



Liberia

Rapid eTrade Readiness Assessment



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NOTE

Within the UNCTAD Division on Technology and Logistics, the ICT Policy Section carries out policy-oriented analytical work on the development implications of information and communication technologies (ICTs) and e-commerce. It is responsible for the preparation of the Information Economy Report (IER) as well as thematic studies on ICT for Development.

The ICT Policy Section promotes international dialogue on issues related to ICTs for development and contributes to building developing countries' capacities to measure the information economy and to design and implement relevant policies and legal frameworks. It also monitors the global state of e-commerce legislation (unctad.org/cyberlawtracker). Since 2016, the section has coordinated a new multi-stakeholders' initiative entitled eTrade for all (etradeforall.org), which aims to improve the ability of developing countries, particularly least developed countries (LDCs), to use and benefit from e-commerce.

Reference to companies and their activities should not be construed as an endorsement by UNCTAD of those companies or their activities.

The following symbols have been used in the tables:

Reference to "dollars" (US\$) means United States of America dollars, unless otherwise indicated;

Details and percentages in tables do not necessarily add up to the totals because of rounding.



PREFACE

The eTrade for all Initiative, launched at the fourteenth Ministerial Conference of UNCTAD in July 2016, is a practical example of how to harness the digital economy in support of the 2030 Agenda for Sustainable Development, notably Sustainable Development Goals (SDGs) 5, 8, 9, and 17. The initiative seeks to raise awareness, enhance synergies, and increase the scale of existing and new efforts by the development community to strengthen the ability of developing countries to engage in and benefit from e-commerce by addressing seven relevant policy areas:

- E-commerce readiness assessment and strategy formulation
- ICT infrastructure and services
- Trade logistics and trade facilitation
- Payment solutions
- Legal and regulatory frameworks
- E-commerce skills development
- Access to financing

As part of the initiative, demand-driven assessments are envisaged to provide a basic analysis of the current e-commerce situation in the countries concerned, and to identify opportunities and barriers. The resulting reports will serve as a valuable input to these countries' involvement in various discussions related to e-commerce and the digital economy, including in the new UNCTAD Intergovernmental Group of Experts on E-commerce and the Digital Economy.

It may furthermore help LDCs to identify areas in which they could benefit from assistance by partners of eTrade for all.

The Liberia Rapid e-Trade Readiness Assessment has benefited from excellent collaboration with the Enhanced Integrated Framework (EIF), which funded the assessment. This report is expected to contribute to the Government of Liberia's ongoing efforts to build a robust, safe and business-friendly e-commerce ecosystem.

With the EIF and other eTrade for all partners, UNCTAD is committed to continue supporting Liberia in its resolve to harness the potential of e-commerce for its development.

Shamika N. Sirimanne

Director, Division on Technology and Logistics, UNCTAD



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This assessment was completed during the tenure of Honourable Minister for Commerce and Industry, Professor Wilson Tarpéh. The Honourable Axel Addy, Former Minister of Commerce and Industry and Stephen Marvie, Former Deputy Minister, led national stewardship for this assessment. Strong planning and coordination assistance was provided by Jefferson Fahn - Director of Foreign Trade, MOCI, and National Programme Manager, National Implementation Unit of the Enhanced Integrated Framework (EIF) programme in Liberia, Jesse Mathies - Assistant Director, Division of Foreign Trade, MOCI, and Richard Pratt - Assistant Director, Division of Domestic Trade, MOCI.

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TABLE OF CONTENTS

NOTE.....	III
PREFACE.....	IV
ACKNOWLEDGEMENTS.....	V
ABBREVIATIONS.....	VII
METHODOLOGY.....	1
EXECUTIVE SUMMARY.....	2
SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS.....	5
FINDING UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS.....	7
1. E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION.....	7
2. ICT INFRASTRUCTURE AND SERVICES.....	14
3. TRADE LOGISTICS AND TRADE FACILITATION.....	19
4. ACCESS TO FINANCING.....	25
5. PAYMENT SOLUTIONS.....	30
6. LEGAL AND REGULATORY FRAMEWORK.....	36
7. SKILLS DEVELOPMENT FOR E-COMMERCE.....	38
CONCLUSION.....	43
THE WAY FORWARD: ACTION MATRIX.....	44
ANNEX I: LIBERIA COUNTRY PROFILE ON ETRADEFORALL.ORG.....	51
ANNEX II: BIBLIOGRAPHY AND WEBSITES USED.....	52



ABBREVIATIONS

ACE	Africa Coast to Europe Submarine Cable
ASYCUDA	Automated System for Customs Data
CBL	Central Bank of Liberia
COD	Cash on Delivery
DTIS	Diagnostic Trade Integration Study
ECOWAS	Economic Community of West African States
EIF	Enhanced Integrated Framework
GoL	Government of Liberia
ISP	Internet Service Provider
ITU	International Telecommunication Union
IXP	Internet Exchange Point
KYC	Know Your Customer
LBA	Liberia Bankers Association
LCC	Liberia Chamber of Commerce
LEAF	Loan Extension and Availability Facility
LEDFC	Liberian Enterprise Development Finance Company
LIBA	Liberia Business Association
LINTA	Liberia National Tourism Association
LRD	Liberian Dollar
LTA	Liberia Telecommunications Authority
MoA	Ministry of Agriculture
MoCI	Ministry of Commerce and Industry
MoE	Ministry of Education
MFDP	Ministry of Finance and Development Planning
MFI	Microfinance Institution
MoL	Ministry of Labour
MFDP	Ministry of Finance and Development Planning
MoPT	Ministry of Posts and Telecommunications
MoPW	Ministry of Public Works
MoT	Ministry of Transport
MoYS	Ministry of Youth and Sports
MSME	Micro, Small and Medium Enterprises
NAPAS	National Postal Address System
NDC	National Data Center
NPA	National Port Authority
NPL	Non-Performing Loans



NFFF	National Trade Facilitation Forum
NUAPS	National Universal Access Program Strategy
PRSP	Poverty Reduction Strategy Paper
TF	Trade Facilitation
TFA	Trade Facilitation Agreement
TPO	Trade Promotion Organization
TVET	Technical and Vocational Education and Training
UAF	Universal Access Fund
UL	University of Liberia
UNCTAD	United Nations Conference on Trade and Development
UPU	Universal Postal Union
US\$	US Dollar
VLSA	Village Savings and Loan Association
WTO	World Trade Organization
WAVF	West Africa Venture Fund



METHODOLOGY

A four-step approach was used for the Rapid eTrade Readiness Assessment for Liberia, to ensure a high level of participation and engagement of key stakeholders in the consultative process:

Figure 1: Assessment methodology



- ✓ Phase 1 | Stakeholder engagement and literature review, 15 October-10 November 2017.
- ✓ Phase 2 | Questionnaire customization and dissemination, 10 November-30 November 2017. Two (2) customized questionnaires for the public and private sectors were distributed to more than 70 stakeholders in Liberia.
- ✓ Phase 3 | Semi-structured in-country interviews and local validation, 1-9 December, 2017. Meetings were organized with key public and private stakeholders in the following segments: Policy and regulatory, banking, telecommunication, trade, academia (ICT training and education), and e-commerce vendors (current and potential).
- ✓ Phase 4 | Report writing and finalization, 10 December 2017– 5 March 2018.

were used as entry points for this assessment. These are:

- ✓ E-commerce readiness assessment and strategy formulation
- ✓ ICT infrastructure and services
- ✓ Trade logistics and trade facilitation
- ✓ Access to Financing
- ✓ Payment solutions
- ✓ Legal and regulatory frameworks
- ✓ Skills development for e-commerce

The information provided in this report is based on data collected from survey respondents from both the public and private sectors and stakeholders who met in bilateral and roundtable discussion formats during the mission (1-9 December).

As with all other Rapid eTrade Readiness Assessments, the seven policy areas used in the eTrade for all initiative



EXECUTIVE SUMMARY

Liberia is at an important juncture in its development trajectory. Since the last decade, the country has embraced a private sector led growth model, which is now gathering pace. The policy conversations have shifted from post-conflict reconstruction to greater involvement in global value chains, domestic market development and recently, the role of information and communications technologies (ICTs) in government and business.

E-commerce is very much a nascent area and, as this assessment notes, each institution has its own interpretation of what e-commerce means and entails for the country. For some, it is a payment system, while for others it is a website. Cognizance of the overall ecosystem is only now starting to develop among the public and private sectors, as well as support actors such as academia, banks and telecommunication firms. The Government can help increase the momentum by integrating e-commerce in the national development agenda and facilitating steady policy and technical support.

The vast majority of Liberian businesses are not e-ready, but lead vendors (e-commerce firms) are forging ahead with promising results.

The private sector is still in recovery mode since the post-conflict phase and the more recent Ebola crisis. Most firms have been too distracted by survivability concerns to pay sustained attention to their involvement in the digital economy. More than 90 per cent of Liberian firms are informal. A recent survey¹ noted that only five per cent of Monrovia-based businesses with more than 20 employees, and annual turnover greater than US\$200,000, had an operational website. They have limited incentive to make these investments owing to a largely offline consumer base: fixed line broadband Internet has struggled to rise above the one per cent penetration rate, and only six per cent of the population accessed the Internet in the last three months. Mobile phone (83 per cent) and active mobile broadband (20 per cent) penetration levels may compare well to peers, but it is a hard sell to convince consumers to place orders over mobile phones.

¹ *Building Markets, Liberian Businesses: The Engines of Economic Recovery and Growth, 2016*

Despite this low base, e-commerce has already established a foothold in the country. Efforts by lead firms over the last five years have started yielding promising results. E-commerce vendors such as Cookshop and Banjoo are forging ahead with innovative (at least in the Liberian context) e-commerce offerings and have experienced impressive growth. Inspired by their successes, a number of Liberian companies are exhibiting interest in e-commerce. Currently transacted values and volumes remain modest, and the model itself is relatively simple with cash on delivery² (COD) followed by mobile money constituting the main payment modes, but the customer base—including both Liberians and resident expats—is increasing.

Liberian youth are especially keen to get involved in e-commerce ventures, either as entrepreneurs, suppliers or employees. In Liberia's post-conflict environment, where youth constitute more than 50 per cent of the population and youth unemployment can lead to fissures in the delicate fabric of society, e-commerce can contribute to employment creation and private sector growth involving young people, thereby acting as a conduit for peacebuilding as well.

A vicious cycle of slow private sector growth that must be broken.

The Government has faced protracted challenges in spurring private sector growth over the last decade. Despite a slew of strategies and incentives, the private sector has remained sluggish. There is a vicious cycle at play. Firms suffer from significant supply side and business environment challenges, and also struggle to forge relationships with buyers. On the demand side, the awareness gap among buyers cannot be overstated. Retailers and wholesalers prefer to import due to weak knowledge and trust regarding the local supplier base, and end-consumers are relatively hesitant to divert from the traditional model of neighbourhood shopping. Trust, awareness,

² *OECD defines an e-commerce transaction to include the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders". Payment and delivery do not have to be conducted online as long as the order placement has been conducted online. Orders made by telephone calls, fax or manually typed e-mail are excluded.*

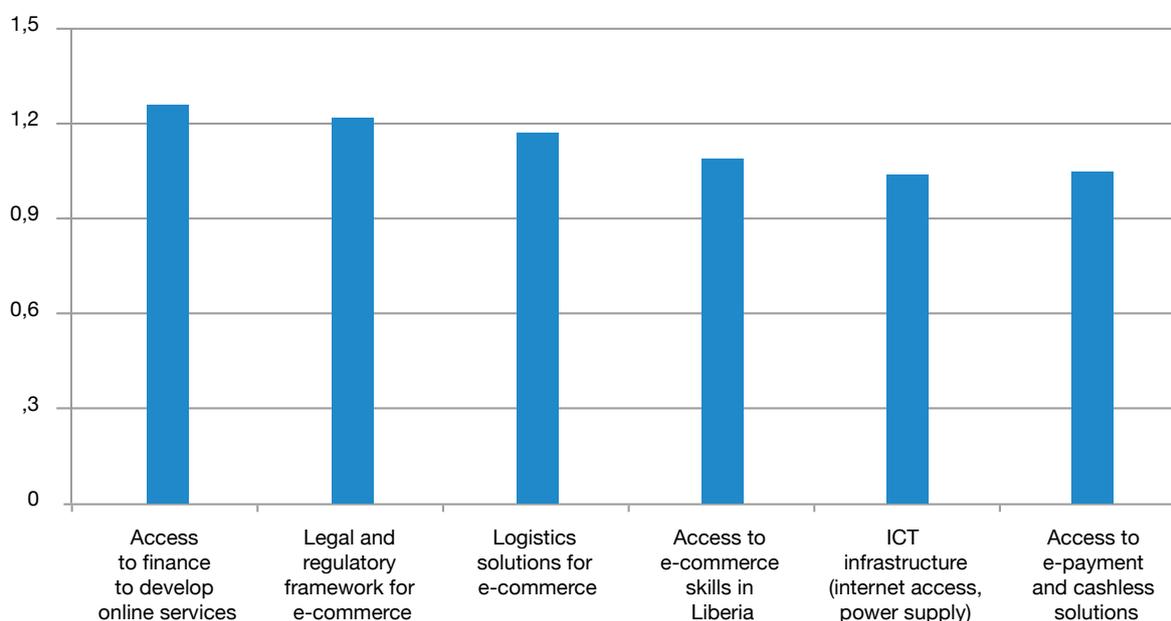


capability levels and the communication between markets (demand side) and sellers (supply side) must be elevated.

Access to finance, legal and regulatory frameworks, followed by logistical challenges, are the top three challenges noted by leading private sector companies. The weak access to financing for starting e-commerce operations coupled with legal and regulatory challenges in the e-commerce ecosystem overshadow the other areas, even though they are also deemed

important constraints. Enterprises are unable to get to the starting point of initiating operations (setting up websites, establishing how to deliver the goods and the like), and so the perception of constraints from the private sector's side focuses predominately on the three areas of access to finance, legal and regulatory framework, and logistics and trade facilitation. Further assessment confirmed that all seven areas (including e-commerce assessments) are problematic, requiring attention.

Figure 2: Which factors constrain the private sector's growth in e-commerce? (23 Responses; weighted average)



Source: UNCTAD

The e-commerce ecosystem (government, banks, posts, telecommunication firms, academia, and ICT support firms) must mature quickly to support the private sector.

Recent developments demonstrate that the pace of reforms in Liberia can be expeditious if the policy focus is established. Examples include the record setting WTO Accession pace, as well as recent proactive steps to shore up technical and coordination capacity related to the Trade Facilitation Agreement (TFA). Much can be accomplished in the policy and regulatory sphere related to e-commerce, if the new

administration gives it adequate attention. This is especially important given that the private sector is forging ahead with developing e-commerce solutions in the absence of dedicated regulations for electronic transactions, cybersecurity, privacy and the protection of consumers online.

Promising developments include the deployment of a centralized switch at the CBL that facilitates interoperability between banks (for example, interbank transfers and Automatic Teller Machines/Point of Sale (ATM/POS) cross-utilization). Local card payment gateways that can also connect to international



networks and a spurt of e-government services under development (albeit in relative isolation to each other) including electronic payment solutions for taxes, water/electricity/school/TV bills are further examples.

Perhaps the most important development has been the rise of mobile money services, which have already been incorporated as payment solutions for the lead e-commerce vendors. Indeed, all indications are that mobile money will be the real driving factor for Liberian e-commerce growth. The reason is evident: the transition from the currently predominantly COD to a card-based payment model will not come quickly. It will come organically, over the medium- to long-term, once a critical mass of e-commerce activity emerges, and regulations pertaining to the protection of consumers online are in place. Mobile money's high user adoption rate reflects a safe, reliable and comfortable means of payment for Liberian consumers, and should be capitalized on.

The Government must continue to shepherd critical hard and soft infrastructure development, including the national ICT backbone, the metro fiber ring, resource mobilization for the Universal Services Fund (USF) and reorganization of the Postal Services. The Government has already initiated various e-government projects in different sectors, including the development of e-education, e-health, a full-scale e-procurement system, and an electronic single window and transition from pre-shipment inspection to destination inspection. Institutional coordination must continue to improve.

The eventual success story will not only be about regulations and infrastructure. The Government may need to consider innovative measures. For instance, in addition to embarking on long-term road infrastructure projects, the immediate challenge of last mile delivery faced by the postal services can be offset by testing and then adopting innovative models, such as what3words, already being tested by a Liberian firm (Banjoo).

Trust development will be essential as well. Assuring consumers, especially within the Liberian middle-class who possess reasonable purchasing power and are relatively more e-literate, that online shopping can be safe, reliable and convenient is challenging, yet essential. Customer protection and security must be guaranteed before people will demonstrate their willingness to sign to online platform. Of great

importance is capacity-building support for all, especially the government, private sector and consumers, in order to strengthen the technical know-how, build trust, and raise awareness.

The developmental path of neighbours (including, Côte d'Ivoire, Ghana and Nigeria) can offer important lessons. For instance, pan-African banks such as United Bank for Africa (UBA) and Guaranty Trust Bank-Liberia (GT Bank) are willing to expand banking and payment services from more advanced markets pending approval by the CBL. Mobile money solutions from more established countries could also help to meet Liberia's needs.

The bottom line.

E-commerce is increasingly viewed among both Liberian policymakers and the private sector as a potentially important driver of economic and socio-economic growth. The environment is ripe but requires multidimensional support. This assessment provides preliminary steps to aid the understanding of what needs to be done to support the e-commerce ecosystem. The potential has been established. Now it must be realized.



SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

MAIN FINDINGS	MAIN RECOMMENDATIONS
 e-Commerce Readiness Assessment and Strategies Formulation	
<p>Increasing cognizance of e-commerce in policy and private sector circles, but common vision is yet to emerge. Fragmented knowledge of e-commerce, and a nuanced understanding regarding the overall landscape does not exist yet. No e-commerce specific strategy exists and the ongoing revision of the Telecommunications and ICT Policy and Strategy covers this area in general terms only.</p>	<p>Facilitate sustained multi-stakeholder dialogue regarding national ICT and e-commerce issues involving public and private sectors, banks, academia, telecommunication firms by developing/reinvigorating a national steering committee focusing on the digital economy. Develop a specific e-commerce strategy in the medium-term to chart the future course.</p>
 ICT Infrastructure and Services	
<p>Weak reliability, affordability, speed and coverage of the Internet outside Monrovia. Sustained growth in mobile telephony and Internet penetration across the country driven by the Mobile Operators. Higher proliferation of mobile broadband internet (20 per cent) vs. fixed-line broadband internet usage (one per cent). Landing of the Africa Coast to Europe (ACE) submarine cable has not yielded expected benefits due to lack of last mile connectivity. High cost of broadband/mobile Internet expected to remain for the medium term, broadband prices will drop amidst rising operator competition.</p>	<p>Complete high-speed metro fiber ring in Monrovia under a competitive fair-play environment involving ISPs, and connecting government, private sector, banks, academia and civil society. Improve the mobile coverage along with associated mobile banking and agency banking network outside Monrovia to all 15 counties as a medium-term goal, as well as the national fibre-optic backbone as a long-term goal. Fully implement the Chief Information Officer (CIO) regime linking senior IT officials across the public sector entities. Ensure funding for National Universal Access Program Strategy (NUAPS)</p>
 Trade Logistics and Trade Facilitation	
<p>Severely-challenged road infrastructure outside Monrovia. Physical addressing is extremely weak even in the capital, leading to challenges in order fulfilment through postal/delivery services. Challenges in securely transporting cash to the counties undermines efforts such as agency banking. Critical capacity constraints in the postal services need to be addressed. Customs handling continues to be an area of challenge although sustained technical assistance has resulted in improvements.</p>	<p>Improve physical addressing in Monrovia as well as the capabilities of the national postal services in conjunction with existing efforts with the Ministry of Posts and Telecommunications and other ministries. Explore rationalization of the posts department. In the interim, adopt innovative approaches (such as W3W and others) to ensure last mile delivery. Ratify the WTO Trade Facilitation Agreement as well as the associated notifications. Ensure continued role for the NTFC in improving Liberia's trade facilitation environment.</p>
 Access to Financing	
<p>Low financial intermediation marked by high cost of credit. Banks face high risk from non-performing loans (NPLs) and low profitability levels. Strong challenges at the enterprise level in accessing credit/capital for operating costs and investments. Commercial banks do not offer lending products geared to the needs of the M/SME sector, and e-commerce related business propositions are especially perceived to be unquantifiable and assessable. Venture capital and other sources of funding have not been successful thus far in Liberia.</p>	<p>Expand network of financial institutions in rural areas. Develop tailored lending solutions for e-commerce businesses and improve awareness among loan seekers about existing instruments. Strengthen coordination between lenders and regulatory agencies, and loan-seeking e-commerce firms. Improve capabilities of loan seeking companies to demonstrate improved creditworthiness to lenders, and on the other hand, help banks in developing assessment criteria for accurately conducting due-diligence on loan applications from e-commerce firms.</p>



MAIN FINDINGS	MAIN RECOMMENDATIONS
 Payment Solutions	
<p>Nascent online payment infrastructure. Cash on delivery is the primary payment mode, and adoption of mobile payments is gaining pace. No connection between mobile wallet – banking accounts. Trust development among consumer base related to online card-based payments will take time. Important efforts by various government entities for online payment for government services. Interoperability and communication between Liberian banks is improving.</p>	<p>Operationalize agency banking. Allow mobile operators and banks to connect mobile wallets to banking accounts to alleviate challenges of liquidity in rural counties. Connect mobile-money services to international remittances networks. Leverage the CBL's Digital Financial Services Working Group to enhance the discussion of payment solutions and foster closer collaboration within the payments ecosystem.</p>
 Legal and Regulatory Framework	
<p>Regulations (and accompanying enforcement) lag behind regional and global standards. Outdated e-transactions law, plus no legislation on consumer/data protection and cybercrime result in an overall weak legal basis as well as security for e-commerce transactions. One area of progress is e-payments for e-government services.</p>	<p>Revise the e-transactions law and develop new laws and regulations in key areas such as protection of consumers and privacy. Ensure enforcement of laws and regulations. Resolve regulatory uncertainty at the Liberia Telecommunications Authority (LTA) and CBL level regarding the scope of mobile operators to offer banking services. Ensure proper governance of the Cable Consortium of Liberia (CCL).</p>
 e-Commerce Skills Development	
<p>E-commerce vendors cannot count on a reliable supply chain of IT support firms to assist growth. Essential skills such as website development, interfacing with bank application program interface specialists (APIs), content management are largely missing. Weak feedback loops between public sector, private training schools, academia and the private sector constrain e-commerce skills development and have led to a strong skills-mismatch challenge. Awareness is growing, albeit slowly within the public sector regarding the concepts, applications and technologies related to e-commerce.</p>	<p>Develop strong feedback loop between the public sector, academia and private sector to coordinate the upgrading of the ICT skills infrastructure and reduce the existing skills mismatch. Emphasis on certificate level courses that can be adapted quickly to the needs of e-commerce actors. Assist skills providers with teacher training and curricula upgrading. Increase role of ICT sensitization for primary and secondary school students. Improve awareness of e-commerce issues in the public sector. Focus on developing supply chain of IT service providers.</p>



FINDING UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS

1. E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION

Increasing private sector forays in e-commerce accompanied by ICT infrastructure and policy development focus in parallel bode well for Liberia's evolving digital economy, which is still in the early stages of maturity. Overall, there is growing grasp of e-commerce in policy and private sector circles. However, a common vision is yet to emerge. Among public sector institutions, there is fragmented knowledge of e-commerce, and a nuanced understanding regarding the overall landscape does not exist. No e-commerce specific strategy exists and current policy/strategy formulation in related areas (such as the revisions to the National Telecommunication Policy and Strategy for Liberia suffer from a conspicuous absence or weak focus on services in general.

