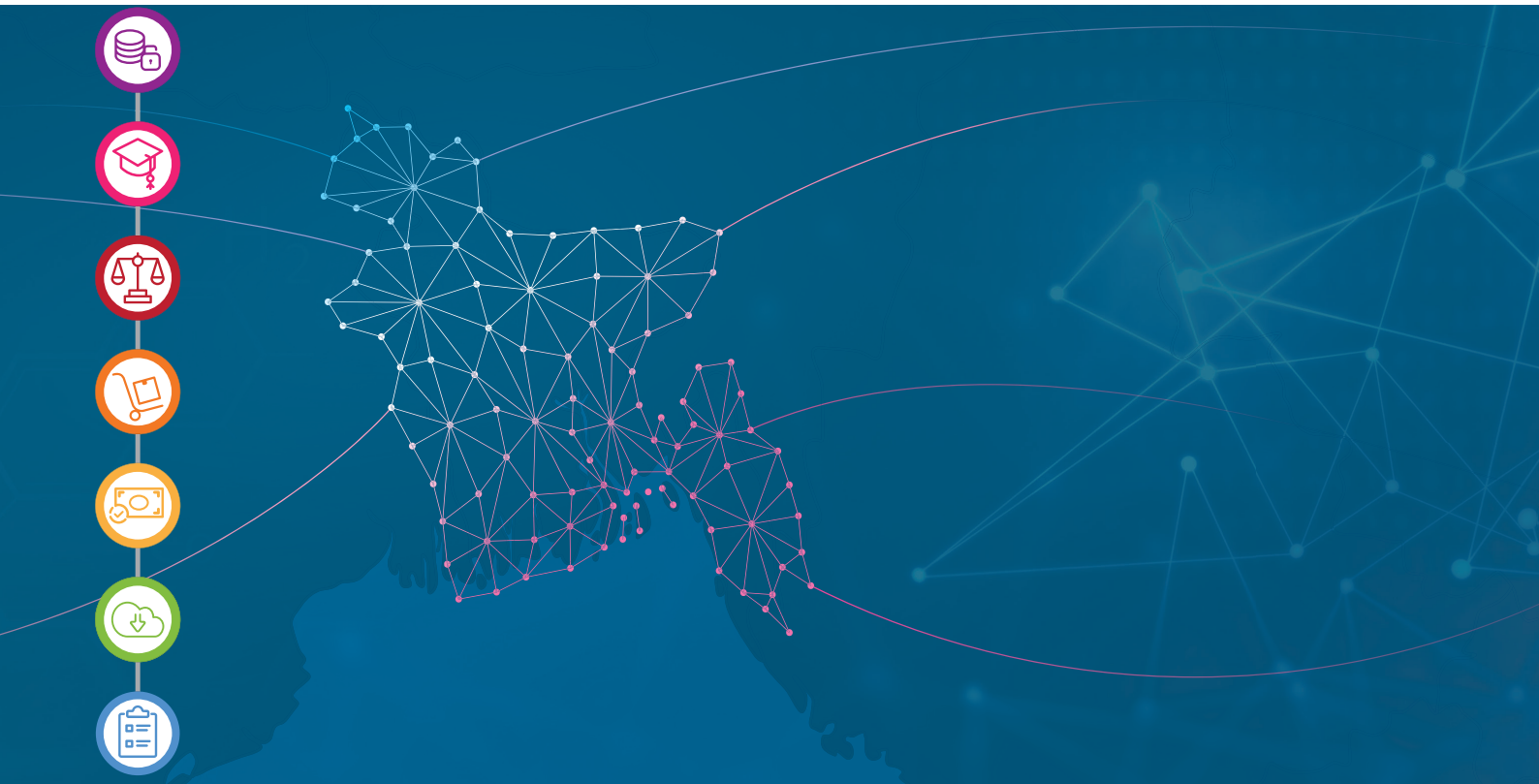


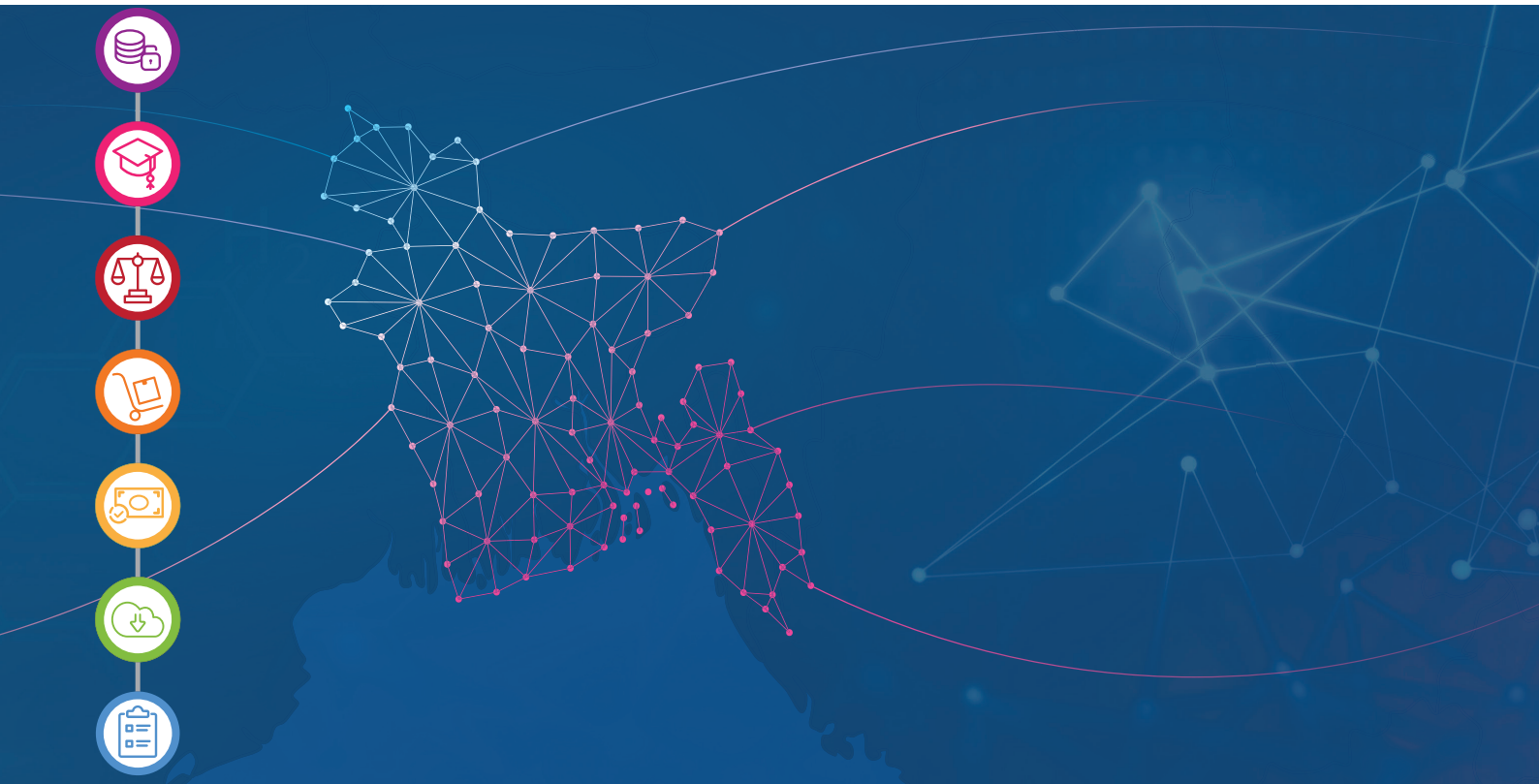


Bangladesh Rapid eTrade Readiness Assessment





Bangladesh Rapid eTrade Readiness Assessment



© 2019, United Nations

This work is available open access by complying with the Creative Commons licence created for intergovernmental organizations, available at <http://creativecommons.org/licenses/by/3.0/igo/>.

The findings, interpretations and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the United Nations, its officials or Member States.

The designation employed and the presentation of material on any map in this work do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Photocopies and reproductions of excerpts are allowed with proper credits.

This publication has been edited externally.

United Nations publication issued by the United Nations Conference on Trade and Development.

UNCTAD/DTL/STICT/2019/6

eISBN: 978-92-1-003971-0



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 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:

Two dots (..) indicate that data are not available or are not separately reported. Rows in tables have been omitted in those cases where no data are available for any of the elements in the row;

A dash (-) indicates that the item is equal to zero or its value is negligible;

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

Reference to "taka" (BDT) means Bangladeshi Taka, unless otherwise indicated. (1 US\$ is equal to approx. 84.02 BDT on February 19, 2019).

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 digital trade, such as in the context of the 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.

Bangladesh has made significant strides in the ICT area, and its efforts to develop the digital economy with strong public and private sector collaboration is a case study in policy development. The growth trajectory of the ICT sector, which has benefited from such collaboration in the past, is an indicator of how the e-commerce ecosystem can grow in Bangladesh. Indeed, with its young, dynamic and IT savvy population, Bangladesh is fertile ground for e-commerce to take root and benefit companies and end-consumers alike.

This report is expected to contribute to the ongoing efforts of the Government of the People's Republic of Bangladesh (GoB) to realize the vision of "Digital Bangladesh" and to build a robust, safe and business-friendly e-commerce ecosystem.

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

Shamika N. Sirimanne

Director, Division on Technology and Logistics, UNCTAD



ACKNOWLEDGEMENTS

This Rapid eTrade Readiness Assessment for Bangladesh was prepared by Felix Christian Haas, UNCTAD Consultant, and Rahul Bhatnagar, Programme Management Officer, with the support of Mostafizur Rahaman Sohel, National Consultant and Convener of the BASIS E-Commerce Alliance, Bangladesh, in close collaboration with a team comprising Cécile Barayre, Marian Pletosu and Dominic Leong under the overall guidance of Torbjörn Fredriksson.

Profound gratitude goes out to the Honorable Mr. Shubhashish Bose, Secretary, Ministry of Commerce, Government of the People's Republic of Bangladesh; Md. Munir Chowdhury, Director General, WTO Cell, Ministry of Commerce, Government of the People's Republic of Bangladesh; Mr. Hafizur Rahman, Director/Joint Secretary, WTO Cell, Ministry of Commerce, Government of the People's Republic of Bangladesh; and Mohd. Khalid Abu Naser, Deputy Secretary, Bangladesh Competition Commission.

During the assessment mission to Bangladesh, the UNCTAD team equally enjoyed exceptional support by Ministry of Posts, Telecommunications and Information Technology. UNCTAD was honored to be received by H.E. Mr. Mustafa Jabbar, Minister, Ministry of Posts, Telecommunications and Information Technology, Government of the People's Republic of Bangladesh. UNCTAD also acknowledges the contribution of Mr. Zunaid Ahmed Palak, MP, State Minister, Ministry of Information and Communication Technology Division, for his support towards this initiative. The assessment would not have been possible without the technical input of the different units of the Ministry.

UNCTAD also acknowledges contribution of private sector business leaders, especially from Mr. Sheikh Fazle Fahim (Senior Vice President, FBCCI), Mr. Syed Almas Kabir (President, BASIS) and Ms. Shomi Kaiser (President, eCab), for their heartfelt support. Mr. Syed Mohammad Kamal (Country Manager, Mastercard) and Mr. Ashish Chakraborty (Director, eCab) have been very much involved in the whole process to make this assessment successful.

UNCTAD is grateful for the kind assistance of the Bangladesh Permanent Mission to the United Nations in Geneva in facilitating essential preparations for the in-country mission. Various other departments and regulatory agencies, including Bangladesh Bank and Bangladesh Telecommunication Regulatory Commission, have provided indispensable technical input to the assessment.

Comments and inputs provided by the following eTrade for all partner agencies, ITC, UNCITRAL and UPU have substantially improved the final report.

Desktop publishing was prepared by Keel Chan and the cover was designed by Magali Studer. The document was externally edited by Nancy Biersteker.

Funding for this report was provided by the Government of Germany.



TABLE OF CONTENTS

NOTE.....	III
PREFACE.....	IV
ACKNOWLEDGEMENTS.....	V
ABBREVIATIONS	VII
EXECUTIVE SUMMARY	1
METHODOLOGY.....	4
SUMMARY OF MAIN FINDINGS AND MAIN RECOMMENDATIONS.....	5
FINDINGS UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS.....	8
1. E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION.....	8
2. ICT INFRASTRUCTURE AND SERVICES.....	16
3. TRADE LOGISTICS AND TRADE FACILITATION	20
4. PAYMENT SOLUTIONS	25
5. LEGAL AND REGULATORY FRAMEWORK	30
6. E-COMMERCE SKILLS DEVELOPMENT	32
7. ACCESS TO FINANCING.....	34
CONCLUSION	37
THE WAY FORWARD: ACTION MATRIX	38
Annex I: Bangladesh country profile on etradeforall.org.....	43
Annex II: Bibliography and websites used	45
Annex III: List of UNCTAD Rapid eTrade Readiness Assessments of LDCs.....	47



ABBREVIATIONS

7FYP	7 th Five Year Plan
a2i	Access to Information
ADB	Asian Development Bank
ASYCUDA	Automated System for Customs Data
B2C	Business-to-Consumer
BACH	Bangladesh Automated Clearing House
BASIS	Bangladesh Association of Software and Information Services
BBS	Bangladesh Bureau of Statistics
BCC	Bangladesh Computer Council
BDT	Bangladeshi Taka
BRTA	Bangladesh Road Transport Authority
BSCCL	Bangladesh Submarine Cable Company Limited
BTRC	Bangladesh Telecommunication Regulatory Commission.
C2C	Consumer-to-Consumer
COD	Cash on Delivery
DCCI	Dhaka Chamber of Commerce and Industry
e-CAB	e-Commerce Association of Bangladesh
e-GIF	e-Government Interoperability Framework
EEF	Equity and Entrepreneurship Fund
FBCCI	Federation of Bangladesh Chambers of Commerce and Industries
FNF	Friedrich Naumann Foundation
GoB	Government of the People's Republic of Bangladesh
GP	Grameenphone
IBFT	Internet Banking Fund Transfer
ICT	Information and communication technology
IDI	ICT Development Index
IDRA	Insurance Development and Regulatory Authority of Bangladesh
IER	Information Economy Report
IFC	International Finance Corporation
IIG	International Internet Gateway
ISP	Internet Service Provider
ITC	International Trade Centre
ITU	International Telecommunication Union
JICA	Japan International Cooperation Agency
KYC	Know Your Customer
LCS	Land Customs Station
LDC	Least developed country
MFI	Microfinance institution
MFS	Mobile financial services
MoC	Ministry of Commerce
MoE	Ministry of Education
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs



MoP	Ministry of Planning
MoPTIT	Ministry of Posts Telecommunications and Information Technology
NBFI	Non-bank financial institutions
NEA	National Enterprise Architecture
NGO	Non-governmental organization
NPSB	National Payment Switch Bangladesh
OECD	Organisation for Economic Co-operation and Development
OTP	One-Time Password
PMO	Prime Minister's Office
POS	Point-of-Sale
RHD	Roads and Highways Department
SDG	Sustainable Development Goals
SID	Statistics and Informatics Division
SME	Small and medium-sized enterprise
TFA	Trade Facilitation Agreement
TTFMM	Trade and Transport Facilitation Monitoring Mechanism
TVET	Technical and Vocational Education and Training
UDC	Union Digital Center
UGC	University Grants Commission
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UPU	Universal Postal Union
US\$	US Dollar
USO	Universal Service Obligation
VAT	Value added tax
WTO	World Trade Organization



EXECUTIVE SUMMARY

The national development agenda of Bangladesh is driven by the Vision 2021, launched in 2010, which articulates a framework for achieving key developmental goals for the country by the year 2021. The goals envisage an ambitious future ranging from “possessing an efficient, accountable, transparent and decentralized system of governance” to “a poverty-free middle-income economy” to “a globally integrated regional economic and commercial hub”. In order to realize these goals, the Government has firmly positioned ICT as an enabler in this framework through its “Digital Bangladesh” initiative, comprised of four pillars: (1) Digital Government (i.e., public service delivery), (2) ICT in Business (i.e., private sector opportunities), (3) Connecting Citizens and (4) Human Resource Development. Several projects for digitalization have been completed and some others are under way in support of this initiative.

