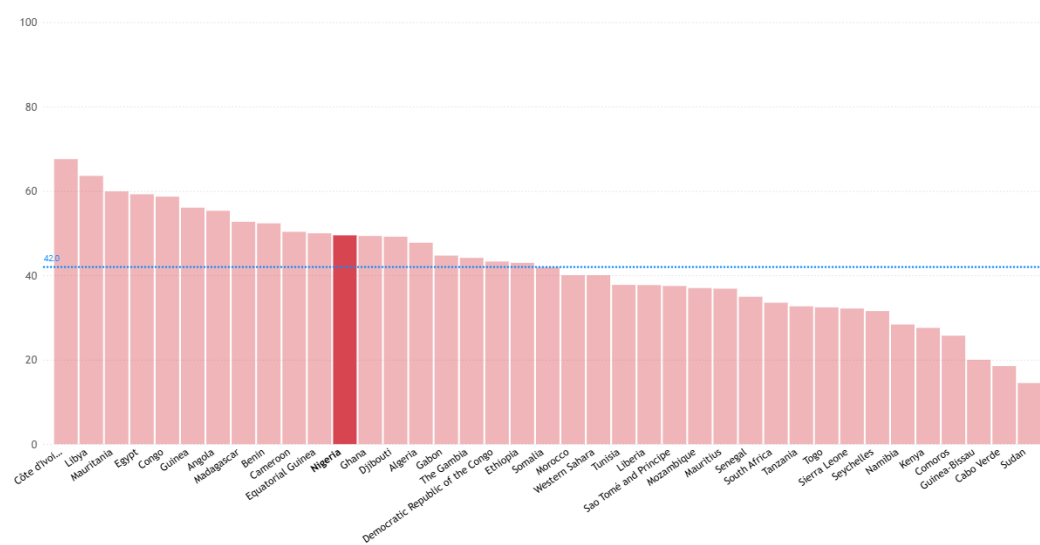


Figure A8. STRI – Road transport services (Nigeria and other African countries)

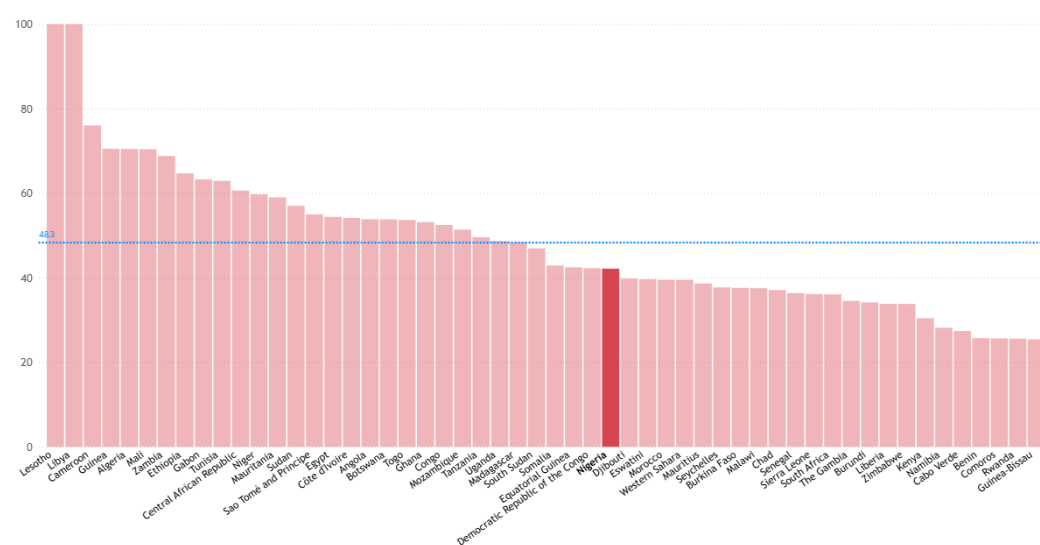
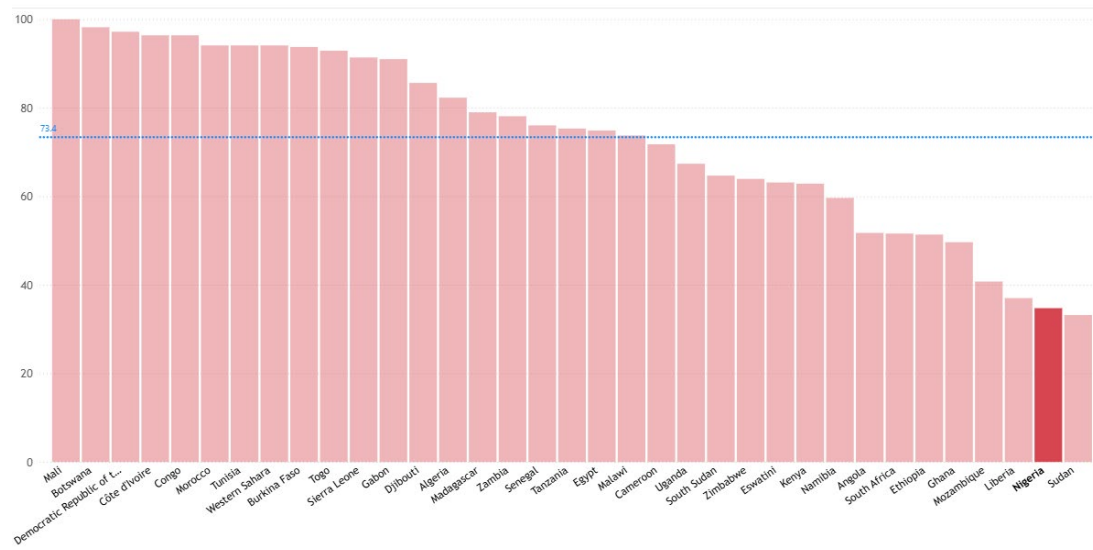