E-commerce firms have been involved to some extent in policymaking. Progress has been made in terms of inter-agency coordination through the establishment of working groups on specific policy areas, such as payment systems, although no specific e-commerce coordination group exists.

Overall, positioning vis-à-vis international benchmarks/indicators point to the low performance of the overall ICT sector.

Three important independent rankings highlight Liberia's weak position in overall ICT readiness for the country:

- 2017 UNCTAD B2C E-commerce Index: Liberia was ranked 124 out of 137 economies in this index, which measures the readiness of countries to engage in online commerce, using four indicators: Internet use penetration, secure servers per one million inhabitants, credit card penetration, and a postal reliability score.
- WEF's Networked Readiness Index: Liberia was ranked overall 130 of 139 economies for 2016, and 135 for the Infrastructure and digital content sub-pillar' of the methodology, based on parameters such as mobile network coverage, international Internet bandwidth, secure internet servers and electricity production.
- ITU ICT Development Index (IDI) ³: Liberia was ranked 161 of 175 economies in 2017. This index is also relevant from an e-commerce

³ The IDI is a composite index that combines 11 indicators into one benchmark measure that can be used to monitor and compare developments in ICT between countries and over time.

standpoint. Several of the sub-indicators⁴ refer to ICT infrastructure, affordability of ICT services and to ICT skills.

1.1. National policies related to ICT, e-government and e-commerce

The policy gap has been reduced in the last decade with a number of important strategies/policies adopted.

- **The 2017 Information and Communications Technology (ICT) Policy Draft (2017-2022)** aims to address critical priorities for sustainable development of the ICT sector, and to support economic development and the social inclusion of all Liberian citizens. The policy specifically addresses the following three key issues:
 - Developing and integrating Liberia's critical ICT infrastructure to open up the potential for wealth creation across the private sector generally, and to empower its citizens,

⁴ These indicators include mobile-cellular telephone subscriptions per 100 inhabitants, international Internet bandwidth (bit/s) per Internet user, percentage of households with a computer, percentage of households with Internet access, percentage of individuals using the Internet, fixed-broadband subscriptions per 100 inhabitants, active mobile-broadband subscriptions per 100 inhabitants, mean years of schooling, secondary gross enrolment ratio, tertiary gross enrolment ratio.



thereby helping to achieve the goal of becoming a middle-income country by 2030;

- Speeding up rapid ICT development and usage in Liberia, since the country currently lags behind West African neighbors and other countries in Africa, and;
- Undertaking corrective policy measures to address the significant disparities in access and affordability for ICT services both within and beyond Monrovia and its surroundings.
- **A postal services strategy** is envisaged to ensure the proper management and growth of the postal sector to its full potential. The draft Postal Policy is expected to be finalized and adopted in this regard. The Government intends to outsource postal financial services by establishing a public-private semi-autonomous agency.
- A National Universal Access Program Strategy (NUAPS) was launched in 2014 and forms the basis for universal access framework in Liberia. The strategy expired in 2017 and needs to be updated.
- A national **e-government strategy (2014-2018)** which spells out the Government's vision of empowering citizens through increased access to e-services, and improved efficiency, transparency and coordination between government entities. The e-Government Interoperability Framework (2014) lays the

basis for the different government entities to interact with each other.

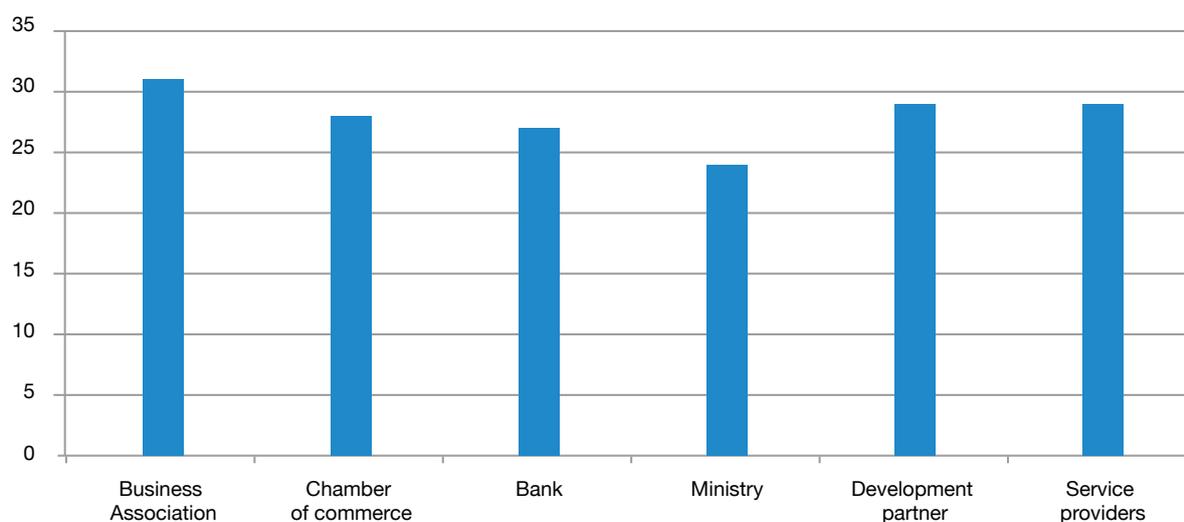
- There is wide consensus that a national broadband strategy is required for Liberia.

E-government initiatives are driving infrastructure growth and adoption of online services among citizens.

The e-government strategy's implementation progress has been slow but steady. Aided by development partners, a number of intra-governmental e-initiatives are in the various stages of development and deployment. These include:

- The Integrated Financial Management Information System (IFMIS) Project at the Ministry of Finance.
- The interministerial CIO framework aiming at enhancing coordination between ministries.
- Mobile money payments for civil services across select ministries and technical agencies.
- Biometric ID across select ministries and technical agencies.
- A comprehensive suite of e-projects – e-health, education, e-agriculture are planned.
- Government-wide network (being supported by Libtelco).

Figure 3: Survey spotlight: In case you need technical assistance to start developing e-commerce solutions, how likely are you to turn to the following entities? (of 31 private sector responses)



Source: UNCTAD



1.2. Current e-commerce marketplace activity

The main e-commerce activity is taking place in the food delivery services (Cookshop) and online marketplaces aggregating Monrovia based retail stores (Banjoo superstore, and Liberia Online Market). One of the market leaders, Banjoo, has also diversified into automobiles, real estate, and education. Some vendors (including apparel design and manufacturing companies) source and produce locally, with an international (US) banking presence connected to international payment gateways.

The success of the current market leaders has not gone unnoticed. Several other companies are now attempting to replicate the online marketplace (for consumer goods) model as confirmed by interviews during a recent MSME conference.⁵ The founders

of Cookshop and Banjoo are actively involved in mentoring other entrepreneurs.

The Government has also included these lead firms in working groups such as the Digital Financial Services Working Group (DFSWG) to understand their perspective and needs, and to feed into the policymaking mechanism.

The tourism sector is expected to be an early adopter of e-commerce due to natural factors that support this forward movement. Hotels/accommodation providers, tour guide companies, food outlets and transportation providers have already initiated efforts to launch an online presence, supported through a strong network developed by the national tourism association (LINTA).

⁵ November 2017 in Monrovia

Box 1: Case study - Cookshop.biz

Cookshop.biz is a leading Liberian online food delivery service linking food retailers, consumers, and advertisers through a digital payment enabled platform. Launched in 2013 by founders Charles D. Cooper and Mlen-Too Wesley, the company is widely considered a pioneer of on-demand e-commerce in Liberia. To date, the online platform has completed over 50,000 orders and surpassed \$1 million in sales. As first movers in the Liberian e-commerce space, the founders are active collaborators with policymakers, banks, telecommunication firms and other private sector partners on how to grow the e-commerce industry.

The Cookshop model is straightforward, involving agreements with a wide range of food outlets across the Greater Monrovia area. Cookshop acts as an intermediary between food outlets and customers - customers place orders through the website and can make payments through a wide variety of options including Cash on Delivery, mobile money, and credit cards. Cookshop operators relay the order to the food outlets, and pickup/deliver the order for a small fee charged to customers. Customers are both local and expats in Monrovia. The value proposition for participating food outlets is clear – they save money by not having to individually invest in the logistical aspects of the delivery process, and they now have access to more clients. The employment and training that the company provides to its staff including operators and delivery staff allows the staff to gain transferrable skills.

Cookshop was the first e-commerce business in the tourism/hospitality sector in the country. In early 2017, the company completed integration with UBA's U-Collect payment gateway, marking the first time that online payments could be processed by a local merchant bank in Liberia enabling digital payments in the form of MasterCard, VISA, PayPal, Mobile Money, and even Bitcoin.

Cookshop Founders: "We are Liberia's first true DOT.COM company, and the nation's online destination for food."

Expansion plans are in place to extend Cookshop's services to other locations, including Nimba, Buchanan and Gbranga. The company's founders aim to use agritech solutions to bring efficiency to the food value chain in Liberia. Partnerships are formed with farm cooperatives to bring their produce to food retailers that are otherwise often beyond their reach. Cookshop will then aggregate produce to bring value to the 35 food retailers in the network, and also to create demonstrable impact in rural communities. The ambitious plan centers on scaling up Cookshop's current digital payment system to facilitate all transactions within the produce delivery network.

Source: UNCTAD interview with Cookshop Leadership Team.



Box 2: Case Study - Banjoo e-commerce

The Banjoo superstore is a leading Liberian e-commerce business centralizing the products from retail stores, provision shops and supermarkets on its mobile site. The main products are groceries, home and office supplies, as well as cooking gas. The business currently delivers throughout Montserrado County and has a vision to fulfil order delivery throughout the country over the next several years. The company also delivers to single locations in four other counties for local pickup. The business has expanded rapidly since its establishment, capitalizing on a significant gap in the market for consumers to easy access to household goods.

Banjoo has arrangements with 100+ retail stores, provision shops and supermarkets across Monrovia. Consumers place orders online and Banjoo manages order facilitation and delivery to the consumer, or the consumer can pick up their goods from an authorized pickup location. Payment options primarily include COD and mobile money payments. An important innovation is the utilization of what3words addressing system in lieu of a formal physical addressing system in Monrovia, and indeed across Liberia. What3words is a global addressing system that has divided the world into 3m x 3m squares, each with a unique address made of 3 dictionary words. It has allowed Banjoo delivery services to fulfil delivery with relatively high levels of efficiency. The integration of this service is all the more impressive because it represents innovation that is currently not common in Liberia.

This distribution channel has allowed retailers and shopkeepers of all sizes, who were hitherto weakly connected to the markets, to have greater access to local markets. It has allowed them access to Banjoo's logistical services in return for a minor fee. Banjoo has also started diversifying its operations to include more sophisticated services such as real estate and motor vehicles, and new entrants are aiming to replicate the original Banjoo e-commerce model.

In the foreseeable future, the company envisions a cashless society in Liberia where e-commerce becomes the number one means of buying and or selling.

Source: UNCTAD interview with Banjoo leadership team



Table 1: Factors promoting growth, and constraining Liberian e-commerce

Factors driving growth	Factors impeding growth
<ul style="list-style-type: none"> • The two lead vendors (Cookshop and Banjoo) have emerged as active champions for e-commerce development in the country, encouraging growth of other vendors as well as facilitating private sector feedback into the policy landscape. These lead firms are paving the way for potential vendors, and also assisting in developing a feedback loop for updating regulations and upgrading supporting functions such as skills development. • Peer-to-Peer advertisements and transactions through social media are very popular, with Facebook being the top medium of choice. From this perspective, sellers/consumers are already quite aware of the benefits of an online presence, and the high level of activity serves as proof of the organic potential for transactions facilitated online. • The recent focus on services development, driven by WTO accession, tourism strategy development bodes well for e-commerce, also because this will result in new markets opening up to vendors. • There is now a strong policy and technical focus on ICT infrastructure improvements through initiatives including the metro fiber ring, passage of the payment act and mobile money regulation, deployment of a centralized switch at the CB (that will facilitate interbank transfers) and others. These improvements will play a critical role in supporting e-commerce. • Strong collaboration between four banks (Ecobank, GT Bank, International Bank, and UBA) and the two wireless telecommunication providers has been stewarded by the Central Bank and the Liberia Telecommunications Authority, and is an important reason for the continued uptake of mobile money in Liberia. 	<ul style="list-style-type: none"> • Trust development across a multitude of areas – online payments, buying without directly interfacing with the seller and the like will take time. • There is consensus that the private sector will fast outpace the regulations in terms of e-commerce development. These include consumer protection, data protection and cybercrime laws. There is currently no legal basis that the courts can utilize for adjudication in case of disputes relating to e-commerce. While this is not currently a big issue due to the low base of e-commerce activity, the laws and regulations will need to catch up soon. • Online payments will take significant time to catch up as banks/consumers gain confidence in deploying online payment solutions and securely put card credentials online. Recent cyberattacks at the national level that resulted in multi-day outages have not inspired consumer confidence. Tourism sector stakeholders reiterated that even with POS systems, connectivity can often be a challenge, especially outside of Monrovia. • National usage levels of the Internet are very low (seven per cent) and the bulk of Internet access takes place through mobile phones. Low broadband penetration is due to weak last mile connectivity. • Weak support supply-chains of ICT service providers for website development, API connectivity and the like are due to which vendors are unable to develop and reliably maintain an online presence in the first place. Software firms and independent software professionals have hitherto not placed a strong focus on e-commerce related services. Their focus mainly falls on customized software development and hardware servicing. To offset this gap, a number of technical training institutes double up as IT contractors. • Order fulfillment is a major challenge due to the poor road and transportation infrastructure, especially outside Monrovia. Lack of physical addressing is a significant constraint to last mile delivery.

1.3. National policies related to private sector development and trade

Private sector development and trade have been front and center of Liberia’s national development agenda since 2010. A number of strategies/policies and assessments have been conducted with the common focus of improving the business climate, as well as effect value chain improvements in key sectors such as Tourism, Cassava, Rubber, Cocoa, and Rubberwood. These include (among others):

- Lift Liberia Poverty Reduction Strategy (2008-2011)
- Agenda for Transformation: Liberia Rising 2030
- DTIS / DTIS-update
- National Trade Policy
- National Export Strategy 2014-2018 (including six sectoral strategies)

These essential documents all have a conspicuously weak (or altogether lacking) focus on services and by association, e-commerce. Market development efforts



have not included the e-commerce dimension beyond surface level analysis and there are no strategies for, or existing assessments of, e-commerce currently in place.

1.4. National coordination (e-commerce task force, interministerial, public-private dialogue)

Individual components of the e-commerce ecosystem are better understood at the policy level, but overall understanding of the ecosystem is still in early stages of emergence.

E-commerce is an emerging area of activity in Liberia and the term holds different connotations depending on the stakeholders. There are generally unclear and mixed interpretations in Liberia of the meaning of e-commerce; what stakeholders see as e-commerce, depends on their position in the e-commerce value chain. For instance, the CBL and commercial banks consider e-commerce as the payment systems comprising the ICT physical infrastructure and software platforms, while for customers, the vendor website constitutes the main e-commerce component.

The key insight is that a common understanding of the overall scope and potential of the e-commerce value chain has not emerged yet, given that this field is still in the early stages of maturity. While there are platforms such as the Digital Financial Services Working Group (DFSWG) to coordinate specific components of the ecosystem, a holistic dialogue through a coordination mechanism that discusses the overall e-commerce has not emerged. This is an important gap.

There is no lead agency for e-commerce at present, however the Liberian e-commerce ecosystem is comprised of a variety of support institutions.

A wide variety of institutions are actively involved in e-commerce development, through a particular focus on one or more thematic areas based on their mandate. There is currently no lead agency for e-commerce issues, which requires redressal because of the overlaps between commerce, trade ICT and logistics-based areas of e-commerce, which will in all probability lead to confusion over institutional mandates as the field evolves.

The key support institutions include the following.

Table 2: Institutional support

eT-READY POLICY AREA	INSTITUTIONS
E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION	CBL, Ministry of Posts and Telecommunications, Liberia Telecom Authority, Ministry of Commerce and Industry
ICT INFRASTRUCTURE AND SERVICES	Ministry of Posts and Telecommunications, Liberia Telecom Authority, Mobile operators (Lonestar, Orange), Libtelco
TRADE LOGISTICS AND TRADE FACILITATION	Ministry of Posts and Telecommunications, Liberia Revenue Authority (Customs), Ministry of Commerce and Industry, National Port Authority
PAYMENT SOLUTIONS	CBL, Ministry of Posts and Telecommunications, Liberia Telecom Authority
LEGAL AND REGULATORY FRAMEWORKS	CBL, Ministry of Posts and Telecommunications, Liberia Telecom Authority
E-COMMERCE SKILLS DEVELOPMENT	Ministry of Education, Ministry of Posts and Telecommunications, Ministry of Youth and Sports
ACCESS TO FINANCING	CBL, Ministry of Finance and Development Planning, Commercial Banks, credit unions, Village Savings & Loan Associations (VSLAs), rural community finance institutions, MFIs, IFC, West African Venture Fund (WAVF)
MARKET DEVELOPMENT ⁶	Sector Associations (such as LINTA for tourism), Ministry of Commerce and Industry (de-facto trade promotion organization)

⁶ Not an eT-Ready Policy Area

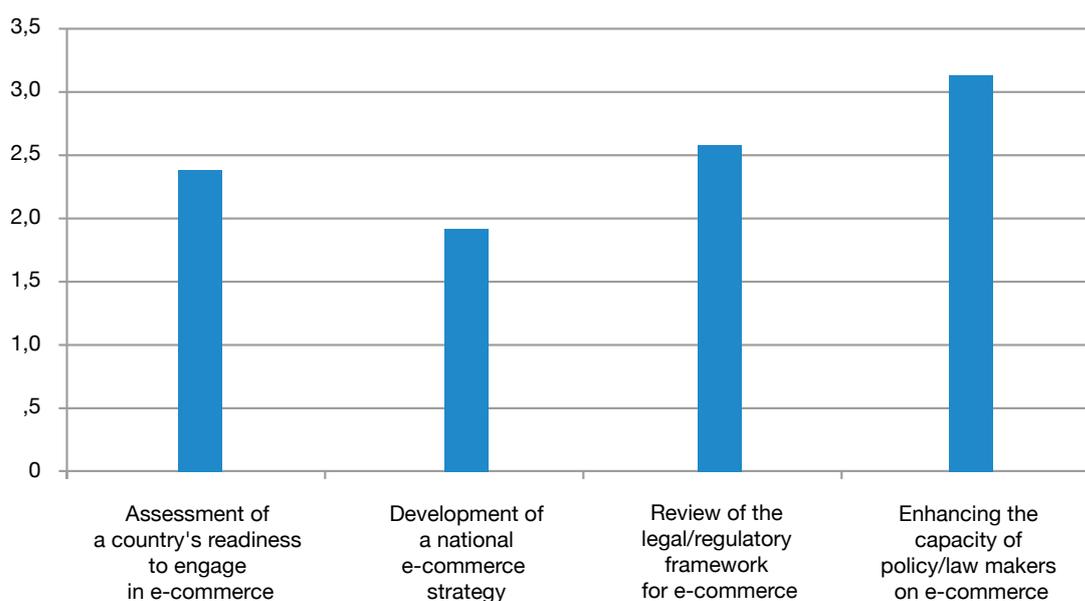


Institutional coordination related to e-commerce must be strengthened in order to ensure interoperability and synergies.