The slogan of “Digital Bangladesh” of the Government of Bangladesh has special significance for national development and is a significant impetus for the use of digital technology in the country. This remarkable initiative and its constituent programs like the a2i (Access to Information) Programme have fostered remarkable growth in the overall ICT infrastructure, emergence of the ICT sector as a business, broad-ranging e-government services, and more recently, a focus on e-commerce and digital businesses. The a2i Programme has taken an initiative named “Rural E-commerce” through 5,275 Union Digital Centers established throughout the country. Union Digital Centers are helping to create an alternative virtual market for the goods and services produced in marginalized or rural areas.

Reflecting the growing importance of the digital economy for Bangladesh, the National Digital Commerce Policy 2018 as well as the National ICT Policy 2019 has been developed and the public sector openness to private sector consultation and drafting of these policy instruments is commendable. However, it is now important to translate the policies into implementable master plans through continued public-private dialogue and support by development partners.

ICT is a natural component of the country's developmental trajectory for a number of reasons. Job creation is a necessity given that approximately 110 million of the country's population of 160 million is under the age of 35. Sixty-five per cent of the population resides in rural areas, which poses significant challenges for both providing government services to citizens as well as integration of the rural population with the cities. The Government has shown remarkable foresight to recognize early the potential of ICT as an essential ingredient for the success of the Vision 2021. Since the inception of Digital Bangladesh initiative, the ICT sector has grown at an average pace of 40 per cent per annum.

The gains in the ICT infrastructure are evident. Nationwide coverage of mobile services is increasing with 2G (near 100 per cent coverage), 3G (undergoing rapid rollout) and 4G networks (primarily in the capital and other major cities), while 5G services are being tested as a growth mechanism for the medium-term. Mobile subscription adoption is high at 88.1¹ per cent; 71 per cent of the country now enjoys mobile broadband penetration accompanying the telecommunications sector with relatively high competition. The Bangladesh Telecommunication Regulation Commission (BTRC) estimates mobile broadband subscriptions to be more than 50 per cent of the population (85.5 million users), while overall Internet usage is estimated at 57.2 per cent (91.2 million users). Further growth may be constrained by affordability of mobile connectivity (possibly due to incurred spectrum charges), and lack of familiarity of the users with mobile Internet services. While 40 per cent of the users possess a smart-phone, while only approximately 4 per cent currently utilize 4G-capable devices. Universal access is a stated concern for the Government, however the regulator is currently observing the marketplace dynamics before making any policy decisions. This is to ensure that any decisions bear in mind the fast-evolving dynamics of the telecom market and do not lead to inordinate burdens on telecommunications firms that may harm consumers in the long term through price increases or deterioration of quality. Recent initiatives for operator interoperability through passive and soon active tower sharing are encouraging in this context.

¹ Actual figures may be lower because of frequent practice of one individual possessing multiple SIM cards to leverage on-air promotions and to account for gaps in coverage areas for service providers.



This operating environment has incubated a fast-evolving e-commerce sector driven on one hand by a flourishing ICT sector, and a fast-growing middle-income consumer base, which has become used to absorbing relatively complex ICT services—whether public-sector or private-sector based—and has an appetite for value-added services. A variety of e-commerce businesses exist—ranging from food and grocery delivery to specialized logistical services. Development initiatives such as the innovative Ek Shop model have facilitated aggregation of e-commerce websites by leveraging e-government structures, namely the Union Digital Centers (8,000+) and the vast ICT network established to support e-government operations. The network also involves order facilitation through the post office delivery system as well as private sector logistics firms that can link to Ek Shop as well. This has facilitated market development for e-commerce firms while at the same time allowing consumers to access a variety of online services. It has also encouraged micro-entrepreneurship in the remotest corners of Bangladesh, since an individual can advertise their goods online by utilizing UDC services. Overall, e-commerce holds significant potential for the country, especially given the recent focus on prioritized sectors such as tourism, pharmaceuticals, apparel/jute, and food processing, which are naturally inclined towards e-commerce.

Improvements in trade logistics are required. While the post office network is extensive, last mile delivery remains a concern given the challenging geography and remote/dispersed communities. For e-commerce firms, order facilitation involves a fragmented chain of multiple logistical suppliers, and operations are frequently hampered by security challenges, reliance on cash as the predominant form of payment (between logistics suppliers and e-commerce firms, as well as with customers), and an overall weak level of maturity of this important service function.

Trade facilitation is an emerging area of interest as well for e-commerce. Cross-border e-commerce activity is currently constrained due to a low de-minimis value and factual checks of most parcels entering Bangladesh. The benefits versus the burden imparted to the customs authority as a result of this needs to be reviewed. Bangladesh's trade facilitation commitments and continued improvements to its customs infrastructure must also be met.

The Information and Communication Technology Act 2006 (and amended versions in 2009, 2013) and the Digital Security Act 2018 are the cornerstones of cyberlaws in Bangladesh. The former is credited with broad-ranging coverage related to recognition of online contracts and digital signatures, as well as recourse mechanisms for dispute resolution. The Digital Security Act 2018 was enacted to ensure National Digital Security and establish regulations regarding Digital Crime Identification, Prevention, Suppression, Trial among other related matters. The Consumer Rights Protection Act, 2009 does not have any focus on digital transactions. A regulatory gap exists regarding copyrights, trademarks and patent rights of e-information and data, and domain name protection.

Mobile Financial Services (MFS) have experienced a rapid uptake from consumers, outpacing card-based payment systems growth, although the usage is still low for e-commerce and digital-payments. Currently, e-commerce related transactions only account for approximately 1.02 per cent of the transactions of MFS. In addition, digital payments constitute currently only 0.14 per cent of the transactions of MFS. Interoperability of mobile-money to Banks and Bank to mobile-money transfer capability needs to be developed swiftly. This will help boost trust among consumers and help develop mobile money as the intermediate step solution away from cash and closer to cashless transactions. The key challenges to overcome are fostering consumer trust and strengthening merchant – MFS/card-service-provider linkages.

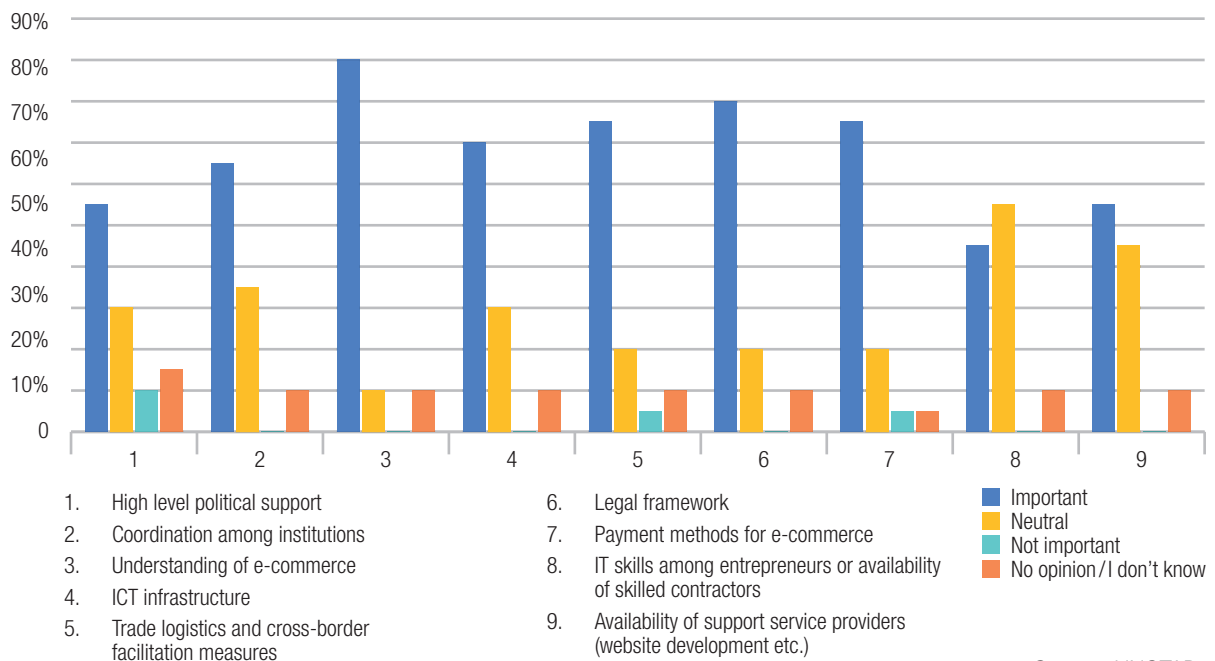
Two key areas of concern are international transaction limits for outbound payments in foreign currency, and access to financing for start-ups, ICT entrepreneurs and e-commerce merchants. The former needs to be reviewed in terms of balancing valid concerns of capital flight with the concern that such restrictions will prevent companies from scaling up operations, especially in cases where procurement of inputs is required from international sources, or where business-related expenses are required. The latter is a key factor constraining SME growth, extending to firms operating within the digital economy. Ample space remains for equity financiers and incubator / accelerator programs offering financing in Bangladesh to be substantially expanded.



In terms of skills development, the e-commerce sector has outpaced skills providers. Companies do cite a challenge in acquiring IT talent, although this is expected to extend to the broader digital skills base as well as the sector evolves. Increased requirements for spurring digital entrepreneurship will undoubtedly arise, as will demand for complex skills focusing not only on website development, but cloud-based custom programming, database development, AI (in the form of customer service bots among other uses), supply chain management and other expertise. A feedback loop is required to link policy, skills providers and the private sector to manage skills mismatch issues.

In conclusion, the digital economy constitutes a significant national development opportunity for Bangladesh and a chance to diversify from traditional industries prevalent in the country, building on the ICT sector development. Ample potential exists to add e-commerce components to nationally prioritized sectors such as pharmaceuticals, the apparel and jute sector and the food processing industry. Addressing the issues identified in this assessment may be instrumental in strengthening public trust in e-commerce and its relevance for Bangladesh’s future economy.

Figure 1: Indicate how important are the following issues to create an environment conducive to e-commerce in your country? (private sector perspective, 22 responses)



Source: UNCTAD



METHODOLOGY

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

Figure 2: Assessment methodology



- ✓ **Phase 1 | Stakeholder engagement and literature review, 16 July - 15 August 2018.**
- ✓ **Phase 2 | Questionnaire customization and dissemination, 15 August – 15 October 2018.** Two (2) customized questionnaires, one for public and one for private sector respondents were received from 28 stakeholders in Bangladesh. Responses were received only from the private sector.
- ✓ **Phase 3 | Focus group discussions and key informant interviews in Dhaka to validate findings and receive additional input, 25 August – 5 September 2018.** Meetings were organized with key public and private stakeholders in the following segments: Policymakers and regulatory bodies, private sector associations, e-commerce entrepreneurs, stakeholders from the banking, telecommunication, courier services sectors and academia.
- ✓ **Phase 4 | Report writing and finalization, 5 September 2018– 1 March 2019.**

As in all other Rapid eTrade Readiness Assessments, the seven policy areas used in the eTrade for all initiative 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
- ✓ Payment solutions
- ✓ Legal and regulatory frameworks
- ✓ Skills development for e-commerce
- ✓ Access to financing

The information provided in this report is based on data collected from 28 survey respondents from the private sector and approximately 80 stakeholders in Dhaka, who have met in focus group discussions at the premises of BASIS or bilaterally during the in-country mission (26 August – 5 September 2018).




SUMMARY OF MAIN FINDINGS AND MAIN RECOMMENDATIONS

MAIN FINDINGS	MAIN RECOMMENDATIONS
 e-Commerce Readiness Assessment and Strategies Formulation	
<p>Vision 2021 articulates the overarching national development agenda, and ICT is centrally positioned to fulfil this through the “Digital Bangladesh” initiative, which has shepherded growth in the digital economy ecosystem by coordinating a range of development initiatives. Strong participation by private sector has been encouraged by a receptive public sector informing pertinent policymaking, including ICT Policy 2019 and the National Digital Commerce Policy 2018. Development of e-commerce in Bangladesh is still in early stages, although sector is transforming rapidly. Consumer adoption is gradually increasing from a low base due to active efforts by firms as well as e-government initiatives. Statistics collection constitutes a capacity gap.</p>	<p>Translate e-commerce policy and ICT to a multi-year master plan. Enhance trust/confidence in broad stakeholder base. Establish mechanism of inter-ministerial collaboration with clearly set out designation of a lead ministry or agency and responsibilities of others involved ministries. Better link national trade and private sector development efforts with e-commerce. Connect initiatives for cluster-based economic development and trade promotion efforts in priority sectors such as tourism, pharmaceuticals, apparel/jute, and food processing with e-commerce-based business models. Improve statistics capacity by linking national statistics office with a2i and other ICT/e-commerce-based initiatives.</p>
 ICT Infrastructure and Services	
<p>Mobile subscriptions rate is high at 88.1 per cent driven by robust competition. 71 per cent of the country now enjoys mobile broadband penetration. BTRC estimates mobile broadband subscriptions to be more than 50 per cent (85.5 million users), while overall Internet usage is estimated at 57.2 per cent (91.2 million users). Important need to ensure 2G nationwide coverage and 3G (undergoing rapid rollout), while scaling up 4G networks. Plans for 5G introduction are underway. Universal access is an important consideration; however, the Government has taken a cautious approach. Smartphones adoption is expected to rise due to increasing local production.</p>	<p>Ensuring 100 per cent coverage vis-à-vis 2G and 3G, while increasing 4G and eventually 5G. Increase smartphone coverage, especially in rural areas and continue efforts to promote local handset manufacturing. Review rollout plans for cellular and broadband networks and proactively engage with private sector to accelerate ICT projects. Encourage telecommunications service providers to cooperate on network/infrastructure sharing in remote areas to benefit from cost sharing, as well as improving last mile connectivity throughout the country.</p>
 Trade Logistics and Trade Facilitation	
<p>Robust national postal network with good delivery capacity throughout the country, although room for improvement in capacity enhancement, diversification of services and digitalization of network. Last mile delivery is a challenge for all firms, especially in rural areas, due to poor road infrastructure and addressing issues. The diverse riverine systems and seasonality of floods frequently cause logistics challenges. Despite Bangladesh’s comprehensive trade facilitation commitments, implementation challenges remain. Cross-border e-commerce activity is constrained due to low de-minimis value regime.</p>	<p>Conduct post office revitalization pilots in rural areas, developing the capacities of remote/rural post offices through technology and best practices available to the private sector. Build capacities of service providers for last-mile delivery in rural areas. Support introduction of insurance products for trade logistics firms to minimize risks due to product breakage, consumer fraud, and security challenges encountered during delivery. Implement the reform recommendations of the Trade Facilitation and Paperless Trade Implementation Survey. Review national de-minimis regime.</p>



