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Book

Advancing AfCFTA digital trade implementation in Ghana

Report

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Any errors are the responsibility of the authors.

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Acronyms

AfCFTA	African Continental Free Trade Area
CCPA	California Consumer Privacy Act
CERT	Computer Emergency Response Team
CSA	Cyber Security Authority
EEA	European Economic Area
ETA	Electronic Transactions Act
EU	European Union
FCDO	UK Foreign, Commonwealth & Development Office
GDP	gross domestic product
GDPR	General Data Protection Regulation
GhIPSS	Ghana Interbank Payment Settlement Systems
GPH	Global Policy House
GST	goods and services tax
ICT	information and communication technology
IFC	International Finance Corporation
ITC	IT Consortium
KYC	Know Your Customer
MSMEs	micro, small and medium enterprises
NDPC	National Data Protection Commission
NITA	National IT Agency
PCSRC	Postal and Courier Services Regulatory Commission
PSSA	Payment Systems and Services Act
SMEs	small and medium enterprises
UNCTAD	United Nations Conference on Trade and Development
US	United States
VAT	value-added tax

Executive summary

The African Continental Free Trade Area (AfCFTA) Agreement promises to contribute to Africa's economic development by facilitating greater intra-African trade and economic integration. The digital economy, a key driver of this development, will be imperative to realise this objective. To this end, the AfCFTA recently lengthened its protocols to include the Protocol on Digital Trade. This promising initiative seeks to increase Africa's digital economy and its contribution to facilitating intra-regional trade and investment. As could be the case for most African countries, this Protocol holds significant potential for Ghana's economy, offering new avenues for growth and prosperity.

The performance of Ghana's digital economy has been in an expansion phase, reflecting the country's growing capacity and potential to leverage the opportunities from the AfCFTA. The digital economy is already paramount to Ghana's economic development, as the information and communication technology (ICT) sector is a growing major contributor to gross domestic product (GDP). In 2022, the value of the ICT sector stood at $2.5 billion (in constant 2015 values), representing 4% of GDP. In addition, the sector has been a major contributor to the country's international integration, with growth in digitally deliverable services reaching $6.3 billion (in value terms) in 2019.

The country's fintech capacity growth has also been a major contributor to the expansion of the digital economy. The fintech industry, largely dominated by mobile money transactions, is one of the fastest-growing markets in the world, and Ghana is now home to over 70 fintech companies (Bright, Oteng, and Gyan 2020).

Ghana's digital economy growth is assessed to have been supported by government policies like the Ghana Digital Agenda 2018 and the Ghana Beyond Aid Charter and Strategy 2019. These initiatives aim to enhance the sector's contribution to national development and require legal and regulatory frameworks to ensure digital transactions are conducted safely, fairly, and securely.

The country has legal and regulatory frameworks for e-commerce and digital transactions, including the Electronic Transactions Amendment Act 2012, the Electronic Communications Act 2008 (Data Protection Act 2012), and, more recently, the Cyber Security Act 2020.

Nonetheless, it needs to do more to leverage opportunities from the AfCFTA to expand the digital economy's contribution to its economic development, as the sector still faces several challenges.

1. **Regulatory complexity:** Relevant legal and regulatory frameworks are beset with specific challenges that weaken their ability to create a conducive environment for digital transactions. For example, the Electronic Transactions Act's enforcement and implementation are weak.
2. **Harmonisation of regulations:** The absence of comprehensive data protection legislation aligned with African and international standards poses significant challenges to user privacy and regulatory compliance.
3. **Digital divide and inclusion:** Differences in broadband internet availability and accessibility, proficiency in digital skills and infrastructure exacerbate inequalities that can hinder participation in digital commerce. Specifically on internet access, huge gaps exist between the northern (maximum 50% access) and the middle and coastal areas (50–90% access).
4. **Digital infrastructure:** The digital infrastructure landscape, including data centres and cloud systems; physical hardware; including mobile devices; computing facilities; and other Internet of Things tools, requires more investment. This will be crucial to increasing integration in the digital ecosystem, enabling Ghanaian companies to scale and expand.
5. **User challenges:** An analysis of responses from private companies engaged in digital economic activities shows that there is limited awareness of the Protocol on Digital Trade as well as legal and regulatory frameworks governing digital activities and usage of digital platforms or opportunities.

In response to the potential economic implications of the Protocol and the digital trade challenges identified in Ghana, certain measures can be adopted to increase the economic benefits of the Protocol.

Within these, the Government of Ghana will need to formulate a Ghana Digital Trade Strategy and Action Plan to implement a digital trade roadmap and execute the Protocol. To ensure such a strategy helps the country realise increased economic gains from digital trade activities, the afore-mentioned challenges must be tackled and the digital trade ecosystem improved.

- Draw lessons from global best practices to develop a comprehensive e-commerce and digital trade act and harmonise existing digital trade regulations and policies with African standards.
- Consider implementing a robust data protection and privacy law to protect user data, enhance trust in digital payment systems and protect online users.

- Enhance the capacities of stakeholders involved in implementing the Protocol while channel more resources to critical components of digital trade to ensure its effective implementation and improve the digital trade ecosystem.
- Increase investment, if possible, by leveraging public–private partnerships to support the development of more digital infrastructure, platforms and payment channels.
- To make the digital economy more inclusive and robust, consider various support programmes for micro, small and medium enterprises, especially those led or owned by women or youth.

Addressing these challenges, improving the digital ecosystem and effectively implementing the AfCFTA Protocol on Digital Trade can increase Ghana's potential economic benefits from the AfCFTA, potentially culminating in an expansion in GDP. To put things in perspective, our quantitative analysis of the potential economic gains from implementing the Protocol shows that Ghana could reach $71.74 billion, up from the current $68 billion, with an export expansion to $25.83 billion from the current $22 billion.

1 Introduction

The main objective of the African Continental Free Trade Area (AfCFTA) is to create a single market for goods and services, facilitated by the movement of persons, in order to deepen the economic integration of the African continent and in accordance with the pan-African vision of ‘an integrated, prosperous and peaceful Africa’ enshrined in Agenda 2063. The establishment of the AfCFTA has been a transformative step for African nations: 54 African countries have signed the Agreement to strengthen intra-African trade and deepen continental integration.

The AfCFTA provides a strong foundation for African countries to boost investment, build the capacity of micro, small and medium enterprises (MSMEs), enable structural economic transformation, and deliver industrialisation across African economies. This can be expedited by safely adopting digital technologies and interoperable digital cross-border platforms and rolling out holistic African digital trade and digital transformation programmes powered by a wave of emerging technologies

As part of the AfCFTA Agreement, several protocols have been developed, including the forthcoming Protocol on Digital Trade (‘the Protocol), which was agreed on by the African Union Assembly of Heads of State and Government, which decided in 2020 to include such a protocol in the AfCFTA Agreement. The Protocol is set to lay the legal foundations to support a secure, transparent and efficient digital trade regulatory environment that enables platform-driven commerce and economic opportunities for billions of Africans on the continent. The African Union Assembly has emphasised the importance of Africa having full authority over elements of digital trade and e-commerce, including on data and digital platforms at all levels.

Liberalising trade conducted digitally can bring additional digital jobs and revenues, especially given the fast-expanding digital economy in Africa. In addition to facilitating trade, digital applications can increase the efficiency of producing goods and their distribution and open new job avenues, particularly for youth. Thus, the digital economy, already a key contributor to Africa’s socioeconomic development (Solomon and von Klyton, 2020), has the potential to contribute to more development: in several African countries, the digital economy, spurred mainly by the mobile revolution, accounts for more than 5% of GDP (Songwe, 2020). One study has revealed that a 10% increase in mobile broadband penetration alone could lead to a 2.5% rise in GDP per capita in Africa (Duarte, 2021).

Another report highlights that, by 2025, the Internet economy could potentially contribute $180 billion to Africa's economy (IFC, 2020). Many experts highlight the AfCFTA rollout and a dynamic digital economy in Africa as the 'game-changer' needed to move the continent forward.

Africa needs opportunities to leapfrog and tap into tailored digital solutions that provide greater choice and access. Indeed, digitisation is not new to African countries: nations like Kenya and others have led this digital movement. Driving this further will naturally be the private sector, which needs closer alignment and engagement with governments, civil society and other key stakeholders to ensure digital solutions fit the marketplace and align with policy frameworks and community implementation programmes.

2 Ghana's digital economy

Ghana's digital economy is one of the fastest-growing in Africa, with most of the activity in cutting-edge areas, including the country's expanding fintech ecosystem. Technological advancement in the country is evident in the myriad of solutions that are springing up, especially in electronic payments and mobile money. In addition to this boom in digital payment applications and fintech infrastructure, Ghana is seeing novel solutions in telecommunications, banking and financial services. Ghana has over 11 million active mobile payment users, with over 80% of banks' transactions conducted via electronic and digital systems (Bright et al., 2020).

Like other African countries, including Egypt, Kenya, Nigeria, and South Africa, all commonly recognised as major players in the payments space, Ghana is transitioning quickly into the digital economy, with the government offering support and policy frameworks. These policy frameworks include the Ghana Digital Agenda 2018 and the Ghana Beyond Aid Charter and Strategy 2019. Ghana has ambitious plans for information and communication technology (ICT) innovation and technological advancement and aims to be a leader in the digital economy in Africa by 2028.

2.1 Digital trade and e-commerce

It is important to have a clear understanding of what we mean by digital trade and to differentiate between it and e-commerce. The notable difference between the two relates to whether the goods and services ordered digitally are delivered physically.

2.1.1 Digital trade

Digital trade refers to exchanging goods, services and information online. It involves using digital technologies, including emerging and advanced technologies, the internet and electronic platforms, to conduct digitally enabled transactions of goods and services, which can be delivered physically or digitally. It encompasses various activities such as e-commerce, online banking, digital advertising, software exchange and remote provision of digital services. Digital trade enables businesses and individuals to trade seamlessly across borders, reach global markets and connect with customers worldwide, boosting value-added exports and imports. Digital trade in the context of the AfCFTA refers to digital trade conducted among AfCFTA member states.

2.1.2 E-commerce

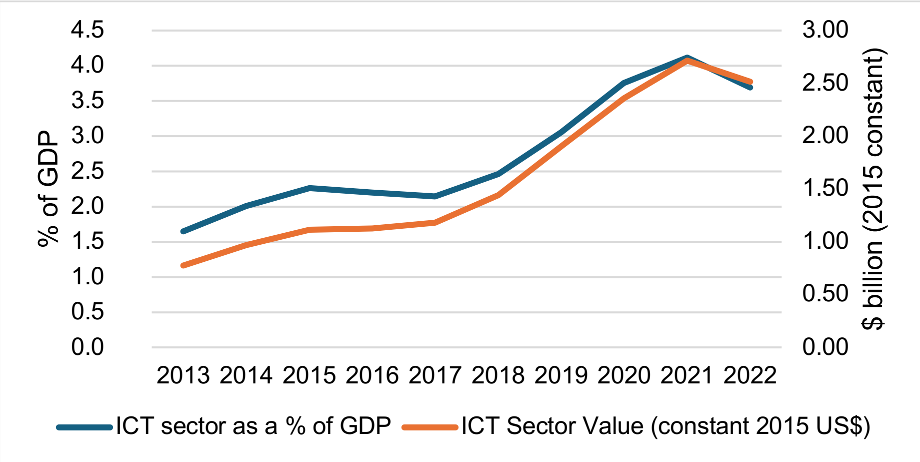
E-commerce, or electronic commerce, is a critical element of digital trade and refers to buying and selling goods and services online. More specifically, e-commerce is ordering goods and services that are delivered physically. This activity is conducted over computer networks. Therefore, security and access to the internet are key components of participating in e-commerce activity.

Digital trade and e-commerce are intertwined, leveraging data and the internet to conduct transactions digitally. Many e-commerce activities are happening across Africa, with many companies producing solutions, predominantly in financial services and payments. With advances in the payment infrastructure and the adoption of novel technologies such as artificial intelligence and blockchain, coupled with favourable regulations and demographics, high levels of digital activity and growth are expected in Africa in the next few years.

2.2 Ghana's ICT sector

Ghana's ICT sector has demonstrated robust growth and resilience, contributing significantly to the nation's economic development.

Figure 1 ICT sector contribution to the Ghanian economy, 2013–2022



Source: own deliberations using data from Ghana Statistical Service (applies to the following figures unless otherwise indicated).

Figure 1 looks at the ICT sector's contribution to the Ghanaian economy in absolute terms and as a percentage of GDP. Both metrics show an overall increasing trend over the period, suggesting that the ICT sector has been growing both in absolute terms and as a share of the economy. The ICT sector's share in GDP starts at just above 1.5% in 2013 and grows steadily to just below 4% by 2022. This indicates that the sector is becoming a more significant part of the economy.

The ICT sector's value in constant 2015 US dollars begins at around $1.25 billion and rises to approximately $2.5 billion by 2022. This doubling over the period suggests significant growth in the sector when adjusted for inflation to 2015 dollars.