The performance of Liberian e-commerce is influenced by the individual capacities of institutions involved in supporting the value chain, and the level of coordination between the institutions. The following key assessments are relevant:

1. Due to the regulatory gap around e-commerce, courts do not currently have the legal basis for resolving disputes focusing on online transactions. In recognition of this gap, the CBL has established the DFSWG to discuss regulatory and digital finance issues at a national level, and function as a feedback loop that results in informed policymaking. The group includes the CBL, LTA, telecommunication firms, Commercial Banks, and select private sector stakeholders.
2. Public sector institutions suffer from technical/human capital and resource-based capacity challenges, although the overall capability levels have improved in the last decade. Out of necessity, Liberia is primarily a welfare state with salary expenses constituting 80 per cent of the government's budget. In this scenario, the efficiency and effectiveness of bloated institutions have suffered, and any focus on emerging themes such as e-commerce has developed slowly.
3. Coordination remains a key challenge and in recognition, working groups such as the DFSWG are essential for effective policymaking with appropriate inputs from relevant stakeholders.
4. There have been calls – both within the government, and the private sector – for a dedicated ICT ministry that will be responsible for areas including e-commerce. Confusion about where the mandate for e-commerce lies (whether with MoPT, MOCI or another entity) exists and should be resolved.
5. MOCI is the lead ministry for negotiation matters at the WTO and other regional fora, and it also serves as the country's TPO. Recent achievements include fast-tracking of WTO accession, deployment of a National Trade Facilitation Committee (as a forward-looking preparation for TFA ratification) and commissioning of several trade and domestic market development strategies.

Figure 4: Survey spotlight- Please score the following areas on their relative importance (1- least important, 5-most important; 24 responses)



Source: UNCTAD



1.5. Access to relevant statistics

Statistical and information gap exists for the entire ICT sector.

It is critical that weaknesses in data collection related to ICT be resolved soon. ICT level statistics – and indeed services level – collection is weak in Liberia. Statistical gaps contribute to challenges in policymaking related to ICT, including e-commerce issues. Capacity related challenges at MOPT, Liberia Institute of Statistics & Geo-Information Services (LISGIS) and other official entities hamper the government's ability to effectively build the business case for supporting ICT. Given that data collection for e-commerce transactions requires a more nuanced focus, a workflow needs to be agreed upon and institutionalized.

The Liberia Telecommunications Authority (LTA) and MoPT are responsible for generating data on the Telecom and ICT markets respectively, however the information is not easily accessible on their websites. LISGIS, the national statistical agency, does not provide disaggregated services level information.

A key challenge relates to the lack of disaggregated data for e-commerce. As in most countries, the Customs department of the LRA (responsible for trade related data collection), does not disaggregate data based on e-commerce transactions. The CBL does not disaggregate SWIFT bank transfers based on remittances or other types. While registering a company, it is not possible to index the firm as an e-commerce vendor. In the absence of this disaggregation, it is not possible to conduct e-commerce specific analysis.

2. ICT INFRASTRUCTURE AND SERVICES

Liberia's rankings in key ICT indices mapped by UNCTAD, ITU and WEF remain very low. Sustained growth in mobile telephony (83 per cent penetration) is driven by innovation and high competition between mobile operators (Lonestar and Orange). Much higher proliferation (20 per cent) of mobile Internet -multiple-subscriber identity module cards per individual) versus fixed line broadband Internet usage (~one per cent), but overall Internet usage across the country is limited to seven per cent. As a consequence of the liberalization of the telecommunications industry, the real impact has been that the accessibility, affordability and quality of service of voice and data services have improved considerably through the interventions of different private GSM companies during the past 25 years.

The landing of the ACE submarine cable in Monrovia has not yielded the expected benefits due to lack of last-mile connectivity through the metropolitan fiber network. High costs of broadband and mobile Internet are expected to remain so for the medium term, although broadband prices should dip amidst operator competition once the metro fiber ring is complete.

Connectivity remains limited outside Monrovia, and the lack of a national ICT backbone is a major constraint. Reliability, affordability, speed and coverage of the Internet outside Monrovia remain weak. Economics for setting up cell phone towers outside Monrovia are untenable given high setup costs (US\$150,000 per tower), and a relatively small consumer base with weak purchasing power. The establishment of a Universal Access Fund is a promising move; however, its sustainability and effectiveness remain to be demonstrated.

Improvements in resource-dependent broadband penetration will take time and, in the interim, vendors can capitalize on the rising mobile-broadband and smartphone-penetration levels to develop mobile enabled websites through which sales can take place. Local digital content creation is key, especially now that there is an Internet Exchange Point (IXP) in Monrovia that will facilitate lower latency, costs and improved speeds for local websites.

2.1. Broadband/mobile internet penetration

Fixed line broadband penetration levels are much lower than cellular coverage, and currently stand at less than one percent.

As the sole licensed fixed line broadband provider in Liberia (no other fixed line provider is allowed to lay fibre), Libtelco has used its monopoly (including high ownership percentage in CCL, which allows it to offer premium incentives) to undercut private



sector competition in this niche. However, it has faced significant challenges in efficiently executing this role due to capacity and resource constraints, and the delayed rollout of the last mile connectivity in Monrovia and beyond. Libtelco focuses now on mainly providing connectivity to the public sector, while the private sector broadband connectivity will potentially be driven after the metro fiber ring project is complete. There are some ISPs such as K3 that do provide wireless broadband connectivity to private consumers and businesses in the Monrovia area. The overall fixed line broadband connectivity levels are less than one percent.

Consolidation of mobile operators led to drop in prices and a scramble to gain market share, ultimately benefiting consumers of mobile services.

Over the last decade, the Liberian mobile operator base has seen a high degree of consolidation. GSM Operators such as Cellcom, Comium, Libercell and Noaphone have either been acquired by competitors, or folded operations due to weak profitability. The marketplace is currently comprised of Lonestar and Orange and both firms have captured market share through a strategy that is a combination of acquisition, competitive pricing and incentives for consumers. Despite the high degree of consolidation, competition is fierce: incentive packages can be counter-matched within a week, and most subscribers hold both Orange and Lonestar SIM cards to benefit from the highly competitive rates and incentives for on-air use. Consequently, mobile subscription penetration has risen from 40 per cent in 2010 to 83 per cent in 2016. Liberia has one of the lowest mobile broadband price levels in Africa. However due to the low-income levels, the average income earner may need to pay close to 15 per cent of his or her monthly income to buy a 500 MB mobile prepaid data plan – which renders the affordability low.⁷

Together, Lonestar (established in 2001 with 60 per cent South African ownership) and Orange (French telecom giant that acquired Liberian Cellcom in 2016) cater to more than 2.8 million subscribers, and most subscribers have both Lonestar and Orange accounts. With its recent acquisition of Cellcom, Orange has a slight estimated lead with 1.6 million subscribers.

⁷ *Measuring Information Society Report (MISR), ITU, 2016*

Orange	French telecom giant completed acquisition of Liberian Cellcom in 2016. Slight lead over Lonestar with estimated 1.6 million subscribers (February 2017), 4G LTE service in Monrovia and recently expanded to Kakata in heart of Liberia's historic rubber belt. Plans for investing US\$18 million in 2018, focusing on further network expansion outside Monrovia and improved financial inclusion through mobile money services. Orange's multi-year strategic plan called 'Essentials 2020' aims to provide coverage to 80 per cent of the population by 2020. Plans to leverage bases in Cote d'Ivoire and Liberia for further expansion in West Africa.
Lonestar-MTN	Established in 2001 with 60 per cent South African ownership. Estimated 1.5 million subscribers for voice and data services. Completed takeover of Novaphone in 2016, which held a market share of 10 per cent. Wide network coverage across Liberia due to its long-term presence. Active player in the mobile money marketplace; goes toe-to-toe with its erstwhile competitor Cellcom (now Orange).

Internet use is low, and mainly takes place through mobile phones.

Despite significant improvement in penetration of mobile subscriptions, use of the Internet remains low in Liberia at seven per cent⁸ in 2016. Additionally, the most recent household survey (conducted in 2013) found that only five per cent of Liberian households reported owning a computer. Approximately 50 per cent of the population has access to a 3G signal, while approximately 17 per cent are able to access a 4G signal. These findings, when considered in conjunction with the high percentage of active mobile broadband subscriptions (20 per cent⁹) and low fixed broadband penetration (well below one per cent), indicate that: (a) Internet usage by Liberians is low, and (b) the bulk of the Internet usage is conducted over the phone. The implication for e-commerce is that vendors must make their offerings smart phone compliant if they are to tap into the high mobile broadband proliferation rate and cope with the low levels of computer-based Internet access.

⁸ *ITU. Indicator defines use of Internet as anytime an individual utilizes an Internet enabled device (including cellphones, tablets and computers) within the last three months to access the Internet.*

⁹ *According to GSMA, the figure may be as low as 5.9 per cent using 3G or 4G connections, when only unique subscribers instead of number of connections are considered.*



Table 3: Key ICT Indicators for Liberia

	2010	2011	2012	2013	2014	2015	2016	LDCs (2016)	Developed (2016)
Fixed-telephone subscriptions	5,806	9,289	13,734	11,000	10,040	9,000	8,000		
Fixed-telephone subscriptions per 100 inhabitants	0.15	0.23	0.33	0.26	0.23	0.20	0.17	0.90	38.10
Mobile cellular subscriptions	1,571,308	2,020,637	2,379,900	2,550,775	3,225,258	3,652,000	3,834,600		
Mobile cellular subscriptions per 100 inhabitants	39.70	49.53	56.79	59.40	73.35	81.09	83.10	67.7	127.3
Fixed broadband subscribers	186	63	524	5,080	6,000	7,000	8,000		
Fixed broadband subscribers per 100 inhabitants	NA	NA	0.01	0.12	0.14	0.16	0.17	0.90	30.30
Active mobile-broadband subscriptions per 100 inhabitants							20.5	19.1	94.4
Percentage of individuals using the Internet	2.30	2.50	2.60	3.20	5.41	5.90	7.32	15.60	79.60
Electricity production * kWh/capita		87.6	71.6						
International Internet bandwidth * kb/s/user		.61	2.01		6.31				
Secure Internet servers * / million pop.		1.21	1.19		2.5				

Source: ITU statistics except for ones marked with *. Yellow fill indicates latest year available for Liberia.

* World Economic Forum; The Global Information Technology Report 2016; Date of data collection or release: 6th July 2016; www.weforum.org/gitr



2.2. Major infrastructure projects in play

The connectivity of the ACE landing point to the metro fiber ring will usher Monrovia in the high speed digital age. This last mile connectivity, however, remains a significant pending challenge.

The Africa Coast to Europe (ACE) submarine cable landed in Monrovia in November 2011, along with high hopes for facilitating broadband connectivity in the country. The ACE cable, stretching 17,000+ km from France to South Africa, connects more than 20 African and West European countries. It is Liberia's sole access to an international optical fiber cable system, delayed in part due to the Liberian civil wars. The cable landing point is managed by the Cable Consortium of Liberia (CCL), a public-private partnership involving the Government of Liberia (55 per cent), Libtelco (20 per cent), Orange (formerly Cellcom 10 per cent), and Lonestar (which recently acquired Novaphone).

The arrival of ACE has led to a sharp decline in Internet connectivity costs, leading to a sharp increase in Internet subscribers, albeit still at a low percentage of the overall population. Internet connectivity is provided by the main GSM mobile networks (Orange and Lonestar), and multiple ISP providers, although the bulk of Internet usage stems from the former route. The mobile network providers offer GPRS, EDGE, HSPA and WiMAX technologies.

The Government is expected to divest its share in Cable Consortium of Liberia (CCL) in the coming years in favor of ISPs that can either directly invest or join forces with each other and invest through a 'consortium within the consortium' model.¹⁰

Despite the high optimism brought about by the ACE cable landing, broadband penetration has not improved to a significant extent. The Government-owned Libtelco, which has the sole authority to provide fixed-line broadband access, has faced significant challenges in rolling out the last mile connectivity from the cable landing point throughout Monrovia and beyond. As a result, the overall network of fixed-line broadband is small. This is expected to change through an ambitious project being implemented by C-Squared (a partner of Google) to develop a metro fiber ring in Liberia that will provide high-speed broadband Internet through multiple carriers to

commercial clients and individuals. These carriers will function as customers for the high-speed ACE link and will include telecommunication firms such as Orange and Lonestar, Libtelco, as well as various ISPs. The ambitious project is expected to be completed by the end of 2018.

The establishment of the Internet exchange point is an important reform.

An Internet exchange point (IXP) was established in Liberia in 2015, which is expected to reduce costs and enhance speed and efficiency for local Internet traffic. The IXP is an intersection point between Internet service and data providers in Liberia based on which local traffic does not need to go to international locations, thus reducing cost and latency. ISPs will no longer have to pay transit costs for local traffic, thus cost savings can be directed towards consumers as well. The IXP is also expected to encourage local content creation, which is essential for consumer awareness and encouraging adoption of online activity whether for leisure or business.

An important need exists for developing a national ICT backbone.

Infrastructural challenges have stymied coverage of mobile and Internet services outside the capital. Liberia lags behind its neighbours in West Africa as well as most African countries in terms of developing a national communications backbone. There are three underlying factors:

1. The disparity between Monrovia and the rest of the country is immense, and it now extends to the digital dimension in addition to the economic dimension. It is imperative that the hinterland is connected to the capital because this connectivity will result in economic and socioeconomic gains.
2. The existing networks cannot support the full potential demand for traffic, considering the forecasted demand increase of bandwidth for individuals, schools, government entities, private sector and other segments, both in and outside Monrovia.
3. A national fiber backbone that has the ability to be connected to other international cables through terrestrial connections (such as in Cote d'Ivoire which has access to WACS, MainOne

¹⁰ *Liberia ICT Policy Draft (2017-2022) (forthcoming)*



& SAT-3 cables) are essential, rather than maintaining sole dependency on the Monrovia ACE cable landing point.

A national communications backbone has been under discussion for the last several years and despite multiple studies, progress has been slow. A USAID report¹¹ notes:

- ✓ Roads are still being dug without ductwork for future fibre integration. The integration of fibre in new road digs and power line stringing has been established to bring down costs in neighbouring countries like Sierra Leone.
- ✓ Power is a significant challenge outside Monrovia. Fuel and other power generation related expenses account for 30 per cent of MNO (Mobile network operator) operational expenses.

- ✓ VSAT operations still required for Internet access in large areas of the country given the lack of broadband connectivity.

Coverage related to mobile services suffers a similar challenge. Despite the growing adoption of mobile phone services in Monrovia, the coverage of mobile phone services outside the capital also remains relatively poor. The high cost of setting up cell phone towers (estimated at US\$150K per tower) in addition to other related infrastructural support costs have rendered the economics relatively untenable for cell phone companies.

The Universal Access Fund (UAF) can be a source for this multi-year, multi-phase infrastructural challenge. The fund has been deployed as a means to serve the rural, unserved and underserved areas in the country. A management structure has also been established, but long-term funding remains uncertain. Pilot projects have been started and are in the feasibility stage.

¹¹ *Liberia Broadband Technical Assessment (Components 2 & 3) Backbone & Last Mile Details (new June 4) and Interim Findings (updated June 4) NetHope Global Broadband and Innovations Alliance June 4, 2015*

Box 3: Swiss investment in the Liberian triple-play market

Swiss-based global telecommunication operator K3 Telecom, which claims to offer a unique wireless broadband solution centred on its 'K3 Air Last mile' technology, has launched a new triple-play service in Liberia through its local subsidiary. According to local media, the start-up – which TeleGeography notes was awarded a frequency licence by the Liberian Telecommunications Authority (LTA) in August last year – has unveiled its wireless broadband technology that will support a range of high speed Internet, VoIP and TV broadcast services. K3 Telecom (Liberia) CEO Ernest Boakai says the newcomer's initiative will go a long way 'to solve the many challenges Liberia faces in terms of [the lack of] fibre access in the last mile'. Boakai points out that Liberia's fixed infrastructure is currently 'fallow', a situation his company is looking to change through the deployment of its own fibre infrastructure. In the meantime, however, K3 Telecom (Liberia) is utilising wireless in the last mile, which the CEO claims 'can transmit within a 50 km radius and connect up to 15,000 end users at speeds in excess of 300 Mbps, with more than 70 classic and high definition television programmes and IP telephony'. The Swiss parent has reportedly already invested nearly US\$5 million to launch the venture, with additional investments now planned to accelerate the company's operations. The Internet access provider says it will offer triple-play for a monthly subscription of US\$80.

Source: <https://www.telegeography.com/products/commsupdate/articles/2017/03/01/liberian-start-up-k3-telecom-rolls-out-triple-play-offer/> (Slightly adjusted text to indicate deployment has taken place.)



5. TRADE LOGISTICS AND TRADE FACILITATION

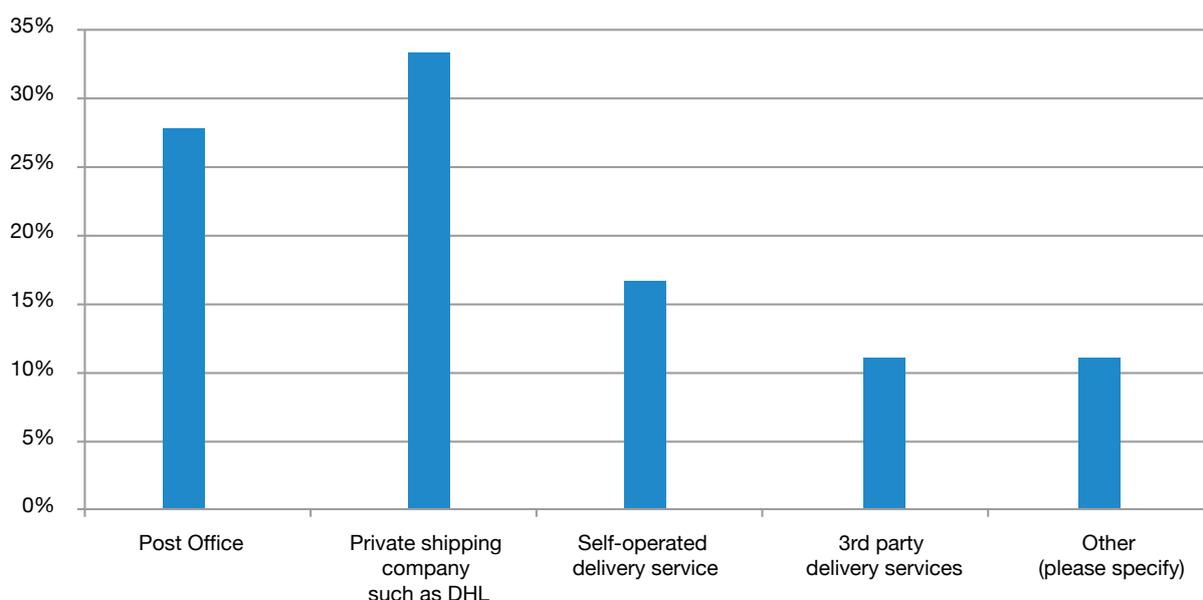
Trade Logistics continues to be a major challenge to movement of people and goods within and transiting through the country, while improvements in the trade facilitation environment have eased the business environment to some extent. Road and transportation infrastructure outside of Monrovia will continue to constrain the business environment (including e-commerce) in the long term. Challenges in securely transporting cash to the counties undermines promising efforts such as agency banking. Physical addressing is extremely weak even in the capital, leading to challenges to order facilitation through postal or delivery services, although some lead vendors have innovated on their own to ease last mile delivery. Critical capacity constraints in the postal services need to be addressed both in terms of reorganization, as well as technical/financial assistance. Improvements in the trade facilitation environment must continue, including further rationalization of administrative burden import/exports, expansion of ASYCUDA deployments, and capacity-building at the Customs Authority.