MAIN FINDINGS	MAIN RECOMMENDATIONS
<div style="display: flex; justify-content: space-between; align-items: center;">  Payment Solutions </div>	
<p>Current reliance on cash as the dominant payment mode imparts risk for future e-commerce growth. The key challenges to overcome are fostering consumer trust and strengthening merchant – MFS/card-service-provider linkages. The deployment of the National Payment Switch in 2012 was an important development and serves as the core basis for interoperability of banking systems. With the growth importance and adoption of MFS, the interoperability dimension needs to be further developed to include mobile-banks and mobile-mobile transfer solutions in the future. Key challenge for e-commerce businesses are international transaction limits for outbound payments in foreign currency.</p>	<p>Foster dialogue with the private sector to develop mechanisms for reducing consumer reliance on cash and encouraging use of MFS and card-based payments. Review the regulations for ceiling limits related to outbound transactions and review particularly the online transaction limits for individuals and corporate entities. Foster interoperability of payment services and transfers between mobile-money and banks and between mobile-money providers. Establish and communicate clear return guidelines for online purchases and identify options to strengthen after-sale services in e-commerce including return payments. Rationalize KYC requirements of commercial banks.</p>
<div style="display: flex; justify-content: space-between; align-items: center;">  Legal and Regulatory Framework </div>	
<p>The ICT Act 2006 and the Digital Security Act 2018 are the cornerstones of cyberlaws, the former credited with recognition of online contracts and digital signatures, as well as recourse mechanisms for dispute resolution. No specific law on cybercrime exists, but the ICT Act and the Digital Security Act include related tenets. The Consumer Rights Protection Act, 2009 does not have any focus on digital transactions; there is no provision for data protection. A regulatory gap exists regarding copyrights, trademarks and patent rights of e-information and data and domain name protection.</p>	<p>Amend Consumer Rights Protection Act to include provisions for digital content and e-transactions in this Act and ensure that accompanying structures for reporting and addressing grievances are suitably adjusted. Develop a data protection act or amend existing Digital Security Act to include provision of data protection for digitally produced content. Amend existing intellectual property laws (i.e. copyright, trademarks and patents) to include e-aspects. Ensure that domain name protection exists for e-commerce websites.</p>
<div style="display: flex; justify-content: space-between; align-items: center;">  e-Commerce Skills Development </div>	
<p>Widening skill gap between a dynamically growing / diversifying e-commerce sector and a skills-development sector responding at a slower pace to the skill demands needs to be addressed. Weak trilateral cooperation and coordination among (public and private) educational institutions, private sector and policymakers. Weak start-up ecosystem support is a challenge to entrepreneurship development for Bangladesh's emerging digital economy. Awareness of digital economy aspects within the public sector is weak, constituting weak translation of policy to action.</p>	<p>Reduce skills mismatch through the development of a feedback loop between the public sector, academia and the private sector (current and potential e-commerce vendors) and other stakeholders. Provide support to youth and learners seeking to transition to entrepreneurship or employment in e-commerce through incubation or acceleration programs. Provision of start-up support in second- and third-tier cities. Conduct capacity-building workshops to boost the awareness of public sector/civil servants on digital-economy aspects.</p>

MAIN FINDINGS	MAIN RECOMMENDATIONS
<div style="display: flex; align-items: center;">  Access to Financing </div>	
<p>Access to financing is one of the major factors constraining SME growth in the country, necessitating a reliance on family/community and informal sources. Low financial intermediation due to collateralization requirements of loans. Limited experience of financial institution in lending to e-commerce businesses and hence limited exposure to the specific needs and mode of operation of such companies (e.g., adequate recognition of intellectual property of an e-commerce entity). Limited risk appetite of commercial banks due to frequent occurrence of non-performing loan issues of the borrowers. Limited formalization of particularly the small and medium-sized enterprise (SME) private sector (i.e. "f-commerce") constituting challenges for lenders to assess creditworthiness. Venture capital activity is underdeveloped.</p>	<p>Strengthen linkages between commercial lenders and associations in sectors in which digital economy can play an important role; develop lending instruments specific to the needs of e-commerce businesses. Support capacity-building efforts of the commercial banking sector to allow a more hands-on understanding of e-commerce-based business models, risk profiles of e-commerce businesses and typical patterns of financing needs of such companies. Encourage the market entry or expansion of local or international venture capital firms through investment promotion activities on opportunities in Bangladesh's e-commerce and ICT sectors. Promote business innovation challenges for entrepreneurs, hackathons and the like to identify aspiring entrepreneurs and link them up with financiers and venture capitalists.</p>



FINDINGS UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS

1. E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION

Vision 2021 articulates the overarching development vision for the country, and ICT is positioned as the central growth driver in the fulfilment of this vision. The a2i Programme (Access to Information) is the umbrella initiative that has shepherded growth in the ICT sector and the overall digital economy ecosystem of the country. The collaboration of the private sector in the development of e-commerce is robust and characterized by strong advocacy and consensus driven efforts informing pertinent policymaking, including the ITC Policy 2019 and the National Digital Commerce Policy 2018. The development of e-commerce in Bangladesh is still in early stages, although the sector is transforming rapidly. Consumer adoption is gradually increasing from a low base due to active efforts by firms as well as e-government initiatives. Statistics collection in e-commerce and more broadly the ICT sector constitutes a capacity gap.

Over the fifteen years, the Government of Bangladesh has undertaken a comprehensive and long-term strategic approach in developing the digital economy ecosystem of the country. Starting with the groundbreaking ICT Act of 2006—which established the legal basis for digital transactions in the country, to a comprehensive e-government network, which is also serving as a conduit for e-commerce development—the ICT and broader digital economy of the country has grown substantially in coverage and in quality. The active public and private sector cooperation in e-commerce development efforts has played a strong role in informing pertinent policymaking. The consistent expansion of ICT infrastructure and the growth in ICT service providers has facilitated recent e-commerce development. Despite the many challenges that face a young developing economy, Bangladesh has shown immense perseverance in improving the overall digital economy ecosystem.

Bangladesh has reached the third development stage along the pathway to digitalization: from ICT infrastructure development, via ICT service provision to e-commerce.

In the early 2000s, the availability of Internet and ICT shaped an opportunity for the Government to extend more cost-effective public services. In initial phases of the operationalization and implementation of the vision of “Digital Bangladesh”², upgrades and rapid expansion of ICT functioned as the main policy focus.

Bangladesh then entered a phase of growth of businesses involved in ICT services (e.g., programming, website design, outsourcing). Only following the update of the ICT Act in 2009 were Bangladesh Bank online transactions permitted. In 2013, the use of international credit cards was formally permitted for online purchases, while conservative online transaction limits for outbound international transactions remain. Simultaneously, a strong mobile financial service sector in Bangladesh emerged.

These developments contributed to an enabling environment for e-commerce ventures, which is where a focus is fast developing for the private sector as well as policymakers.

International ICT benchmarks/indicators indicate that Bangladesh’s digital economy ecosystem is in the early stages of development despite commendable efforts of the GoB to foster development.

These composite rankings reveal that for some indices such as UNCTAD’s B2C E-commerce Index, Bangladesh has progressed along the e-commerce value chain enough to fare well from a regional perspective. For others such as the ICT Development Index, which measures a broader state of the ICT infrastructure in the country, the country has an overall lower ranking. From an absolute perspective Bangladesh is ranked in the lower rungs of the global ladder, but regionally, it is at par or outpaces its peers in most rankings.

² Digital Bangladesh has enjoyed consistent support from the office of the Honorable Prime Minister Sheikh Hasina. Mr. Sajeed Wajed Joy, Advisor to Prime Minister on Information and Communication Technology, has played an important role in terms of strategic oversight.



Table 1: Bangladesh's e-commerce performance compared to regional economies (2018 rankings)

Index (number of economies surveyed)	Bangladesh	Myanmar	India	Nepal	Pakistan	Bhutan
UNCTAD B2C E-commerce Index ³ (151 economies)	88	125	80	115	117	112
ITU ICT Development Index ⁴ (176 economies)	147	135	134	140	148	121
WEF Networked Readiness Index ⁵ (139 economies)	107	133	91	118	110	87

Source: UNCTAD, ITU, WEF

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

Vision 2021 articulates the overarching development vision for the country, and ICT is positioned as the central growth driver in the fulfilment of this vision.

Vision 2021 is the articulation of the country's guiding vision, involving a dual focus on eradication of poverty by 2021 and transformation of the country by leveraging ICT as a key growth driver for economic and socioeconomic transformation of the country. The ICT-led push has been termed as "Digital Bangladesh", and involves four pillars:

- Human resource development: Leverage technologies to build world-class skills in all areas of study especially mathematics, science, and English language. The pillar also involves focus on e-Education providing vocational and "lifelong education" opportunities to youth (vocational training) and adults (continuous learning).
- Connecting the citizens: Ensure last mile connectivity and equitable Internet access in an affordable and sustainable manner.
- Digital Government for pro-poor services: Facilitate provision of civil services and leverage technology for e-government, down to the smallest unit of government and administrative distribution. The two key

sub-components of this component are e-Citizen Services (for citizens to access services) and e-Administration to delivery e-Citizen Services (for public sector authorities to manage requests).

- ICT in business: Focus on three broad dimensions i) access to market, ii) promotion of ICT business to support Digital Bangladesh and iii) ICT as an export-oriented sector.

An updated National ICT Policy is due to be gazetted in 2019.

An update of the ICT Policy 2015 has been drafted and was validated in November 2018. The strategy update considers the forecasted impact of 5G and the Fourth Industrial Revolution among other developments that will affect Bangladesh's ICT sector and its broader digital economy. The "ICT Policy 2019" focuses on multiple pillars: digital government, digital security, social equity and universal access to education, research and innovation, skill development and employment generation, strengthening of domestic capacity to cope with the changes of emerging technologies.⁶ This policy is due to be gazetted in 2019 when it will officially become active.

³ Measures the readiness of countries to enable digital economic activities by combining the following sub-indices: Internet use penetration, secure servers per one million inhabitants, credit card penetration, and the postal reliability score.

⁴ Measures the state of ICT infrastructure, affordability of ICT services and ICT skills.

⁵ Measures the environment for ICT offered by a given country or community (market, political, regulatory, and infrastructure environment), the readiness of the country's key stakeholders (individuals, businesses, and governments) to use ICT, and the usage of ICT among these stakeholders.

⁶ List of strategic pillars from <http://www.newagebd.net/article/43428/national-ict-policy-2018-on-the-cards>. Further details on the substantive content of the ICT policy 2019 are not yet available for review.



A number of policies have been developed under the aegis of the a2i Programme.

The flagship initiative of the Government's overall digitization drive is the a2i Programme that is currently led from the Prime Minister's office (to be possibly moved to the Ministry of ICT). Various policy documents and laws/acts and regulations have been formulated within the scope of the a2i Programme as noted by the accompanying table, underlining the relevance and central role that a2i has played in the development of Bangladesh's digital economy ecosystem.

A snapshot of some of the strategies/policies include:

- The 1998 National Telecommunications Policy outlined provisions of spectrum and service neutrality. Under the headline of "Telephone for All", the policy sets out targets for full telephone service coverage and 65 per cent Internet penetration by 2021. The policy was then followed by the 2001 Bangladesh Telecommunication Regulatory Act. Given the considerable developments in the telecommunications sector, the policy was updated in 2013.
- A National Broadband Policy has been prepared to streamline procedures to expand broadband connectivity and related services in a systematic manner.
- A National Cybersecurity Strategy outlines three key priorities in addressing "cyber threats, risks and challenges to [...] national values and interests" including legal measures, technical and procedural measures and organizational arrangements.

- With support of ITU, the National Enterprise Architecture (NEA) and e-Government Interoperability Framework (e-GIF) have been developed by the Bangladesh Computer Council (BCC). These frameworks are to enhance interoperability, asset utilization and reduce procurement costs in the provision of governmental services.

A National Digital Commerce Policy 2018 has been developed in a joint effort with the private sector associations as policy directions that elevate the national importance of e-commerce.

The private sector has been intimately involved, with encouragement from the Government, in strategic planning related to the ICT sector. This is now extended to the digital economy also, as indicated by the development of the National Digital Commerce Policy and the accompanying National Digital Commerce Policy 2018 jointly developed by the Ministry of Posts, Telecommunications and Information Technology and ICT/e-commerce sector associations. These principles form the strategic main areas of focus for e-commerce in the country, and include the following:

1. Expanding and developing business in the digital commerce space.
2. Creating an enabling environment for the operations of digital commerce businesses.
3. Ensuring transparency, liability and accountability in the operations of digital commerce businesses.

Table 2: Plans, laws, policies and guidelines formulated with the support of a2i

ICT Policy 2009	ICT Act 2010	National e-Governance Architecture	e-Krishi policy
Strategic priorities of Digital Bangladesh	Sixth Five-Year Plan	Cybersecurity policy 2010	Health policy
Public-private partnership policy and guidelines 2010	Rural Connectivity Policy Guideline 2010	Broadband policy	Education policy
Mobile keypad standardization policy	National strategy paper on m-governance	Guidelines for utility bill payment	National Telecommunication Policy 2010
Right to Information (RTI) Act	Guidelines on Mobile Financial Services (MFS) for banks	Proactive information disclosure guidelines	Indicators for measuring Digital Bangladesh
Bangladesh interoperability guidelines and standards (BIGS)	Disability act	Innovation team Gazette	National portal framework (NPF) management gazette

Source: adapted from information provided by a2i



4. Fostering cooperation to establish confidence among sellers and buyers in digital commerce transactions.
5. Taking ethical and legal measures to protect the interests of entrepreneurs, buyers and sellers.
6. Cooperating for protection of the consumers' rights.
7. Coordinating with concerned organizations in order to mitigate risks in digital transactions.
8. Strengthening cooperation in the ITC infrastructure rollout required for the smooth operations of digital commerce businesses.
9. Undertaking necessary coordination and policy reforms to support the transportation of products.
10. Creating an enabling environment for cross-border digital commerce.
11. Facilitating access to financing to permit the development of digital commerce activities of SMEs.
12. Creating opportunities for participation of the population in the periphery to participate in digital commerce.
13. Creating opportunities for entrepreneurship and employment.
14. Promoting the export of domestic products.

1.2 Current e-commerce marketplace activity

The development of e-commerce in Bangladesh is still in early stages, although the sector is transforming rapidly, encouraged by the following factors:

- The number of e-commerce operators with reasonably competent management and operational capabilities.
- The fast-growing logistics sector for order facilitation—in the last 2-3 years a range of delivery companies have flourished focusing on e-commerce facilitation.
- The Ek Shop model initiative, which has brought markets closer to e-commerce companies.

The following is a delineation of e-commerce business models active in Bangladesh. Operations are mostly focused on Dhaka but coverage outside the capital, especially for the B2B logistical delivery services is increasingly rapidly.

- B2C⁷: Particularly different types of delivery services of food or groceries (e.g., PaperFly) have emerged in Dhaka. For instance, the online shopping websites Shopr.bd and ShoptoBd have emerged, which give customers from Bangladesh access to products available on other international e-commerce websites such as Alibaba.
- B2B⁸: Logistical service providers with a digital presence that are linked to the e-commerce operators for order facilitation.
- C2C: Online marketplaces providing a platform for C2C sales have been established (e.g. Ekhanei.com).
- In addition to B2C and C2C, online job boards (such as bdjobs.com) and digital marketing firms are also present in the country.

Ek Shop is an innovative one-stop marketplace aggregator for sellers and buyers in Bangladesh established under the lead of the a2i Programme, and has significant potential to boost e-commerce nationwide, including in the rural areas.

Tied to the a2i Programme's technical and communications backbone is the Ek Shop initiative, led by UNDP in close collaboration with the a2i team. Ek Shop is an online portal that aggregates the main e-commerce companies active in Bangladesh, plus companies offering logistical delivery services across the country. This model is built on and leverages the a2i technical backbone and therefore connectivity is ensured throughout the country. Of 700 plus services (G2P, P2G) that are being digitized through the a2i Programme, 20-30 are the focus of government-led e-commerce. Using this portal, consumers anywhere in the country can view products online and ship them to a UDC drop-point and collect from the drop-point.

Another case is the assistance to individual entrepreneurs exhibiting their product (for example,

⁷ Online -retail/grocery stores such as Ajkerdeal, Bagdoom.com, Daraz, PriyoShop, Chaldal, ShebaEasy.com, Shopperu, Sindabad.com, Pickaboo, Blkroy.com, Rokomari.com, Shohoz.com, Flight Expert, Go Zayan

⁸ Bangladesh Post Office, DHL, Fedex, UPS, eCourier, Biddut, GoGoBangla, PaperFly, Pathao, Hungrynaki



artisanal items, saris) at a UDC for online sale (picture is taken by UDC staff and the product is listed online with a price proposed by the seller). This model allows rural entrepreneurs and consumers to get linked to a national end-to-end e-commerce backbone and participate in e-commerce.