Around 2016, the growth in the ICT sector's share of GDP appeared to flatten slightly before continuing its upward trajectory. However, the value in constant dollars continued to grow during this period. In the last year, 2022, there appears to have been a slight dip in both the percentage of GDP and the sector value, indicating a possible slowdown in growth or a contraction in the sector. However, the overall trend remains positive.

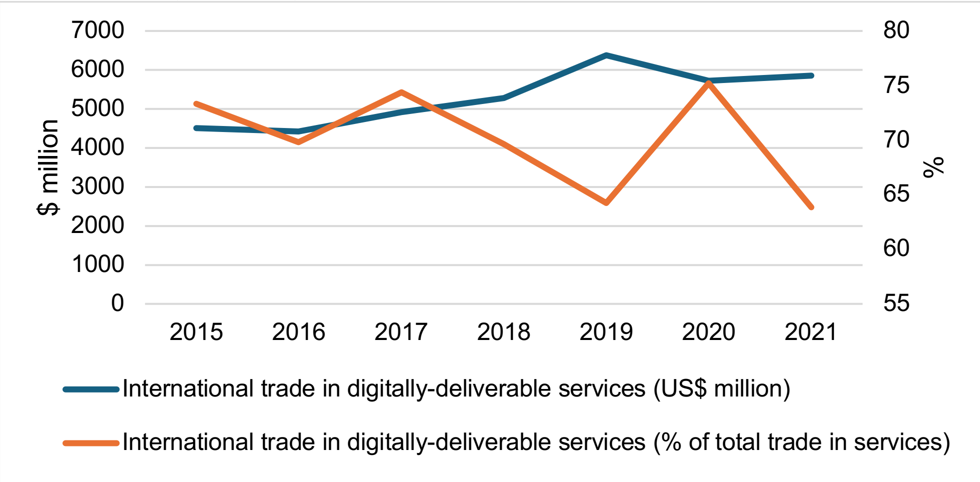
The graph indicates that the sector's value and share of the economy have moved in tandem over the years, suggesting that the growth in ICT owes not only to the growth of the overall economy but also to the increasing importance and expansion of the sector itself.

Several factors, such as technological advancements, increased investment in ICT, digital transformation of traditional industries and a growing reliance on digital services and infrastructure, could drive these trends. The slight dip in the end could be due to economic downturns, market saturation, or technological shifts that may have temporarily affected the growth of the ICT sector.

2.2.1 ICT goods exports

The data on ICT goods exports show some fluctuations and a notable gap in the dataset for the last two reported years.

Figure 2 International trade (exports) in digitally deliverable services, Ghana, 2015–2021



Source: own deliberations using data from Ghana Statistical Service (applies to the following figures unless otherwise indicated).

Figure 2 shows trends in Ghana's international trade in digitally deliverable services between 2015 and 2021, measured in terms of US dollar value and as a share of total trade in services.

Over this period, the value of digitally deliverable services, in US dollars, shows an overall upward trajectory despite fluctuations. This indicates a growing capacity and potential for digital service provision in Ghana's economy. The peak in 2019 at approximately $6,377 million reflects a high point in the sector's output, followed by a decline in 2020, likely linked to the COVID-19 pandemic's impact on economic activities, even those that are digitally based. The recovery in 2021 to $5,857 million suggests a rebound, though it has not reached the previous peak, indicating lingering effects of the pandemic or other market dynamics.

The share of digitally deliverable services in total trade in services exhibits notable variability, which may indicate the evolving nature of Ghana's services sector and its trade patterns. The surge to 75.21% in 2020 may reflect increased reliance on digital services during the pandemic, when traditional service delivery faced restrictions. The subsequent fall to 63.85% in 2021 could signal a readjustment as other service sectors recovered and the market corrected itself post-pandemic.

These insights align with the objectives of the AfCFTA Protocol on Digital Trade, which aims to promote digital trade as a means for economic growth and development across Africa. Ghana’s increasing trade in digitally deliverable services suggests the country is well-positioned to benefit from the digital trade opportunities presented by the AfCFTA.

It is crucial to acknowledge that while the digitally deliverable services category encompasses those that can be delivered remotely over digital networks, not all such services are delivered digitally in international trade. The graph does not distinguish between potential and actual digital delivery; the figures represent a broader capability for digital trade rather than its actualisation.

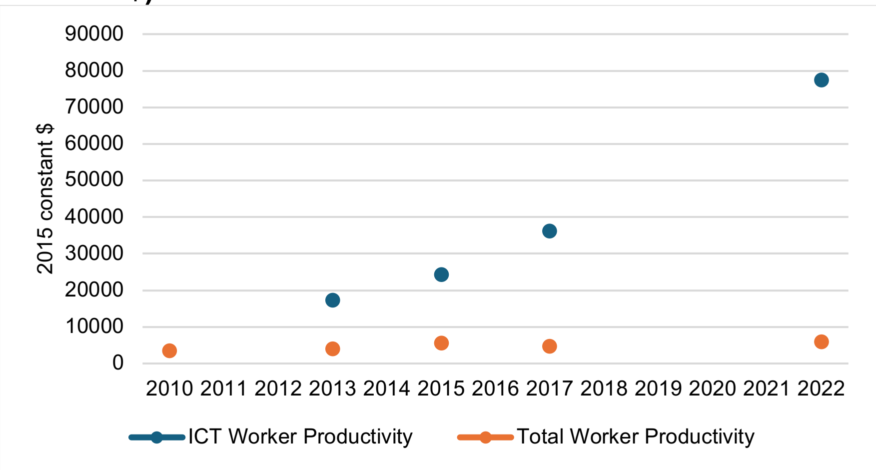
The data indicates that Ghana's services sector has the infrastructure and potential to deliver services digitally, which is a strong foundation for further digitalisation of the economy. The growth in the value of digitally deliverable services suggests a country increasingly capable of and likely engaging in digital trade. However, the extent of digitally delivered services may be a subset of the total reported. This underscores the importance of differentiating between digital potential and actual digital trade flows in policy-making and analysis.

2.2.2 ICT workers and productivity

Figure 3 compares the productivity levels of ICT sector workers with the average worker productivity level across all sectors. The productivity ratio comparing ICT worker productivity with total worker productivity in Ghana saw a remarkable increase from 2015 to 2021.

In 2015, the ratio stood at approximately 5.01, signifying that, on average, ICT workers were five times more productive than their counterparts in other sectors. This ratio saw consistent growth in subsequent years, reaching about 6.21 in 2016 and 6.48 in 2017, indicating an expanding productivity gap favouring ICT workers. In 2021, there was a significant leap in the productivity ratio to around 13.25, meaning the productivity of ICT workers was more than 13 times that of the average worker across all sectors.

Figure 3 ICT worker vs total worker productivity (constant 2015 $)



Source: own deliberations using data from Ghana Statistical Service (applies to the following figures unless otherwise indicated).

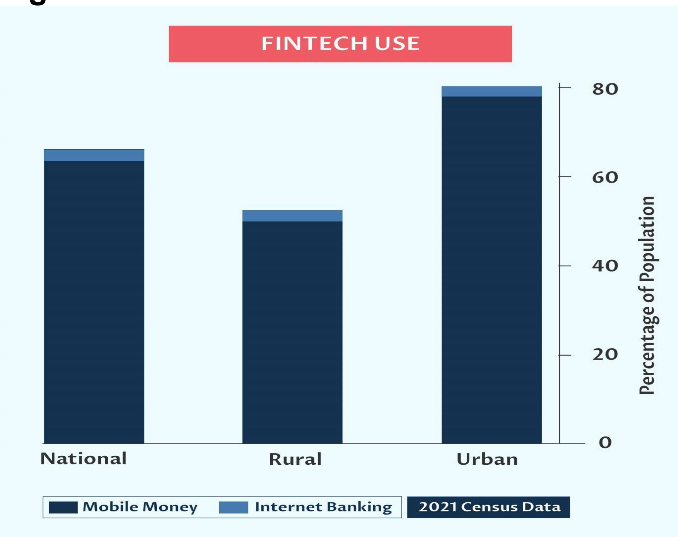
This pronounced growth in productivity within the ICT sector suggests various contributing factors, including rapid technological advancements, high-value activities prevalent in the ICT industry, enhanced skill development and educational opportunities in ICT, and substantial capital investments in digital infrastructure. The notable surge in productivity in 2021 may reflect a considerable digital transformation across Ghana's economy or a surge in the ICT sector, possibly driven by innovation and an upswing demand for digital services.

2.3 Digital trade and the fintech landscape in Ghana

Ghana’s digital trade and fintech landscape broadly covers the banking and financial services sector and insurance, telecommunications, and non-bank financial services. The levying of a ‘fintech tax’ of 1.5% on digital financial services, known as an e-levy, means Ghana has one of the steepest tax rates in the region. It is reported that Ghana’s fintech landscape is home to over 70 fintech (Bright, Oteng, and Gyan 2020). This number is growing rapidly as infrastructure improvements are constantly being made.

Since 2021, Ghana has welcomed financial technologies (fintech) at an impressive rate. Spurring this growth were regulatory changes, such as the Central Bank allowing non-bank institutions (e.g., telcos) to own and manage mobile network operations.

Figure 4 Fintech use in Ghana



Source: UNCTAD (2023)

Table 1 presents the top 10 active players in the fintech ecosystem in Ghana. This sits in line with the ambitions of the Protocol on Digital Trade to align regulations to support more African fintechs and innovative firms to bring new business models.

Table 1 Top 10 active fintech companies in Ghana

Fintech	Description of services
MTN Mobile Money – Momo	MTN Mobile Money (popularly called MTN Momo) is an offshoot of MTN, one of Ghana's largest telecoms networks. It provides consumers and businesses with access to payments, e-commerce, insurance, lending and remittance services. MTN Momo is the most widely used mobile payment app in Ghana, controlling about 89.3% of mobile financial services revenue in Ghana.
Zeepay – a trend-setter	Zeepay specialises in mobile money interoperability and international remittance. It was the first fintech company in Ghana to be issued a Dedicated Electronic Money Issuer Licence by Bank of Ghana. Zeepay has been instrumental in facilitating cross-network money transfers and fostering financial connectivity in Ghana and across parts of Africa. It is the second-largest fintech app in terms of mobile financial services revenue.
Hubtel – a fintech with e-commerce services	Hubtel is one of Ghana's most versatile fintech companies. It provides mobile payment, bulk SMS and e-commerce solutions. Its point-of-sale platform allows businesses to accept mobile money, cards and QR codes. Hubtel empowers numerous small and medium enterprises (SMEs) in Ghana by digitising their payment processes.

Fintech	Description of services
Expresspay – one of Ghana's premier fintechs	Expresspay provides electronic payment solutions. Its platform allows utility payments, internet subscriptions and airtime top-ups. Expresspay combines a user-friendly interface and an extensive agent network, making it a popular option for Ghanaians and expats seeking efficient payment solutions.
Kowri – the 'all-in-one' app	Kowri, one of Ghana's fastest-rising all-inclusive digital financial apps, is a service from Sevn Ghana Limited (formerly DreamOval Limited). It is a multi-bouquet of financial solutions that include sending and receiving payments; buying airtime; paying utility bills; and managing, insuring and promoting businesses.
Finance Plus – focused on financial institutions and loans management	Finance Plus, by Cube Robotics, is a custom software-building company with experts who assist credit unions, rural banks and microfinance institutions in growing with specialised software provide financial services to customers.
GhanaPay – the giant in the room	GhanaPay is a payment app rolled out by Ghana Interbank Payment Settlement Systems (GhIPSS), a wholly owned subsidiary of Bank of Ghana mandated to implement and manage interoperable payment system infrastructures for banks and nonbank financial institutions.
Chango – towards crowdfunding	Chango is a crowdfunding platform rolled out by IT Consortium (ITC), one of Ghana's largest business-to-business fintech companies. It is a mobile app made up of both private and public groups that brings people together based on agreed terms and conditions to raise funds. The app is used to donate to a cause or project by creating groups and raising funds. ITC is establishing itself as one of Africa's leading financial services technology solutions providers.
Slydepay – one of the many firsts from banks	Slydepay was created by Dreamoval Limited and is powered by Stanbic Bank Ghana. Slydepay (formerly iWallet) is an all-in-one mobile app for mobile payments, airtime and internet data purchase. It is essentially a mobile wallet that allows customers to pay bills, top up mobile phones, make money transfers and pay in-store via QR codes as well as online via emails. It has an option that allows customers to make payments at retails shops via the app.
Payswitch – enabling financial inclusion for SMEs	Payswitch is one of the few fintech companies that allows businesses to accept payments via multiple channels, such as mobile money, cards (Visa and Mastercard) and other online platforms. It combines card management and issuing, digital banking, automated fare collection, e-commerce, agency banking and other tailor-made solutions.

Source: Global Policy House research and analysis

The Bank of Ghana is the main regulator of the fintech industry in Ghana. It is mandated that banks and non-financial institutions engaged in fintech in Ghana be licensed. It has set up the Fintech and Innovation Office to oversee the fintech market space in the country. There are six categories of licences for fintech:

- Dedicated Electronic Money Issuer Licence
- Payment Service Provider Scheme Licence
- Payment Service Provider – Enhanced Licence

- Payment Service Provider – Medium Licence
- Payment Service Provider – Medium
- Payment Service Provider – Standard
- Payment and Financial Technology Service Provider Licence.