3.1. Mode of delivery, last mile delivery (traffic, regulations)

Liberia’s road, air and waterway (oceanic and inland) infrastructure has struggled to recuperate since the civil war, and the overall logistics infrastructure upgrading is expected to remain a long-term goal. Physical connectivity within Liberia - between Monrovia and 15 county capitals - will improve in the medium-term future, as will connectivity to the larger hinterland, as a result of extensive road improvement work.

For now, though, the movement of goods and people outside of Monrovia remains challenging. Road connectivity and infrastructure are weak, especially during the rainy season. For e-commerce vendors and indeed any private sector operator that needs to fulfill on-time order delivery to clients, the transportation infrastructure will likely remain a long-term challenge that increases costs of doing business and hinders sustainability of client relationships, both national and international.

Figure 5: Survey spotlight - Which vendor do you use to ship products? (18 responses)



Poor transportation infrastructure constitutes an important challenge to e-commerce.

The total road network in Liberia constitutes 10,600 km (657 paved and 9,943 unpaved), translating to a low paving ratio.¹² Of the paved roads, only about a quarter qualify as all-weather roads. The rainy season regularly contributes to heavy deterioration of the roads. The road network outside the major cities, especially Monrovia, is severely challenged, although the Government has launched an ambitious road reform project with support from development partners.

Some 250 km of road are being rehabilitated linking the capital to the Guinea border in one of the largest infrastructure projects (Liberia Road Asset Management Project) undertaken in modern Liberia with support from a multi-donor trust fund managed by the World Bank. This primary road traversing the country plus accompanying secondary roads linking villages across counties in the hinterland is expected to benefit more than 300,000 people through improved linkages and resulting access to services. In the interim however, the movement of goods, cash, and people remains restricted, resulting in important constraints for e-commerce.

Liberia also has a large number of concessionaires operating in the primary sectors like rubber and timber and that invest in ensuring good road/rail linkages from the concessionaire area of operation to Monrovia and the ports. This road infrastructure can potentially benefit the rest of the population.

Related to air transport, Roberts International Airport is the only international one in Liberia, located about 50 km southeast of Monrovia. Several airlines connect Liberia to the US, Europe and other countries in Africa. Services have been largely resumed since the freeze during the Ebola crisis, and these airlines offer spare capacity for air cargo that can be potentially utilized for trade. No dedicated air cargo services operate currently. The airport is expected to undergo significant rehabilitation and expansion in coming years.

Regarding sea-based transport, there are four major ports operated in Liberia, with Monrovia port being the largest. APM Terminals, a subsidiary of Maersk,

has been contracted to manage all port operations for Monrovia. There is a master plan for the ports being developed, and it is expected that the capacity of the ports will be overhauled significantly in the next two decades.

Liberia's Postal Services suffer from a wide range of capacity challenges.

The postal services require broad rehabilitation and capacity-building. In terms of postal vans, staff training, network building, institutional coordination, the services suffer significant challenges. This is indicated in UNCTAD's B2C E-commerce Index where Liberia's Post Reliability score was a low 12 out of 100, reflecting the immense challenges that need to be overcome for the postal services.

The Government has placed initial focus on postal expansion and decentralization of postal services supported by the Universal Postal Union to build a total of 78 post offices within the entire country based on population density of every ten thousand inhabitants. A total of 25 post offices have so far been either rehabilitated or newly constructed in 13 of the 15 counties.

The postal service does provide an expedited mail service (EMS) to the US, as a means to cater to the significant level of the diaspora population with active ties in Liberia, and vice versa.

The Governance Commission is currently working on a reorganization for the postal services.

A postal services policy and strategy is required to ensure the proper management and growth of the postal sector to its full potential. The Governance Commission (with support from ECOWAS) is working to explore the possibility of reorienting the postal services as a public-private semi-autonomous agency linked but not residing fully within the Ministry of Posts and Telecommunications. The resulting overhaul and influx of resources and expertise may service to boost the scope and the service delivery for this essential service.

¹² For reference, the total land area in Liberia is approximately 96,000 square km.



Box 4: ECOWAS Postal Service Master Plan

Under the ECOWAS Postal Service Master Plan, 13 national programs focusing on regulatory reform for the postal services in the ECOWAS community have been developed. For Liberia, the Program aims at preparing, organizing, and implementing a long-term PPP to continue and expand the Liberian Postal Service as a national operator with a network for access to financial, digital, social, and postal services. This is envisaged through a phased approach and with a long-term and (sub)regional cooperation perspective.

Three Phases are envisaged.

Phase A: Preparation of a long-term PPP to operate the Liberian Postal Service. This includes:

- Institutional reform including separation of policy (Ministry of Posts and Telecommunications) from regulatory, and operational (postal services functions; regulator could be merged with Liberia Telecommunications Authority as an overall communications regulator
- Assessment, due diligence, and net asset valuation of the Liberian postal service and review of the fiscal, postal, and financial regulatory framework
- Design of options, structures and models for a PPP to operate the Liberian Postal Service. These could range from a concession-styled contract, to an outsourced management contract, to a joint-venture or a new company to operate the Postal Service under a B-O-T (build–operate–transfer) agreement, or as part of a regional alliance; preparation of application(s) for required licenses to operate the Postal Service
- Financial projections for three-five years
- Address prerequisites in legal and regulatory framework to enable or facilitate a PPP

Phase B: Transaction advisory to arrange the PPP. This includes:

- Preparing the information memorandum
- Animating potential investors for the selected PPP or roadshow
- Organizing the competitive bidding process
- Advising the evaluation of the bids and Contract negotiations

Phase C: Implementation support and guiding the setup of the PPP as a vehicle to expand the role of the postal network in access to social, digital, and financial services. This includes technical assistance and training in the following areas:

- Determination of potential revenue producing products such as financial services, e-Commerce fulfilment, national logistics service, sea surface mail, and others.
- Product design, marketing, advertising, and programs for financial literacy and consumer protection.
- Operations management, including implementation of ICT, security, power supply, and connectivity at post offices.
- Staff training.
- Central treasury and risk management.
- Financial management, and CBL reporting.

Project Results

- Completion of the legal, regulatory, and institutional aspects of corporate transformation of the Liberian postal service with a long-term PPP
- Business continuity leading to tax receipts through increased usage of state-owned assets and rights, and to improved access to digital and financial inclusion
- Improved ICT in post offices and expanded network
- Enhanced financial management capacity and corporate governance
- Applicable licensing via PPP partner for the provision of financial services through post offices
- Independent market valuation of the Post and the state-owned assets
- Preparation of information memoranda and arrangement of partnerships and/or investments

Source: Study on the Development of an ECOWAS Postal Service Master Plan, IOS Partners, 2016

A number of private sector courier services have taken root to cater to a growing requirement for package delivery services.

DHL, FedEx, and UPS are the main courier firms active in Liberia, primarily catering to the national and county

capitals. These companies have seen operations grow rapidly over the last few years in line with increasing demand for intra- and inter-city delivery services within Liberia and also within the region and internationally. The weak capacities of postal services have also contributed to this demand for private sector services.



For overseas delivery, these firms have links with both sea and air-transport services.

From an economic perspective, customers still do not use these services for small parcels for shipping internationally given the prohibitive costs, and the postal service cannot adequately cater to this requirement.

3.2. Physical addressing issues

The lack of a formal physical addressing system significantly impacts effective last mile delivery.

The public works system is severely under capacitated in Liberia and especially in Monrovia, where heavy inward migration, technical and financial resource constraints, and a broad list of competing priorities have prevented the Government from focusing on city planning in general, and on developing a formal

physical addressing system in particular. In the absence of a robust system of street addresses, the postal services must depend on calling recipients to confirm the exact location where the parcels should be delivered, incurring delays and inefficiencies. Phone numbers are now required to be written next to the address descriptions.

The overall impact is that both postal services and courier services are inhibited. The postal system plays a vital role in trade facilitation and logistical support for the e-commerce ecosystem, and in Liberia, the already weak postal system struggles given the lack of formal addressing. A pilot project (NAPAS – National Postal Address System) with initial funding from the Government to develop formal addressing for a neighbourhood in Greater Monrovia was considered relatively successful but ended due to financing constraints.

Box 5: The challenge of physical addressability in Liberia

Last mile delivery is an all too common and vexing problem in developing countries. The main root causes are institutional challenges with the postal system, weak road transportation and network infrastructure, and an inadequate physical addressing system. The latter in particular is a vexing problem in Liberia. The virtual lack of formal addressing is the result of years of an under capacitated public works system, and overwhelming pressure on Monrovia due to the high level of inward migration, due to which city planning is rendered overwhelmingly difficult.

The NAPAS (National Postal Address System) initiative was launched in 2015 to ensure a physical address system for every Liberian resident to enable postal service delivery, as well as satisfy considerations of health, security and solid waste management. The main goal was to develop a national postcode and also improve standards and international mail exchanges through lead technical support from the ITU. Stewarded by the Government of Liberia, the various partners involved in this project included Universal Postal Union, Monrovia City Corporation, Ministry of Internal Affairs, Liberia National Police, Ministry of Finance, and others.

As an initial step, a pilot was launched in a greater Monrovia neighborhood. However, the pilot and the overall project have been stopped due to funding challenges. The NAPAS project highlights the challenge that many such promising initiatives face in generating momentum on the ground, despite having a strong business case for support. There are many competing priorities facing the Government, and additionally, multi-year donor funding for a project of this scope is difficult to secure. The project is currently shelved, awaiting funding and technical resources.

London-based what3words maps the entire globe into a grid of 3mX 3m squares, each of which is identifiable by a unique three-word address that can be uploaded onto a mobile or web application and provides location and directions-based functionality just like Google maps. The system has found applicability from drone routing to travel applications to postal/courier services delivery. Apart from evolving partnerships with a number of leading private sector companies, the company has tie-ups with eight national postal partners (Saint Maarten, Solomon Islands, Kiribati, Tonga, Nigeria, Djibouti, Mongolia and Cote d'Ivoire) to pilot the system with the postal delivery service. The service has found applicability in 13 industries including automotive, logistics, postal services, travel and tourism.

While companies in countries with well-developed addressing infrastructure are utilizing what3words for route optimization, it can serve a much more basic but essential purpose in countries like Liberia – locating individuals and businesses for packable delivery. In Liberia, this is being piloted by Banjoo e-commerce with a relatively high degree of success. The business case for investigating the potential of this service through the postal service is strong and may yield positive results. This is especially important given that the implementation of a long awaited formal addressing system remains in limbo due to financial and technical capacity issues. This will require a degree of creativity and flexibility on the part of the public sector. Banjoo's CEO Caesar Morris is optimistic, "Regardless of the challenges e-commerce face in Liberia; I only see possibilities. Years ago, we struggled to find customers' locations. But today, making deliveries is seamlessly with what3word, and it will only get better".

Source: UNCTAD



3.3. Regulatory issues

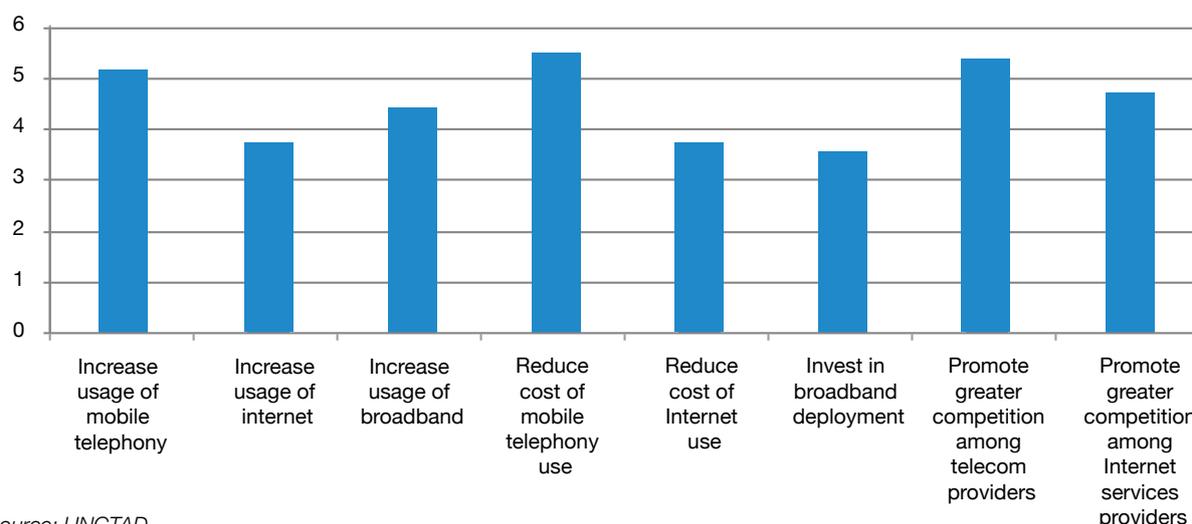
Liberia became the 163rd member of the WTO, after a decade of negotiations with other WTO members.

Accession and the consequent implementation of the post-accession implementation plan are expected to level the playing field for Liberian businesses in terms of opening markets and facilitating domestic reforms to bring local policies to international standards. However, increased competition in domestic market from imported goods is also anticipated. The overall impact per sector will only emerge in the medium-long

term. Despite the additional competition, the access bodes well from a trade facilitation point of view due to the expected upgrading of laws and infrastructure ranging from quality management/compliance to port management to customs processes enhancement.

The country is also forging ahead post-WTO accession with its commitments and has even established a National Trade Facilitation Committee (NTFC) despite not having ratified the Trade Facilitation Agreement (TFA) yet. This proactive step is an indication of the Government's willingness to resolve trade facilitation issues.

Figure 6: Survey spotlight- Please score the following areas on their relative importance to facilitate e-commerce development (1- least important, 9- most important; 19 responses):



Source: UNCTAD

Liberia has made strides in improving processing times and decreasing the paperwork burden related to trade; however, capacity development at the customs authority is an important requirement.

A number of important improvement initiatives were undertaken with development support from the World Bank and other partners between 2003 and 2013. Improvements include the establishment of a centralized facility for clearing cargo at the port, implementation of UNCTAD's Automated System for Customs Data (ASYCUDA, Version World), and implementing a pre-inspection regime for cargo. Customs reforms remain a priority for the Government with ongoing initiatives to build the human capital at the customs authority, as well as to streamline

processes. MOCI is also in the process of establishing a single window that will further ease trade facilitation for importers and exporters. Similar steps are being taken to build capacity for establishing Verification of Conformity (VOC) processes that will allow Liberian importers and exporters to reduce further the documentary burden, through prior tested and documented goods.

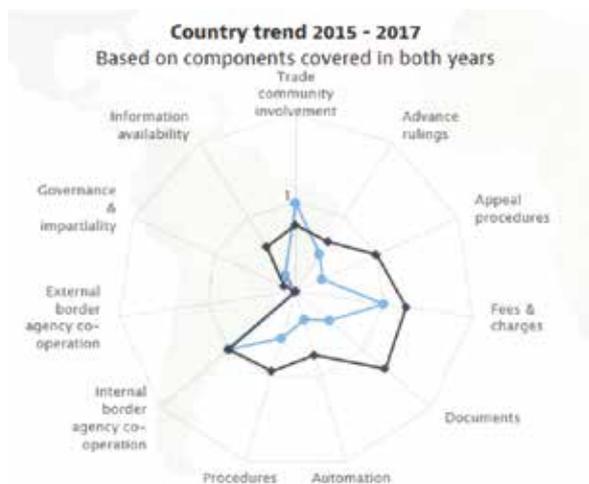
According to OECD indicators, harmonization and simplification of documents is a significant achievement in Liberia, while performance for information availability, involvement of trade community, automation and internal border agency co-operation is below the averages of Sub-Saharan African and lower income



countries.¹³ This is part of a broader push to further develop capacity of Liberian Customs. The EU is providing significant assistance in this regard through the ‘Long Term Technical Assistance to the Customs Department of the Liberia Revenue Authority’ project, involving the following three goals¹⁴:

1. Increasing revenue collection nationally, including the establishment of a “Centre for Excellence” and pilot upgrade of selected key border posts;
2. Reducing smuggling and fraud through strengthened capacity for anti-smuggling, intelligence, as well as investigation and enforcement;
3. Increasing efficiency and enhanced trade facilitation, including reduced average clearance times, through strengthened capacity for management control and for consistent application of laws, regulations and procedures, in particular promotion of voluntary compliance and post clearance audit operations.

Figure 7: Liberia Trade Facilitation Indicators 2017



Source: Trade Facilitation Indicators, OECD, 2017

Despite the improvements, overall trade facilitation remains challenging in Liberia. For both documentary compliance as well as border compliance, the time

and costs associated are almost 2X times higher than in Sub-Saharan Africa.

Indicator	Liberia	Sub-Saharan Africa	OECD High Income
Border compliance			
Time to export (hours)	193	100	13
Cost to export (US\$)	1113	592	150
Time to import (hours)	217	136.4	103
Cost to import (US\$)	1013	687	300.1
Documentary compliance			
Time to export (hours)	144	88	2.4
Cost to export (US\$)	155	215	35.4
Time to import (hours)	144	103	3.5
Cost to import (US\$)	230	300	25.6

There are no regulations that govern cross-border e-commerce, although in any case, the bulk of the cross-border trade takes place in the informal sphere with Liberia’s immediate neighbours.

¹³ Trade Facilitation Indicators, OECD, 2017

¹⁴ https://ec.europa.eu/europeaid/projects/long-term-technical-assistance-customs-department-liberia-revenue-authority-lra_en

4. ACCESS TO FINANCING

Liberian enterprises across the board face strong challenges in accessing credit/capital for operating costs and investments. Low financial intermediation is marked by high cost of credit. Banks face high risk from non-performing loans and low profitability levels. The banking network outside of Monrovia is extremely weak.

Commercial banks do not currently lending products geared to the needs of the MSME sector, and e-commerce related business propositions are especially perceived to be unquantifiable. Lending activity has also decreased due to cash hoarding stemming from political instability. Commodity prices crash and resulting loss of export revenue has affected federal dollar reserves, putting additional pressure on the CBL and lending institutions.

Venture capital activity is non-existent in the ICT sector and previous experiments by both venture capital firms, as well as development partners, have not demonstrated effective results.

4.1. Depth of the banking network

The commercial bank network in Monrovia has grown rapidly in the last decade and a half.¹⁵

There are currently nine banks in the country - AccessBank, Afriland First Bank, Ecobank, Global Bank, G N Bank, Guaranty Trust Bank, International Bank, Liberian Bank for Development and Investment, and United Bank for Africa Liberia Limited (UBA). These include pan-African banks such as UBA and Ecobank that have taken a leading role in launching innovative services. Seven of the nine banks are foreign owned. There are currently 93 branches of these banks across the country (the majority in Monrovia) serving a consumer base of 4.4 million.

Weak bank networks outside Monrovia are a significant challenge to financial inclusion.

As of 2014, there were 3.7¹⁶ commercial bank branches and two ATMs per 1,000 inhabitants, and one branch and ATM per 1,000 sq km. Four of 15 counties do not have any commercial bank presence. Due to the challenges related to logistics and security, banks have been slow to develop their network outside the major cities such as Monrovia and Buchanan.

¹⁵ Due to the synergies between banks and mobile money services providers, the information related to banking penetration also applies to the payment solutions policy area.

¹⁶ WDI 2017, IMF estimates

Commercial Banks

County	Banks presence (2016)	Branches (2016)
Montserrado (containing Monrovia)	9	57
Margibi	4	10
Grand Cape Mount	1	1
Grand Bassa	6	6
Sinoe	1	1
Maryland	2	4
Bong	3	3
Nimba	5	7
Lofa	1	2
Grand Gedeh	1	1
Bomi	1	1
Total		93

Source: Central Bank of Liberia

The non-financial lending sector has grown rapidly. Given the high percentage of non-performing loans in Liberia (approximately 12 per cent in 2016¹⁷), commercial banks are forced to lend on highly untenable terms – short term duration (one-two years) with a high interest rate (+20 per cent in some cases). Given these terms, commercial banks have found competition in the form of entities in the non-

¹⁷ <https://www.export.gov/article?id=Liberia-Banking-Systems>



banking financial sector that include credit unions, Village Savings and Loan Associations (VSLAs), rural community finance institutions, microfinance institutions, a development finance company, mobile money service and insurance companies. Most of these institutions, particularly those in the informal sector, make short-term, high-interest rate loans to their members.¹⁸ There are currently 13 microfinance institutions, 10 Rural Community Finance Institutions (RCFI) and 250+ Credit Unions, which are monitored but not licensed.¹⁹

MFIs have not fared well due to weak governance and due-diligence for appraisals. This has been borne out in their experience with over 25,000 borrowers. Credit Unions and Rural Community Financial Institutions (RCFIs) have fared better and are in a better position to maintain rural coverage.