Utilization of Facebook as a platform (known as f-commerce) is widely popular in the country.

In 2017, the e-CAB estimated that around 8,000 Bangladesh e-commerce pages on Facebook exist, while the number of formal e-commerce websites amount to approximately 700. As a currently unregulated economic phenomenon, f-commerce is offering inclusive entrepreneurial opportunities with practically no entry barriers.

This is partially driven by promotions from telecom firms involving free access to Internet via Facebook (including with pictures). This allows a medium for both buyers and sellers to interact online, albeit transact offline. This informal activity is significantly larger than formal e-commerce transactions. There is

some concern regarding the viability of regulating this activity, although both regulators (Bangladesh Bank) and commercial banks are in favor of not imposing regulations at this point. Instead, stakeholders realize that this activity could instead give rise to e-commerce start-ups who will migrate to formal channels based on organic growth and opportunity identification (as in the case of Priyoshop).

Consumer adoption is gradually increasing from a low base due to active efforts by firms as well as e-government initiatives.

In terms of consumer acceptance of e-commerce, there exists a reluctance on the part of consumers due to the lack of “touch and feel” capability that is offered in a physical shop. However, e-commerce firms are aware of this and are trying to adapt by offering (a) robust and flexible refunding policies, and (b) efficient order facilitation as a way to generate confidence among the consumer base. Consumer awareness is growing also due to habituation for e-transactions through e-gov initiatives.

Box 1: Priyoshop

Priyoshop was founded in 2012 initially as an f-commerce-based entity and migrated to a formal e-commerce platform in 2013. The company is engaged in a 3C model (computers, communication, consumers), with 60 employees. The company primarily provides logistics and fulfilment capacities linking urban-rural, urban-urban, and rural-rural geographies in the country. Priyoshop also has a direct sales platform for fast moving products (primarily ladies dresses, jewellery, gadgets that are held in inventory due to high demand). Women constitute an estimated 60 per cent of the consumer base. The two channels used for sales are Ek Shop and the marketplace (priyoshop.com). It is currently the leading platform that provides order fulfilment in rural areas.

Delivery is primarily conducted by bicycles and motor bikes. An in-house call center assists consumers. Priyoshop has five warehouses in Dhaka to ensure four-hour delivery, and more are planned at the district level. To drop off and pick up packages, the company uses a system of touchpoints that include post-offices, UDC centers, and Banglalink Kiosks. Tie ups with a2i's Ek Shop means that the company now benefits from the high number of orders placed and has a steady market. The company leverages the post office network as a logistics channel (8,000+ post offices within one-two mile distance of any consumer, operating down to the UDC levels). Strategic partnerships have been forged with: Bkash, Dmoney (for developing in-house warehousing), Microsoft, Banglalink and a2i.

This system of drop points and solid distribution linkage with these partners signifies that local artisans and individuals interested in selling their products can take their “goods” to drop points, where they are added to the inventory and listed online. These products include the “Taati Sari” that has also been exported through Priyoshop. The growth strategy followed by the company is of an in-house procurement model, involving a goal of 100 per cent order facilitation.

Priyoshop operates VAT-free based on the VAT-exemption that has been granted to e-commerce firms. Acceptable payment modes include COD, Paypal, Bkash, Dmoney, card on delivery (POS).

The company has a flexible return policy that has proven attractive to consumers:

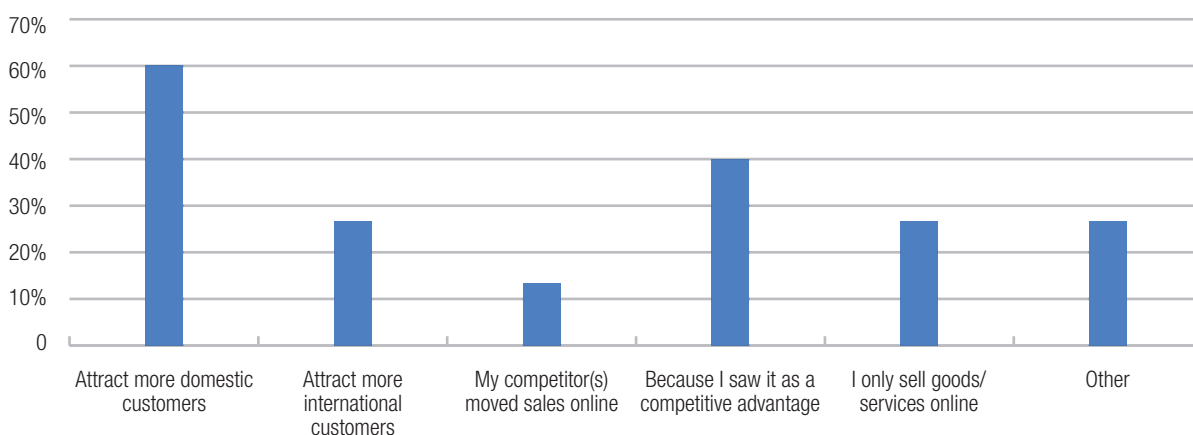
- No questions asked for returns.
- Instant returns - which allows consumers to get their money back within 48 hours of Priyoshop initiating the return.
- Seven-day refund policy, meaning that consumers have seven days to return goods.

While some fraud does occur, by and large, the trust level has held strong, and the refund policy has not been exploited to a degree that concerns the company.

In a bid to raise consumer awareness in rural areas about how to benefit from the digital economy, Priyoshop entered into a strategic linkage with Microsoft in 2017 to conduct training related to mobile-based commerce.

Source: Interview with Priyoshop Founder



Figure 3: What motivated you to sell goods/services online? (private sector perspective, 22 responses)

Source: UNCTAD

1.3 National policies related to trade

Different existing SME clusters in Bangladesh can be promoted through digitalization.

The Government has been engaged in various efforts to strengthen the development of the private sector with an eye on cultivating those with e-commerce potential. The ready-made garment sector has shown exceptional growth over the past decades and has been an essential part of the private sector spectrum. Equally, the digitalization agenda comprising the initial rollout and upgrading of the national ICT infrastructure, subsequently the development efforts around the establishment of the skill-based ICT service industry and the support to e-commerce can be seen as a move towards a diversified, inclusive and skill-based economy. While garments are undoubtedly important, the Government has also identified food processing, pharmaceutical and apparel/jute sectors as current development priorities.

1.4 National coordination (e-commerce task force, inter-ministerial, Public-Private Dialogue)

The Prime Minister's Office (PMO) directly leads coordination efforts for related strategies and projects to realize the "Digital Bangladesh" goals set out under "Vision 2021", and the a2i Programme is a central component of this shepherding role.

The a2i Programme was established as part of a joint initiative of the PMO and the UNDP in 2007

with the overall aim to leverage digital solutions for socioeconomic development in areas of health, education, livelihood and cluster development. A high-level National Digital Task Force was established under the Prime Minister's stewardship, while each ministry and division were assigned an "e-Governance Focal Point" for the planning, implementation and oversight of the development of e-government services. The program and its constituent components have been widely successful in developing an end-to-end e-government network in the country.

In order to make e-government services accessible, more than 5,000 UDCs have been established as citizen-to-administration intermediaries. These UDCs have recently been leveraged as e-commerce distribution nodes.

The provision of e-government services is particularly based on the concept of intermediation between the e-government users and respective governmental entities. The a2i Programme connects ministries in Dhaka to administrative centers across the country right down to the lowest administrative unit called Union Digital Centers (UDC). There are around 5,200 UDCs in the country. Each citizen has access to a UDC within reach of a few kilometres. The UDCs are run based on an entrepreneurship model (one male and one female operator) and facilitate a range of e-government services such as passport applications, issuance of a birth certificate and voting-related e-government services. This initiative is important given the size of the country, the population (which makes physical provision of services challenging), and



logistical challenges for citizens to travel to Dhaka as well as provincial capitals. The UDCs help to decentralize the governments administrative workload while making it efficient to achieve the service.

The collaboration of the private sector in the development of e-commerce is robust and characterized by strong advocacy and consensus driven efforts.

The private sector is organized into several associations in the ICT/e-commerce sectors, including BASIS, e-CAB, engaged in advocacy and public outreach efforts, providing advisory capacity to the government on technicalities of ICT and e-commerce and consolidating private sector perspectives:

- BASIS is the predominant IT sector association, formed to support the development of e-commerce. It makes recommendations on behalf of the emerging e-commerce sector for a more business-enabling environment for e-commerce and ICT service providers. Due to the efforts of BASIS, a VAT-exemption for ICT and e-commerce companies could be achieved to actively support the growth and diversification of the sectors. Furthermore, BASIS is involved in training and capacity-building efforts for different target groups.
- The e-Commerce Association of Bangladesh (e-CAB) was founded in 2014 mainly to work on youth entrepreneurship/skills development through the LICT project. It is an implementing partner of the World Bank funded LICT project and is involved in capacity-building for youth entrepreneurs. The e-CAB is also trying to assist in the revitalization of the postal services network. It is particularly focused on sector strengthening and the representation of corporate interests in the e-commerce space. The Association currently comprises around 800 members and is equally addressing logistics challenges of e-commerce businesses with delivery models.
- The Dhaka Chamber of Commerce and Industry (DCCI) is the third institution closely involved in and supporting Bangladesh's e-commerce sector. Established in 1958, and comprised of 4,000+ members, the Chamber focuses on close collaboration with SMEs. An ICT committee has been formed within the

Chamber, and it has led advocacy efforts for e-commerce with various ministries, especially the Ministry of Labour in favour of diversifying focus areas, from a skills development point of view.

- The Federation of Bangladesh Chambers of Commerce and Industry (FBCCI) is the trade organization of Bangladesh that plays a pivotal role in consultative and advisory capacity, safeguarding the interest of the private sector, including in relation with e-commerce development.

The sector associations are relatively well aligned and seek collaboration with each other on a frequent basis with the ultimate result of uniformly communicating in one voice on behalf of the private sector.

The following public and institutional and private sector stakeholders have particular relevance with regard to the eT Ready policy areas:



Table 3: Institutional support to e-commerce development

POLICY AREA	INSTITUTIONS
E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION	a2i, Ministry of Posts, Telecommunications and Information Technology (comprising Information and Communication Technology Division and Posts and Telecommunications Division), Ministry of Commerce, Ministry of Planning, Ministry of Finance, Ministry of Education, Bangladesh Bank, Securities and Exchange Commission, Financial Institution Division, Bangladesh Investment Development Authority, Board of Investment, Bangladesh Insurance Development and Regulatory Authority (IDRA), Bangladesh Bureau of Statistics (BBS) / Statistics and Informatics Division (SID), Bangladesh Telecommunication Regulatory Commission (BTRC), sector associations (i.e. BASIS, e-CAB)
ICT INFRASTRUCTURE AND SERVICES	Bangladesh Telecommunication Regulatory Commission (BTRC), Ministry of Posts, Telecommunications and Information Technology, Mobile operators (Grameenphone, Robi-Airtel, Banglalink, Teletalk), Board of Investment, Bangladesh Submarine Cable Company Limited (BSCCL)
TRADE LOGISTICS AND TRADE FACILITATION	Ministry of Commerce, Ministry of Posts, Telecommunications and Information Technology, Customs, Excise & VAT Commissionerate, Bangladesh Road Transport Authority (BRTA), Export Promotion Bureau
PAYMENT SOLUTIONS	Bangladesh Bank, Financial Institution Division, sector associations (i.e. BASIS, e-CAB), commercial banks (e.g., Eastern Bank Ltd.), Mobile Financial Service providers (e.g., bKash), card-based payment providers (e.g., Mastercard, Visa)
LEGAL AND REGULATORY FRAMEWORKS	Bangladesh Bank, Ministry of Posts, Telecommunications and Information Technology
E-COMMERCE SKILLS DEVELOPMENT	Ministry of Education, Ministry of Posts, Telecommunications and Information Technology, Bangladesh Hi-Tech Park Authority, Ministry of Primary and Mass Education
ACCESS TO FINANCING	Bangladesh Bank, Financial Institution Division, commercial banks, Mobile Financial Service providers, Association of Bankers

1.5 Access to relevant statistics

Statistics collection in e-commerce and more broadly the ICT sector constitutes a capacity gap.

Statistics for e-commerce is a significant challenge primarily stemming from the still nascent maturity stage of e-commerce in policy circles. No data are currently collected for e-commerce transactions. This will change as collaboration increases within the public sector and responsibilities are better delineated. Primary and secondary data sources are largely inactive and statistics communicated to domestic and international organizations (including for the ICT sector) are outdated.

A serious data mismatch challenge exists between Bangladeshi data sources with international bodies like ITU and others. There is a significant gap between statistics transmission to the international agencies through which many international rankings are developed, affecting global perception of Bangladesh's IT position. This confusion creates an urgent need for the Government to take this issue seriously and address this mismatch.

Research and dialogue have been initiated on the potential "Indicators for Measuring Digital Bangladesh" by the a2i Programme. A proposed 53 potential indicators for impact measurement have been compiled.

A significant opportunity for comprehensive measurement of at least e-marketplace data arises from the EK Shop initiative. Purchases routed via Ek Shop may then be utilized to collect useful data, e.g. on the types of agricultural or industrial clusters that are underrepresented on Ek Shop that may be promoted. Noteworthy may be also the extent to which e-commerce-related business associations may contribute to enhanced and representative data collection efforts.



2. ICT INFRASTRUCTURE AND SERVICES

Mobile Internet is the prominent form of Internet access in Bangladesh, albeit still operating with limited consumer adoption. Strong competition exists within the Mobile network operator base. Important need to ensure nationwide coverage of 2G (near 100 per cent coverage) and 3G (undergoing rapid rollout), while scaling up 4G networks. Plans for leapfrogging through 5G introduction are already underway. Universal access is an important consideration. However, the Government has employed a cautious approach aimed at first assessing market dynamics before developing a policy. Smartphone adoption is expected to rise in Bangladesh due to increasing local production. Use of fixed broadband is limited despite numerous available Internet service providers. Strong broadband connectivity through two submarine cables bodes well for Internet services expansion

2.1 Broadband / mobile / smartphone penetration

Mobile Internet is the prominent form of Internet access in Bangladesh, albeit still operating with limited consumer adoption.

According to BTRC, there are 91.4 million Internet subscribers⁹ in Bangladesh (as of January 2019) utilizing the following access options.

- Mobile Internet: 85.6 million users
- WiMAX: 0.061 million users
- ISP + PSTN: 5.7 million users

The overall 71 per cent mobile broadband coverage bodes well for e-commerce and connectivity growth. Based on the above figures, the BTRC estimates mobile broadband subscriptions to be more than 50 per cent (85.5 million users), while overall Internet usage is estimated at 57.2 per cent (91.2 million users). Constraining factors for further growth are the affordability of mobile connectivity (possibly due to incurred spectrum charges), and lack of familiarity of the users with mobile Internet services. The type of device (feature phones vs. smart-phones) is a relevant factor: 40 per cent of the users possess a smartphone, while only approximately 4 per cent currently utilize 4G-capable devices.

Table 4: Key ICT indicators for Bangladesh

	2010	2011	2012	2013	2014	2015	2017 ¹⁰ or as indicated
Fixed-telephone subscriptions ('000s)	1,281	978	962	1,082	974	831	--
Fixed-telephone subscriptions per 100 inhabitants	0.85	0.64	0.62	0.69	0.61	0.52	0.4
Mobile cellular subscriptions ('000s)	67,924	84,369	97,180	116,553	126,866	133,720	157,544 ¹¹
Mobile cellular subscriptions per 100 inhabitants	44.95	55.19	62.82	74.43	80.04	83.36	88.1
Fixed broadband subscribers	414,569	468,500	600,461	1,525,325	3,093,171	3,866,463	--
Fixed broadband subscribers per 100 inhabitants	0.27	0.31	0.39	0.97	1.95	2.41	1.9
Active mobile-broadband subscriptions ('000s)	46	260	308	2,970	21,213	21,579	--
Percentage of individuals using the Internet ¹²	3.70	4.50	5.00	6.63	13.90	14.40	18

Source: International Telecommunication Union (ITU) statistics

⁹ The term "Internet subscriber" hereby refers to a person having accessed the Internet at minimum once within the preceding 90 days.