Ghana’s clear licencing structure enables businesses to have clarity on compliance requirements if they operate in one of the above areas. These licencing regimes will also need regular review to evaluate their suitability in an ever-changing digital trade environment.

GhanaPay by the Ghana Interbank Payment and Settlement Systems

Ghana Interbank Payment and Settlement Systems (GhIPSS) is a subsidiary of the Bank of Ghana with the sole purpose of ensuring payment system interoperability to foster the goal of financial inclusion in the country. This program has spearheaded two payment system infrastructures: the Mobile Money Interoperability platform and the GhIPSS Instant Pay platform, which facilitate the transfer of funds across telecommunication networks and from mobile banking platforms to mobile money networks.

In June 2022, GhIPSS launched the bank-wide GhanaPay mobile wallet to encourage the rise of the country’s cashless and financially inclusive ecosystem. This clearly symbolises the country's shift towards digital applications.

Regulatory sandbox payment framework

To promote innovation and mitigate risk in the dynamic digital financial service ecosystem, the Bank of Ghana has established a regulatory sandbox as an important tool in developing a regulatory framework supportive of responsible innovations and nurturing new business models. This framework aims to enable small-scale live testing of innovative financial products, services and business models by eligible financial service providers and start-ups (operating under a special exemption, allowance or other limited, time-bound exception) in a controlled environment under the supervision of the Bank of Ghana. By this arrangement, innovators can temporarily test new ideas without being subjected to the full set of regulatory requirements applicable outside the sandbox while addressing users’ and regulators’ respective concerns.

The regulatory sandbox has been open to a limited scope of innovations and emerging technologies, such as new digital businesses not covered under any regulation, new and immature digital financial services technology, and innovative digital financial products and services that can potentially solve recurring financial challenges within the country.

The sandbox also seeks to prioritise new innovations that leverage crowdfunding products, remittances, blockchain technology, electronic Know Your Customer (eKYC) platforms, regulatory technology, supervisory technology and digital banking and financial services targeted at financial inclusion for women. Ghana's regulatory sandbox is a good example for other African countries.

Innolab Insurtech Accelerator Programme

The National Insurance Commission has implemented the Innolab Insurtech Accelerator Programme to help grow the country's insurance technology start-ups while promoting innovations in the insurance industry. This initiative is hoped to inspire fintech start-ups to diversify their product offerings and explore other areas of necessity in the financial service delivery industry.

Ghana Digital and Services Payments Platform

This initiative is part of the ambition to digitise the economy and promote a cashless economy in line with the Digital Ghana Agenda. The Ministry of Communication and Digitalisation set it up in a bid to promote a centralised public sector payment platform. The digital payment platform will also ensure greater transparency in collecting taxes and revenues. The platform will serve as a payment system hub for Ghana's public sector, including Ghana Immigration Service, the Social Security and National Insurance Trust, Ghana Revenue Authority and the Passport Office.

3 Review of existing policies, laws and regulations governing digital trade

3.1 Laws and regulations

The regulatory framework for e-commerce and digital transactions is in place in Ghana, with laws to ensure digital transactions are conducted safely, fairly and securely. These laws include the Electronic Transactions Act (ETA) 2008, amended by the ETA Amendment Act 2012; the Electronic Communications Act 2008; Data Protection Act 2012; and, more recently, the Cyber Security Act 2020. This legal framework helps protect consumers by establishing rules for data privacy, consumer rights and dispute resolution; the laws promote fair competition, prevent fraud and address issues related to intellectual property and cybersecurity.

3.1.1 Electronic Transactions Act 2008

The ETA 2008 provides for the regulation of electronic communications and related transactions. It is the primary law regulating e-commerce activities, including online marketplaces. It provides for the legal recognition of electronic transactions and electronic signatures and sets out the legal framework for e-commerce in Ghana. Under it, electronic transactions have the same legal standing as traditional paper-based transactions. The Act also establishes rules for electronic communication, data protection and the use of electronic documents in legal proceedings.

The Act defines electronic transactions as transactions through an electronic agent such as a computer program or other automated means (Section 144). Since e-commerce qualifies as an electronic transaction, the Act will apply to businesses that market or sell goods and services online. The law further applies to the supply of goods if the consumers are in Ghana (Section 53).

Business owners conducting business online must provide certain information to their customers. This information includes the full name and legal status of the business, the physical address, the phone and email contact, membership of any regulatory body, a sufficient description of the main characteristics of products and services, the total price of products and services, and the manner of payment. The website must also provide the terms of agreement for a transaction, the privacy policy and how consumers can access a complete transaction record. Business owners must allow customers to review and correct errors and withdraw from a transaction before concluding the purchase. They should also use a payment system that is sufficiently secure in relation to accepted technological standards available at the time of the transaction (Sections 46–50).

Under this law, all operators of electronic services must apply for a licence to operate online (Section 38). Since Ghana is not a party to international conventions such as the United Nations Convention on the Use of Electronic Communications in International Contracts, national contract rules for cross-border transactions deviate from internationally standardised rules.

3.1.2 Electronic Communications Act 2008

This Act provides for the regulation of electronic communications, broadcasting, and the use of the electro-magnetic spectrum and for related matters. It allows the National Communications Authority to regulate broadcasting organisations and their services.

3.1.3 Cyber Security Act 2020

While digital trade has many advantages, it also presents new opportunities for fraudsters and scammers to exploit unsuspecting consumers. The Cyber Security Act 2020 created the Cyber Security Authority (CSA) to regulate cybersecurity activities in Ghana, promote the development of cybersecurity in the country, and seek the general protection of citizens in cyberspace.

Section 41 establishes national and sectoral Computer Emergency Response Teams (CERTs). Institutions are required to report cybersecurity incidents to the relevant sectoral or national CERT within 24 hours of detecting the incident. Where cybersecurity services are provided as part of digital trade operations, Section 49 of the Act requires compliance with the licensing requirements set out in the Act.

The Act also provides that the CSA shall establish mechanisms for the accreditation of cybersecurity professionals and the certification of cybersecurity products and technology solutions. The necessary accreditations and certifications would apply to the employment of cybersecurity professionals (Section 57) or the use of cybersecurity products (Section 58) in digital trade operations.

Digital trade operations that involve interactions with children or the handling of their data invoke provisions on the protection of children online, such as Section 62, prohibiting publishing images of minors, and Section 82, under which the CSA can order a digital platform to take down all images of that nature.

3.1.4 Data Protection Act 2012

The Data Protection Act 2012 also applies to digital trade, including online marketplaces and e-commerce businesses in Ghana. It is designed to protect individuals' privacy and personal data. It sets out rules and regulations for individuals, organisations, and public bodies to collect, process, store, and disclose personal information. It seeks to ensure data subjects have control over their personal information. The Act establishes the National Data Protection Commission (NDPC) as the regulatory body responsible for enforcing the act's provisions. Under this Act, non-compliance can result in penalties such as fines, imprisonment or both. The Act empowers the NDPC to investigate and enforce compliance.

Institutions or businesses that process consumers' data (data controllers) must ensure data is processed lawfully and reasonably without infringing the privacy rights of the data subject, among other things (Section 18(1)). The individual's right to privacy has been enshrined under Article 18(2) of the 1992 Constitution as a fundamental human right.

Further, a data controller cannot process a consumer's data without the prior consent of the individual who is the subject of the personal data. Nevertheless, the law allows exceptions where the purpose for processing the data is authorised by law, to protect the customer's legitimate interest, necessary for a contract the customer is a party to or to pursue the legitimate interest of a data controller (Section 20(1)).

Unless the law permits, a consumer in an e-commerce transaction can object to the processing of his or her data (Section 20(2)). A data controller who processes the data of a foreign consumer from a foreign country must ensure the data processing complies with the data protection rules in that country (Section 41).

The law further requires data controllers to register with the NDPC. After registration, the NDPC grants a certificate of registration, which is renewed every two years. A data controller can apply for the licence through the data protection website. Depending on whether the applicant is a small, medium, or large data processor, the data controller must pay the prescribed fees upon registration.

According to Ghana's data protection legislation, a data controller can process data in Ghana but must first register with the NDPC and be granted permission to carry out local processing.

3.1.5 Payment Systems and Services Act 2019

An important aspect of e-commerce transactions is electronic payment. E-commerce can only thrive with a proper payment system regime. In 2019 Ghana's parliament introduced the Payment Systems and Services Act (PSSA) 2019. This aims to consolidate and amend all laws relating to payment systems and services and to regulate institutions that engage in payment systems and electronic money business. The Bank of Ghana has supervisory and regulatory authority in all matters relating to payment, clearing and settlement systems (Section 3(1)).

A payment service provider with a licence or authorisation has the power to provide, among others, the following services:

1 clearing of payment instructions among financial and non-financial institutions
2 settling of obligations arising from the clearing of payment instructions
3 transfer of funds from one account to another using electronic means
4 facilitation of inter-operability of payment systems and services among payment system providers
5 provision of electronic payment systems for the unbanked and under-banked population (e.g., mobile money)
6 issuing of electronic payment instruments
7 issuing prepaid cards, credit cards, debit cards and similar media.

The law has provided safeguards for security in payment systems. A service provider shall have an appropriate and tested technology system equipped with fraud and monitoring and detection tools, a valid third-party certification from a reputable certification authority, a system capable of interoperating with other payment systems in the country, and a cybersecurity policy when applicable (Section 20). These tools are necessary to assure account holders that the personal information required for payments is protected and that they are not susceptible to fraud and cyberattacks.

A payment service provider must ensure that only the account holder authorises a transaction against a customer's account. A customer subscribing to a payment service like mobile money, a debit card or a fintech app must submit a form of identification as a customer due diligence requirement. The forms of identification permitted are a national identification card, a voter identification card, a driver’s licence, a passport, a national health insurance card, biometrics and any other identification prescribed by the Bank of Ghana (Section 35(1)).

Any time there is a transaction, the service provider must notify the customer of this through electronic means or a physical receipt. The notice must at least state the transaction amount, the transaction type, the date and time of the transaction, a unique transaction reference, the identifying details of the recipient or sender and any fees charged (Section 20). A service provider must implement a system with built-in control mechanisms for a complete audit trail (Section 34). They shall not engage in any activity likely to result in systemic risk or affect the payment system's integrity, effectiveness or security.

A service provider, not a bank or specialised deposit-taking institution, should not engage in banking business or any activity prohibited by the Bank of Ghana. Permissible transactions under the Act include domestic payments, domestic money transfers and cash-in and cash-out transactions, all captured in e-commerce (Section 23). The service provider should also count airtime as electronic money or use airtime for permitted activities only if it is expressed in monetary value (Section 23). The service provider must inform the Bank of Ghana if it wants to outsource its technology platform, operational functions, internal audits, and risk management functions (Section 38).

The law requires electronic money issuers, payment service providers, and anyone operating an electronic transaction platform to enter terms of service agreements with consumers. These agreements help businesses limit their legal liability while maintaining control over their digital platform.

Online marketplaces and e-commerce businesses in Ghana are also subject to general laws that regulate businesses, such as the Companies Act of Ghana, the Value Added Tax Act, the Electronic Transfer Levy (Amendment) Act and the Income Tax Act. The Ghana Revenue Authority requires businesses to register and pay taxes.

3.2 **Policies**

The National Payments Systems Strategic Plan 2019–2024 and the National Financial Inclusion and Development Strategy 2017–2023, though not solely focused on digital trade, encourage a broader financial services infrastructure that can support digital transactions. The Digital Financial Services Policy builds on these strategies, aiming for a more inclusive and secure digital financial ecosystem.

In looking at barriers affecting trade in digitally enabled services:

- There are no limitations on downloading and streaming affecting cross-border digital trade because the Government of Ghana does not restrict or disrupt access to the internet or censor online content. Any such restrictions would require prior judicial authorisation.
- There are also no restrictions on online advertising.

3.3 **Comparison with other countries**

In Africa, Ghana does well regarding the digital trade regulatory ecosystem, scoring below the African average of 0.34 (indicating less restrictive regulations) (Kouty, 2024). Nonetheless, Eswatini and Lesotho score much better than Ghana; outside Africa, Singapore, Estonia, and Denmark consistently rank high in digital trade regulations. These latter nations typically have:

- a consolidated legal framework – clear and comprehensive laws governing e-commerce and digital trade
- robust data protection – strong legislation protecting user privacy and ensuring responsible data handling
- international alignment – regulations that adhere to international digital trade standards and agreements
- efficient enforcement – well-resourced enforcement mechanisms to ensure businesses comply with regulation.

3.4 Digital trade challenges for Ghana: some existing gaps

The digital transformation sweeping through Ghana's economy brings opportunities and challenges, particularly in digital trade. As businesses increasingly embrace digital commerce, they face a complex regulatory landscape with fragmented legal frameworks.