Figure A9. STRI – Rail transport services (Nigeria and other African countries)



REFERENCES

Chung Alex, and Ying Lu, 2021, *Consumer trust in the digital economy: The case for online dispute resolution*, UNCTAD Research Paper No. 72 UNCTAD/SER.RP/2021/15, November 2021. Available at: https://unctad.org/system/files/official-document/ser-rp-2021d15_en.pdf

CIGI-Ipsos Global Survey on Internet Security and Trust 2017

Ferracane, Martina Francesca; van der Marel, Erik. 2021. *Regulating Personal Data: Data Models and Digital Services Trade*. Policy Research Working Paper; No. 9596. © World Bank, Washington, DC. Available at: <https://openknowledge.worldbank.org/server/api/core/bitstreams/0b4562ce-777f-567b-8247-9441ec24a26c/content>

International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD), World Bank and World Trade Organization (WTO) (2023), *Digital Trade for Development*, Geneva: WTO. Available at https://www.wto.org/english/res_e/booksp_e/dtd2023_e.pdf

International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD) and World Trade Organization (WTO) (2023), *Handbook on Measuring Digital Trade*, Second Edition, Geneva: WTO. Available at https://www.wto.org/english/res_e/publications_e/digital_trade_2023_e.htm

Organisation for Economic Cooperation and Development (OECD) (2000), *Guidelines for Consumer Protection in the Context of Electronic Commerce*, OECD Publishing, Paris. Available at https://www.oecd.org/content/dam/oecd/en/publications/reports/2000/03/guidelines-for-consumer-protection-in-the-context-of-electronic-commerce_g1gh2530/9789264081109-en-fr.pdf

Pichler, D., and D. Tomić. 2019. "Electronic Signature in Legal Theory and Practice—New Regulation." Chapter 3 in *Economics of Digital Transformation*, edited by Saša Drezgić, Saša Žiković, and Marko Tomljanović, 57–70. University of Rijeka, Faculty of Economics and Business.

United Nations Trade and Development (UNCTAD), 2017. *Consumer Protection in Electronic Commerce: A Note by the UNCTAD Secretariat*. Geneva: United Nations.

World Bank Group (WBG) and World Trade Organization (WTO) (2023a), "Turning Digital Trade into a Catalyst for African Development", *Joint WBG–WTO Policy Note*, Washington, D.C.: World Bank. Available at https://www.wto.org/english/thewto_e/minist_e/mc13_e/policy_note_digital_trade_africa_e.pdf

World Bank Group (WBG) and World Trade Organization (WTO) (2023b), *Trade in Services for Development: Fostering Sustainable Growth and Economic Diversification*, Geneva: WTO. Available at https://www.wto.org/english/res_e/publications_e/trade_in_serv_devpt_e.htm

World Economic Forum, 2019. *The Global Governance of Online Consumer Protection and E-Commerce*. http://www3.weforum.org/docs/WEF_consumer_protection.pdf

World Trade Organization (WTO) (2019), *World Trade Report 2019: The Future of Services Trade*, Geneva: WTO. Available at https://www.wto.org/english/res_e/booksp_e/00_wtr19_e.pdf

World Bank Group (WBG) (2019), *Nigeria Digital Economy Diagnostic Report*, Washington, D.C.: World Bank.

World Trade Organization (WTO) (2023), *Global Trade Outlook and Statistics 2023*, available at https://www.wto.org/english/res_e/publications_e/trade_outlook23_e.htm.

ABBREVIATIONS

AfCFTA	Agreement Establishing the African Continental Free Trade Area
AEC	Agreement on Electronic Commerce
DE4A	Digital Economy Initiative for Africa
DTA	Digital Trade for Africa
DTRR	Digital Trade Regulatory Readiness
ECOWAS	Economic Community of West African States
GATS	General Agreement on Trade in Services
ICT	Information and Communication Technology
IFD	Investment Facilitation for Development
IMF	International Monetary Fund
ITA	Information Technology Agreement
ITU	International Telecommunication Union
OECD	Organisation for Economic Co-operation and Development
PKI	public key infrastructure
RTA	regional trade agreement
STRI	Services Trade Restrictions Index
TFA	Trade Facilitation Agreement
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development
WB-WBG	World Bank – World Bank Group
WTO	World Trade Organization