¹⁰ Reflect the indicators that are available

¹¹ BTRC Data (January 2019)

¹² A data discrepancy exists for this indicator. According to the BTRC, Internet users through mobile Internet, WiMAX, ISP +PSTN has reached 91.34 million as of December 2018. A similar discrepancy exists for the active mobile-broadband subscription rates, which should be closer to 85.5 million (> 50 per cent per 100 individuals) according to BTRC.



Strong competition exists within the Mobile network operator base.

Four mobile network operators are active in Bangladesh, with the following market share distribution. The three private operators, Grameenphone Ltd., Robi Axiata Ltd. and Banglalink Digital Communications Ltd. cumulatively have more than 97 per cent of market share, while state-owned Teletalk Bangladesh Ltd. has around 3.8 million subscribers. The CDMA technology-based operator Citycell terminated its operations in Bangladesh recently.

Important need to ensure nationwide coverage of 2G and 3G, while scaling up 4G networks.

Mobile phone service and mobile broadband coverage respectively have been ramped up significantly in recent years. Most parts of Bangladesh are covered by 2G networks only at this stage at frequencies of 900 and 1800 MHz, 3G service up to HSPA+ (HSPA is High Speed Packet Access, HSPA+ is called Evolved HSPA or 4G) is available in densely populated urban areas only at 2100 MHz. In 2017, the Bangladesh Telecommunication Regulatory Commission (BTRC) implemented measures of technology-neutrality.

Table 5: Subscribers and market share of telecommunications service providers in Bangladesh

Operator	Subscribers (Million, end of July 2018)
Grameenphone Ltd.	70
Robi-Airtel/Axiata	45.3
Banglalink Digital Communications Ltd.	33.4
Teletalk Bangladesh Ltd.	3.8
TOTAL	152.5

A pie chart illustrating the market share of four telecommunications service providers in Bangladesh. The largest share is held by Grameenphone at 45.96%, followed by Robi-Airtel at 29.7%, Banglalink at 21.9%, and Teletalk at 2.5%.

Source: Association of Mobile Telecom Operators of Bangladesh (AMTOB)

Table 6: Key ICT indicators for Bangladesh

Grameenphone Ltd.	Brand: Grameenphone. Joint venture company between the Grameen and the Norwegian provider Telenor. Largest operator in Bangladesh. Efforts towards full 3G coverage of the population by 2020. The 4G rollout commenced in Dampara, Khulshi and Nasirabad in Chittagong in 2018.
Robi Axiata Ltd.	Brand: Robi-Airtel. As the brand name indicates, Robi-Airtel recently emerged from the merger of the Bangladesh operators of Malaysian Axiata Group and Indian Bharti Airtel. Network integration efforts are undertaken. The 3G coverage reportedly has gaps, while the 4G/LTE rollout in all 64 district capitals of Bangladesh commenced in 2018.
Banglalink Digital Communications Ltd.	Brand: Banglalink. Banglalink is managed by VEON. Full coverage with 2G services since 2014. The 3G coverage has reportedly at least been reached in all towns by now. The 4G rollout in Khulna and Chittagong completed.
Teletalk Bangladesh Ltd.	Brand: Teletalk. Teletalk Bangladesh Ltd. is state-owned and maintains comparatively small operations with its current market share of 2 per cent only. Due to financial challenges of the operator, the company has rebranded to enhance its position and signed a nationwide network sharing agreement with its competitor Robi-Airtel/Axiata.

Source: UNCTAD desk research



Three operators have recently (February 2018) been issued 4G licenses (GP, Robi-Airtel/Axiata and Banglalink). Services have started in Dhaka, although there are lingering issues of coverage related to 2G and 3G.

The Government has stated that they intend to employ a leapfrogging strategy to move to 5G by 2021, and a pilot has already been tested successfully. While this ambitious approach is commendable, care must be taken for ensuring 100 per cent coverage vis-à-vis 2G, 3G in the country as an important universal access consideration.

Universal access is important. However, a formal universal access policy has not yet been developed.

The Government is aware of the social inclusion benefits that digitalization can bring to Bangladesh, and while there is support for universal access, the policy decision has been to observe the marketplace dynamics before making any policy decisions. This is to ensure that any decisions reflect the fast-evolving dynamics of the telecommunications market, and do not lead to inordinate burden on telecommunications firms that may harm consumers in the long term through price increases or deterioration of quality.

- Bangladesh Telecommunication Regulatory Act, 2001 established the obligation of telecommunications operators to reserve 1 per cent of operator revenues for Universal Service Obligation (USO) related activities.
- Telecommunication firms do share towers, and BTRC is in the process of establishing guidelines for active sharing (currently passive sharing is common).
- Overall, the BTRC, Government and operators have a generally good tripartite partnership and any formal universal access policy in the future will benefit from this cooperation.

Smartphone adoption is expected to rise in Bangladesh due to increasing local production.

The Government is attempting to promote the adoption of smartphones in rural areas by encouraging local production of handsets, which are less expensive than imports. According to market statistics, the majority

of smartphones sold in Bangladesh are local brands. Around half of the smartphone market is dominated by the brand “Symphony” (approximately 45-53 per cent according to different sources). The local brand “Walton” comprises another 10-15 per cent of the smartphone market. Samsung devices constitute the most prevalent foreign brand. The increasing local production of smartphones will possibly increase affordability as well as contribute to increased adoption of local content and e-commerce related activities by consumers, on which e-commerce firms can capitalize.

Use of fixed broadband is limited despite numerous available Internet service providers (ISP)¹³.

Although fixed broadband subscriptions have significantly increased over recent years – from 50,000 in 2009 to over three million more recently – the current level of 2.41 subscriptions per 100 inhabitants indicates the current low base of the sector. A modernization of the nationwide fibre-optic backbone infrastructure has been approved by the Bangladesh’s Executive Committee of the National Economic Council. Bangladesh Telecommunications Company Limited (BTCL) will implement the infrastructure upgrade to next-generation technology with dual financing from the GoB and China until 2023.

2.2 Reliability, affordability, latency, speed, coverage

Significant progress in expanding bandwidth and increasing affordability have been achieved. Following Bangladesh’s connectivity to the South East Asia–Middle East–Western Europe 4 (SEA-ME-WE 4) cable connection, wholesale Internet prices were slashed to approximately one quarter of the previous price level by BTRC.

BTRC has noted that the spectrum rates have been set based on study of different countries in Europe as well as the subcontinent so, from a regulatory perspective, tariffs are not considered to be a significant challenge. The rates however do tend to remain relatively high from an affordability point of view. In a bid to further reduce prices for consumers, the Government has announced plans to reduce the VAT for Internet Service Providers from 15 to 5 per cent by December 2018 to reduce the costs for Internet users.

¹³ Bangladesh T&T Board (Bangladesh Telegraph and Telephone Board), BDCoM, Bangladesh Online Limited (BOL), BRACNet Services are the leading ISPs in Bangladesh.



The affordability of Internet services is a major concern of the companies engaged in e-commerce: Around 76 per cent of the private sector survey respondents emphasized the importance of making low-cost Internet available to users.

2.3 Major Infrastructure projects

Strong broadband connectivity through two submarine cables bodes well for Internet service expansion.

Bangladesh is connected internationally through two submarine cables and five terrestrial cables (with India), along with one satellite, so the country is well covered from a redundancy perspective. Bangladesh's international broadband connectivity was initially established through access to the SEA-ME-WE 4 optical fibre submarine communications cable system offering a bandwidth of 250 Gbps. This cable system

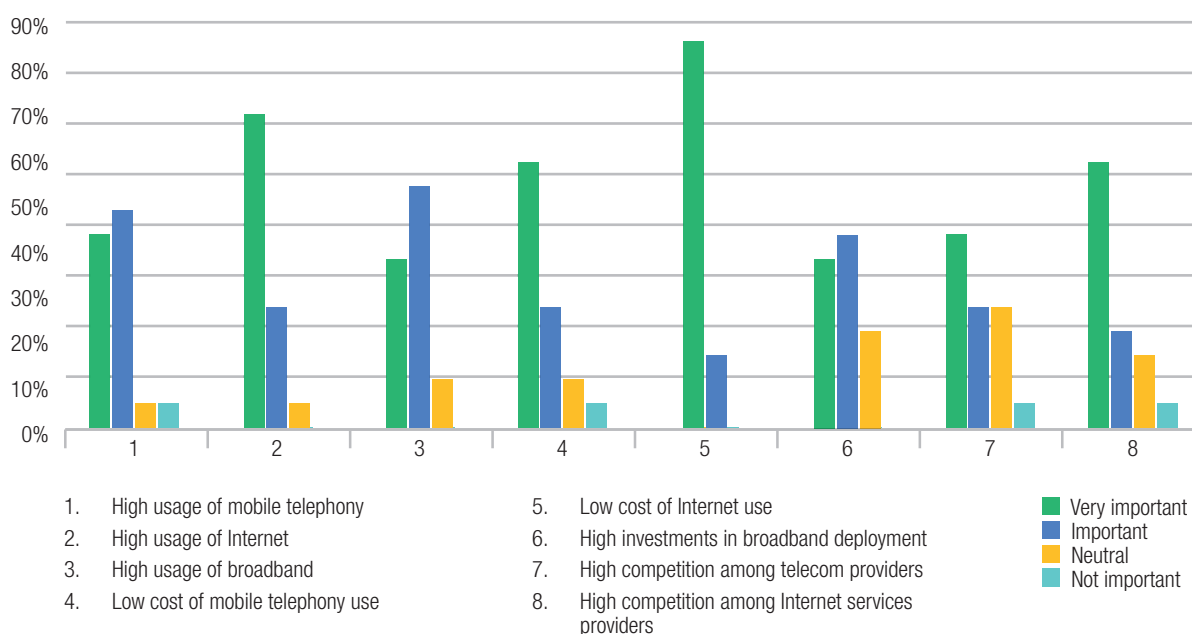
connects Singapore, Malaysia, Thailand, Bangladesh, India, Sri Lanka, Pakistan, UAE, Saudi Arabia, Sudan, Egypt, Italy, Tunisia, Algeria and France. Additional bandwidth of 400 Gbps is provided through six international cable associations with adjoining India. At the end of 2016, Bangladesh was connected to an additional submarine cable network, South East Asia – Middle East – Western Europe 5 (SEA-ME-WE 5), that initially provides 200 Gbps bandwidth; bandwidth will eventually be increased to 1,500 Gbps. Both cable systems, SEA-ME-WE 4 and SEA-ME-WE 5, are domestically managed by BSCCL that is acting as both a submarine cable system management corporation and a telecommunications provider (IIG and ISP). Currently, Bangladesh Telecommunication Regulatory Commission (BTRC) has issued 136 licenses for ISPs, which bodes well for spurring Internet usage along with affordability.

Table 7: Download and upload speed in Bangladesh (October 2018)

	Global rank	Download	Upload
Mobile Internet	114	9.12 Mbps (global average: 23.80 Mbps)	5.76 Mbps (global average: 9.49 Mbps)
Fixed broadband	87	17.57 Mbps (global average: 50.88 Mbps)	19.10 Mbps (global average: 25.52 Mbps)

Source: speedtest.net

Figure 4: ICT infrastructure factors important for e-commerce development (private sector perspective, 21 responses)



Source: UNCTAD



3. TRADE LOGISTICS AND TRADE FACILITATION

The national postal network is dense and involves a relatively robust delivery capacity throughout the country, although there is significant room for improvement, particularly in terms of capacity enhancement and diversification of services and digitalization of network. E-commerce and logistics firms face a variety of challenges in the physical delivery of goods, especially to rural areas. Transportation infrastructure is particularly weak in rural areas, posing last-mile delivery challenges for logistics firms (operating on behalf of e-commerce firms). The geographic profile of Bangladesh, along with the seasonality of floods, frequently causes logistics challenges. Despite Bangladesh's comprehensive trade facilitation commitments, implementation challenges remain. Cross-border e-commerce activity is constrained due to a low de-minimis value and customs checks of most parcels entering Bangladesh.

3.1 Mode of delivery, last mile delivery, traffic, regulations

An extensive national postal network with robust delivery capacity throughout the country bodes well for e-commerce growth.

There is a very extensive post office network in the country with almost 10,000 post offices and 40,000 governmental staff. The network enables last mile contact to within one-two miles of consumers. Private sector agents run approximately 86 per cent of post-offices, and the government-run post offices¹⁴ are predominantly in rural areas, where commercial agent operations are less viable from a business standpoint. Post office density in Bangladesh is 1 per 14.57 km², while one post office serves on average 15,000 users. This is a significant achievement considering the country's high population density. Courier companies largely rely on the existing postal network for deliveries. The post office network is dense enough to be reached from most major settlements within a few miles.

Diversification and digitalization are important goals for the postal services network.

Financial and insurance services have been part of the mandate of post offices since the early days of the postal services network. Post offices are reasonably capable for conventional postal operations, but definitely need technical and financial support, especially if they are to offer new services such as payments and wallets.

The digitalization of postal services is currently limited, with only roughly 1 per cent of post offices connected to Internet. Rural unconnected post offices have

been at least provided with handsets that allow them connectivity. An important initiative (Epost.com.bd) is being planned as an umbrella platform that will help reach last mile delivery in rural areas. Bangladesh Post is also party to the initiative. The platform provides a common shipment tracking and status-monitoring interface for e-commerce companies. Beyond the reduction of transaction costs, the platform strengthens mutual trust and transparency. An API (application programming interface) is provided for merchants and delivery companies for developing technical linkages, as well as providing enhanced trust and collaboration.

E-commerce and logistics firms face a variety of challenges in the physical delivery of goods especially to rural areas.

The topographic and infrastructural conditions in Bangladesh as well as the relatively small scale of operations of most e-commerce firms do not allow them to carry out deliveries nationwide through their own capacity. Firms therefore rely on a number of actors to ensure end-to-end-delivery.

From an urban-to-rural transportation perspective, the first mile is typically covered using motorcycles and covered vans (from the e-commerce firms' distribution centres), second mile for inter-city services is conducted through logistics firms, and here the private courier service industry is well diversified, with international and local logistics firms engaged.

The last mile involves local transportation. The overall process flow from urban to rural transportation of goods involves a variety of actors and is characterized

¹⁴ The Bangladesh Post Office is organized as a department of Ministry of Posts, Telecommunications and Information Technology.



by a fair degree of fragmentation. For competitiveness to development in logistics, maturity of logistical services/on time delivery are important areas where improvement is required.

Courier services in Bangladesh are constrained by the following challenges:

- Purchasers do not want to pay in advance for the goods due to trust issues. The collection of cash- or card-based payments on delivery adds a layer of complication (e.g., security issues of cash transportation, technical requirements).
- Inappropriate packaging by sending SMEs that leads to the damage of the shipment, which then creates challenges or additional administrative efforts for courier service companies.
- Coordination between e-commerce firms and logistics firms are a challenge.
- There are existing cases of fraud where deliveries are made and customers file complaints alleging that deliveries have not been made. In response, courier services are experimenting with innovations such as OTP (One-Time Password) codes which serve as confirmation that customers have received the goods. They cannot deny receiving goods at a later stage, offsetting a challenge that e-commerce firms have been facing lately.
- Police frequently stop bicycle and motorcycle delivery personnel because the drivers wear backpacks, which is perceived as a security risk.
- Festivals are a significant challenge for courier and logistics companies, given the massive increase in demand for delivery of gifts, food and other products that occurs on a seasonal basis. Most of the delivery firms are not in a position to absorb the heavy demand on their own, and collaboration between the service providers is still ad-hoc, resulting in weak flexibility and scalability of the logistics model. The heavy demand during such seasons coupled with the overall fragmentation of the logistics sector make challenges in terms of order facilitation.