Ghana’s regulatory environment may not fully align with African and international digital trade standards, potentially impeding cross-border trade and hindering efforts towards international harmonisation. Additionally, limited enforcement capacity further complicates regulatory compliance and undermines consumer trust in the digital ecosystem. In this dynamic landscape, businesses navigate intricate regulations, safeguarding data privacy and addressing cybersecurity risks while striving to harness the benefits of digital commerce and digital trade to expand their market reach and scale their businesses.

As digital trade grows in Ghana, regulators and policy-makers need to keep pace with this growth and not impose counterproductive regulations or attempt to overregulate. Too much regulation risks stifling digital trade and e-commerce, limiting the capacity to adopt novel technologies to aid innovation and growth. Like many developing countries, Ghana faces numerous challenges in digitally transforming its economy. The lack of a comprehensive e-commerce strategy, inadequate infrastructure, limited access to financing and poor digital literacy among the population can hinder digital trade growth. The high internet access costs hinder the country's ability to fully participate in the global digital economy. To address these gaps and propel Ghana towards a more digital future, policy-makers must prioritise investments in:

- ICT infrastructure
- enhancing cybersecurity measures
- implementing effective e-commerce policies
- improving digital skills among the population.

Below, we summarise a number of significant challenges and gaps that Ghana needs to address to ensure readiness to adopt digital trade and align with the Protocol on Digital Trade.

3.4.1 Regulatory complexity

Businesses across industries face an increasing burden of fragmented legal frameworks and complying with ever-changing regulatory frameworks, requiring substantial investments of time, finances, and expertise. Divergent regulations related to data protection, taxation, intellectual property rights and cross-border data flows create barriers to market access and increase compliance costs for businesses operating in multiple jurisdictions. Ghana's digital trade regulations are scattered across various laws, making it difficult for businesses to navigate. With the rollout of the Protocol, AfCFTA member states should be able to provide clearer and more comprehensive rules to reduce regulatory uncertainty. In Ghana, there is a need for a comprehensive e-commerce and digital trade act.

Table 2 Regulatory fragmentation in digital trade

Regulatory area	Description
Data protection	Varied data protection laws, such as GDPR in the EU and the California Consumer Privacy Act (CCPA) in the US
Cross-border data flows	Restrictions on the flow of data across borders, with negative impacts on digital trade and creating data silos; opaque processes
Taxation	Challenges related to digital taxation, including VAT/GST on digital services and duties on digital products and services
Intellectual property	Protection and enforcement of intellectual property rights in the digital sphere and new forms of intellectual property, including software and digital content

Source: GPH 2024

3.4.2 Data privacy and security concerns

Data privacy and security concerns pose significant challenges in the digital trade landscape. High-profile data breaches and privacy scandals have heightened consumer awareness and resulted in greater regulatory scrutiny, prompting stricter regulations such as the GDPR in the EU and the California Consumer Privacy Act (CCPA). It is imperative for businesses to adhere to data protection regulations and uphold strong cybersecurity measures to establish trust and protect sensitive information. We expand further on this below in the context of Ghana.

Table 3 Data privacy and security concerns

Challenge	Description
Data breaches	Risks of unauthorised access to sensitive data, leading to financial and reputational damage and harmful outcomes to vulnerable groups
Regulatory compliance	Challenges related to adhering to data protection laws and regulations, particularly for MSMEs with little capital and financing
Consumer trust	Establishing and upholding consumer confidence and trust by employing transparent practices in handling data
Cybersecurity threats	Reducing the dangers presented by cyber threats like malware, phishing and ransomware assaults; ensuring African nations have measures in place to combat cyber threats

Source: World Economic Forum 2024 and GPH 2024

3.4.3 The digital divide and inclusivity

The digital divide relates to the disparity between those with access to digital technologies and those without access. Differences in broadband internet availability, proficiency in digital skills and infrastructure exacerbate inequalities and can hinder participation in digital commerce. Bridging this gap requires collaborative efforts to improve digital literacy, expand internet accessibility and foster inclusivity in digital trade initiatives. GPH exists to close the digital divide, focusing on supporting African member states with capacity-building, educational content and the development of Africa-centric products, leveraging a range of emergent technologies. By closing the digital divide, we create more opportunities for inclusion and digital connectivity for women, youth and other underrepresented groups.

Table 4 Digital divide challenges

Challenge	Description
Access to broadband	Tackling discrepancies in broadband internet availability, especially in rural regions
Digital literacy	Improving digital competencies and literacy to empower both individuals and communities
Infrastructure gaps	Allocating resources to digital infrastructure development to narrow the gap and ensure fair access for all
Inclusive policies	Advocating for policies that promote inclusiveness and cater to the requirements of marginalised populations

Source: Longe (2024) and GPH 2024

3.4.4 Uncertain data protection

The data protection environment lacks a robust legal framework, creating user privacy and business compliance challenges.

- Ghana does not have data protection legislation as comprehensive or extensive as in other countries, such as the EU's GDPR.
- Though there are several similarities between the GDPR and Ghana's Data Protection Act 20212, particularly in relation to their foundational provisions on scope, definitions, principles and legal bases for processing. The GDPR is notably more detailed in relation to the obligations it imposes on data controllers and data processors, such as those related to data transfers, recordkeeping and data protection officers. While the Ghanaian Act can be considered a relatively comprehensive law regarding the general basis it establishes for a personal data protection framework, it is in several ways less exacting than comparable laws like the GDPR.
- The GDPR has extraterritorial scope, meaning it applies to any individual, organisation or company processing the personal data of individuals in the EU, regardless of the organisation's location. In contrast, Ghana's Data Protection Act 2012 primarily applies to data processing activities within Ghana's territory. Section 45 requires that the data controller be established in Ghana and the data be processed in Ghana, that the equipment or data processor be in Ghana or that the data have originated either partly or wholly from Ghana. This leaves potential gaps in protection for Ghanaian data subjects whose data is processed by entities outside the country and whose data originates outside Ghana.

  The GDPR grants data subjects a comprehensive set of rights, including the right to access, rectify, erase, and restrict the processing of data, data portability, and object to processing. While Ghana's Data Protection Act 2012 recognises some of these rights, such as access and correction, the scope and extent of these may differ from those provided under the GDPR.
- In addition, the GDPR empowers supervisory authorities to impose stricter penalties and fines for violations of data protection requirements than in the Data Protection Act 2012, with penalties of up to €20 million or 4% of the organisation's global annual turnover of the preceding year, whichever is higher.

3.4.5 Harmonisation of digital trade regulations

Harmonising digital trade regulations creates a conducive environment for more digital trade and integration, reduced trade costs, and increased interoperability. In Africa, fragmentation of digital trade regulations has contributed to limited digital trade and digital trade integration. Ghana's regulations may not fully align with regional and international digital trade standards, potentially hindering cross-border trade.

3.4.6 Enforcement capacity

Limited resources for enforcement make it difficult to ensure adherence to existing regulations.

3.5 Areas for improvement for Ghana

By looking at best practices globally and adopting the Protocol on Digital Trade, Ghana can improve its digital trade ecosystem and address the challenges we outlined above in several ways:

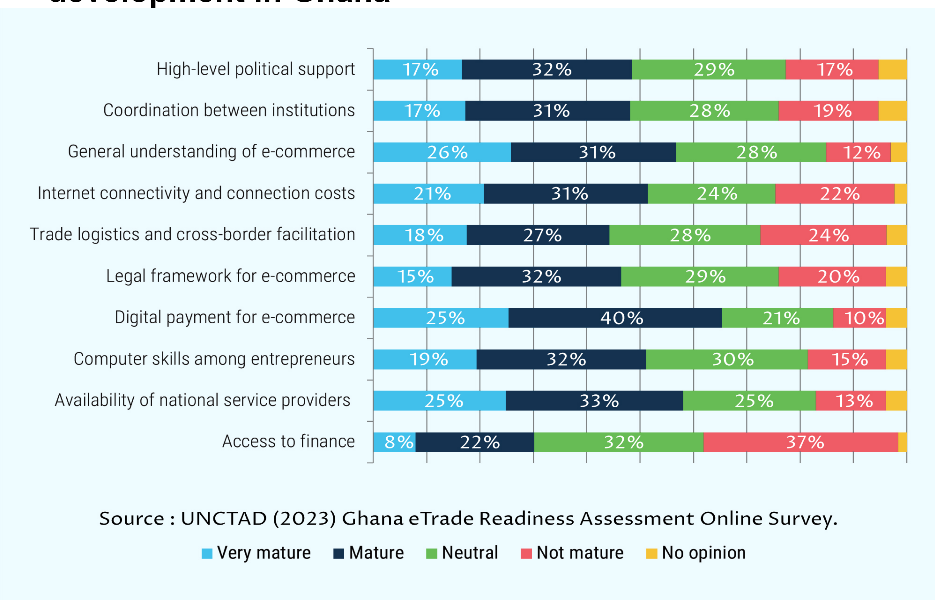
- Develop a **comprehensive e-commerce and digital trade act.** This would consolidate existing regulations and provide a clear legal framework for businesses.
- Implement a **robust data protection and privacy law** to safeguard user data and promote trust in the digital marketplace.
- **Harmonise digital trade regulations with existing African and international standards.** This would streamline cross-border trade and make Ghana a more attractive destination for digital businesses.
- **Build capacity** for enforcing digital trade regulations and providing education on critical components of digital trade, including digital technologies. Increased resources for regulatory bodies would ensure the effective implementation of the legal framework.
- Tap on existing mechanisms and frameworks such as **GPH's Digital Trade Framework and the ODI/GPH Framework** to assess the impact of the AfCFTA Protocol for a step-by-step guide on the core elements required to implement and roll out digital trade and digital transformation that is sustainable and implementable.

By addressing these challenges, implementing best practices, and making the recommended improvements above, Ghana can create a more robust and competitive digital trade environment. By tackling these challenges head-on and fostering an enabling environment for digital trade, Ghana can harness the potential of technology to drive economic growth and development. The country can pioneer and lead in the rollout and implementation of the Protocol on Digital Trade, catering to women and youth for greater growth in Ghana.

4 Ghana's technological infrastructure and e-commerce capabilities

E-commerce is playing a major role as a catalyst for growth in Ghana and other African economies. COVID-19 saw many countries, including Ghana, shift to adopt more e-commerce activities. Young enterprises set up digital platforms and marketplaces and were exposed to more regional markets to sell their goods and services and build more partnerships and strategic alliances while boosting their revenue base. The e-commerce readiness status of Ghana has been well documented in its United Nations Conference on Trade and Development (UNCTAD) e-readiness report. Figure 5 highlights a mature level of political support and understanding of e-commerce, with the legal framework and the digital payments architecture also ranked highly in the country.

Figure 5 Needs and opportunities for e-commerce development in Ghana



Source: UNCTAD (2023)

Figure 6 Trading across borders by country

Ranking in 2020 for Trading across borders			
eSwatini	35	Guinea-Bissau	146
Lesotho	40	Djibouti	147
Botswana	55	Zambia	155
Morocco	58	Ethiopia	156
Mauritius	72	Ghana	158
Rwanda	88	Zimbabwe	159
Tunisia	90	Cote d'Ivoire	163
Mozambique	94	Central African Republic	164
Mali	95	Sierra Leone	165
Seychelles	98	Somalia	166
Cabo Verde	109	Guinea	167
Benin	110	Burundi	169
Gambia	115	Gabon	170
Kenya	117	Egypt	171

Source: World Bank (2020)

Figure 6 highlights in global rankings that many African countries are still behind in cross-border trade, with Ghana holding 158th place. The Protocol on Digital Trade could help change this by supporting African countries with clearer rules on key areas that enable cross-border trade, including free-flowing cross-border data transfers, interoperable cross-border digital payment systems, and identity systems.

Although the Government of Ghana is working hard to champion e-commerce and digital transformation to include technological advancement, the following problems remain:

- lack of a comprehensive domestic fibre backbone infrastructure
- public operators not able to reach rural and poorer customers
- broadband is slow, although the mobile market is growing.

Relevant technological infrastructure has become indispensable for any African country to aid development and alignment with international trends.

In addition, leaders' political will and support to champion digital transformation and trade are critical to achieving a dynamic digital ecosystem that leverages safe, secure and robust technological infrastructure. In Ghana, support over the past few years has come directly from the country's president, a major champion of digitisation and digital transformation initiatives for Ghana.

Ghana's exemplary Digital Property Address System (GhanaPostGPS) uses digital infrastructure to give every property a unique identifier. This will aid with more efficient last-mile delivery, minimise crime, and enable a source for robust data that can be used for future predictive analysis and emergency response. This important infrastructure can support the rollout of a digital trade programme that also reaches rural communities that previously had no form of address system.