4.2. Financing by commercial banks and MFIs

Companies, especially MSMEs, face significant challenges in accessing loans.

According to the 2017-2018 iteration of the WEF's Global Competitiveness Index, access to finance is now the most problematic factor for doing business in Liberia, up from #2 in the 2015-2017 iteration two years ago.

The demand for capital is for a variety of needs and is driven by both short-term working capital requirements (pre-financing for raw material and the like), as well as longer term capital investment requirements (business expansion, equipment purchases and the like). The lending rates (approximately 14 per cent in end-2005), are among the lowest in the region. On the demand side, firms are unable to reliably demonstrate their creditworthiness, whether stemming from the lack of secure land titles, or proper documentation (in the form of business and financial plan, balance sheets and others). Banks require high collateral levels and startups/MSMEs are simply unable to provide them. On the supply side, the low deposit levels at commercial banks has also further constrained lending levels. The majority of loans are short-term and high interest, and therefore untenable for the large part of the MSME sector.

¹⁸ <https://www.export.gov/article?id=Liberia-Banking-Systems>

¹⁹ *Mobile Money in Liberia*, Michael B. Ogun, Deputy Director, Regulation & Supervision Department, Central Bank of Liberia

Lending institutions mainly issue credit for trade sectors, rather than productive sectors such as agriculture. This has as much to do with their understanding of the trading sectors as it has with relative degree of risk posed by different sectors. As a nascent activity in Liberia, e-commerce is not a familiar topic for lending officers in commercial banks and this presents challenges for companies seeking to develop or expand their e-commerce businesses.

The high level of non-performing loans in Liberia has contributed to the high degree of caution and inflexibility exercised by banks in issuing loans.

The weak credit referencing abilities (of the CBL and banking institutions) is coupled with the weak creditworthiness of loan seekers. To assist banks in assessing the creditworthiness of loan seekers, the CBL manages an Excel-based credit reporting repository called the Credit Reference System, which lists credit history and negative activity by borrowers. This system serves as the de facto public credit reporting system and has been pending automation for the last several years.

There is currently no private credit reporting system in place. The lack of a national identification system, long planned but not implemented, is also holding banks back.

Commercial banks reported high quota requirements by the CBL as an area of contention.

The root causes are multiple but easy to pin down: on one hand, the sluggish economic growth and depressed export revenues (owing to declining global commodity prices) have led to low federal dollar reserves, and the CBL turns to the commercial banking sector to ensure that they maintain a minimum quota/reserve levels in the federal reserve. Commercial banks are struggling with low deposit levels because customers are holding on to their cash in the uncertain political climate (driven by the election freeze). In this environment, commercial banks and the CBL find themselves at odds on the level of quota imposed on the banks.

Arguably, the high reserve rate imposed by the CBL does not affect liquidity at the banks given that the banks do not have any domestic instruments for investments, and they self-impose a low approval rate for loan applications.



Table 4: Select Access to Finance instruments

Small-Medium Enterprises Credit Stimulus Initiative ²⁰	The CBL launched the Small-Medium Enterprises Credit Stimulus Initiative in 2010, providing low-interest financing to Liberian-owned small and medium size enterprises. The Ministry of Finance and Development Planning (MFDP) set up the Private Sector Development Project in July 2014, based on a Government Enhancement Fund account in the Liberia Bank for Development and Investment. The project has provided loans of US\$2.1 million in total to 41 businesses as of May 23, 2016. The CBL is planning to introduce a deposit guarantee scheme, which may promote access to deposits. In June 2016, the Ministry of Education launched the pilot project of wage payments through the mobile money system. This could boost the growth of the mobile money market. In addition, the 2014 Payment System Act modernized the supervision and regulation framework of the national payment system in Liberia. The CBL has been upgrading its payment system infrastructure and has fully implemented the National Electronic Payments Switch in 2015, which allows bank customers to access ATMs, POS, Visa, and Master Card services.
Loan Extension and Availability Facility (LEAF)	The LEAF is an attempt to provide liquidity for MFIs, Credit Unions and VSLAs so that they can extend much needed loans in the rural parts of the country, and spur financial inclusion. Through a soft-loans approach, more than LRD 200 million were provided to these institutions to be repaid over a multi-year period. It is not fully clear if the initiative has been successful in its goal, although the model is a promising one. Challenges have included low repayment rates as well as weak adherence of MFIs
Liberia Innovation Fund for Entrepreneurship (LIFE) ²¹	The Liberia Innovation Fund for Entrepreneurship (LIFE) is a private sector investment fund which focuses on developing and promoting innovations in the Liberian private sector by investing in capital infrastructure projects that promote the growth of SMEs and promote value addition within key industrial sectors. LIFE also provides Seed Funding to support the growth and development of industries in local communities to provide employment opportunities to communities' dwellers and improve their livelihood.

Box 6: High interest rates

In 2011, the CBL made available to local banks a \$2.8 million credit line for onward lending to SMEs in the country. It was extended to retail lenders at an interest rate of three per cent with the expectation that banks would lend to borrowers at a rate of between five and eight per cent, implying that banks could make a profit of up to five per cent on each loan. The banks on the other hand have been unable to extend loans to SME borrowers at that rate. Retail banks, in turn, after factoring in the higher than average delinquency rates among SME borrowers and the possible need to absorb high non-performing assets (toxic assets) and to create a natural barrier to non-serious borrowers, are selling loans at rates between 15 and 17 per cent after factoring in processing fees.

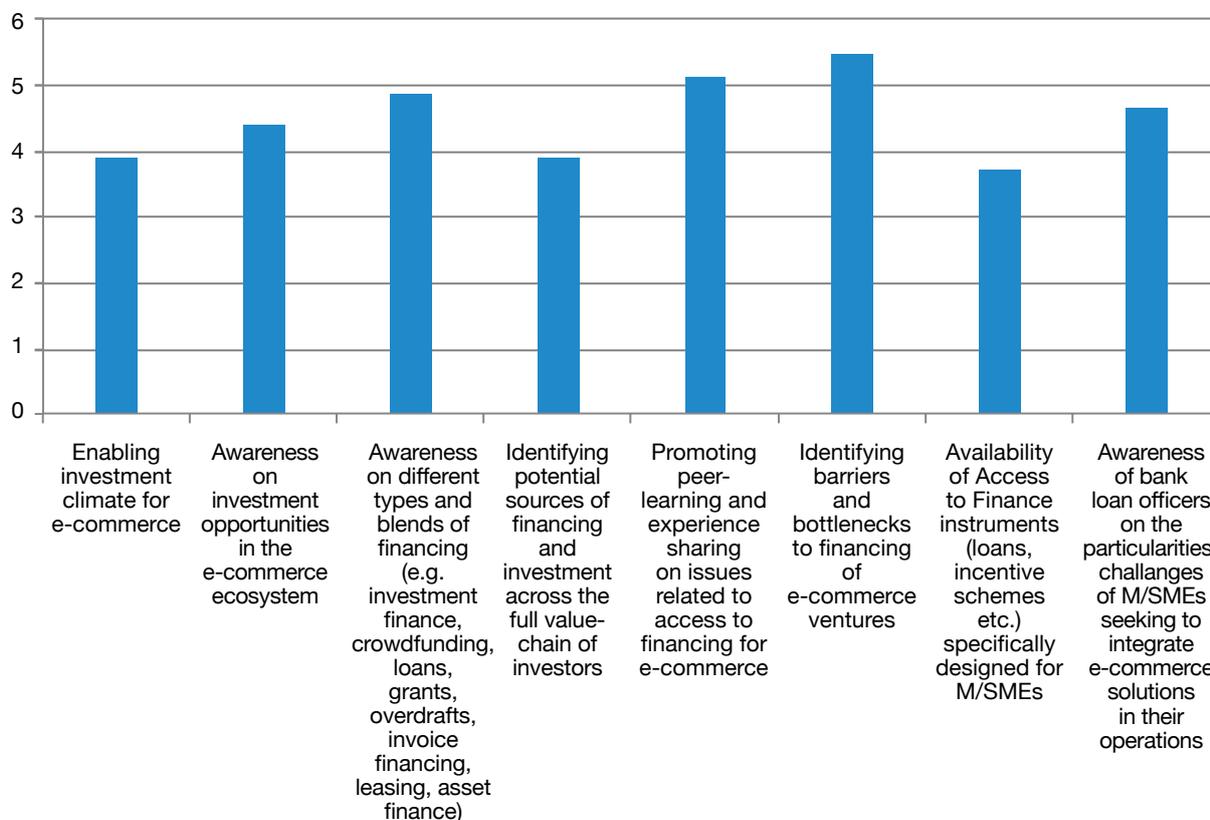
Source: National Export Strategy 2014

²⁰ Text from IMF Country Report No. 16/239, 2016

²¹ Ministry of Commerce and Industry website, (<http://www.moci.gov.lr/2content.php?sub=185&related=15&third=185&pg=sp>)



Figure 8: Please score the following areas according to their relative importance (1 being the least important issue and 8 the most important one; 17 responses)



Source: UNCTAD

4.3. Financing by business incubators, business accelerators, and venture capitalists

The insecure political climate and business environment have created disincentives for venture capitalists and international firms seeking to tie up with Liberian companies from conducting business in the country.

- The only active venture fund is the US\$40 million West Africa Ventures Fund (WAVF) that is co-funded by the IFC (and Netherlands-based Cordaid) and partners with select SMEs in Liberia and Sierra Leone after a robust due diligence process, on an equity basis. The fund currently supports five SMEs from Liberia, including a bakery and rice mill funded during the Ebola crises period.

At the local level, there is some business incubator activity. The following incubators/accelerators are operating in Liberia:

1. SMART Liberia: Focused mainly on youth entrepreneurs. The Girl Entrepreneurship and Technology (GET) Program is focused on female youth entrepreneurs and involves components of training, funding and business incubation. SMART Liberia also operates a 'tech for social impact' program that imparts IT skills to students, and an 'Employment Accelerator' program that trains current students and recent graduates in skills currently in demand within the job market and then connects them with employers through an online job portal. Selected participants in each cohort are provided financial support.
2. Building Markets: Building Markets (formerly Peace Dividend Trust) is a leading for-profit consultancy that provides a variety of intermediary services to bring together buyers and sellers (service providers) in Monrovia, among other analytical/consulting services.



Among the coaching services provided are Financial Management and Business Plan training, as well as advanced specialized training in areas such as Advanced Bid Compilation, Buyer-specific Bidding Procedures and Processes and Joint Ventures, Cooperatives & Teaming. It does not provide grants or finance as such.

3. The Liberian Enterprise Development Finance Company (LEDFC)²² is a defunct non-bank financial institution established in 2007 with US support, aiming to providing working and investment capital loans between US\$25,000 to US\$1 million to Liberian- and diaspora-owned firms. LEDFC faced significant problems in the following areas and was sold to the Ghana Growth Fund in 2013. The challenges below are still relevant currently and should serve as important considerations for addressing access to financing issues.
 - a. Challenges in identifying bankable investment opportunities due to poor quality business plans as well as the small size and capacity of the private sector, which offered a small number of suitable investment projects.
 - b. Inability of companies to satisfy the \$25,000 collateral requirements
 - c. High percentage of NPLs resulting from a weak repayment culture and feeble enterprise performance.

4.1. Financing by development partners

There are no financing programs that directly target ICT or e-commerce. The closest match is IFC's involvement with Access Bank that supports small/medium sized loans to the MSME sector. Other partners in the program are AfDB and the EIB. The bank's focus is on the bottom of the pyramid and is one of the few access-to-finance success stories that take place outside Monrovia. Typical loans range from US\$1,000 to \$20,000, and repayment can be conducted through mobile money options.

1. SPARK is a Dutch NGO specializing in a range of higher education and local private

sector development initiatives in countries with a conflict background. Through its flagship Ignite Fund, the NGO is developing and running activities for their target group, young and ambitious Liberians. For these inspiring entrepreneurs and already existing entrepreneurs, SPARK and its local partner BSC (Business Start-Up Center), Monrovia organize Business Plan Competitions, Business Development Services, and inspirational workshops.²³

2. AfDB is providing technical support to Access Bank – which is a lending institution providing micro- and small-sized loans.
3. USAID has also established a loan guarantee program through Ecobank and International Bank.

²² Information from Liberia Financial Sector Development Implementation Plan (FSDIP), Central Bank of Liberia, 2016

²³ SPARK website



5. PAYMENT SOLUTIONS

Cash on delivery is the primary payment mode, and adoption of mobile payments (including by e-commerce vendors) is gradually picking up pace. Mobile money payment model offers the most promising payment solution, especially in financially underserved areas outside the capital. Commercial banks are introducing card-based solutions at a rapid pace. Agency banking regulation has been passed by the CB and applications from commercial banks are pending approval. Once operational, agency banking will contribute to increased financial inclusion in the hinterland. Nascent online payment infrastructure requires further technical development, as well as trust enhancement over the medium-long term. No connection between mobile wallet – banking accounts. Adoption and trust development within the consumer base related to online payments will take time. Isolated efforts by various government entities for spurring e-governance (LRA – online tax payments, LEC – electricity bills, MoF - IFMIS). Centralized switch deployed by the CB called National Electronic Payment Switch (NEPS) facilitates online interoperability and communication between Liberian banks, thus paving the way for e-government transactions (such as bill payments).

The bulk of e-commerce payment activity involves customers placing orders online and paying through the COD route. While mobile money payment solutions have been ramped up in terms of options and adoption, cash payments outstrip all other payment options available in the country. This is likely to remain so for the medium- to long-term, until mobile money payments are further integrated into the commercial banking system, card-based payment solutions gain mainstream trust, online payment gateways are further developed, and at a basic level, Internet penetration increases beyond Monrovia.

The second option utilized is mobile money. Customers navigate the website and update their shopping carts, and through well-defined instructions, make a payment through their mobile money wallet to the vendor's mobile money account. A confirmation code is sent to the customer via SMS and the customer then enters the code into the order form, just before finalizing the order. The vendor team is able to reconcile the confirmation code and accept the order.

The third option involves customers making online payment through their debit cards (via MasterCard) or through the bank cards issued by UBA or GT Bank (the two banks that have payment gateways). This is a relatively new option and uptake has been slow due to initial technical outages, and uncertainty regarding security on the part of customers.

The presence of pan-African banks has led to a number of innovations in the Liberian banking sector. African banking leaders such as UBA and Ecobank

have benefited the Liberian banking sector by introducing tried and tested banking products in the local market, as well as decreasing costs to consumers due to sometimes fierce competition that takes place between all banks. Despite the competition, these banks meet often at the senior decision maker level (MD, CIO, Risk Management, Treasury) in order to formulate a common position on common areas of interest (agency banking as an example).

5.1. Financial regulations

Agency banking framework must be implemented as a matter of priority.

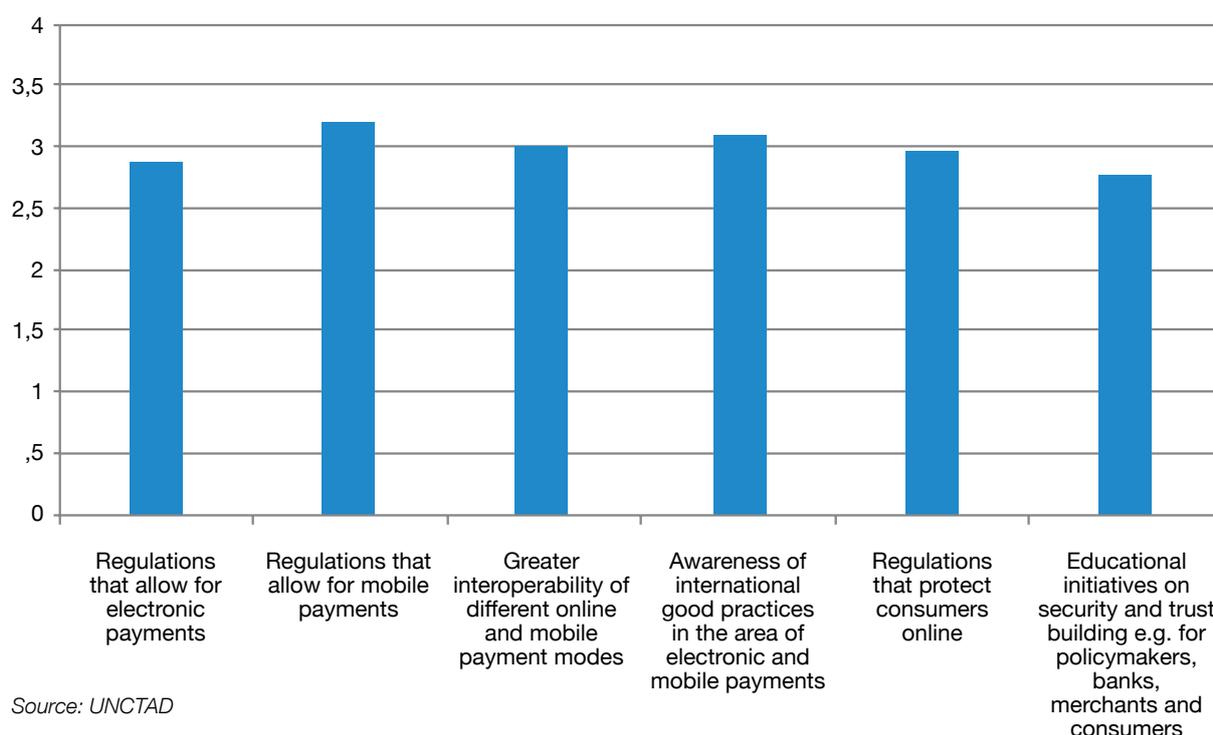
Agency banking remains an important pending area of reform involving CBL and commercial banks/mobile service providers. The CBL has recently approved an Agency Banking Framework that will allow commercial banks to utilize the network and mobile-money infrastructure of cell-phone companies across the 15 Liberian counties and enable mobile services kiosks/shops to offer banking services, in doing so become 'banking agents'. These agents would be non-exclusive so multiple banks can have the same agent. This is widely expected to facilitate access to the unbanked population outside Monrovia. The CBL is currently reviewing individual applications from commercial banks who are working in close concert with the two wireless providers in the country - Orange and Lonestar - to expand the banking network across the country.



The key challenge that undermines this promising development is low liquidity at agency bank locations; this issue is especially severe outside Monrovia. The issue of security is an additional and important concern – moving cash between Monrovia and the various counties remains logistically challenging. One solution (which alleviates but does not solve the problem of

liquidity) would be to link customer bank accounts directly with their mobile-money accounts (bank to wallets), which would allow customers in remote areas to utilize the agency banks in a cashless transaction. That is, for certain transactions, agency banks would not need to pay cash to a customer, but rather directly transfer funds from a mobile money account to the customer’s bank account.

Figure 9: Survey spotlight- Please score the following areas on their relative importance (1- least important, 5- most important; 21 responses)



Source: UNCTAD

5.2. Mobile money regulations

Mobile money was launched in 2011 as part of efforts to improve financial inclusion in Liberia. Subsequent amendments in 2014 constitute the current basis of the mobile money governance and regulatory structure. The amendments are aimed at further advising mobile money providers on regulatory requirements, safeguarding integrity of the system, and mitigating risk to the poor/unbanked. The CBL serves as the governing and licensing authority.

In 2014, the amended Mobile Money Regulation was approved to enable the growth and expansion of mobile money services, including allowing for non-

bank financial institutions (NBFIs) to provide such services throughout the 15 counties. The regulation has also encouraged *interoperability and non-exclusivity of the agent network*.²⁴

This has led to the wide proliferation of mobile money services through Lonestar and Orange. *The regulation defines mobile money services as opening and maintaining the mobile money account, cash-in/ cash-out, account-to-account transfers (to/from bank accounts, in-between mobile money accounts), bill payments, government payments, and a variety of*

²⁴ <https://www.cbl.org.lr/doc/LiberiaFinancialSectorDevelopmentImplementation.pdf>



more use cases.²⁵ The regulation stipulates that banks wanting to offer mobile money services must apply to the CBL, but do not have to create a separate entity.

The two main mobile operators—Lonestar and Orange—have been licensed by the CBL to provide mobile money services. In accordance with the regulations in place, both operators have established a separate financial service institution so that they can be supervised by the CBL. This is because the mobile network operators technically fall under the regulatory umbrella of the Liberia Telecom Authority, and the CBL wants to avoid confusion on its mandate to regulate all mobile money operations in the country.

The main commercial banks, including Ecobank, GT Bank, IB, and UBA, are authorized to serve as super-agents for the mobile money services of the two mobile operators.