Continued efforts are required to improve the national addressing and post-code systems in the country.

A physical addressing system is in place in Bangladesh, although courier service personnel confirm challenges of locating the recipient of the parcel or item, especially in rural areas. Quality addressing and postcode systems are essential for national infrastructure and the socio-economic development of a country. They also form the cornerstone of quality postal services, facilitating business exchange and hence contributing to a country's economic growth. In Bangladesh, predominantly the rural areas have posed challenge for physical addressing, although improvements are required in the urban areas as well. There is a need to further align national addressing standards to international standards to facilitate interoperability of name and address data, enable address validation and provide guidelines for building and maintaining address infrastructures.

Transportation infrastructure is particularly weak in rural areas posing last-mile delivery challenges for logistics firms (operating on behalf of e-commerce firms).

Overall, Bangladesh has significant challenges to overcome in terms of transportation infrastructure. The country's geography, with complex riverine, and coastal systems and dispersed populations render transportation infrastructure development challenging, although improvements have continued at a gradual pace.

Firms seek to mitigate time losses and delays in delivery often by phone calls to locate the sending / receiving party. In addition, e-commerce website or app operators are making attempts to maintain a customer database to avoid issues in locating the same customer a second time. In rural areas, the physical addressing system is less developed. Since essentially only the Bangladesh Post Office delivers to such non-urban parts of the country though, the burden of identifying rural recipient locations is placed on the postal service.



Box 2: Case Study: Chaldal.com

Chaldal.com, established in 2013, is an e-commerce enterprise that caters to groceries – particularly perishable goods – and daily necessities. The company has diversified the product offerings in line with demands of the customers. The three founders Zia Ashraf, Tejas Viswanath and Waseem Alim lead the operations, technology and finance aspects respectively. There are three main departments – corporate, consumer and special requests.

Chaldal has one-hour fulfillment guarantee for various parts of Dhaka, while users can also in advance specify a convenient time frame during which Chaldal will then make the delivery. The company offers a seven-day return policy. Goods are sourced directly from factories/manufacturers and stocked in company-owned warehouses. This logistics network comprises eight warehouses strategically distributed around Dhaka to ensure the particularly urgent delivery of goods that require refrigeration. Average delivery size per customer is 10-12 items, and a flat delivery rate is charged.

The company has innovated in several ways:

1. A smart filtering model is applied in which products with low demand (i.e. low sales over a period of two months) are removed from the product offerings.
2. Based on geographical target location of the delivery, volume, weight of orders placed, the system automatically batches delivery items and allocates delivery personnel. To a large extent, systems optimization of the supply chain has been studied and implemented through in-house developed software.
3. An online tracking system in the background provides staff with the real-time status update.
4. Consumer addresses are verified beforehand to reduce uncertainty during delivery.

Chaldal has received an IFC investment, whereby the company explains that it was over an approximately seven- to eight-month process all IFC guidelines and procedures needed to be implemented by Chaldal. During this time, the team had to bring about improvements to the legal setup of the company, to HR policies, operational safety and financial structures. A comprehensive legal and financial audit was carried out, before the agreement was concluded.

Source: UNCTAD Interview with the management of Chaldal

Table 8: Status of Bangladesh's infrastructure compared to regional economies according to the WEF Global Competitiveness Report 2017-2018

(Ranks: 1-137)	Bangladesh	India	Nepal
Overall Ranking in Pillar "Infrastructure"	111	66	119
Quality of roads	105	55	118
Quality of railroad infrastructure	60	28	n/a
Quality of port infrastructure	85	47	135
Quality of air transport infrastructure	115	61	133

Source: World Economic Forum, The Global Competitiveness Report 2017-2018, Pillar Infrastructure for Bangladesh, India, Nepal

Box 3: Snapshot of the road, rail and air infrastructure

According to the Roads and Highways Department (RHD), Bangladesh's public road network comprises a total of 21,561 km of roads; these road kilometers are classified as follows: 3,521 km as National Roads, 4,287 km as Regional Roads and 13,753 km as Zilla (District) Roads. Out of the 21,561 km of roads, 80.9 per cent are paved. Due to seasonal flooding, in approximately one-third of the country, roads are constructed on raised embankments.

The railway system is an important backbone of the country. In 2014, a total 65 million passengers and 2.52 million tons of cargo were transported by Bangladesh Railway. In total, this amounts to 8,135 million passenger-km and 677 million ton-km. A logistics challenge for Bangladesh is the exceptional multiple gauge system. The total network of 2,835.04 km is divided into a broad-gauge system in the Western part of the country amounting to 659.33 km, a meter gauge system of 1,800.88 km length in the East and 374.83 km of dual gauge.

Bangladesh has 13 operational airports, including the airports of Dhaka, Chittagong, and Sylhet handle international flights.

Source: UNCTAD desk research



3.2 Trade Facilitation Performance

Despite improvements in trade facilitation, implementation challenges remain.

Bangladesh has already implemented a comprehensive set of trade facilitation measures pursuing liberalized regime. Reforms include the abolition of import licensing requirements, the implementation of risk management measures instead of 100 per cent checks, the introduction of Automated System for Customs Data (ASYCUDA) and the introduction of Authorized Economic Operator registration.

A trade information portal as well as a customs information portal have been established online. Following the World Trade Organization (WTO) Trade Facilitation Agreement (TFA) ratification in 2016, a National Trade and Transport Facilitation Committee of 28 members has been formed.

Bangladesh signed in 2017 the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific but has not yet ratified it. Ratification of that Agreement could significantly assist in implementing paperless trade facilitation, including in terms of opportunities for technical cooperation.

Despite the progress in Bangladesh's formal trade facilitation commitments, challenges remain regarding implementation, as indicated in the "Trading Across Borders" Category of the Doing Business Report. The considerable progress of Bangladesh in border compliance regarding import and export costs and time reduction compared to the Doing Business Report 2018 is noteworthy. For the internationalization of the e-commerce sector, it will be essential that trade facilitation reforms particularly for smaller parcels and individual shipments continue.

A trade information portal as well as a customs information portal have been established online. Following the World Trade Organization (WTO) Trade Facilitation Agreement (TFA) ratification in 2016, a National Trade and Transport Facilitation Committee of 28 members has been formed.

Bangladesh signed in 2017 the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific but has not yet ratified it. Ratification of that Agreement could significantly assist in implementing paperless trade facilitation, including in terms of opportunities for technical cooperation.

Despite the progress in Bangladesh's formal trade facilitation commitments, challenges remain regarding implementation, as indicated in the "Trading Across Borders" Category of the Doing Business Report. The considerable progress of Bangladesh in border compliance regarding import and export costs and time reduction compared to the Doing Business Report 2018 is noteworthy. For the internationalization of the e-commerce sector, it will be essential that trade facilitation reforms particularly for smaller parcels and individual shipments continue.

Table 9: Bangladesh's ranking (2018) according to the Logistics Performance Index (LPI) compared to regional economies

Country	LPI Rank	LPI Score	Customs	Infrastructure	International shipments	Logistics competence	Tracking and tracing	Timeliness
Bangladesh	100	2.58	2.30	2.39	2.56	2.48	2.79	2.92
India	44	3.07	3.18	2.96	2.91	3.21	3.13	3.32
Nepal	114	2.51	2.29	2.19	2.36	2.46	2.65	3.10
Myanmar	137	2.30	2.17	1.99	2.20	2.28	2.20	2.91

Source: World Bank, International LPI Scorecards for Bangladesh, India, Nepal



Table 10: Trading across borders from Dhaka (Bangladesh) in comparison to other regions as per Doing Business 2019 Report

Indicator	Dhaka	South Asia	OECD high income	Best Regulatory Performance
Time to export: Border compliance (hours)	168	62.9	12.5	1 (19 Economies)
Cost to export: Border compliance (US\$)	408	347.2	139.1	0 (19 Economies)
Time to export: Documentary compliance (hours)	147	74.1	2.4	1 (26 Economies)
Cost to export: Documentary compliance (US\$)	225	160.3	35.2	0 (20 Economies)
Time to import: Border compliance (hours)	216	95.8	8.5	0 (25 Economies)
Cost to import: Border compliance (US\$)	900	504.6	100.2	0 (28 Economies)
Time to import: Documentary compliance (hours)	144	100.8	3.4	1 (30 Economies)
Cost to import: Documentary compliance (US\$)	370	276.7	24.9	0 (30 Economies)

Source: *Doing Business in Bangladesh 2019 Report* ("Trading Across Borders" Category)

Box 4: Trade facilitation for kitchenware and lentils. A case study of regulatory practices of trading with TTFMM.

The TTFMM examined the export of plastic kitchenware and tableware from Bangladesh to Bhutan through the Burimari land port and the import of lentils from Nepal to Bangladesh through Banglabandha land port:

- For a regular trader to complete the export process, 11 documents are required, and these documents need to be submitted repeatedly - 93 times. Similarly, for a regular trader to complete an import process, 18 documents are required and these need to be submitted for a total of 71 times.
- It is costly to complete onetime procedures for a new trader. In typical cases, a new trader needs to cover approximately US\$ 840 to complete processes exporting plastic kitchenware and tableware from Bangladesh to Bhutan through Burimari Land Customs Station (LCS) which includes Tk 41,650 (or US\$ 533.97) for completing onetime procedures for a new trader. A new trader needs to cover the costs of US\$ 1,450 for completing the process of importing lentils from Nepal to Bangladesh through Banglabandha LCS, which includes the cost of Tk 43,950 (or US\$ 563.46) for completing onetime procedures for a new trader.
- The average speed with and without delays along corridors under study is 15–17 km/h and 24–27 km/h, respectively, which is much lower than the average speed surveyed in Central Asia.

Source: UNESCAP / ADB

Cross-border e-commerce activity is constrained due to a low de-minimis value and customs checks of most parcels entering Bangladesh.

Beyond the foreign currency transaction limits for online transactions, e-marketplace businesses are considerably constrained by the currently implemented restrictive de-minimis regime. The current de-minimis value is US\$ 12, which constitutes an inordinate burden for both importers and customs authorities. Small parcels such as purchases from online marketplaces (e.g. eBay, Amazon) of any value typically remain in custom checks for an extended period, while duties may possibly be levied on them. E-commerce companies from Bangladesh can only rely on partnerships with import-specialized companies or may only purchase products of

foreign origin where available in-country. Due to the transaction limits and the realities at customs, the desirable internationalization and expansion of successful Bangladesh e-commerce enterprises is impeded.

The results from the UN Global Survey on Trade Facilitation and Paperless Trade Implementation show Bangladesh's implementation progress of around 40 per cent of the measures assessed. Particularly in the implementation areas "Institutional arrangement and cooperation" and "Transparency" further progress is required, e.g. in terms of the alignment of formalities and procedures with adjoining countries and in terms of stakeholder consultations, e.g. with the private sector.



4. PAYMENT SOLUTIONS

The current reliance on cash as the dominant payment mode imparts a significant risk for future e-commerce growth in Bangladesh. The key challenges to overcome are fostering consumer trust and strengthening merchant – MFS/card service providers linkages. The deployment of the National Payment Switch in 2012 was an important development and serves as the core basis for interoperability of banking systems. With the growing importance and adoption of MFS, the interoperability dimension needs to be further developed to include mobile-banks and mobile-mobile transfer solutions in the future. A key challenge for e-commerce businesses is the international transaction limits for outbound payments in foreign currency. Interoperability will be key for the MFS/cards sector going forward.

The dominant mode of payment for e-commerce transactions in Bangladesh is Cash on Delivery, especially in rural areas. Mobile-money solutions are rapidly being adopted by consumers and represent a key driver of future growth for enabling e-commerce payments.

4.1 Financial Regulations

A fundamental leap forward in the development of digital payment solutions in Bangladesh was the establishment of the National Payment Switch Bangladesh (NPSB).

The market has been interoperable since the start of card issuance in 1997. Currently there are 42 issuers and nine acquirers into the market.

The NPSB was deployed in December 2012. All domestic ATM transactions have been routed through NPSB since 2016. Bangladesh Bank has set up Bangladesh Electronic Fund Transfer Network (BEFTN), Real Time Gross Settlement (RTGS), Internet Banking Fund Transfer (IBFT), which facilitate:

- Interoperability of POS so that POS terminals of any bank can be used in-shop free-of-charge for the card holder.
- Interoperability of ATMs indicating that that for a nominal charge of Tk 15 per withdrawal and Tk 5 for bank statement or balance inquiry the ATMs of other banks can be used.
- Interoperability of IBFT stating that transactions of six banks can be handled via Internet banking – still at a nascent stage.
- The digital Commerce Policy of the Government has created a focus on the increasing issuance of Prepaid Cards and sales through e-commerce sites.

- Banks and payment aggregators are running promotions to increase digital payments using e-commerce.
- Global organizations like Mastercard have added two Internet payment gateways with the two leading banks in Bangladesh to ease up e-commerce transactions.

A key challenge for e-commerce businesses are international transaction limits for outbound payments in foreign currency.

According to Bangladesh Bank, foreign exchange limits for individuals are set as travel budgets, a budget for medical treatment abroad and e-commerce transactions. The conservative policy of the Government stems from a desire to manage foreign capital reserves and reduce capital flight risks. This regime however results in practical limitations for a range of e-commerce activities as well as activities such as booking flight tickets.

Similarly, B2B transaction limits are applied for any outbound transactions. Annually, Bangladesh companies are allowed to send outbound remittances amounting to US\$ 20,000, which is perceived to be quite restrictive for companies wanting to scale up. Members of the association BASIS have been granted an extended transaction limit of US\$ 30,000. The ceiling amount for outbound fund transfers constitutes a significant challenge for individuals and firms. Without a more liberal fiscal regime that allows for a higher threshold in foreign currency current account transactions, it will be challenging for companies to participate in global value chains. Some banks provide the option of ERQ (Export Retention Quota) accounts for businesses that allows businesses to retain payments through inward remittance in their ERQ account and BDT account simultaneously.



Table 11: Status of development of different payment gateways / facilities in March 2018

Transaction category	Limit
International travel budget limit (total)	US\$ 12,000 per person, per annum
To SAARC countries and Myanmar	US\$ 5,000 per person, per annum
To other countries than SAARC and Myanmar	US\$ 7,000 per person, per annum
Medical treatment	US\$ 10,000
Online transactions	US\$ 300 per transaction* *The bank(s) can open this for a certain time and increase the limit based on customer's request over phone showing valid reason/purpose.

The account holder will have the option of retaining maximum 60-70 per cent of the inward remittance in the foreign currency account and can use this for outward transfers for bona fide business purposes.

National payment gateway has been proposed but is currently being reviewed from a feasibility standpoint.

A project has been floated by Bangladesh Bank to have banks route transactions through their national payment gateway for all payments including e-government (the original intent), POS and ATMs. Commercial banks have pointed out certain technical challenges including the fact that the payment gateway is not Payment Card Industry Data Security Standard (PCI DSS) certified, not EMV compliant and the payment gateway does not have any specific module for dispute resolution. In light of these concerns, and based on a consultative process, Bangladesh Bank has decided on a one-year hiatus to deliberate further.

4.2 Mobile Money Regulations

The “Regulatory Guidelines for Mobile Financial Services in Bangladesh”, revised most recently in 2015, facilitated the nationwide rapid rollout of MFS.

The “Regulatory Guidelines for Mobile Financial Services in Bangladesh” guide regulates the operations of MFS in the country. MFS providers under this regulation are required to be led by a scheduled commercial bank.