4.1 Components and enablers of a digital trade ecosystem

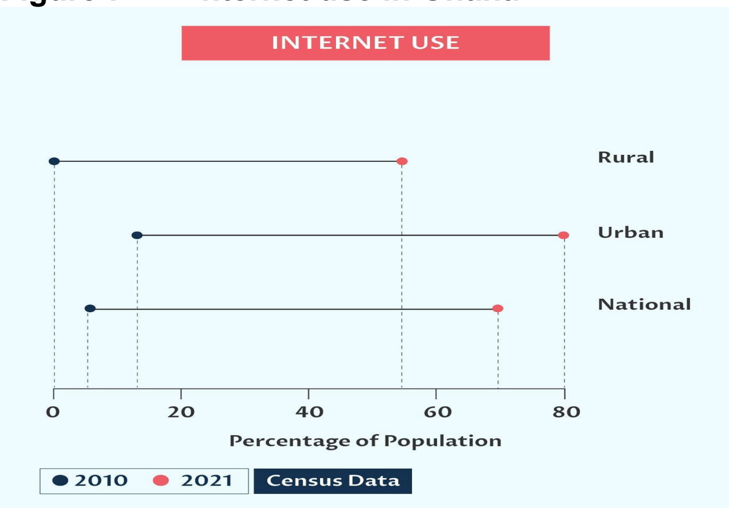
4.1.1 Digital infrastructure

In order to fully leverage Ghana's dynamic, growing digital trade ecosystem, it is important to direct more investment towards digital infrastructure, such as data centres and cloud systems, physical hardware, including mobile devices, computing facilities, and other Internet of Things tools. This will help Ghanaian companies scale and expand.

4.1.2 Connectivity

Connectivity to high-speed internet is another key element. There are still gaps in urban and rural connectivity, leading to a digital divide within the country's population. As Figure 7 shows, Ghana's online presence increased from 8% in 2010 to 69% in 2021. However, in urban areas, internet rates increased from about 13% to 80%, compared with a move from 2% to 54% in rural areas.

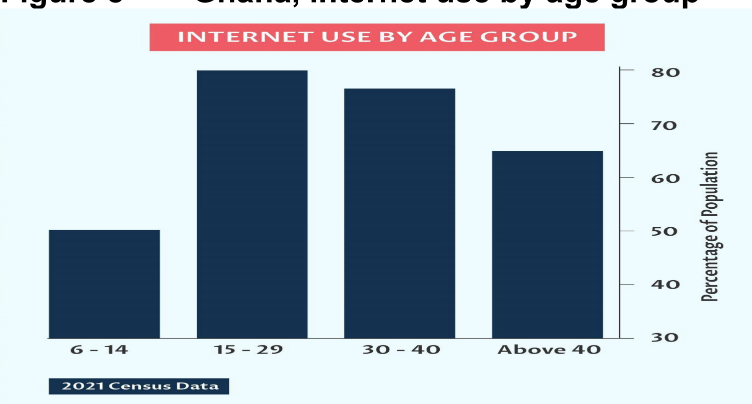
Figure 7 Internet use in Ghana



Source: UNCTAD (2023)

Below, we share internet use by age, showing clear adoption and use mainly by people aged 15–40 and less so by older generations.

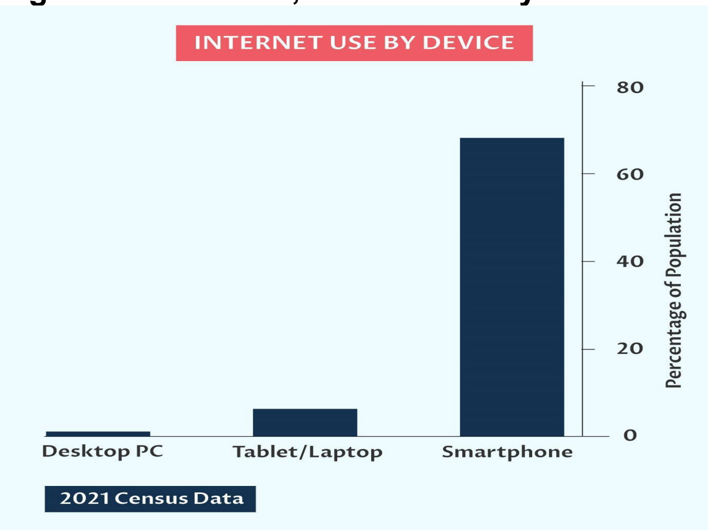
Figure 8 Ghana, internet use by age group



Source: UNCTAD (2023)

Usage varies by device: we see more use through smartphones, with a rate of over 60% of the population. Internet usage ranges from 24% in Mion, Northeast Gonja and Karata to 92% in Tema West, Ayawaso West and La Dade-Kotoport. However, rates are below 50% per cent in the northern part of the country. Ghana's middle and coastal regions boast 50% and 92% usage rates.

Figure 9 Ghana, internet use by device

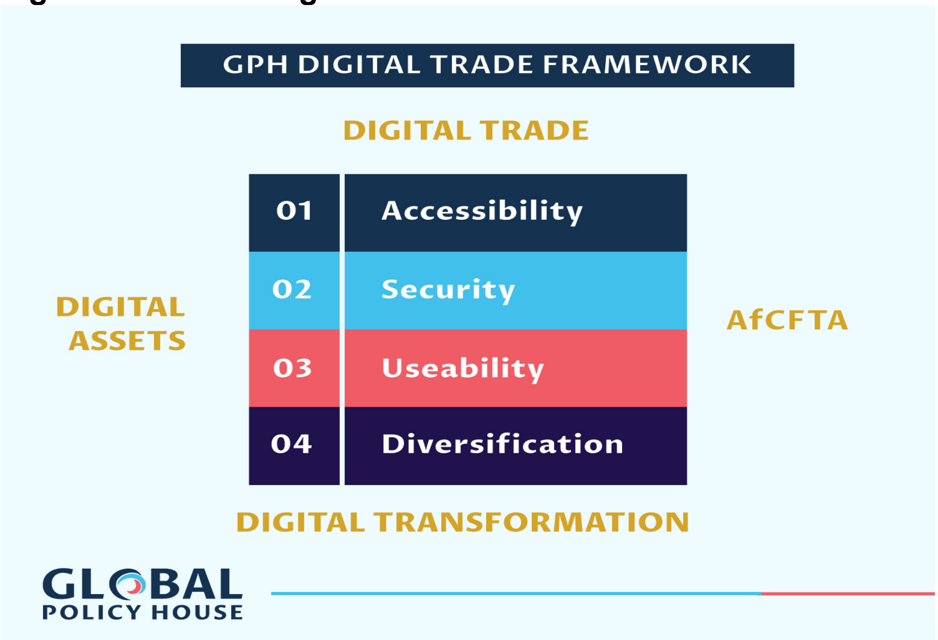


Source: UNCTAD (2023)

As the data shows, young people often rely heavily on smartphones. Furthermore, data affordability levels can be explored, and the market pricing of data can be evened out by encouraging more competition in the marketplace.

To deliver digital trade and enable Ghana to move towards economic transformation driven by a vibrant digital economy, the following mix of innovative principles and models outlined in the GPH Digital Trade Framework will lead to sustainable growth for the country. The diversification of product and service offerings, as well as the creation of a digital trading environment with security, usability and accessibility, is key to getting results.

Figure 10 GPH digital trade framework



4.2 Digital payments

Ghana is a good example of the expansion of e-payments, with a range of new active players entering the market, including Zeepay and MTN, among others. The PSSA 2019 came with clearer rules for payment operators to abide by, which is a positive step forward for Ghana. It is imperative that systems are interoperable and enable efficient settlements as transactions are conducted.

Ghana has established mechanisms to ensure the country has a dynamic digital payments ecosystem, evident from its establishment of various schemes, including the Bank of Ghana regulatory oversight for fintechs, the Payments System Council, and a growing FINTECH community working with other financial institutions. As an AfCFTA member state, Ghana can be an enabler of digital trade and help support other countries in establishing regulatory mechanisms and best practices, working with other countries to establish standards and innovative approaches to digital payments.

Although digital payments are helping bring more people into the financial ecosystem, many community members are still caught up in the digital divide. Poor access to the internet or even electricity prevents them from connecting and engaging in digital trade.

4.3 Digital identity

Digital identity in Ghana is a fundamental element in conducting digital trade. With the increasing adoption of mobile money services such as MTN Mobile Money and Telecel Cash, having a secure and reliable digital identity is essential for conducting transactions online safely and efficiently. Digital identities in Ghana typically consist of some personal information in the form of biometric data, national identification numbers and phone numbers linked to individuals' accounts. This enables users to authenticate themselves when making digital payments and helps verify their identities to prevent fraud and ensure accountability.

The National Identification Authority issues biometric identification cards known as Ghana Cards. These serve as a unique identifier for individuals in all interactions with government agencies and private sector entities. This initiative aims to streamline digital payment processes, enhance security, reduce fraud and promote financial inclusion by providing individuals with a secure and reliable form of identification. By establishing a sovereign identity system for digital payments, Ghana is paving the way for more efficient and transparent financial transactions that benefit consumers and businesses while ensuring data protection and privacy rights are upheld. This is a hugely important requirement as we see the introduction of the Protocol, which should pave the way for African member states to work together to establish interoperable digital identity systems governed by legal frameworks that protect data and common standards set to implement digital identity policies.

Further, authentication and verification in digital payments in Ghana are crucial processes that ensure the security and reliability of transactions. Authentication involves confirming the identity of users through various methods such as passwords, biometrics or tokens to prevent unauthorised access to sensitive information. Verification, however, involves validating the accuracy and integrity of transaction details before processing payments. In Ghana, financial institutions and payment service providers implement stringent authentication and verification protocols to protect consumers from fraud and cyber threats. This includes two-factor authentication, encryption technologies and real-time monitoring systems to detect suspicious activities. By prioritising authentication and verification in digital payments, Ghana aims to foster trust in online transactions and promote financial inclusion by providing a secure environment for individuals to easily conduct their electronic transactions. The Protocol should reinforce the significance of laws supporting electronic authentication mechanisms that countries have in place.

Case study: Launch of the national personal identification system – the Ghana Card

The Ghana Card is mandatory, and over 18 million people have registered for it. The initiative has benefitted the government and other sectors in numerous ways. This innovative identification system has streamlined processes for citizens, providing them with a secure way to verify their identity and access various services. By centralising personal data onto one card, the government can more efficiently manage records and reduce instances of fraud or duplication. Furthermore, the Ghana Card has proven invaluable in improving security measures in healthcare, finance and transportation sectors. The card's incorporation of biometric technology ensures accuracy and validity when verifying individuals, helping combat identity theft and unauthorised access. Overall, the launch of the Ghana Card has revolutionised how information is shared and utilised across multiple sectors, fostering a more organised, efficient and secure environment for citizens and the government.

As Ghana continues to embrace the digital revolution in its financial sector, having a robust digital identity system will be key in fostering trust and promoting financial inclusion among its population.

4.4 Digital technologies

Digital trade is being transformed by a wave of emerging and advanced technologies under application in critical areas of the digital trade ecosystem. The emergence of innovative solutions utilising data-driven technologies such as artificial intelligence, blockchain, the Internet of Things, big data, robotics, drones and emerging Quantum applications is predicted to play a big role in digital transformation for many African countries, including Ghana.

In context, Ghana is bringing in applications using artificial intelligence and blockchain to help support supply chain efficiency and transparency, which is leading to more productive activity across digital trade supply chains. Drones and 3D printing were prevalent during COVID-19, and these applications are being utilised today to support last-mile delivery and hard-to-reach communities in poorer communities. Blockchain, in particular, can build trust in digitally enabled transactions, helping automate processes utilising smart contract applications for efficiency and better-value transactions.

To fully leverage and benefit from these technologies, Ghana must boost capacity and knowledge among the population, with a strong focus on youth and women. By providing education and a testing environment through sandboxes and national accelerators, a pipeline of skilled experts can be developed to build solutions that can be used to produce more business models around digital trade. As an example, young people in Ghana can produce digital content and engage with this by utilising, for example, virtual reality and augmented reality applications powered by artificial intelligence. Although these technologies have the potential for transformative change, there are risks associated with their use, including biases and harmful content.

With the Protocol incoming, it is imperative that AfCFTA member states are in position to provide the right regulations and safeguards to users of these technologies, setting clear rules and standards that are interoperable to minimise and mitigate potential risks.

4.5 Digital platforms

The world has shifted to a platform economy and a data economy, with businesses, especially SMEs, connecting to this to transact and do business. As digital trade grows in Africa, digital marketplaces and activity will expand, with Web 3 providing a foundation for more immersive marketplaces.

The emergence and growth of digital marketplaces in Ghana signify a pivotal shift in the country's economic landscape. These platforms serve as catalysts for innovation, connectivity and economic empowerment. By providing a virtual space for buyers and sellers to connect, digital marketplaces break down traditional barriers to trade, enabling businesses of all sizes to reach wider audiences and tap into new markets both domestically and internationally.

Moreover, these platforms facilitate financial inclusion by offering convenient payment solutions and access to credit, thus empowering entrepreneurs and SMEs to participate more actively in the digital economy. As Ghana continues to embrace digitalisation, the importance of digital marketplaces will only increase, driving economic growth, fostering entrepreneurship and creating opportunities for sustainable development.