A number of focus areas for regulatory reform related to mobile banking have been identified.

The areas of reform have been identified through previous studies and have been confirmed through this assessment. These include:

1. Resolving clearing and settlement challenges posed by the dual currency regime, as well as mobile operators accommodating dual currencies
2. Implementing the agency banking regulations

3. Interoperability between mobile wallet and bank accounts
4. Developing cross-border mobile payment capabilities related to remittances and trade.
5. Maintaining a balance between Know Your Customer (KYC) paperwork requirements (required in support of anti-money laundering and anti-terrorism considerations) with facilitating easy adoption of mobile money services, especially outside Monrovia.
6. Developing an adaptable ecosystem comprising mobile operators, banks and regulators for developing services based on evolving needs of Liberian consumers.

5.3. Main mobile and cashless solutions

Cash is the principal form of payment, with both US\$ and Liberian dollars widely used.

For the bulk of business (including e-commerce) transactions, cash on delivery is the main form of payment. Both US\$ and LRD (also known as Liberty dollars) are used widely, the latter for mainly low volume transactions. Due to the weak network of bank branches around the country, movement of large cash volumes poses logistical and security challenges. A key challenge posed by the dual currency use is that payment systems must accommodate settlement and clearing in both currencies, incurring burden and complexity.

²⁵ *ibid*

Box 7: Liberty dollars and US\$

Liberia has a floating exchange rate system with both Liberian dollars (LRD), known as “Liberty” notes, and the U.S. dollars (US\$) being legal tenders. The exchange rate is determined by market supply and demand. The CBL regularly intervenes in the foreign exchange market through weekly foreign exchange auctions and monthly government T-bill auctions in order to stabilize the exchange rate, facilitate imports, maintain a low inflation rate, and spur economic growth. Large-scale business and government transactions are conducted in US\$, while retail or day-to-day routine transactions are conducted largely in LRD. Contracts and tax agreements are typically specified in US\$, and about 85 per cent of taxes are paid in US\$. The US\$ can be freely exchanged for LRD in commercial banks, licensed foreign exchange bureaus, petrol stations, and large supermarkets.

Source: <https://www.export.gov/article?id=Liberia-Financial-Sector>



Mobile Money has expanded rapidly throughout the country.

As of early 2016, almost 20 per cent of the population had active mobile money accounts, and this figure has improved since then. Mobile money services are now available in all 15 counties of the country. The key usage is for local remittance (used extensively during the Ebola crisis), payment of electricity, water and TV bills, school fees, and even government salaries. The key modes of usage are P2P, B2P, G2P and P2G, bills and merchant payment on an interval basis.²⁶ Evidence suggests that the main usage of mobile money in Liberia is as a short-term savings account rather than for transfers. The main mobile money merchant operations include: customer registrations; cash deposits to registered mobile money user

²⁶ *Mobile Money in Liberia*, Michael B. Ogun, Deputy Director, Regulation & Supervision Department, Central Bank of Liberia

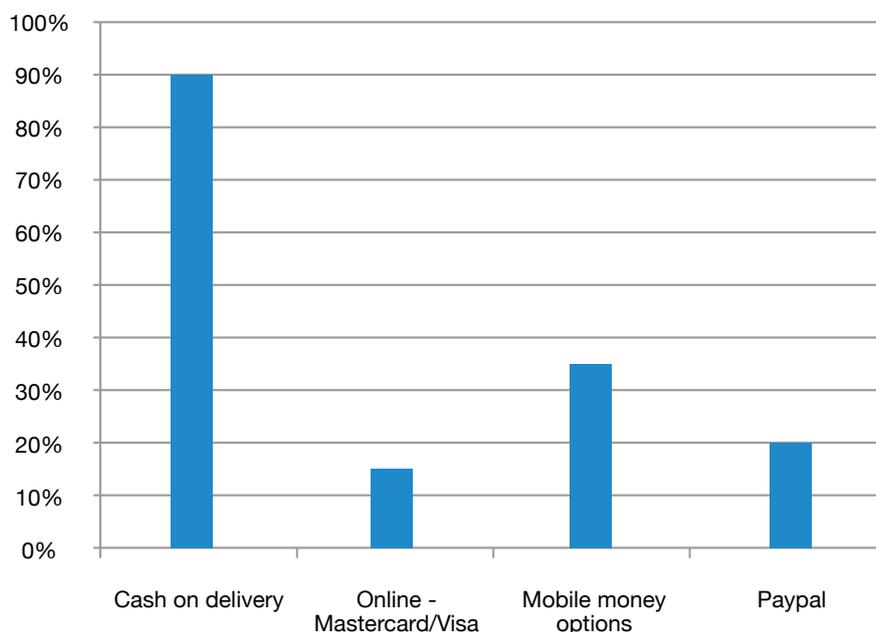
accounts, cash withdrawals for registered as well as non-registered mobile money customers.

Card-based solutions have recently started to emerge and are at an early stage of adoption.

All major commercial banks in Liberia – primarily UBA, GT Bank, IB, Ecobank – offer either their own cards or Visa/MasterCard debit cards. The latter can be utilized for online transactions, as well as at ATMs/POS of other Liberian banks. Credit cards are offered to consumers on a case-by-case basis and are not the norm.

Adoption of card-based solutions is at an early stage and will take time to develop, as consumers become more aware of the benefits of using cards. Almost all commercial banks have developed online banking solutions, but customer awareness remains a limitation for increased adoption.

Figure 10: Survey spotlight - What is the current form of payment system that you offer to your customers? (20 responses)



Source: UNCTAD



The CBL has taken important steps to establish electronic interoperability between banks, which will in turn drive consumer e-payment/banking activities.

The CBL has deployed a centralized switch that facilitates interoperability and communication between Liberian banks. The National Electronic Payment Switch (NEPS) constitutes an interbank payment network, through which consumers and companies can transfer funds and conduct operations across banks (as well as mobile money providers). In the absence of this switch, only intrabank (within the same bank) transfers could take place, and customers from one bank could not electronically transfer funds to accounts in other banks. Eventually the system would scale up to allow all Liberian banks, POSs and ATMs to seamlessly link and also facilitate transactions between mobile money and bank accounts.

Also, under implementation are mechanisms that will allow domestic consumers to pay (and facilitate settlement/reconciliation) bills (electricity, mobile phones, school fees and the like) through multiple channels including mobile phones, online portals, ATMs, or bank branches. One important feature, that is anticipated but remains on the planning desk, is a gateway to international banking channels that will allow Liberian banks to issue cards accepted worldwide and also locally.

So far, this interbank payment network has not been scaled up to allow e-commerce vendors to link themselves to the switch, although discussions are ongoing to explore procurement of additional modules that will facilitate these linkages.

Box 8: WAMZ Payments System Development Project

The CBL has embarked upon a payments system modernization project linked to the US\$30 million WAMZ Payments System Development Project in The Gambia, Guinea, Liberia and Sierra Leone funded by the African Development Bank, in collaboration with the West African Monetary Institute (WAMI). Payments system modernization will play a crucial role in financial deepening in the country and will help put the country's financial system on par with other countries in the sub-region and beyond by transitioning the country's economy from cash based to one less dependent on cash. The payments system development project was expected to be concluded in June of 2014, but was suspended and only recently commenced after the Ebola outbreak had slowed down.

The main components of the project are as follows:

- Real Time Gross Settlements System (RTGS) and Scriptless Securities Settlement Systems (collectively, RTGS/SSS) for high-value transactions and interbank settlement and central securities depository and securities settlement system.
- Automated Check Processing (ACP) and Automated Clearing House (ACH) (collectively, ACP/ACH) Systems based on machine-readable (MICR) cheques. Machine readable (MICR) cheques are being introduced, along with processing equipment at bank branches and head offices, and a communications network linking bank head offices to the CBL. An automated clearing house (ACH) for processing cheque transactions is being installed at the CBL.
- Core Banking Application (CBA)
- Infrastructure Upgrade

A missing component of the WMAZ project is a centralized switch which allows for interbank payments. The Central Bank has recently deployed this critical infrastructure independent of the WAMZ project with full backing of banks and mobile operators.

Source: <https://www.cbl.org.lr/doc/LiberiaFinancialSectorDevelopmentImplementation.pdf>

Online payment solutions are gradually emerging.

UBA's U-Collect payment gateway and GT Bank's GT Pay are the only options for processing an online transaction through a local merchant bank. Both options allow secured payments from internationally recognized cards on the interswitch network, including

MasterCard and Visa. Both payment gateways have an established presence across Africa but are relatively new entrants in Liberia.

In practical terms, customers of these payment gateways noted recurrent challenges with downtime, although they maintain that outages have decreased



since the initial deployment. Adoption has been relatively slow, in line with the small base of both e-commerce vendors, as well as customers who have the awareness, confidence and ability to shop online.

Prior to these payment gateway solutions, vendors would need to open international bank accounts that could be connected to payment gateways, and thereafter transfer funds back to Liberia, incurring tax and security-based concerns, in addition to the additional costs.

PayPal and similar payment gateways do not operate in Liberia due to security considerations. Money transfer service providers include primarily Western Union and MoneyGram, and the usage is mainly limited to inward remittances. Most of the commercial banks operate MoneyGram and Western Union outlets for payments and fund transfers inside and outside Liberia.

Mobile money applications will rise significantly in the future.

The Government projects that mobile money applications to grow through the following four phases:²⁷

1. Government salaries and bulk payments: payroll, stipends, expense reimbursements, pensions and benefits.
2. Point of Sale: retail, tuition, utilities
3. Revenue collection: taxes, customs, licence fees
4. Financial services: remittances, banking, credit, insurance

A number of these are already in play, including fees payment for electricity, school, DSTV and selective payroll services across the government.

A number of initiatives are encouraging consumer adoption of mobile or online based payments.

As noted earlier, the Government has taken concrete steps to deploy various e-government services as a means to improve public sector efficiency and transparency. A number have been developed or are in progress.

- UBA has been awarded a contract by the LRA to develop a tax payment system for consumers through mobile payments involving the main telecommunication firms (Orange and Lonestar).
- UBA has also helped MoFA develop an online passport application platform based on the U-Collect payment gateway that will allow payments using MasterCard, Visa or UBA cards.
- LEC (Liberia Electricity Corporation) customers will soon be able to pay electricity bills through mobile payments – as will be the case for diverse services including water and sewage, schools, gas stations (non-e-government), and DSTV bills (non-e-government).

All of this encourages online behavior by consumers and fosters trust development, which has a positive spillover effect on e-commerce.

²⁷ <https://www.cbl.org.lr/doc/LiberiaFinancialSectorDevelopmentImplementation.pdf>



6. LEGAL AND REGULATORY FRAMEWORK

Regulations lag behind private sector activity. Outdated e-transactions law and a lack of legislation on privacy and consumer protection, cybercrime and other areas result in a weak legal basis as well as limited security for e-commerce transactions. One area of progress is e-payments spurred by the Digital Financial Services Working Group convened by the CB, which serves as a de facto public-private sector panel on e-commerce. The ongoing political crisis in the country and the stabilization period after elections means that no major regulatory improvements can be expected until at least mid-2018. In anticipation of increased pace of e-commerce activity in the near future, the adoption of a robust legal and regulatory framework constitutes an important priority for Liberia

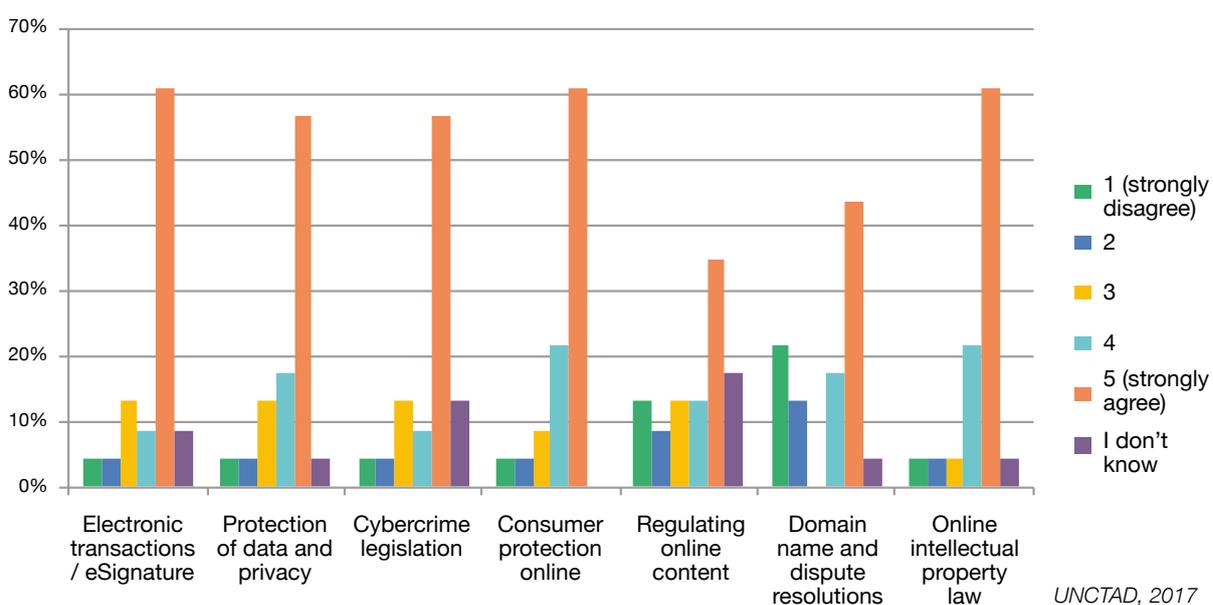
An important regulation that has been passed by the CB and now needs to be implemented is the Agency Banking regulation (covered in more detail in the Payment Solutions section). This regulation is an important step in increasing financial inclusion in the Liberian hinterland.

Despite increased number of subscribers in the telecommunications market, Liberia still remains vulnerable in terms of laws and regulations that drive significant impactful trends toward achieving sustainable jobs creation, knowledge-based economic growth and social development for all citizens. Liberia scored 2.8 and ranked 139 among the 139 countries regarding ICT-related laws, according to the World Economic Forum's Networked Readiness Index in 2016.²⁸ The political and regulatory regime scored 3.6 and ranked 84 of 139 countries, while the business and innovation environment scored 3.6 and ranked far below from the best at 117 of 139 countries.

As highlighted below, the framework is currently fragmented between different legislation that are not fit for the purpose when it comes to e-commerce. There is an important requirement to review the current and future requirements of the Liberian e-commerce value chain, assess the coverage that the current legal and regulatory framework provides, and subsequently draft/amend legislation accordingly. Indeed, survey respondents identified the most important legal areas for the advancement of e-commerce ecosystem in Liberia as cybercrime legislation, intellectual property rights, protection of consumers online and privacy.

²⁸ No ranking was reported in 2015.

Figure 11 : Survey Spotlight: Do you agree that government regulations in the following areas are important to enhance trust in e-commerce? (23 responses)



6.1. Status of cyberlaws²⁹

Electronic Transactions

The Electronic Transactions Law (ETL) adopted in 2002 is partially based on the UNCITRAL model law on electronic commerce (1996). It amends the general business law to facilitate the use of electronic transactions for commercial purposes. The statutes of the law mainly focus on establishing a regime for certification authorities dealing with electronic records and digital signatures. The law fundamentally establishes the legal basis for accepting electronic contracts and digital signatures.

The law includes provisions for government entities to develop their operational regulations related to accept electronic records and signatures and, in doing so, facilitates the development of e-government services to some extent.

There is a requirement to review and potentially amend the law to reflect post-2002 developments in e-commerce that require additional coverage through legislation and regulations.

In addition to the ETL, the Payments System Act 2014 contains provisions to support a modern payment system with the overarching goal of bringing Liberia's financial infrastructure into line with other ECOWAS and regional countries. This alignment is also deemed necessary for the possible launch of a single currency in the sub-region in the future. Hard and soft infrastructure upgrades that will be enabled through projects facilitated through the passage of this Act will enable inter-bank payments among other functionalities, which will aid e-commerce.

The impact of the payment system law has been largely insignificant because the demand and/or volume of electronic transactions are fairly low at the present moment.

Cybercrime

There is no cybercrime law currently in place nor cybersecurity policy or infrastructure. Authentication

and integrity are addressed through the provisions of the ETL dealing with certification authorities.³⁰ The CB has no law or regulations on cybersecurity due to limited capacity issues. A unit was recently established with senior staff assigned to lead progress on this important gap area.

Data Protection/Privacy: No data protection laws currently exist in Liberia. The closest protection is derived from the Freedom of Information Act passed in 2010, which grants citizens access rights to their personal information that is in the public domain, and also the right to amend any information that is proven to be 'incomplete, incorrect or misleading'. A draft data protection law is in progress.

Consumer Protection: Liberia does not have a Consumer Protection Act, although one is planned. Liberian consumers are partially protected by various legal instruments such as the Telecommunications Authority Act, which addresses the protection of consumers against fraudulent practices, as well as the consumer protection regulation issued by the CBL.

The ETL contains a provision granting consumers special rights related to electronic transactions. This relates to the rights of consumers to be made aware of any hardware or software requirements that affect the ability of the consumers to access or retain the records electronically. The provision also stipulates that consumers must be provided the option to provide affirmative consent in cases where the law requires that information be provided 'in writing'. However, the absence of this consent does not render the electronic contract invalid.

²⁹ This section derives heavily from recent UNCTAD analysis on the harmonization of e-commerce legislation in ECOWAS conducted in 2015. Updates from the current assessment exercise have been reflected where applicable.

³⁰ Review of e-commerce legislation harmonization in the Economic Community of West African States, UNCTAD, 2015



7. SKILLS DEVELOPMENT FOR E-COMMERCE

ICT and e-commerce skills remain weak across the board. Weak feedback loop between the public sector, academia and the private sector constrains e-commerce skills development and has led to a strong skills-mismatch challenge. Outside the CBL and the LTA, the public sector is largely unaware of the concepts, applications and technologies related to e-commerce. E-government and e-commerce are routinely misconstrued to be the same concept.

Vendors and customers both play an important role in driving skills development in the e-commerce ecosystem. As the primary consumers of relevant e-commerce related skills, vendors provide direction to the public sector, skills providers, and IT support service providers regarding what skills are needed. End-consumers ultimately inform the vendors about these requirements based on their buying behaviour and requirements.

In order for Liberian businesses to successfully embrace e-commerce, skills and awareness must be comprehensively upgraded. The IT skills base has remained constrained in breadth and depth due to several factors. Essential skills such as website development, interfacing with bank APIs, content management are significantly weak, and e-commerce vendors cannot count on a reliable supply chain of IT support firms to assist them in this regard.

7.1. Skills gap identification

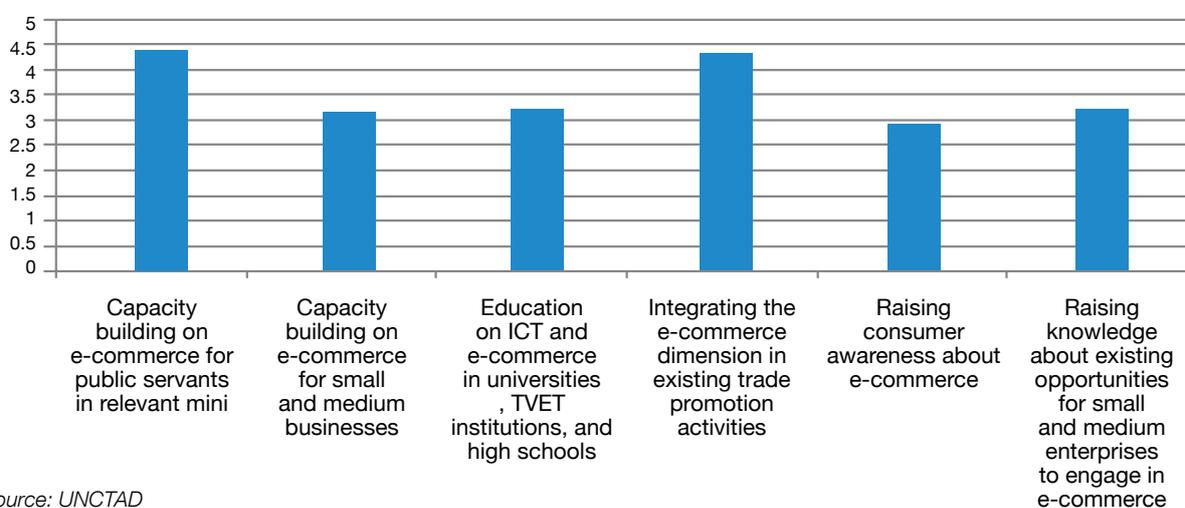
Awareness of e-commerce, from scope definition to technical and policy aspects, is lacking in Liberia, throughout the public sector.