The regulation sets out that such scheduled commercial bank-led MFS platforms are permitted to carry out the following transactions:

- I. Disbursement of inward foreign remittances,
- II. Cash-in/cash-out into Mobile Accounts through agents/bank branches/ATMs/Mobile Network Operator (MNO) outlets,
- III. Person to Business payments (e.g. merchant payments),
- IV. Business to Person payments (e.g. salary disbursements),
- V. VLoan disbursements to borrowers,
- VI. Government to Person payments (e.g. pension payments),
- VII. Person to Government payments (e.g. tax, fee),
- VIII. Person to Person payments.

4.3 Main mobile and cashless solutions

MFSs have developed rapidly in Bangladesh with a number of service providers and a fast-growing consumer base.

Given the favorable MFS regulations by Bangladesh Bank in 2015 as well as previous regulations, the MFS sector has developed rapidly. Lower KYC requirements for MFS providers –as a means of spurring MFS usage–than for banks have for example created incentives for the considerable number of subscriptions to MFS platforms.

BRAC Bank's bKash has the largest market share of subscribers. While bKash and DBBL dominate the market, there are a number of other players vying for this growing market. The Post has an existing money transfer service and plans to expand this to MFS



services, it is currently negotiating with Bangladesh Bank for basic banking license¹⁵. Bangladesh Bank has expressed KYC/AML concerns around these MFS service, specifically around daily transaction limits – with the argument that larger transactions ought to be routed through the formal financial system rather than through MFS providers.

While all MFS platforms in Bangladesh seek to maximize their active subscribership and build their services on an extensive agent network, providers differentiate their offering through the size of an ATM and branch network. Given the significant size of diaspora population from Bangladesh working abroad, partnerships with international providers of remittance services (e.g. Western Union) are also relevant for a range of users.

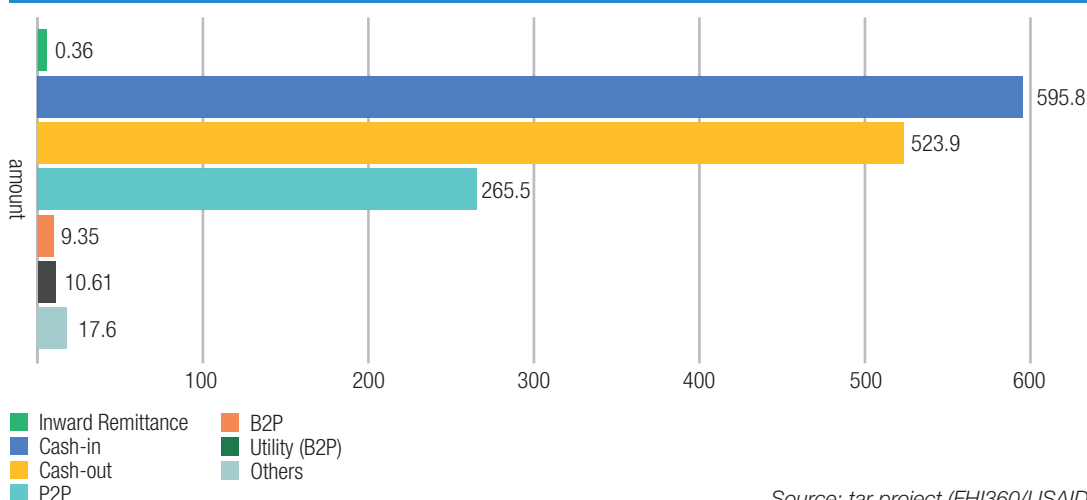
MFS platforms in Bangladesh typically offer the following core functionalities: bank transfer, cash-in/cash-out, sending money, and payments. In addition, MFS have developed different additional services including mobile recharge, savings products, utility payments and remittance products in collaboration with international remittance service providers. As of February 2015, predominant MFS transactions were cash-in and cash-out indicating the prevailing preference of users for cash.

Table 12: Size of MFS in Bangladesh in terms of subscribership and agent, ATM, branch and merchant network

	bKash	DBBL MB	mCash	UCash	MYCash	SureCash	TBMM	OK Banking	IFIC MB
Subscribers (in million)	17	5.2	2.3	2.2	1.0	1.0	0.5	0.3	0.3
Agents	151,000	134,500	90,000	105,000	97,000	33,000	22,000	90,000	82,500
ATMs	300	4,000	450	105	720	320	170	32	57
Bank branches	155	1,552	294	156	100	1,000	101	72	130
Merchants	17,230	4,500	120	550	350	250	30	100	500

Source: MStar project (FHI360/USAID)

Figure 5: MFS transactions as of February 2015 (in million US\$)



Source: tar project (FHI360/USAID)

¹⁵ Road to transformation. The Daily Star. 09 October 2017. <https://www.thedailystar.net/frontpage/road-transformation-1473547>



The following table provides key statistics related to payment facilities.

Table 13: Status of development of different payment gateways / facilities as of October 2018

Number of debit cards	13,539,087
Number of credit cards	1,061,407
Number of prepaid cards	187,260
Number of ATM Booths	10,063
Number of Point-of-Sale (POS) terminals	43,764
National Payment Switch Bangladesh (NPSB) certified Banks for ATM transactions	51 Banks
NPSB certified Banks for POS trans.	50 Banks
NPSB certified Banks for IBFT trans.	19 Banks

Source: Bangladesh Bank https://www.bb.org.bd/fnansys/paymentsys/natpayswitch_comp_stat.php

More than 90 per cent of payment cards in circulation are debit cards (see accompanying table). It is noteworthy that 49.5 per cent of the card users only use a single card, 32.5 per cent are using two or three cards and 18 per cent have access to more than three cards. Of the 172 million card-based transactions carried out in 2016, 94.5 per cent of these transactions were ATM cash withdrawals.

E-commerce use of MFS and card-based solutions are currently limited.

Key factors constraining e-commerce growth are consumer trust in online payment solutions and a technical and awareness gap of e-commerce merchants. The current consumer preference for cash is constraining growth of a growing e-commerce sector because it presents security as well as liquidity challenges. Also, given the fragmented nature of the delivery service mechanism (where multiple types of delivery services and firms may be involved), the cash payments are a burden and the opportunity for mistakes/mischief in cash transfers exists.

MFS and cards are a relatively new phenomenon in Bangladesh. There are currently 11.5 million debit cards in circulations, less than 1 million credit cards, half a million prepaid cards and 45 million mobile wallets, of which only 40 per cent (approximately 20 million) are active.

According to the payment gateway SSL Wireless, MFS providers have established a network of approximately

800,000 agents in order to enhance liquidity. As of now, e-commerce transactions only account for approximately 1.02 per cent of the transactions of MFS, while digital payments constitute currently only 0.14 per cent of the transactions of MFS.

In order to facilitate trust and bridge the technical gap with merchants, companies such as bKash have partnered with IT service providers to offer IT onsite support for merchants who want to connect their sites to bKash's API. This is also the case with other payment gateway providers, who use a perpetual model of services support, involving lifetime support.

The statistics strongly indicate that for efficient e-commerce, all types of non-cash-based payment solutions need to be strengthened. Trust in these payment solutions as well as interoperability will need to be built through the close cooperation of payment service providers and policymakers.

Interoperability will be key for the MFS sector going forward.

While all MFS in Bangladesh have been established in a bank-led model, interoperability between MFS and bank accounts as well as among MFS providers has not yet been achieved. Mobile-to-mobile transfer capability will be in place within one year, but it will also be important to enable mobile-to-bank account transfers.



Meanwhile, different payment gateway solutions have been developed that provide merchants with the option to receive payments through any nationally available channels. The company Software Shop Limited (with the solution SSL Wireless) is leading in the market handling approximately 80 per cent of online payments in Bangladesh via the platform SSLCOMMERZ.

To encourage the internationalization of Bangladesh's e-commerce businesses, the interoperability of locally available MFS solutions with international payment systems, particularly the regular banking system, will be essential.

The hundi system serves as an important information system of financial access.

The "hundi" system serves as an alternate channel for remittances given the underdevelopment of restrictive remittance channels. Hundis are intermediaries carrying out domestic or international transactions (both inward and outward remittances) informally. Hundis typically have extended family networks (e.g. in Singapore, Malaysia), at times are involved in money changing or trading businesses. The model involves instant payout to the recipient in Bangladesh upon

payment in the country of origin of the remittance. A unique characteristic in the case of Bangladesh is that that the inbound remittance can then be transferred via any MFS platform, signaling a semi-formal acceptance of this system.

Similarly, outward Hundi payments offer instant cash out, in the foreign currency of choice, for a domestic payment to an intermediary. Outward remittances are done to bypass the restrictive foreign currency regime enforced by Bangladesh Bank. Outward remittances enable businesses to purchase goods overseas, patients to settle hospital bills, students to pay tuition fees, and an individual to move money out of the country.

The main reason for the growth of the Hundi system is convenience. This system is mainly used for remittances so also functions as a payment mechanism. However, one consequence is that when businesses bypass the formal banking channels, they do not demonstrate creditworthiness with banks, and therefore adoption of formal channels is further constrained. There are also some AMT/CFT considerations that may need to be reviewed to ensure that this channel is not misused.



5. LEGAL AND REGULATORY FRAMEWORK

The Information and Communication Technology Act 2006 and the Digital Security Act 2018 are the cornerstones of cyberlaws in Bangladesh. The former is credited with broad-ranging coverage related to recognition of online contracts and digital signatures, as well as recourse mechanisms for dispute resolution. This is the only Cyberlaw which directly addresses digital transactions.

No specific law on cybercrime exists, although the ICT act (and its 2013 amended version) and the Digital Security Act 2018 include certain tenets dealing with cybercrime. These focus on cyberattacks, broad categories of online offences as well as the obligations of citizens and entities to refrain from conducting malicious online activity.

The Consumer Rights Protection Act does not have any focus on digital transactions. No provision clearly lists how data stemming from online transactions should be safeguarded in any of the laws. A regulatory gap regarding copyrights, trademarks and patent rights of e-information and data and domain name protection exists.

The current legal and regulatory framework for ICT and the digital economy is largely centred around the Information and Communication Technology Act, 2006 and the Digital Security Act 2018. While important progress has been made in terms of the cyberlaw ecosystem, there is an important need to cover the identified gaps, facilitate capacity building for law preparation/enactment/enforcement, and the need to sensitize consumers to create overall trust in online transactions. However, the latter has been partially achieved through the extensive e-government services available to citizens.

5.1 Status of four key laws per UNCTAD Cyberlaw tracker

Electronic transactions: E-transactions are covered within the frame of the Information and Communication Technology Act 2006. Brief amendments to the law were made in 2009 and 2013. The act recognizes the authentication of electronic records through digital signatures by establishing the legal basis for electronic records and digital signatures. Primarily designed in order to aid the Government's drive towards e-government, it also casts an attentive eye towards e-commerce related implications. The parts of the Act dealing with electronic records are based on the UNCITRAL Model Law on Electronic Commerce, 1996. The Act refers to a notion of "digital signature" that is technology-neutral, but also makes reference to PKI-based digital signatures certificates. Provisions such as e-contracting are currently missing from the Act.

Online payments are not explicitly addressed in the ICT Act, nor in its amended 2009 and 2013 versions. The legal basis for this was established by the Central Bank in 2009.

The Act lays down the provision of establishing, constituting, and dissolving of Cyber Tribunals that may deliberate upon legal cases involving digital transactions, and allow for speedy and effective trials of offences committed under the Act. Detailed guidance on the powers of such tribunals, trials procedures, appeals processes etc is provided.

In order to further support e-commerce activity, it could be useful to review the provisions of the Electronic Transactions Act relating to electronic signatures and electronic transactions against best international standards, including UNCITRAL texts. Missing provisions could be highlighted and ambiguities regarding the legal status of electronic signatures could be resolved, possibly by reinforcing technology neutrality.

Overall, the Act is a testament to the Government's foresightedness in establishing the legal basis for digital transactions early in the maturity curve for the ICT sector. Its relevance is amplified now that e-commerce activity is picking up in the country.

Consumer Protection: The Consumer Rights Protection Act (CRPA) 2009 provides guidance on aspects of consumer protection in Bangladesh.



To implement this act, a National Consumer Rights Protection Council has been established that is supported by a secretariat in the form of the Directorate of National Consumer Rights Protection (DNCRP) to which consumer complaints may be directly addressed. To ensure uniform and nationwide implementation, the Act provides for the creation of district level committees called District Consumer Rights Protection Committees.

This Act does not address issues that arise from e-commerce and e-transactions. However, given that the structures for managing and enforcing the tenets of this Act are already in place and functioning relatively well, the Act could be amended to reflect distant sales that include e-commerce transactions and sale of digital content. Given that activity within the country's digital economy is advancing swiftly and evolving to feature more complex online transactions, there is an important need to include the provision for digital content and transactions in this Act through an amendment.

Cybercrime: Cybercrimes are covered within the frame of the ICT Act (amended in 2013 to include penalties for cybercrimes) and more comprehensively through the Digital Security Act 2018. The Digital Security Act recognizes the increasing significance of e-commerce and online transaction activity in the country and the possibilities of cyberattacks that can affect infrastructure, businesses and consumers. This Act replaces some of the related tenets of the Amended ICT Act (2013) in order to avoid duplication. The Digital Security Act has about 20 provisions on cybercrimes, though some of them are actually on content control / restriction of freedom of speech¹⁶.

Spamming is specifically included as a criminal offence under the Digital Security Act 2018. Section 25(1) of the Act states that “acts of a person using electronic means to deliberately and knowingly distribute information that attacks, intimidates, irritates, humiliates, defames, embarrasses, or discredits a person is considered a criminal offence.”

While the ICT Act and the Digital Security Act include provisions on the scope of punishment in case of cybercrimes, the scope of cybercrimes has been allocated a wide-ranging spectrum. The Digital Security Act has been the subject of some controversy. While

freedom of expression is enshrined in Bangladesh's Constitution, the Act is perceived to provide broad and discretionary powers to authorities against alleged offences under the Act. The assessment of this Act's statutes from a civil liberty perspective are not the scope of this Rapid eTrade Readiness Assessment, and indeed any such assessment would need to weigh the complexities of threats against religious and communal harmony vs. maintaining freedom of expression and speech online. What can be gleaned from the continuing discourse/debate is that certainly the volume of local online content will drop due to the uncertainty among content owners, which in turn could have some implication for consumer adoption of online activity.

Data Protection: Article 43 of the Constitution recognizes an individual's right to “privacy of correspondence and other means of communication”. However, no data privacy or protection laws outline how this information should be safeguarded. No data protection law has been enacted yet, although select tenets from the Digital Security Act are meant to fulfil this requirement, at least partially. According to Section 26 of the Digital Security Act 2018, a person cannot distribute, sell, supply, collect, take into possession or use the identity of another person without legal authority. No provision clearly lists how data stemming from online transactions should be safeguarded.

5.2 Other related laws, acts, regulations

In addition to these four key areas for e-commerce, the following legal and regulatory weaknesses need to be addressed:

- Existing intellectual property laws (i.e. copyright, trademarks and patents) do not contain any provisions on e-commerce/digital economy, requiring an amendment of the regulations.
- Domain names can be protected as a registered trademark. However, no specific provisions are in place for website domain name protection for e-commerce firms.

¹⁶ See the text at <https://www.cirt.gov.bd/wp-content/uploads/2018/12/Digital-Security-Act-2018-English-version.pdf>, s 17 ff.



6. E-COMMERCE SKILLS DEVELOPMENT

The widening skill gap between a dynamically growing and diversifying e-commerce sector and a skill-development sector responding at a slower pace to the skill demands needs to be addressed. Trilateral cooperation and coordination are required among (public and private) educational institutions, private sector and the governmental entities engaged in policymaking and regulation. A skill gap analysis and extrapolation of skill requirements is essential to avert both under- and over-supply of talent in a given sector. Quick-fix solutions may be identified to address immediate skill gaps faced in the digital economy or to pilot scalable interventions.

6.1 Skill gap assessment

A skill-mismatch challenge is in the making as the e-commerce sector grows and the skill-development sector lags.