4.6 Digital skills

An analysis of Ghana’s recent national census data by authors from the World Bank shows that internet use is much higher for persons aged 15–29 (80%) and 30–40 (78%) (Dabalen and Mensah, 2023). However, the same study's findings reveal significant gaps in internet use: usage is higher among wealthy households and persons with formal (secondary or tertiary) education. The government recognises the need to leverage the digital economy to support youth’s increased involvement in economic development. To this end, it is working to build a workforce with increased digital skills to accomplish its goals in digital transformation. However, implementation of digital skills training continues to fall short. To fully leverage the digital economy, more development of digital skills is required.

5 Perceptions and understandings of the AfCFTA among stakeholders in Ghana

Research on perceptions and understandings of the AfCFTA among stakeholders in Ghana is crucial to assess its effectiveness and identify areas for improvement. We present here a synthesised overview of stakeholder perspectives based on interviews with stakeholders directly,. In total, the respondents included over 50 attendees to the workshop, 120 business and private officials (some unable to respond due to internet outages in Ghana), and government ministries, where consultations were made.

This research, combined with our analysis of the critical elements in a dynamic Ghana digital trade ecosystem, point to areas where Ghana can focus to enhance digital trade and leverage the opportunities coming with the Protocol and the AfCFTA.

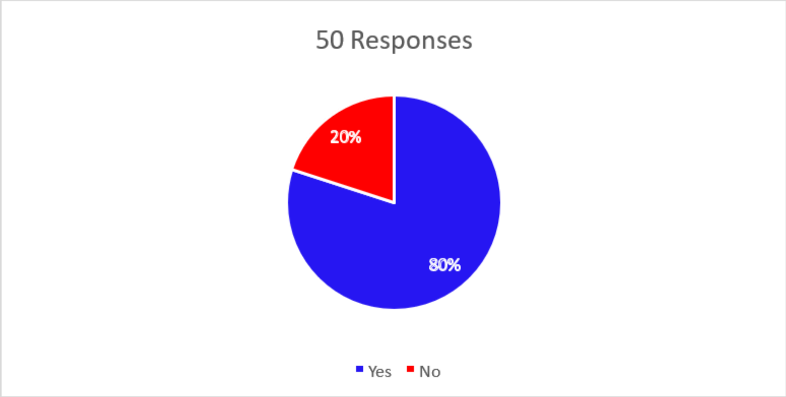
Below we provide our analysis of perceptions and feedback received in the past two weeks.

5.1 **Expanding market horizons**

While most businesses (80%) currently trade with other African countries (see Figure 11), there is a notable discrepancy in e-commerce adoption across different markets. This suggests a potential untapped opportunity for businesses to leverage digital platforms for intra-African and global trade expansion.

There is no single digital trade platform that is helping with intra-African trade expansion currently. This is because every digital trade platform is designed for domestic needs and not for intra-African trade purposes. Just as Europe and other countries have platforms for all-inclusive trading, such as earnings, bangles and other accessories for sale, platforms like these will help MSMEs trade these goods online.

Figure 11 Trade with other African countries

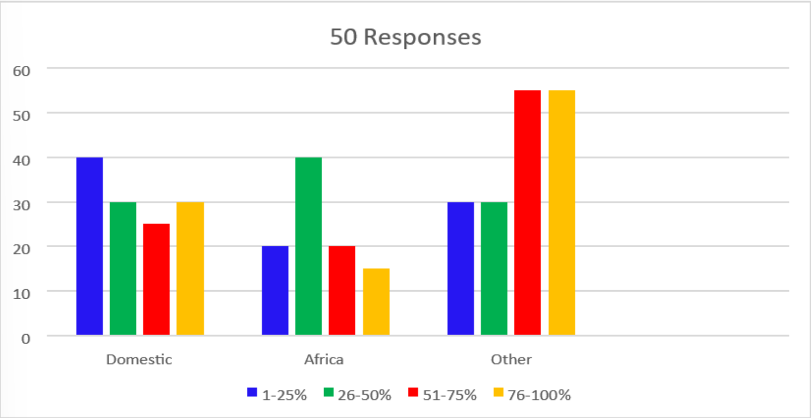


Source: Authors using information from interviews with private enterprises in Ghana (applies to the following figures unless otherwise indicated)

5.2 E-commerce as a growth driver

The significant proportion of businesses (75%) conducting a moderate to high percentage of their domestic trade through e-commerce countries (see Figure 12) underscores the growing importance of online channels in Ghana's business landscape. This trend signals a shift towards digital first strategies and highlights the potential for further growth in online commerce domestically. The focus should not only be on big industries or big companies that trade in a truckload of goods and services but also on supporting MSMEs, which have highlighted the challenges around logistics and financing, with a need for logistics and last-mile delivery improvements.

Figure 12 Proportion of trade conducted through e-commerce

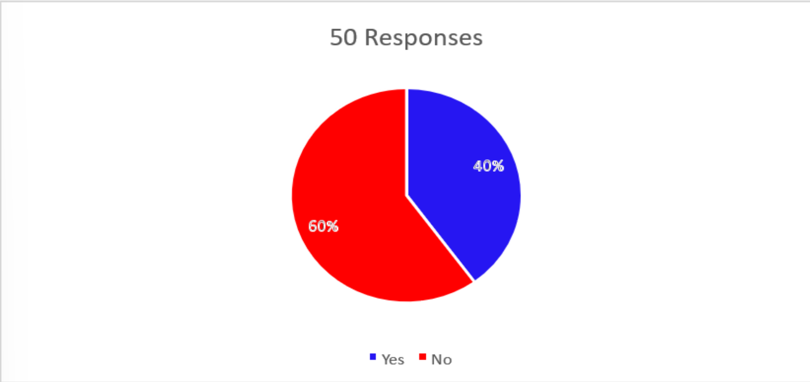


5.3 Digital infrastructure readiness

Only 40% of businesses have their own e-commerce website or utilise third-party platforms (see Figure 13); this reflects a need for enhanced digital infrastructure to support online commerce. This underscores the importance of investing in digital platforms and technologies to facilitate seamless online transactions and improve business market access.

Technology is evolving, and so is trade. Hence, establishing a Protocol that helps African state parties introduce frameworks and rules to enable digital trade is critical. Internet connectivity, which varies from region to region, needs to be tackled to deliver digital trade and implement the AfCFTA.

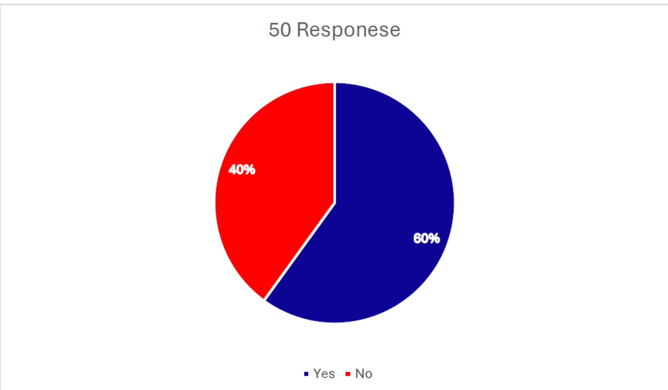
Figure 13 Ownership of e-commerce website or use of third-party e-commerce platform



5.4 Knowledge gap and capacity-building

While awareness of the AfCFTA Protocol is relatively high (60%) (see Figure 14), there is still a lack of full understanding of its role. It is important that more capacity-building is undertaken to sensitise people and provide fuller information on the Protocol and the AfCFTA. This highlights the importance of proactive engagement, consultations and initiatives to ensure businesses are well informed and participate actively in shaping trade policies and any new frameworks that will be established after the rollout of the Protocol. This should be extended to the educational curriculum, so students can be educated early. This will help improve skills development and optimise the ability to produce new business models in cutting-edge digital trade and e-commerce areas.

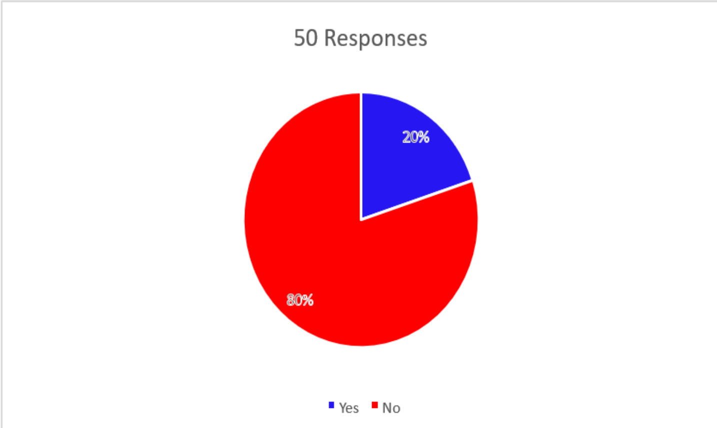
Figure 14 Knowledge of the AfCFTA Protocol



5.5 Regulatory clarity and support

The low awareness of regulatory bodies and steps for authorisation in e-commerce operations (see Figure 15) indicates a need for greater clarity and support from regulatory authorities. This suggests an opportunity for governments and relevant agencies to guide and assist businesses in navigating the regulatory landscape, thereby fostering a conducive environment for digital trade. The AfCFTA Protocol can pave the way for regulatory agencies and African member states to formulate the appropriate policies and regulations.

Figure 15 Awareness of regulatory bodies for e-commerce

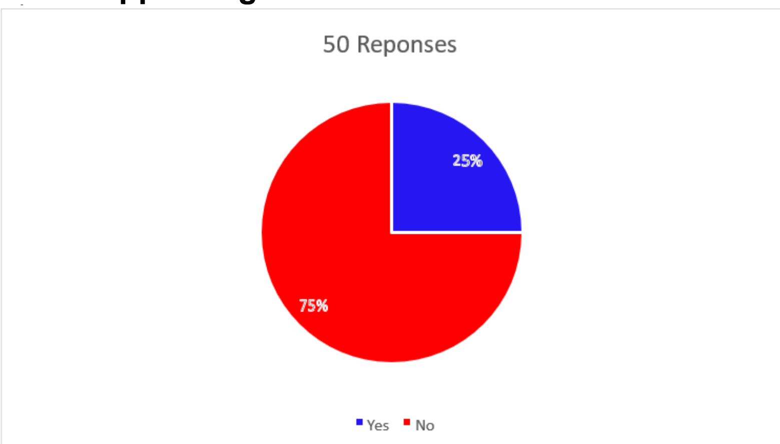


5.6 Perceptions of the regulatory environment

The perception that current rules and regulations for Ghana's digital trade are insufficient to support exports (25%) (see Figure 16) points to a need for regulatory reforms and updates to accommodate the evolving digital landscape. This signals an opportunity for policy-makers to review and revise existing regulations to facilitate digital trade and promote business growth. Ghana should set a clear digital trade strategy encompassing steps and mechanisms to facilitate digital trade in a well-governed ecosystem.

Policy-makers need to hold regulation roundtable dialogues, consultations and awareness activities with relevant stakeholders to inform them regularly as they formulate new policies and guidance. This can also help in setting up guidance and aligning it to meet international standards.

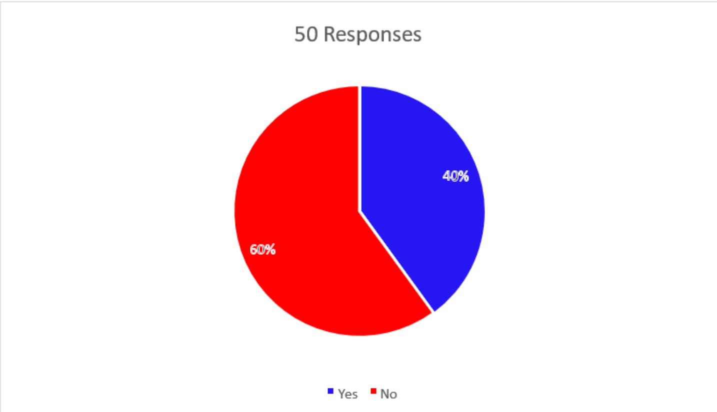
Figure 16 Are Ghana's current regulations and rules sufficient to support digital trade?



5.7 Additional benefits of the AfCFTA Protocol

Despite limited awareness of regulatory bodies and processes, recognition that digitally delivered products will be exempt from tariffs under the new Protocol (40%) (see Figure 17) indicates some awareness of the potential benefits of the AfCFTA Protocol. This highlights the importance of communication and education efforts to ensure businesses fully understand and capitalise on the opportunities presented by the Protocol. The Protocol can and should provide opportunities for African businesses and enable them to operate easily in other AfCFTA member states with ease, ensuring clear compliance and a regulatory environment for them to operate in. It will break new ground and boundaries for traders to trade in other African markets under the AfCFTA. Ghana can lead in supporting its businesses to capitalise on the Protocol.