Outside the CBL and the LTA, where e-commerce components such as mobile and online payment gateways have been actively discussed, the public sector is largely unaware of the concepts, applications and technologies related to e-commerce. The disconnect exists to the extent that e-government and e-commerce are routinely misconstrued to be

the same concept in public sector circles. There is therefore an important need to raise the awareness of e-commerce at the policy level.

The need for enhanced awareness is borne out by the survey conducted as part of this assessment, where ‘capacity-building on e-commerce for public servants in relevant ministries’ and ‘integrating the e-commerce dimension in existing trade promotion activities’ (typically the mandate of MOCI) emerged as top priorities for stakeholders, when asked about skills-development issues.

Figure 12: Survey spotlight - Please score the following areas according to their relative importance (1 being the least important issue and 6 the most important one;17 responses)



Source: UNCTAD



Lack of viable markets prevent a pull effect on aspiring/current vendors, IT support firms, policymakers, and ultimately on skills providers and skills seekers.

A strong case can be made for markets leading the way for e-commerce policy and curricula development. In Liberia, the e-commerce market is particularly weak – domestic consumers have weak purchasing power and do not shop online. The international community is an active but small segment constituting high value buyers. There is a marked hesitancy among consumers/businesses to put their credentials online. Cooperation between companies to collaborate across e-commerce value chain is also weak. B2C is now emerging, but virtually no activity exists in B2B, C2C, and G2C segments. The business case for making investments in e-commerce is unclear at the firm level, owing to currently weak enterprise profitability levels.

Overall, this has led to a sluggish market that disincentivizes traditional businesses from going online, which in turn means that they do not hire IT contractors as they normally would, nor do they hire IT professionals for e-commerce related work. Thus universities/technical institutes as well as policymakers do not have the feedback and ‘pull effect’ required to reassess and revamp the skills infrastructure related to e-commerce and IT in general.

Weak feedback loop between the public sector, academia and the private sector constrains e-commerce skills development.

At present, the private sector is unable to effectively communicate its skills requirements to the skills-providers (including primary/secondary schools, universities, and IT technical training institutes). Public-sector entities such as the Ministry of Education are unable to sufficiently gain the insights required to enact effective policies in aid of IT and specifically e-commerce development. There is a strong skills-mismatch challenge in the IT sphere, where skills such as website design/maintenance that are in demand by potential/current e-commerce vendors are in short supply, and instead students are taught from a static and outdated curriculum not tied to market demand.

To offset this gap, a strong feedback loop needs to be formalized between the private sector (demand side), academia (supply side), and support entities (public

sector, ICT support firms) and the private sector to coordinate the upgrading of the ICT skills infrastructure and reduce the existing skills mismatch.

Weak IT support chain stymies growth options for vendors.

Most companies seeking to extend their traditional model to e-commerce contract external service providers for this specialized support, rather than retaining this function in-house. For Liberian firms, this option is not available. IT firms that can support businesses are few in number, and their quality and breadth of support is assessed to be weak. Contractors with specialized skills required for e-commerce (such as website development, customized software support) are not easily available. Despite the challenges, the base has grown significantly in the last 15 years and continues to evolve in line with the overall sector. Going forward, it will be essential to develop a reliable supply chain of IT service providers to adequately support the e-commerce value chain.

The growth of this supply chain will be driven to a large extent organically. As the e-commerce activity ramps up, the demand for IT services will pick up as well, and it is expected that a supply chain of firms and professionals will emerge gradually that can cater to end-to-end vendor requirements.

Scope to improve interministerial coordination relating to ICT skills-development.

While there has been marked improvement in coordination within the public sector regarding ICT skills-development, there is more work to be done to clarify the mandate of different ministries about ICT and improving overall coordination to support policy and strategy design.



Box 9: Policy objectives related to human resource development in Revised ICT Policy 2017-2022 (forthcoming)

The following key priority areas have been identified in the revised ICT policy draft. While the focus on e-commerce in the revised strategy is limited, improvements within the overall ICT skills development area will contribute to the development of stronger human capital within the e-commerce sphere as well.

1. Increase the size and quality of ICT-skilled human resource base in Liberia
2. Use ICT to improve the quality of delivery of education and training in all areas including distance learning, as well as to enhance the learning experience itself
3. Expand and improve adult education, lifelong learning and both general and digital literacy programmes, notably for retraining and re-skilling the existing workforce
4. Make the use of ICT part of everyday life without excluding those that need skills development
5. Encourage and support ICT training for political decision-makers, community and civil society leaders, as well as private and public-sector executives
6. Give special attention to providing new learning and ICT access opportunities for women and youth, the disabled and disadvantaged, particularly disenfranchised and illiterate people, in order to address social inequities
7. Develop and deploy a nationwide e-Education system that supports schools, higher education/training facilities across the country by interconnecting them with each other and with relevant knowledge centres, providing curriculum integration while also generating information to better shape policies, strategic plans and tactical decisions for developing education and vocational training
8. Foster interest among Liberia academia sectors to conduct research and development activities related to ICT
9. Incentivize industry with ICT specialization to conduct their own training programmes and to contribute to institutional training programmes
10. Ensure that all tertiary institutions offer degree courses in ICTs

Source: Liberia Information and communications technology (ICT) policy draft (2017-2022), page 30

Requirement to promote meaningful integration of women and youth in ICT activities.

The vast majority of working women are involved in the informal sector (more than 90% by some accounts), putting them at significant risk for discrimination, exploitation, and creating opportunity costs for the economy. Digital literacy is low for Liberian women, and they fall into the cracks of the digital divide as a result of cultural barriers, as well as challenges in accessing business (technical) advice and finance.

The Government has placed emphasis on encouraging the participation of women in entrepreneurship activities, including within the ICT sector. As a first step, the ICT policy (draft) proposes a gender gap audit and/or a new iteration of a national household survey with disaggregated gender specific information to serve as a baseline assessment of women in ICT. The strategy also proposes programmes to promote and support women ICT entrepreneurs, digital literacy training for women and girls, and targeted public access of ICT tools. Integrating ICT and e-commerce into existing efforts for women owned and operated

business may help in opening further opportunities and markets for them.

The large population of youth combined with an entrepreneurial culture bodes well for e-commerce. From a demographic perspective, Liberia is a young country. Youth account for more than 50 per cent of the overall population. Forty-four per cent of the population is under the age of 15. The ICT policy (draft) promotes youth entrepreneurship initiatives in ICT in conjunction with the work currently being undertaken by the Ministry of Youth and Sports in terms of technical, vocational education and training.

The key challenge will remain sustained policy attention (given many other governmental priorities), and resources (technical and financial) to ensure that long-term efforts are made to enhance the integration of women and youth in the ICT (including e-commerce).



Box 10: Gender specific policy goals

1. Ensure that all analysis conducted for the purposes of developing ICT policies and plans integrate gender and gender considerations, from network deployment analysis to universal access strategies and priorities.
2. Endeavour to improve the availability of gender disaggregated data on access and use of ICTs
3. Involve gender advocates and experts in the policy and planning process from the start to ensure women-centric policy development
4. Establish time-bound targets to achieve gender equality in access across all areas of policies and plans, from skills building to adoption and use
5. Consider allocating a percentage of the resources available to support women-centred activities, including resources to promote and support women ICT entrepreneurs, digital literacy training for women and girls, and targeted public access and other projects to support access and use for women and girls
6. Ensure that all skill building and training programmes are developed considering the needs of women and girls across all educational levels. These programmes should: consider what themes would be most relevant to participants; offer training opportunities for all levels, from basic skills to more advanced coding and design; consider the location of programmes and the gender of trainers
7. Establish quotas to ensure the equal participation of women and other marginalised groups in all programmes supported by national policies and plans, especially rural and poor populations

Source: Liberia ICT policy draft (2017-2022), page 27

7.2. Availability of tertiary education/curriculum, professional training

There are mainly two routes related to higher level IT education in Liberia - via universities and specialized training institutes.

The latter group has proliferated in the post-civil war period since 2013, with a number of technical institutes currently operating in Monrovia, including the more established BlueCrest University College, and Starz College of Science and Technology. There are no IT masters level courses currently offered – the University of Liberia provides an associate level degree and the private sector technical training institutes offer bachelors and certificate level courses. Some of these institutes have tie-ups with Indian training providers such as NIIT, and further tie-ups are expected with partners with US and Ghana. Skills seekers predominantly prefer the certificate level route because the economics make sense – in terms of invested time, finances, and in-house placement services.

There are no specific training courses focusing on e-commerce given that the field is in the early stages of development. Both skills providers and skills seekers are tentatively assessing the potential and the sustainability of e-commerce in Liberia, given past experiences of sectors (such as oil and gas) where

high hopes and investments of time and finances on both supply and demand sides were disappointing after an initial period of high optimism.

Among the course offerings, there is a distinct lack of hybridization, i.e., integration of cross-functional areas such as entrepreneurship and marketing with website development and programming.

Requirement to boost certificate level IT education, accompanied by university level upgrading of IT infrastructure and curriculum and reduction of IT literacy gap at the primary and secondary school level.

The vast majority of youth above age 20 are unemployed and this is especially a cause for concern in a post-conflict country where high youth unemployment has in the past contributed to fragility. Youth unemployment has also led to social fragmentation, as young people tend to move to Monrovia from their distant communities in search of economic opportunities, fracturing community ties.

Education in general is a pervasive challenge in the country. The 2010 Labour Force Survey indicated that only 17 per cent of Liberians have a secondary school education, and women constitute a minority of this percentage.

ICT education needs to be introduced starting at the primary and secondary school levels. Lessons learned



from ongoing pilot programs to digitize primary school education must be carefully studied and applied as necessary. This will require significant efforts to train teachers as well.

Certificate level courses will continue to offer skills/job seekers a medium to gain specialized education and allow them to enter the job market in a relatively short timeframe. Due to the close relationship with industry, course providers are better placed than Liberian universities to adapt faster to industry requirements, and this must be leveraged.

The university level IT offerings need to be comprehensively upgraded over the medium- to long-term. This includes hard infrastructure (computer labs and related technical support, networked access, reliable access to power) and soft infrastructure (curricula upgrades, teacher skills upgrading and retention, hybridization of IT courses with management, entrepreneurship, sales and other subjects). Affiliations such as the University of Liberia’s arrangements with Tilburg University in the Netherlands will help in cross-fertilizing IT with other topics.

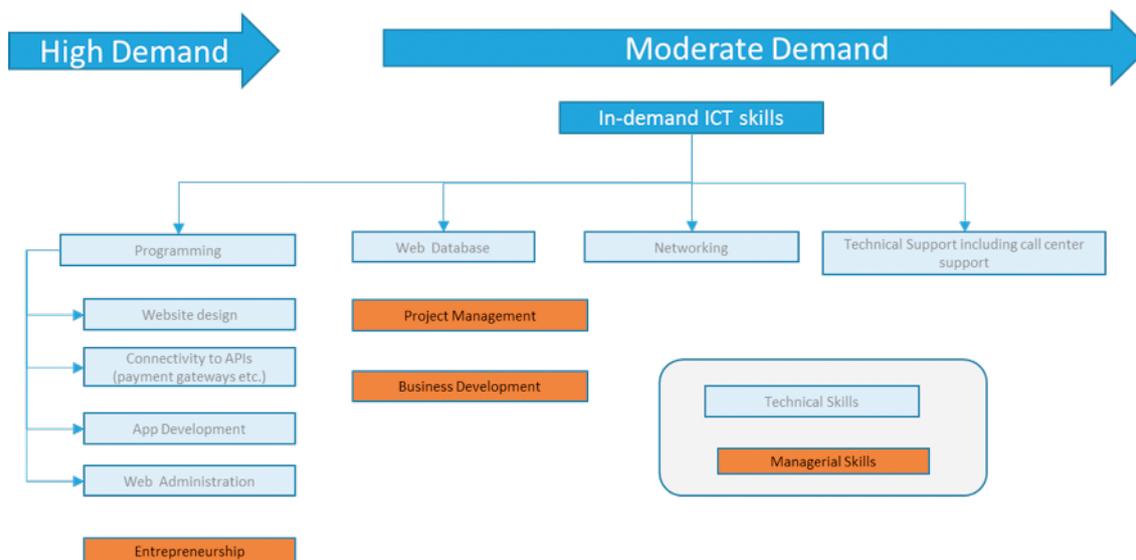
Box 11: Youth and ICT

The Government has stated the following objects vis-à-vis youth and ICT:

1. Promote the use of ICTs, in partnership with youth-focused bodies, particularly Ministry of Youth and Sports (MoYS) and relevant MDAs to deliver information and content that emphasize citizen agency and socio-economic development.
2. Support the delivery of programmes designed to ensure a youth focus on productive application of ICTs.
3. Promote incentive and support schemes targeted at youth entrepreneurship initiatives in ICT.
4. Ensure that online safety mechanisms are in place to support youth use of technology and increase awareness among youth about cybersecurity issues.
5. Promote the utilisation of ICT in education delivery and management and its incorporation in education curriculum at all levels.

Source: Liberia ICT policy 2017-2022(draft)

Figure 13: Skills forecasted to be in high demand for Liberian e-commerce



Source: UNCTAD assessment through online survey and in-country interviews



CONCLUSION

It is clear that for Liberia to become a more e-commerce ready country, progress is required on multiple fronts involving multiple stakeholders. The Government will need to ensure that progress on implementing existing strategies and regulations continues, and gaps are filled. E-government initiatives, as well as infrastructure development projects, will need to continue at a brisk pace. Banks, telecommunication firms, and academia are all ready to contribute to the continued growth of the ecommerce ecosystem. This collaboration must be leveraged to realize the potential of e-commerce for economic and socio-economic growth.

The Government has expressed the willingness to work with stakeholders across the board– including the private sector–to discuss issues relevant to the digital economy. Leading firms have proven to some extent the willingness of the markets to respond to e-commerce offerings, with promising results. In this regard, the proverbial stars thus are aligned.

The following are the key tangible and indirect contributions that e-commerce can make towards Liberia's growth trajectory.

1. Bring previously disconnected private sector players closer to domestic and international markets, facilitating trust development in the medium-long term.
2. Contribute to reducing high import dependency vis-à-vis consumption goods in the domestic market.
3. Contribute to sector development efforts for the economy, for instance, IT, tourism, professional services (graphic design, marketing and

branding, content generation) due to downstream value chain linkages.

4. Enhance trade competitiveness of Liberian firms by:
 - a. Facilitating inputs sourcing for productive consumption by firms (B2B).
 - b. Facilitating Liberian exports to international markets (B2C).
5. Support inclusive growth involving increased economic participation of MSMEs, women and youth, who are not currently meaningfully integrated in the economy.
6. Contribute to economic development efforts across the 15 ECOWAS countries.

In order to actualize the gains from e-commerce, the Government of Liberia will require sustained technical and financial support from development partners. The action matrix at the end of this report identifies the critical areas of focus and also identifies potential partners whose mandates aligns with the scope of the activity.

E-commerce is increasingly viewed among both Liberian policymakers and the private sector as a potentially important driver of economic and socioeconomic growth in Liberia. The road ahead may prove to be rocky as the understanding throughout the ecosystem on overall e-commerce potential and challenges evolves gradually. However, as this assessment confirms, the potential is immense.



THE WAY FORWARD: ACTION MATRIX

E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop a specific e-commerce strategy (as noted in the Telecommunications and ICT strategy) in the medium-term to consolidate gains and chart the future course of Liberian e-commerce.	<ul style="list-style-type: none"> National direction established for e-commerce development. Public and private stakeholders engaged and mobilized in e-commerce. 	High	MoCI, MoPT, UNCTAD
Complete the validation and endorsement process related to various pending strategies and policies including the Telecommunications and ICT policy, and the postal services master plan.	<ul style="list-style-type: none"> Updated strategies/policies guiding the public sector in discharging their mandate. 	High	MoPT, LTA, CB, A4AI (Alliance for Affordable Internet), USAID
Facilitate a sustained multi-stakeholder dialogue regarding national ICT and e-commerce issues by developing/reinvigorating an ICT4D steering committee in the country.	<ul style="list-style-type: none"> Strengthened institutional coordination between public and private sector, banks, skills providers, telecommunication firms. Improved understanding of the Liberian e-commerce ecosystem across the institutional base. 	High	MoPT, MoCI, CB, LTA, Libtelco, mobile operators (Lonestar/Orange), UNCTAD
Improve institutional collaboration related to e-commerce statistics collection by institutionalizing a workflow between relevant public-sector entities. Enable disaggregation of customs(trade) data, Society for Worldwide Interbank Financial Telecommunication (SWIFT) transfers for remittances, company registration in aid of better collection of e-commerce information.	<ul style="list-style-type: none"> Improved data collection leading to effective policymaking and institutional support related to e-commerce. 	High	LISGIS, MoPT, LTA, CB, MOCI, LRA (Customs), UNCTAD
Designate a lead ministry/technical agency and integrate ownership of e-commerce issues in its mandate.	<ul style="list-style-type: none"> Evolved clarity of the roles and responsibilities of public sector institutions vis-à-vis e-commerce. 	High	Cabinet
Connect the various e-government initiatives and services that are being developed in relative isolation from each other. Operationalize CIO network across government entities, including at the President's office.	<ul style="list-style-type: none"> Maintained coordination flows between the government offices. 	Medium	MoPT, Libtelco, LTA
Develop a private sector e-commerce focus group comprised of current and potential vendors as a platform for discuss the community's challenges and common issues. Focus group to be either part of an existing private sector body such as LCC/LIBA or an independent professional association.	<ul style="list-style-type: none"> Improved advocacy and awareness levels within the e-commerce vendor community (both current and potential). 	Medium	IT firms, e-commerce vendors, LCC, LIBA, MOCI, MoPT
Conduct separate gender/youth gap audits and/or a new iteration of a national household survey with disaggregated gender/age specific information to serve as a baseline assessment of women and youth in ICT.	<ul style="list-style-type: none"> Well-defined current state of women and youth involvement in the e-commerce value chain. 	Medium	MoPT, Ministry of Gender and Development, MoYS, MoL, LISGIS
Reinforce MOCI's capabilities (as the de facto Liberian TPO) to conduct market analyses and engage with vendors and domestic/international buyers through workshops and B2B outreach efforts both within and outside Liberia.	<ul style="list-style-type: none"> Raised awareness of the potential of e-commerce for vendors and sellers. 	Low	MOCI, MoPT, ITC
Launch a pilot project anchored in the tourism sector to establish the business case for e-commerce led growth for the tourism industry in Liberia. Project will target the large number of organizations (UN+NGO+international concessionaire firms) travellers arriving in the country on short visits and are interested in tourism experiences.	<ul style="list-style-type: none"> Quantified business case (number of satisfied customers, diversity of tourism experiences provided, number of suppliers) over a 6-12 month period. 	Low	MoPT, MICAT, MoCI, LINTA, iLab, Swedish Delegation



E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop and deploy a nationwide consumer awareness campaign to encourage use of mobile money services.	<ul style="list-style-type: none"> Increased adoption of mobile money services in the country. 	Low	MoPT, Ministry of Rural Development, mobile operators (Lonestar/Orange)
Strengthen the operational capability of Liberian Post to support e-commerce and ensure operational efficiency of the postal network to facilitate ecommerce inclusion across the whole country	<ul style="list-style-type: none"> Increased e-commerce inclusion for all citizens and businesses. Strategic positioning of Liberian Post, improvement in the operational efficiency of the Liberian Post, and the sustainability of the universal postal service 	Medium	MoPT, MoCI, Donors, Liberian Post, UPU

ICT INFRASTRUCTURE AND SERVICES			
Indicative action	Expected outputs	Priority Level	Potential support by:
Establish the metro fiber ring in Monrovia and develop an operational PPP model for private sector led Internet services expansion, based on a competitive basis. Facilitate last mile connectivity for homes, offices and other end-users through a competitive licensing model.	<ul style="list-style-type: none"> Improved broadband penetration in Monrovia and reduced costs for consumers. Ensure a level playing field for all ISPs and mobile service providers. 	High	MoPT, LTA, CB, MoPW, Google/C-Squared, USAID
Provide technical and funding support to establish a national backbone infrastructure to all 15 county capitals with redundant links to high-speed networks in neighbouring countries such as Cote d'Ivoire.	<ul style="list-style-type: none"> Nationwide coverage for Internet access, which will further lead to increased financial inclusion. 	High	MoPT, LTA, CB, MoPW, USAID, ITU
Develop a long-term management and resource mobilization strategy for the Universal Access Fund and integrate its role in national policies as applicable.	<ul style="list-style-type: none"> Ensured sustainability and operationalization of the Universal Access Fund. 	Medium	MoPT, CB, LTA, MoCI, ITU, A4AI
Connect the various e-government initiatives and services that are being developed in relative isolation from each other. Operationalize CIO network across government entities, including at the President's office.	<ul style="list-style-type: none"> Maintained coordination flows between the government offices. 	Medium	MoPT, Libtelco, LTA, USAID
Leverage public sector work projects such as power lines and road development to include ducts and masts for fiber network build-out	<ul style="list-style-type: none"> Reduced costs for laying fiber and fulfil dig-once goals. 	Medium	MoPT, MoPW, MoT, MFDP, LTAWB
Develop regulations (standards, codes, rights and responsibilities) and reporting requirements for Rights of Way options for private operators to lay fibre or build masts through private land.	<ul style="list-style-type: none"> Increased delivery of fixed links to end users. 	Medium	MoPT, LTA, MoPD, MoPW
Complete the deployment of the National Data Center (NDC) in support of the Government (intra-government network) operationalization.	<ul style="list-style-type: none"> Efficient and increased G2G, G2C, G2B services. 	Medium	LTA, Libtelco, MoPT
Build the administrative capacity of CCL and finalize ownership structure post metro fiber ring deployment.	<ul style="list-style-type: none"> Increased efficiency of CCL leading to overall management of the 'ACE Submarine Cable – metro fiber ring – final mile connectivity linkages'. 	Medium	Cabinet, MoPT, LTA, A4AI, USAID