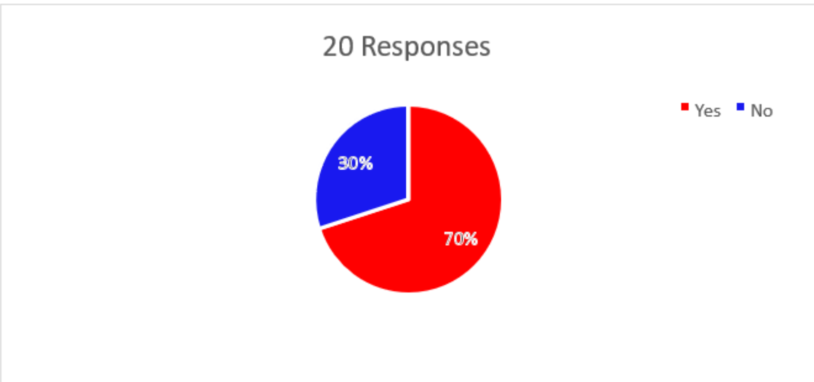
Figure 17 Awareness that digitally delivered products can be exempt from tariffs



5.8 Awareness of the AfCFTA Protocol

While a minority (30.8%) of respondents know the AfCFTA Protocol, the majority (69.2%) are unfamiliar with the ongoing negotiations (see Figure 19). This highlights a potential gap in awareness and understanding among public sector stakeholders regarding the Protocol's implications and objectives.

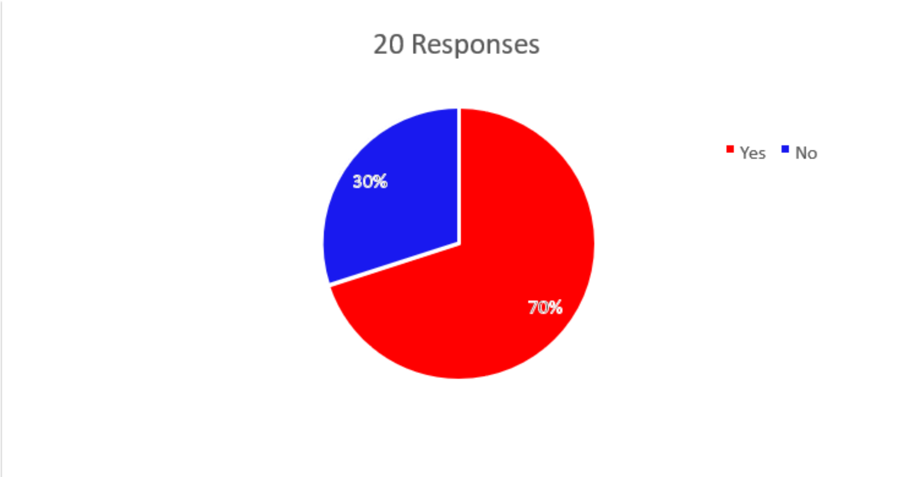
Figure 18 Familiarity with the AfCFTA Protocol



5.9 Capacity for handling digital trade

Most respondents (69.2%) do not have an official unit dedicated to handling digital trade matters (see Figure 20). This suggests a potential need for capacity-building initiatives within the public sector to effectively enhance expertise and capabilities in managing digital trade affairs.

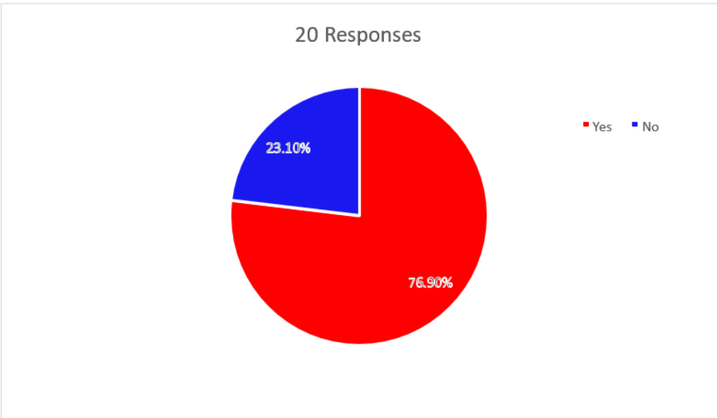
Figure 19 Presence of an official or unit that handles digital trade issues



5.10 Involvement in negotiations and preparations

Most respondents (76.9%) were not involved in negotiations or preparations for Ghanaian representation in digital trade discussions (see Figure 21). This underscores the importance of broader stakeholder engagement and participation in shaping trade policies and agreements.

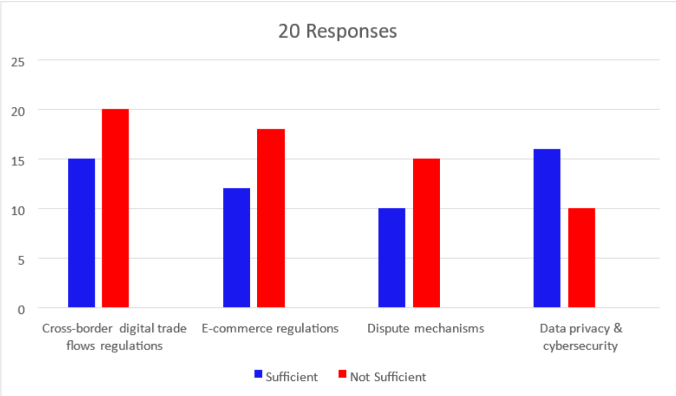
Figure 20 Involvement in negotiations for the AfCFTA Protocol



5.11 Policy and regulatory framework

The responses indicate widespread scepticism regarding the sufficiency of current rules and regulations in Ghanaian digital trade to enhance exports. Issues such as cross-border digital trade flow regulations, e-commerce regulations, dispute mechanisms and data privacy and cybersecurity are perceived as inadequately addressed, suggesting a need for policy reforms and enhancements (see Figure 22). GPH recommends a comprehensive series of capacity-building activities to support Ghana in updating and reforming policies to align with elements in the Protocol.

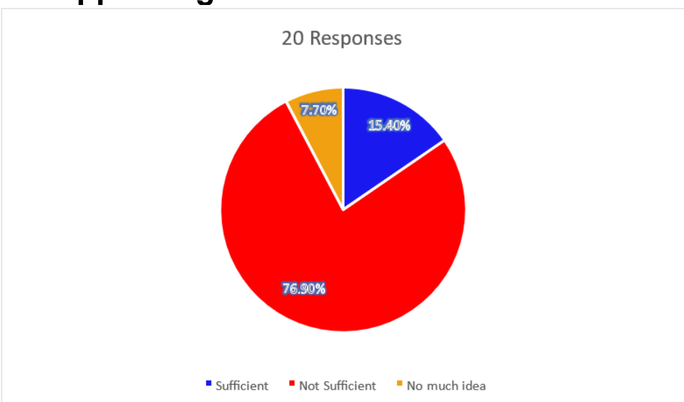
Figure 21 Sufficiency of Ghana's current rules and regulations to enhance digital trade exports



5.12 Infrastructure readiness and challenges

Most respondents (76.9%) do not consider Ghana's current digital infrastructure sufficient to support expected increases in digital trade activity. This highlights concerns about infrastructure gaps and the need for investments to improve connectivity, reliability and accessibility (see Figure 23).

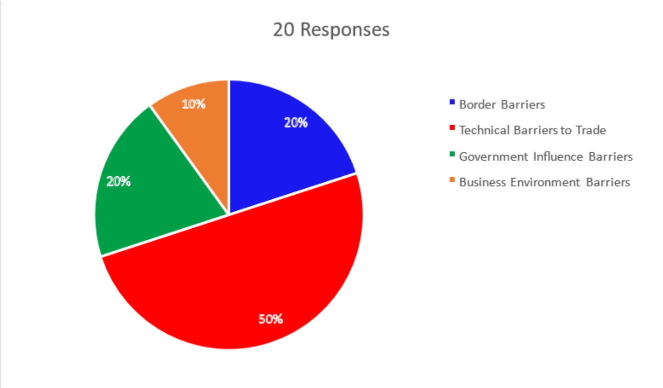
Figure 22 Sufficiency of current digital infrastructure to support digital trade



5.13 Barriers to digital trade

Technical trade barriers are identified as the primary obstacle to digital trade, followed by government influence and business environment barriers. This underscores the multifaceted challenges businesses and stakeholders face in navigating the digital trade landscape (see Figure 24).

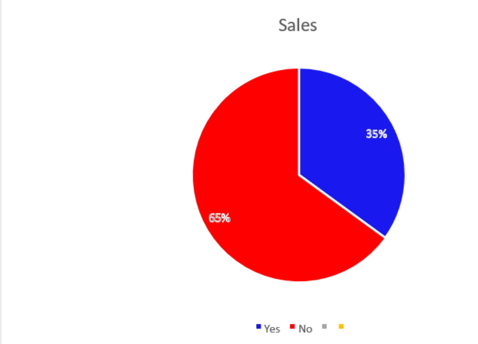
Figure 23 Barriers to digital trade



5.14 Skilled labour and innovation policies

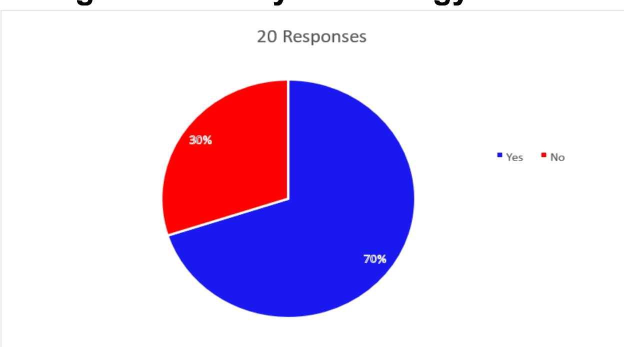
A significant majority (61.5%) of respondents believe there is insufficient skilled labour to support enhanced digital trade, highlighting the importance of investment in human capital development and digital skills training initiatives (see Figure 25).

Figure 24 Sufficiency of skilled labour



However, there is a strong consensus (69.2%) on the need to implement policies to facilitate technology transfer and innovation within Ghana, indicating a recognition of the importance of fostering innovation ecosystems and leveraging digital technologies for economic growth (see Figure 26).

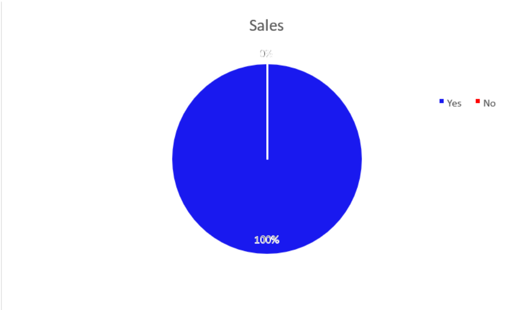
Figure 25 Considerations to implement policies to facilitate digital economy technology transfer and innovation



5.15 **Collaboration for implementation**

All respondents recognise the need to collaborate with other public or private sector players to implement digital economy policies, emphasising the importance of multi-stakeholder partnerships and coordination efforts (see Figure 27).

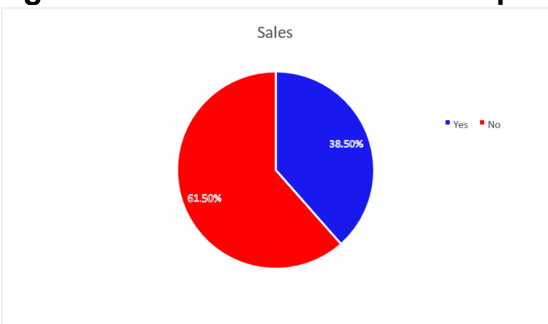
Figure 26 Collaboration to implement the Protocol



5.16 **Support and capacity-building initiatives**

Despite limited resources, a significant proportion (61.5%) of respondents have not hosted sensitisation workshops with businesses, especially SMEs. This highlights an opportunity for increased outreach and capacity-building efforts to raise awareness and build capabilities among businesses regarding digital trade opportunities and challenges (see Figure 28).

Figure 27 Sensitisation and capacity-building



We summarise in Table 6 other feedback from both the private and public sectors.

Table 5 Private and public sector perspectives on the AfCFTA and the Protocol on Digital Trade

Government/regulatory bodies:	**Business community/private sector and industry groups:**
The Ministry of Communications and Digitalisation and the Postal and Courier Services Regulatory Commission (PCSRC) have shown commitment to the AfCFTA's objectives by launching the AfCFTA Hub. They perceive the AfCFTA as an opportunity to boost digital trade, promote e-commerce and support the growth of technology and fintech start-ups and SMEs in Ghana.	Ghanaian businesses, especially SMEs and start-ups, view the AfCFTA as a gateway to new markets and opportunities across Africa. The digitised assembly point provided by the AfCFTA Hub could be seen as a valuable platform for expanding their reach, accessing market insights and fostering competitiveness.