TRADE LOGISTICS AND TRADE FACILITATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
<p>Develop and implement an open national physical address system to homes, institutions and businesses to facilitate trade and logistical support for a modern postal system. Add specific existing location data if useful for the postal operations (latitude-longitude, geocodes similar or equal to what-3-words, and others).</p> <p>Liberia to list the possible data sources to build and structure the postal address data file. As an initial step, restart pilot project (NAPAS) to test addressing in Congo Town area of Monrovia.</p>	<ul style="list-style-type: none"> Improved 'findability' of Liberian addresses, leading to improved last mile delivery. Contribute to the expansion of the e-commerce ecosystem in the country through e-commerce fulfilment and logistics. 	High	MoPT, MoPW, UPU, W3W, or other private sector solution providers
<p>Support the development of the Liberia Single Window platform that will help consumers access essential information (costs, guidelines, tariffs), submit customers related forms, access help desk support and make online payments for certain forms.</p>	<ul style="list-style-type: none"> Ease of doing business for traders (importers/exporters). 	High	MOCI, MFDP, CBL, UNCTAD
<p>Continue expansion of ASYCUDA deployment to all border crossings.</p>	<ul style="list-style-type: none"> Harmonized trade data collection across all border crossings. 	High	MOCI, LRA, CBL, UNCTAD
<p>Finalize decision on ratifying the WTO Trade Facilitation Agreement as well as the associated notifications. Ensure continued role for the NTF Forum in improving Liberia's TF environment.</p>	<ul style="list-style-type: none"> Alignment of Liberian trade facilitation environment with TFA signatory countries, which will improve reciprocity (re: fees and documentary burden) and alignment. 	High	Cabinet, MOCI, UNCTAD
<p>Implement the national program related to the ECOWAS Postal Service Master Plan, specifically aimed at establishment of Liberian postal services as a semi-autonomous body operated through a PPP. Expand the role of the postal network to access social, digital, and financial services.</p>	<ul style="list-style-type: none"> Enhanced efficiency of Liberian postal services, leading to improved last mile delivery. 	Medium	MoPT, MoPW, MFDP, ECOWAS, UPU
<p>Expand the role of the postal network in accessing social, digital, and financial services.</p>	<ul style="list-style-type: none"> Increase of social, digital and financial inclusion of the population Foster financial inclusion through the postal network and through digitalization of postal financial services 	Medium	MoPT, MoPW, MFDP, ECOWAS, UPU
<p>Develop Liberian Post to support easy-export / easy-import through the Post that targets MSMEs across the country including rural areas.</p>	<ul style="list-style-type: none"> Increased exports and imports of low value items from Liberian MSMEs thanks to lower prices and simplified export and import processes offered by Liberian Post. 	Medium	Liberian Post, MoCI, MoPT, LRA, UNCTAD, WB, UPU
<p>Develop incentive packages aimed at attracting international courier companies and improve the network of courier services that can help in developing logistical coverage throughout the 15 counties.</p>	<ul style="list-style-type: none"> Enhanced coverage by delivery firms across Liberia. 	Medium	MoPT, MOCI, UPU
<p>Deploy the Verification of Conformity (VOC) process/mechanism being planned for importers and exporters, involving pre-shipment inspections, and pre-authorized testing and documentation.</p>	<ul style="list-style-type: none"> Reduced documentary burden for Liberian importers and exporters. 	Medium	LRA (customs), NPA, MOCI, MoA,
<p>Assist in the continuing training and deployment of advanced software solutions for modernization of Customs Administrations' clearance procedures and systems, including paperless postal clearance</p>	<ul style="list-style-type: none"> Improved capacity of Liberian customs and alignment with international standards and best activities. 	Medium	LRA, MOCI, UNCTAD, UPU
<p>Integrate ASYCUDA with commercial banks and develop a system allowing for tax/customs bills to be accepted on behalf of the Government and LRA.</p>	<ul style="list-style-type: none"> Improved efficiency, transparency and ease of doing business for trading businesses. 	Low	MOCI, MFDP, LRA, CBL, UNCTAD



TRADE LOGISTICS AND TRADE FACILITATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Expand the scope of existing incubators to include e-commerce, as well as assisting existing incubators, accelerators and entrepreneurship labs to further develop capabilities.	<ul style="list-style-type: none"> Improved environment for spurring entrepreneurship for ecommerce ventures. 	Low	MoCI, MoYS, iLab,

ACCESS TO FINANCING			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop coaching programs for e-commerce vendors (both current and potential) to build their capacities for approaching lenders for loans. Capacity-building approach will include focus on improving documentation, business plans, operational and financial planning.	<ul style="list-style-type: none"> Improved success rate of Liberian firms when approaching lending institutions for loans. 	High	Commercial banks, MFDP, MOCI, LBA
Review collateral requirements imposed by banks and develop tailored lending products and collateral requirements for e-commerce start-ups and SMEs.	<ul style="list-style-type: none"> Increased access to credit for smaller scale vendors. 	High	Commercial banks, MFDP, MOCI, LBA
Develop e-commerce specific lending instruments for Liberian firms seeking to transition to digital platforms.	<ul style="list-style-type: none"> Greater access to financing for Liberian vendors (current and potential). 	High	Commercial banks, MFDP, CBL, MOCI, LBA
Develop a multi-year grants program involving 100 per cent financial support and mentoring for selected firms for a select number of years, state that the program would be converted to a matching grants scheme requiring a level of contribution from the firms.	<ul style="list-style-type: none"> Improved capabilities of Liberian firms that will result in improved loan repayment rates and levels of success when applying for loans. 	Medium	IFC, Spark
Develop an awareness campaign focusing on sensitizing loan officers to the particularities of the MSME sector and especially e-commerce vendors.	<ul style="list-style-type: none"> Increase cognizance of issues faced by e-commerce vendors by loan officers. 	Medium	Commercial banks
Facilitate pending transition of existing public sector referencing system to the electronic format.	<ul style="list-style-type: none"> Lower turnaround times between requests, more efficient processing of requests, and lower error rates resulting from incorrect identification. 	Low	CBL, MFDP, LBA
Develop and promote comprehensive financial literacy strategy for all: <ul style="list-style-type: none"> Incentivize people to put their money in the banking system. Improve culture of savings in commercial banks. Launch an outreach campaign by banks to consumers. 	<ul style="list-style-type: none"> Increased trust in the banking system. 	Low	LBA, Commercial Banks

PAYMENT SOLUTIONS			
Indicative action	Expected outputs	Priority Level	Potential support by:
Further scale centralized switch at the CBL to include components as required including: <ul style="list-style-type: none"> a gateway to international banking channels that will allow Liberian banks to issue cards accepted worldwide, and also locally. Connect e-commerce vendors to the switch 	<ul style="list-style-type: none"> Enhanced interoperability within the banking network and with the vendor base ultimately boosting online payment activity. 	High	CBL, LTA, MoPT, WB



PAYMENT SOLUTIONS			
Indicative action	Expected outputs	Priority Level	Potential support by:
Operationalize the Agency Banking regulation by reviewing and passing pending applications from commercial banks and other non-banking financial institutions.	<ul style="list-style-type: none"> Increased banking solutions in the underserved areas leading to increased financial inclusion. 	High	CBL, LTA, MoPT, MOCI
Link customer bank accounts directly with their mobile-money accounts (bank to wallets), allowing customers in rural/remote areas to utilize the agency banks in cashless transactions. Resolve regulatory concerns related to interoperability between bank accounts and mobile wallets and deploy the required infrastructure related to the switching network.	<ul style="list-style-type: none"> Reduced impact of low liquidity and challenges in transporting cash in rural areas. Increased convenience for customers. Seamless operations connecting customer/business banking accounts to their mobile accounts. Cashless operations are promoted, especially in rural areas. 	Medium	CBL, LTA, MoPT, mobile operators (Lonestar/Orange), GSMA
Review Know Your Customer (KYC) paperwork requirements (required in support of anti-money laundering and anti-terrorism concerns) to simplify and decrease burden as much as possible for consumers.	<ul style="list-style-type: none"> Increased adoption of mobile money services, especially outside Monrovia. 	Medium	CBL, LTA
Commission a study to address dual currency concerns through best practices and lessons learned outside Liberia. Specifically focus on the implications for e-commerce.	<ul style="list-style-type: none"> Improved understanding of the implications/risks that a dual or single currency regime will pose for Liberian e-commerce 	Medium	CBL, MFDP
In collaboration with banks, launch a countrywide awareness building campaign (starting with the main city centers) to make customers more aware of the utility, risks, rewards of using cards, mobile money, as well as online banking options.	<ul style="list-style-type: none"> Improved consumer awareness leading to reduced dependence on physical branches. 	Medium	MFDP, Banks, mobile operators (Lonestar/Orange)
Explore the feasibility of connecting mobile-money services to international remittance networks (inward and outward) similar to the partnership models in other African countries.	<ul style="list-style-type: none"> Increased convenience of citizens and businesses to transfer funds. Reduced remittance costs. Improved financial inclusion. 	Low	CBL, LTA, mobile operators (Lonestar/Orange), GSMA
Speed up review and approval process of new innovations and services proposed by banks, and other financial services providers such as Liberia Postal services, including the Pan-African banks operating in Liberia.	<ul style="list-style-type: none"> Absorption of new services from the region and beyond to Liberia. 	Low	CBL, WB, UPU
Reassess the remittance market against the General Principles for International Remittance Services.	<ul style="list-style-type: none"> Best practices related to remittances are incorporated in the Liberian payments system. 	Low	CBL, MFDP, MOCI
Use the postal network with its unique reach in remote and rural areas to enable financial inclusion as a provider of financial services, especially of digital financial services (including postal payment services) and ensure its operational readiness to provide them. Post can become a provider of mobile payment solution having the trust from the population and being a state-owned company.	<ul style="list-style-type: none"> Increased access to financial and payment services through digitization, partnerships with banks and other financial institutions. Post as a unique institution providing both the financial and logistics channels for the population and SMEs especially in rural areas. 	Medium	CBL, MFDP, MOCI, Liberia Post UPU



LEGAL AND REGULATORY FRAMEWORK			
Indicative action	Expected outputs	Priority Level	Potential support by:
Update e-commerce related laws to fill gaps in the form of missing and out of date legislation – including: <ul style="list-style-type: none"> Electronic Transaction Law; consumer protection law; data protection law; and the cybersecurity law. 	<ul style="list-style-type: none"> An up-to-date legal ecosystem as a necessary precursor for e-commerce growth and legal recourse. 	High	CBL, MOCI, MoPT, UNCTAD
Sign an MOU between the CBL and LTA for improving interoperability at the regulatory level, accompanied by a mechanism for regular dialogue and information exchange.	<ul style="list-style-type: none"> Reduced ambiguity and improved coordination on mobile banking. Improved understanding on the scope of mobile operators within the banking sphere. 	High	CBL, LTA
Develop consumer protection regulations on specific aspects of e-commerce (return policies for damaged goods, for example). Ensure that regulations and consumer rights are easily accessible by citizens.	<ul style="list-style-type: none"> Improved consumer protection for online buyers, contributing to a fundamental basis of trust in e-commerce. 	High	CBL, MoPT, LTA, MOCI
Facilitate smooth implementation of the recently approved agency banking regulation.	<ul style="list-style-type: none"> Increased banking presence in underserved parts of the country resulting in improved financial inclusion. 	High	CBL, MoPT, LTA, MDFP, MOCI
Expand the Digital Finances Services Group chaired by the CBL to include a wider group of stakeholders throughout the seven policy areas (such as academic institutes, Liberia Postal Services, logistics providers).	<ul style="list-style-type: none"> Resulting holistic feedback and perspective will help to drive effective regulations. 	Medium	CBL, MoPT, MFDP, LTA
Explore the need and scope for establishing an e-commerce law	<ul style="list-style-type: none"> Specific legal provision facilitating e-commerce growth 	Medium	CBL, MoPT, LTA, MOCI
Implement regulation CBL/SD/003/2010 to facilitate the deployment of a private sector credit references bureau under licensing by the CBL.	<ul style="list-style-type: none"> Improved risk management for commercial banks, resulting in increased access to finance for loan seekers who qualify. 	Low	CBL, MFDP
Conduct a deep assessment of the implications of the duality of the Liberian legal system (Anglo-American common law vs. customary law) and its implications on the emerging e-commerce area.	<ul style="list-style-type: none"> Duplications and potentially confusing overlaps are removed. 	Low	CBL, MoPT, LTA, MOCI

E-COMMERCE SKILLS DEVELOPMENT			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop a feedback loop in the form of a platform between the public sector, academia and the private sector (current and potential e-commerce vendors) to actively and sustainably develop a skills pipeline geared towards the e-commerce sector.	<ul style="list-style-type: none"> Improved coordination for facilitating upgrading of the ICT skills infrastructure and reduce the existing skills mismatch. Upgraded skills curriculum related to e-commerce issues. 	High	MoE, LCC, MOCI, UL, ICT training institutes
Conduct a detailed skills gap assessment vis-à-vis the e-commerce value chain to understand the level of gap involved.	<ul style="list-style-type: none"> In-depth understanding of the type and scale of skills that are weak or missing related to the e-commerce value chain. 	High	MoE, LCC, MOCI, UL, ICT training institutes, private sector
Develop and deploy e-commerce boot camps for companies and ICT professionals to gain fundamental knowledge of the essential technicalities of starting, operating and scaling up an e-commerce business within Liberia's context.	<ul style="list-style-type: none"> Enhanced holistic knowledge of e-commerce for companies and professionals. 	High	ICT training institutes, iLab



E-COMMERCE SKILLS DEVELOPMENT			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop specific training courses focusing on e-commerce (website development, API programming in particular among other areas) using the existing certificate level providers as anchors.	<ul style="list-style-type: none"> Additional options for skills-seekers who are unable to invest in associate (current) or bachelor/masters (future) courses in Liberia 	High	ICT training institutes, iLab
Promote incentive and support schemes targeted at youth and women focused entrepreneurship initiatives in e-commerce.	<ul style="list-style-type: none"> Increase in quality and breadth of avenues for youth and women to be involved in e-commerce. 	High	MoCI, ITC, UN Women
Develop a comprehensive program for improving ICT penetration and adoption across schools at both primary and secondary levels.	<ul style="list-style-type: none"> Improved and accelerated ICT education and skills training in all schools across the country. 	Medium	MoE, Bridge Academy and other institutes
In line with the ICT policy (currently in draft), develop and deploy a nationwide e-Education system that supports schools, higher education/training facilities across the country by interconnecting them with each other and with relevant knowledge centres, providing curriculum integration while also generating information.	<ul style="list-style-type: none"> Improved policies, strategic plans and decision-making ability for developing education and vocational training 	Medium	MoE, MoPT
Establish ICT training centers across the 15 counties, in a phased manner.	<ul style="list-style-type: none"> Trained professionals who can become vendors or provide support services to the vendor base. 	Medium	MoE, MOCI
Develop a reliable supply chain of IT service providers to adequately support the e-commerce value chain. Encourage businesses to focus on their support function through financial and business development incentives (such as the growth vouchers scheme).	<ul style="list-style-type: none"> Improved ICT support to current and potential e-commerce vendors. 	Medium	MOCI, MoPT
Incorporate ICT and e-commerce elements in Technical Vocational Education and Training (TVET) institutes operated by MoYS.	<ul style="list-style-type: none"> Enhanced TVET educational offerings in ICT, which will cultivate a ICT skills base. 	Medium	MoE, MoYS, MoPT
Foster partnerships with international universities to introduce masters level programs on ICT in Liberia, of which e-commerce will be components.	<ul style="list-style-type: none"> High quality programs developed in Liberia in line with and access to international best practices. 	Low	MoE, UL
Improve and scale up adult education, lifelong learning and both general and digital literacy programmes, with an ICT dimension and with a focus on retraining and re-skilling the existing workforce.	<ul style="list-style-type: none"> Improved long term development of the ICT skills pipeline. 	Low	MoE, MoYS, iLab
Conduct capacity-building workshops to boost the awareness of public sector/civil servants of essential e-commerce concepts.	<ul style="list-style-type: none"> Improved awareness in the public sector and informed coordination and policymaking related to e-commerce issues. 	Low	MoE, MoYS, MoPT, MOCI
Institute a growth voucher scheme to incentivize e-commerce vendors to test (through a one-time use voucher funded through a grants mechanism) the services of Liberian website designers and programmers.	<ul style="list-style-type: none"> Efficient market development related to ICT and e-commerce. 	Low	MoPT, MOCI

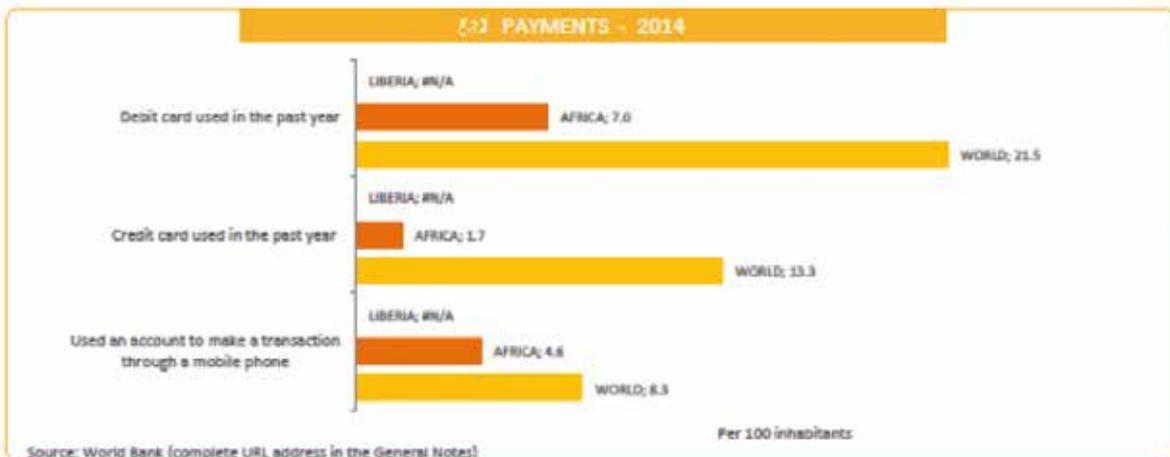
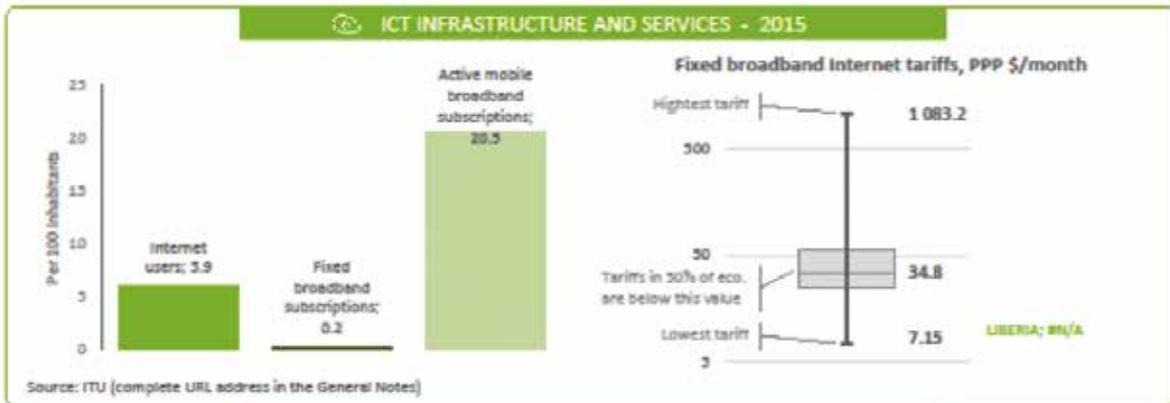


Annex I: Liberia Country Profile on etradeforall.org



COUNTRY PROFILE: LIBERIA

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Annex II: Bibliography and websites used

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