The view of the AfCFTA Hub is as a strategic tool for enhancing transparency, facilitating trade financing and combating fraudulent activities in cross-border transactions. The requirement for businesses to obtain AfCFTA numbers and common transaction IDs reflects a focus on ensuring compliance and building trust among participants.	While the prospect of freely exporting goods and services across Africa is appealing, businesses may also have concerns about regulatory compliance and the practicalities of navigating multiple registration requirements with different agencies such as the National IT Agency, the Cybersecurity Authority and the PCSRC. These organisations likely recognise the AfCFTA as a significant milestone for regional economic integration and trade facilitation. They may support initiatives like the AfCFTA Hub as a means to empower businesses, enhance efficiency in cross-border trade and capitalise on the continent's economic potential. However, they may advocate for streamlined registration processes and greater coordination among regulatory bodies to minimise administrative burdens on businesses and facilitate smoother participation in the AfCFTA.
Academia and civil society: Academics and civil society organisations may perceive the AfCFTA as a catalyst for socioeconomic development and poverty reduction in Ghana and across Africa. They may emphasise the importance of inclusive policies and capacity-building initiatives to ensure marginalised groups benefit from the trade agreement. They may also engage in research and advocacy efforts to assess the impact of the AfCFTA on various sectors of the economy, identify potential challenges and recommend policy interventions to maximise its benefits while addressing any adverse effects.	**Consumers and the general public:** Consumers may have limited awareness of the AfCFTA's specifics but may indirectly benefit from increased market competition, expanded product choices and potentially lower prices resulting from trade liberalisation efforts. The general public may have mixed perceptions depending on their understanding of the Agreement's implications for job creation, economic growth and national sovereignty. Efforts to communicate the objectives and potential benefits of the AfCFTA to the public may help build broader support and buy-in for the initiative.
We recommend as part of a fuller review a comprehensive survey to seek more feedback from the various stakeholders on the hurdles they perceive in relation to the implementation and rollout of the Protocol and the AfCFTA. **Appropriate rules and laws through the AfCFTA Protocol can be set with Africa state parties working in collaboration to establish common guidelines and standards that help boost digital trade and AfCFTA implementation.**	

Source: GPH consultations, analysis and interviews in Ghana

6 Estimating the potential impacts of the Protocol on Digital Trade on Ghana's economy

As part of the ongoing work to assess the impact of the Digital Trade protocol, SITA has developed a comprehensive methodology to estimate the impacts of participating in the protocol signatory economies (Lemma, 2024). This methodology comprises two main approaches: direct impact estimation and indirect impact estimation.

1. **Direct Impact Estimation**

   Assessment of Regional Trade Agreement (RTA) Benefits: By participating in an RTA with e-commerce provisions, countries can significantly boost GDP, exports, and employment. Studies show that high-income countries see a 10.3% increase in exports with such agreements, while emerging economies experience a 16.9% increase (OECD, 2023). This leads to potential increases in GDP per capita by approximately 11.7% to 12.48% due to higher export volumes.

   - Employment Impact Analysis: By calculating the GDP growth and applying the employment-to-GDP ratio, we estimate the potential increase in employment. For instance, with a baseline GDP and workforce, a GDP increase of 13.6% can translate to around 6.8 million new jobs, demonstrating the direct correlation between economic growth and employment.

2. **Indirect Impact Estimation:**

   - Digital Penetration Effects: Enhanced digitalisation, measured by increased internet accessibility, further boosts economic outcomes. A 10% increase in digital penetration can raise GDP by 0.02% to 0.3%, with significant potential for employment growth and export enhancement.

- Combined Impact Analysis: Integrating the direct impacts of the Protocol with the indirect effects of increased digital penetration results in a combined GDP growth estimate ranging from 11.72% to 12.78%. This synergy between trade liberalisation and digital advancements underscores the comprehensive benefits of these combined efforts.

3. **Total Impact Synthesis:**

- The combined effects on trade, GDP, and employment illustrate the transformative potential of these methodologies. For example, exports could rise by 15.2% to 21.2%, leading to substantial economic and social advancements.

While the developed methodology provides a robust framework for estimating the impacts of participation in the Protocol on Digital Trade and enhanced digitalisation, it has several limitations. Firstly, the methodology relies heavily on previous estimates of similar trade protocols' impacts on other regions, which may not fully capture Ghana's unique economic context. Additionally, the absence of specific sectoral data limits the precision of our projections, potentially overlooking sector-specific dynamics and variations in impact.

The optimistic assumptions regarding export and GDP growth may not account for potential barriers to implementation, such as infrastructural challenges, regulatory hurdles, and varying levels of digital adoption across different regions. Moreover, the model assumes a direct proportionality between GDP growth and employment, without considering factors like productivity advancements, technological innovations, and sector-specific economic shifts that could significantly influence employment dynamics. These limitations highlight the need for cautious interpretation of the results and the importance of complementing this methodology with detailed, context-specific analyses.

Research indicates that African countries could experience a substantial increase in their exports, between 15% and 16.9%, by adopting an AfCFTA protocol that includes significant e-commerce and digital trade considerations (OECD, 2023., Abendin & Duan, 2021., Bunje et al. 2022., Were, 2015).

Consequently, for each 1% increase in exports, GDP per capita levels are likely to rise by approximately 0.78%, translating to an increase in GDP per capita levels of between approximately 11.7% and 12.48%. These projections highlight two key metrics: the potential increase in GDP (and GDP per capita) and the increase in the value of total exports for AfCFTA Protocol signatory countries.

Analysing the ramifications of GDP growth on employment levels requires a structured methodology. The analysis begins by calculating the GDP growth based on the projected increase, followed by determining the employment-to-GDP ratio, which measures the efficiency of employment across the economy in relation to GDP. This ratio aids in projecting the increase in employment resulting from GDP growth. The formula for this calculation factors in existing GDP, the percentage increase and the workforce, providing a basis to estimate potential employment opportunities.

While this methodological approach presumes a direct proportionality between GDP growth and employment expansion, it is important to note the limitations of this model. Factors such as productivity advancements, technological innovations and sector-specific economic shifts, which can significantly influence employment dynamics, are not accounted for.

Despite these limitations, this framework offers valuable insights for policy-makers. It serves as a preliminary guide in formulating economic and labour policies aimed at maximising employment opportunities in the wake of GDP increases, enabling the crafting of informed strategies that leverage economic growth to enhance growth, exports and employment prospects.

Using the most recent data for Ghana – that is, export value ($22,094,606,175), GDP ($68,003,831,000) and total workers (11,637,427), it is possible to estimate the potential impacts of Ghana engaging with the AFCFTA Protocol:

1 **GDP increase:** GDP could potentially increase to between approximately $71.32 billion (low estimate) and $71.74 billion (high estimate), considering the expected export growth owing to the AFCFTA Protocol.

2 **Export increase:** The value of exports could potentially increase to between approximately $25.41 billion (low estimate) and $25.83 billion (high estimate), in line with the projected export growth ranges of 15% to 16.9%.

3 **Employment increase:** The potential increase in employment could be between approximately 567,154 (low estimate) and 639,994 (high estimate) additional workers, using the employment-to-GDP ratio method.

These figures are indicative of the potential economic benefits of increased digital trade under the AfCFTA Protocol. It is important to remember that these calculations are based on economic models and assumptions and that actual outcomes may differ as a result of a multitude of economic factors and real-world complexities.

6.1 Estimating the potential impacts of increased digital penetration on Ghana’s economy

The other side of the equation to Ghana's participation in the AfCFTA Protocol is that the country increases its digitalisation rate – that is, the amount of people who have regular access to the internet. Increased participation in the digital economy is likely to have growth impacts, which are likely to positively compound the effects of joining a digital trade regional trade agreement.

To estimate the effect of national-level reforms, we can use the digital penetration measure, which is effectively the percentage of people who have access to the internet within a country. Further, to estimate the impacts of a 10% increase in digital penetration, we can refer to various studies that have established correlations between internet and broadband penetration and various economic indicators.

These studies posit that a 1% increase in digital penetration could result in an employment increase that varies widely, from as little as 0.04% to as much as 2.4%. The effect of digital penetration is similarly significant but tends to have a broader economic impact. Specifically, a 1% increase in digital penetration may lead to an increase in exports ranging from 0.2% to 4.3%, and in imports by about 0.1% to 1%. Furthermore, this increase in digital penetration is also associated with an increase in GDP, which could range from a marginal 0.002% to a more substantial 0.3%.

Applying these insights, a 10% increase in digital penetration could have a cascading effect on the economy. For Ghana, where the export figures for 2022 stand at approximately $22 billion, the increase in exports resulting from a 10% rise in digital penetration could potentially boost exports by $440 million to $946 million, using the provided ranges. Similarly, the anticipated impact on GDP could range from a slight $1.36 million to a noteworthy $204 million increase, while employment could potentially see an increase ranging from roughly 4,654 to 279,448 jobs, considering the total number of employed individuals is approximately 11.6 million.

6.2 Estimating the potential impacts of the AfCFTA and increased digitalisation for Ghana's economy

To combine the estimated impacts of Ghana signing the AfCFTA Protocol with the effects of a 10% increase in digital penetration, previously estimated outcomes can be aggregated. Joining the Protocol is projected to increase exports by 15% to 16.9%, which, in turn, is anticipated to elevate GDP by 11.7% to 12.48%. The improvement in digital connectivity is expected to boost employment, exports, imports and GDP based on the varying impacts per 1% increase digital penetration.

GDP could potentially rise to between $71.32 billion and $71.74 billion as a result of the Protocol. Furthermore, a 10% increase in digital connectivity could enhance GDP by an additional amount ranging from $13.6 million to $204 million. Thus, the combined effect on GDP could range from an increase of approximately $71.33 billion to nearly $71.94 billion.

Exports may increase to between $25.41 billion and $25.83 billion. With the additional impact of increased digital connectivity, exports could grow by an extra $441 million to $948 million. This leads to a combined increase in export value potentially ranging from about $25.85 billion to almost $26.78 billion.

The total number of workers in Ghana may rise by approximately 567,154 to 639,994. A 10% increase in digital connectivity could additionally raise employment by approximately 46,550 to 279,848 workers. Therefore, the combined potential increase in employment could range from roughly 613,704 to 919,842 workers.

These combined effects highlight the multiplicative benefits of policy measures aimed at both trade facilitation and technological advancements, with the caveat that the actual results may vary as a result of a wide range of economic, social and political factors.

7 Conclusions and policy recommendations

7.1 Conclusion

The analysis reveals a nuanced landscape of opportunities and challenges for Ghanaian businesses in the context of the AfCFTA Protocol on Digital Trade. While there is significant potential for growth in digital commerce both domestically and internationally, addressing knowledge gaps, enhancing digital infrastructure, providing regulatory clarity and fostering stakeholder engagement are crucial steps to unlock the full benefits of the Protocol and drive sustainable economic development in Ghana. Analysis of questionnaire responses from the public sector reveals several key initial signals and insights related to the AfCFTA Protocol.

While there is growing awareness of the importance of digital trade and innovation, significant gaps exist in awareness, capacity and policy frameworks. Addressing these challenges will require concerted efforts from both public and private sector stakeholders. More investments in the digital infrastructure, policy reforms, capacity-building initiatives and collaborative partnerships are required to realise the full potential of digital trade for Ghana's economic development.

Overall, while stakeholders in Ghana may hold varying perspectives on the AfCFTA, there appears to be general recognition of its potential to drive economic growth, promote intra-African trade and foster technological innovation. Continued stakeholder engagement, capacity-building and policy reforms will be essential to harness the full benefits of the Agreement and address any challenges that may arise along the way.

7.2 Policy recommendations

It is recommended that a full, comprehensive review be undertaken to formulate a Ghana digital trade strategy with an action plan to implement a Ghana digital trade roadmap and execute the AfCFTA Protocol.

By looking at best practices globally and adopting the Protocol, Ghana can improve its digital trade ecosystem and address the challenges we have outlined above in several ways:

- Develop a **comprehensive e-commerce and digital trade act.** This act would consolidate existing regulations and provide a clear legal framework for businesses.
- Implement a **robust data protection and privacy law** to safeguard user data and promote trust in the digital marketplace. Include cyber-proof applications that help protect data and users online.
- **Harmonise digital trade regulations with international standards.** This would streamline cross-border trade and make Ghana a more attractive destination for digital businesses.
- Ensure policies formulated **facilitate free-flowing data** to enable cross-border data exchange, which allows for more innovative business models.
- **Build capacity** to enforce digital trade regulations and education on critical components of digital trade including digital technologies and any new forms of emerging technologies. Increased resources for regulatory bodies would ensure effective implementation of the legal framework.
- **Increase investment** in robust digital infrastructure, digital platforms and payment channels, fintech companies and digital upskilling programmes to enable the delivery of digital trade. This can include tapping into new digital financing instruments and digital assets that come with appropriate regulations.
- Ensure a **competitive digital trade ecosystem** that centres opportunities for MSMEs and start-ups, tailoring support to include underrepresented groups, including women and young people.

By addressing these challenges, implementing best practices and making the improvements recommended above, Ghana can create a more robust and competitive digital trade environment.

By tackling the challenges outlined earlier, Ghana can foster an enabling environment for digital trade and harness the potential of emergent technology, including artificial intelligence, to drive economic growth and development.

The country can be a pioneer and leader in the rollout and implementation of the AfCFTA Protocol on Digital Trade, which will centre women and youth for greater growth in Ghana.

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