The Dhaka Chamber of Commerce, among other national organizations has stressed that the feedback loop on e-commerce related skills is quite weak, and the linkages between industry and academia need to be strengthened, along with the public sector linkages.

In preparation for the 7th Five Year Plan (7FYP), the GoB has commissioned a background paper to determine the status of development towards “Digital Bangladesh”. The following recommendations regard education sector development for Bangladesh’s digitalization:

- *Education quality improvement through IT-enabled learning,*
- *Teacher empowerment in primary and secondary education,*
- *Strengthening vocational stream,*
- *Expanding IT graduate pool.*

Skill development needs for e-commerce professions are not stated in the policy recommendations explicitly. In this maturing stage of Bangladesh’s digitalization, skill profiles demanded by the private sector engaged in e-commerce are more diversified and often interdisciplinary (e.g. digital marketing, enterprise resource planning).

The development of a rising skill-mismatch gap impeding future e-commerce in Bangladesh is not recognized and addressed appropriately. Effective trilateral cooperation mechanisms need to be established, e.g. a formalized feedback loop

connecting (1) the private sector with its skill demands to (2) academia and skill providers on the supply side as well as (3) the public sector shaping skill development strategies (e.g. education boards, ministries). In order to commence trilateral dialogue on skill gaps and ways to address these, a comprehensive “Skill Gap Analysis for Digital Commerce” is recommended as a starting point for dialogue and multi-stakeholder collaboration.

A strong private sector drive for fostering talent through apprenticeships and on-the-job training.

E-commerce firms in Bangladesh face one key common challenge. They are able to set up their enterprises, and advance operations to a particular level but then growth stagnates due to the lack of ICT skills and talent available to them. Firms agree on the challenges of the e-commerce private sector in identifying candidates with a suitable skill set. At the moment, the responsibility of training candidates on-the-job rests with the private sector. Initiated trainings by BASIS have proven helpful, but short add-on courses are not sufficient to address the systemic skill mismatch.

This is even prior to companies requiring broader assistance for digital businesses. The position of the industry is that it can train apprentices on the job but would benefit from some support from the Government in terms of cost-sharing, given that these trained professionals would be industry ready.

6.2 Availability of tertiary education/curriculum, professional training

Higher education reforms have not yet been aligned with skill development needs for digital Bangladesh; certificate-level courses may help bridge gaps at least in the interim.



The success of e-commerce ventures in Bangladesh largely depends on the capabilities and the educational background of the respective entrepreneurs. While a comprehensive revision of curricula in primary and secondary education towards digitalization and ICT may take an extended period of reform, added certificate-level courses on e-commerce topics (such as payment solutions) may be added to existing programs within a shorter time frame. Based on the approval of the University Grants Commission (UGC) as a regulatory body of the higher education sector, digital teaching methods might also be deployed for teaching digitalization, ICT and e-commerce subjects. Currently, universities in Bangladesh are barred by UGC from delivering credit-bearing courses entirely online.

A limited number of certificate courses are offered by BASIS. The industry would however benefit from further support from the Government through cost-sharing and scaling of the programs. Further collaboration between academia and the private sector may be facilitated by the Government in a trilateral cooperation model to ensure the industry-readiness of professionals.

6.3 Tech start-ups scene

Incubation efforts have grown recently, with a number of incubator and accelerator facilities established in the past decade.

Incubators and accelerators are essential to the success of any start-up effort. Particularly in ICT and e-commerce, innovative start-up companies with limited investment requirements have potential for scale in Bangladesh. Currently though, the number of incubators and accelerators is limited, with only approximately a dozen start-up supporting actors operating at considerable scale. Most of these organizations only entered operations in 2016.

According to the platform “Start-up Dhaka”, the following incubators and accelerators are active in Bangladesh’s ICT, tech and e-commerce sectors:

- “Spark* Bangladesh” has supported 60 entrepreneurs through a half-year acceleration program with equity-free grants, through network and advice.
- “GP Accelerator” is a program of the telecommunications company Grameenphone,

which supports tech-focused start-ups through the provision of in-house workstations and continuous support. In order to foster mutual commitment to business development of the start-ups, GP takes 10 per cent in equity.

- The “Banglalink IT Incubator” has been established as a joint initiative of the telecommunications company Banglalink and the Hi-Tech Park Authority.

Freelancing has experienced a growth wave in recent years and may bode well for IT support services development.

Another relevant phenomenon in Bangladesh’s e-commerce and ICT sectors has been the quest of young professionals for freelancing opportunities. On the U.S.-based freelancing platform Upwork for instance, freelancers from Bangladesh constitute the third largest user segment (i.e. 16.8 per cent of global market share in outsourcing) with more than 650,000 registered individuals according to the Dhaka Tribune. Freelancing may be considered an important opportunity for tech-savvy youth; this flexible mode of working may allow potential future ICT service and e-commerce entrepreneurs to explore the ways of acquiring project work and to get involved in a range of international projects. The income premium obtainable as an IT freelancer creates incentives since an increasing number of young professionals favor independent work over regular employment. This offers an opportunity for IT professionals to support e-commerce firms as the sector grows. Recently BASIS, with the support of ICT Ministry, has launched a FX Prepaid card – Shadhin with Bank Asia and Mastercard to ease up payments for freelancers in Bangladesh. These cards are connected to Payoneer accounts, which are available at most of the top freelancing sites.

Prohibitions for business registrations in residential areas restrict start-up activity.

The current policy that prohibits business registrations at addresses in residential areas needs to be reviewed. It now effectively prevents professionals seeking to establish a single person office from being able to operate home-based businesses. This is a significant impediment for freelancing IT professionals/digital entrepreneurs particularly. This also prevents such entrepreneurs from operating within the formal economy and constrains start-up activity in general.



7. ACCESS TO FINANCING

Access to financing is one of the major factors constraining SME growth in the country, necessitating a reliance on family/community and informal sources. This challenge extends to firms operating within the digital economy. The contributing factors are limited awareness by banks and financial institutions of the fundamental considerations of creditworthiness assessment of e-commerce businesses, as well as limited venture capital activity. The still limited scope of equity financiers and incubator / accelerator programs in Bangladesh may be substantially expanded.

In terms of relative performance among the seven policy areas, Access to Financing has been cited as the main underperforming area. The main challenge is that the lending sector is extremely conservative by traditional banks, MFIs cater mostly to MSMEs and cottage industries. Non-performing loans are widely prevalent, and companies are unable to exhibit creditworthiness because they do not use corporate accounts for transactions (instead using the Hundi system mentioned previously).

While access to credit is an issue generally, due to a multitude of reasons, there is not a dire absence of credit in the country. However, the ICT and the emerging digital businesses sector has been given insufficient attention by commercial banks due to lack of physical collateralization and lack of recognition of IP as a viable source of collateral.

7.1 Depth of the banking network

The financial sector of Bangladesh has significantly expanded in recent years, with local and foreign banks, non-bank financial institutions (NBFI) and microfinance institutions (MFIs) operating in country. The financial regulator is Bangladesh Bank, which is the Central Bank of Bangladesh.

Scheduled Banks are operating under the provisions of the Bank Company Act from 1991 with several amendments and a respective banking license. Currently, 58 scheduled banks are active in Bangladesh, which can further be classified as follows:

- 40 *Private Commercial Banks* have majority shareholding by the private entities; eight of these private commercial banks operate according to the principles of Islamic financing.
- 6 *State-Owned Commercial Banks* have majority shareholding or are fully owned by the GoB.

- 3 *Specialized State-Owned Banks* are policy banks established to advance certain public development objectives such as agricultural or industrial development, namely Bangladesh Krishi Bank, Rajshahi Krishi Unnayan Bank and Probashi Kallyan Bank.
- 9 *Foreign Banks (FCBs)* have licenses to operate branch offices in Bangladesh.

Non-Scheduled Banks are only established for specific outlined purposes and are limited in the scope of their operations.

The private commercial banks are increasingly important compared to the state-run sector. In 2017 private commercial banks held approximately 60 per cent of banking sector assets.

The emerging e-commerce sector in Bangladesh is a new phenomenon for the mostly traditionally lending institutions. From a bank perspective, a fundamental difference between e-commerce loan applicants and other SMEs is that e-commerce businesses typically cannot provide any physical asset as collateral. The value of the company and its creditworthiness need to be assessed based on e.g. the business model, the technology or other intellectual property developed, and the human resources available to the enterprise. Even promising e-commerce entities reportedly face challenges seeking access to debt finance.

7.2 Financing by commercial banks and MFIs

Access to financing is one of the prime factors constraining SME growth in the country, necessitating a reliance on family/community sources.

Access to financing is a major constraint to the development of Bangladesh companies active in e-commerce. E-commerce entrepreneurs often need to privately finance their ventures (e.g. through savings,



family support) until a certain scale and professionalism of the company is reached. A common strategy of e-commerce entrepreneurs is equally to pursue other professional part-time opportunities in parallel to the early-stage venture or to freelance.

The SME Foundation classifies financing instruments available to the software industry of Bangladesh (in analogue the e-commerce sector) in table 14.

Increasing cognizance of the Government and commercial banks for improving the access to financing situation for SMEs.

The GoB recognizes the importance of SMEs for inclusive economic growth in Bangladesh. As of 2012, approximately 22 per cent of the loan portfolio of commercial banks were categorized as SME loans. Through initiatives such as the activities of SME Foundation and different international development partner funded projects and programs (e.g. on financial inclusion of women), it is likely that this percentage of loans could be increased. Islami Bank Bangladesh Limited (IBBL) has been mentioned as the largest SME leader with 83,000 SME clients.

Commercial banks on the other hand have indicated a willingness to adapt to the requirements of ICT firms but have cited a struggle to better understand the specific requirements of sector firms. They advise that the sector should better communicate their requirements and advocate through position papers and consultations that also involve Bangladesh banks. Borrower mindset and culture of non-payment have been cited as two key challenges that commercial banks must overcome.

The Equity and Entrepreneurship Fund (EEF) of the GoB was a promising initiative, but has not succeeded and is currently suspended.

One of the few available sources of funding came through the EEF directly from the GoB. The EEF was established in fiscal year 2000/01 in order to support private sector led growth in the priority sectors agro-food processing and software development.

Initially, the Central Bank itself, Bangladesh Bank, lead the implementation for the governmental funding initiative until 2009. Subsequently, the fund management responsibility was transferred to the Investment Corporation of Bangladesh, while Bangladesh Bank remained involved in the setting of funding policies and monitoring. Out of the total budget of the fund of 20 billion BDT since its establishment, approximately one-quarter was allocated to ICT-related ventures.

Through the EEF, the GoB has until recently provided equity to “technically and financially viable projects” to an entrepreneur with appropriate technical and entrepreneurial qualification and “track records in financial conduct specially with Banks/FI”. Equity between BDT 0.5 and 5 crore (a crore or koti denotes ten million) per company was provided following a ratio analysis of the project.

The EEF was suspended recently, as cases of misappropriation of allocated funds occurred. Since the GoB itself became equity partner, entrepreneurs of defaulting firm cannot be prosecuted for grave misconduct with public funds. The fund is currently not disbursing, until funding policies have been amended to e.g., a loan-based model of support that avoids moral hazard issues.

Table 14: Options for direct and indirect financing of e-commerce businesses

Direct Financing	Indirect Financing
<ul style="list-style-type: none"> • Private financing • Retained earnings • Business angel financing • Venture capital • Commercial bank loans • Seed finance • ODA • Innovation and Programming Competition Prices 	<ul style="list-style-type: none"> • Tax incentives • Public R&D spending



The government-backed SME Foundation offers commercial funding at subsidized rates to SMEs.

The government-linked SME Foundation has mapped local economic cluster industries throughout Bangladesh. It has initiated capacity-building efforts with companies from the cluster industries and is – via a cooperation scheme with domestic commercial banks – able to facilitate the extension of commercial funding at a subsidized interest rate.

Insurance products geared towards the e-commerce sector do not exist.

There are 70+ insurance firms in Bangladesh with less than 5 per cent penetration. These companies provide mainly life insurance products although cash transit insurance is also available. According to a decision maker at one of Bangladesh's largest insurance firms, a variety of insurance products, including those for e-commerce firms are in theory ready and deployable, but the companies will not deploy them because:

- On the logistics side, there is significant fragmentation of delivery companies with highly uneven quality. In this environment, insurance firms are unable to complete their due diligence especially related to the risks involved. Therefore, unless there is some consolidation among logistics firms and injection of professionalism/technical competence, it is unlikely that these insurance firms will get involved.
- In the insurance sector, the major firms set the lead and others follow. The large firms are in a wait and watch mode for the logistics side to settle and mature.

The microfinance sector in Bangladesh is extensively developed, particularly driven by the operations of NGOs.

As of November 2018, a total 702 microfinance institutions were formally registered. Already in 2012, the loan portfolio of the MFIs in Bangladesh amounted to around 3 per cent of the GDP of Bangladesh. According to the statistics of the Microcredit Regulatory Authority of Bangladesh in June 2014, the total outstanding loan portfolio amounted to around BDT 403 Billion. Microfinance institutions cater to 25.6 Million micro-entrepreneurs and offers nearly US\$ 8 Billion in credit to the informal economy constituting an important source of capital for small / rural enterprises.

The microfinance sector however is currently not actively geared towards catering to funding requests for digital economy work, and further assessment is required to see how this important segment can be leveraged to assist e-commerce start-ups, among other types of firms.

7.3 Financing by business incubators, business accelerators and venture capitalists

The current options for e-commerce start-ups to find support and investment from venture capital firms or angel investor are still limited. The following investors have provided equity to start-up companies from Bangladesh: IPE Capital, AdTech, Osiris, Razor Capital, Innotech Corporation, BD Venture. However, this support is still limited across the board.

7.4 Financing by development partners

The only significant financing mechanism for e-commerce firms is a program of the International Finance Corporation (IFC) that explicitly targets the digital economy. In addition, SME Foundation has been considering support to e-commerce SME through subsidized loans.

According to an Asian Development Bank (ADB) assessment, different revolving SME refinance plans have been financed by the following entities (mostly with a focus on supporting women entrepreneurs):

- Bangladesh Bank (21,791 BDT million for 23,700 entrepreneurs)
- Enterprise Growth and Bank Management Project (3,126 BDT million for 3,160 entrepreneurs)
- ADB – Fund 1 (3,349 BDT million for 3,264 entrepreneurs)
- ADB – Fund 2 (7,469 BDT million for 13,645 entrepreneurs)
- Japan International Cooperation Agency (JICA) Fund (2,777 BDT million for 381 entrepreneurs)



CONCLUSION

Bangladesh has established an important foundation for inclusive growth and diversification through the promotion of a technology-driven and skill-based digital economy. The Government has in an exemplary manner supported public-private dialogue and collaboration in digitalization matters. It has been possible to expand the provision of e-governmental services rapidly and - due to the UDC infrastructure - in a way accessible to the population.

Over the years, a diversified set of e-commerce businesses have emerged comprising the classical e-marketplace for goods and services offers, delivery service models for grocery products, as well as digital travel agency services. This foundation promises to diversify significantly through additional business models and digital opportunities, if the development path of an enabling e-commerce environment is continued.

Going forward, an important need exists to implement actions that support e-commerce in a comprehensive national strategy—recognizing all barriers to business from an ecosystem perspective—to increase confidence of the general public in e-commerce, and to address the digital divide between urban and rural areas with greater priority. These and other identified recommendations for the seven policy areas will need to be implemented to ensure that the ecosystem for an overall digital economy moves forward.



THE WAY FORWARD: ACTION MATRIX

E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION			
Indicative action	Expected results	Priority Level	Potential support by
Formulate joint (preferable) or separate masterplans that translate the ICT Policy 2019 and the National Digital Commerce Policy 2018 into actionable, multi-year roadmaps with clear delineation of responsibility and coordinated implementation.	Actionable roadmap(s) developed as well as a shared understanding by all stakeholders of action points to foster growth of the digital economy of Bangladesh in alignment of different strategies, projects and programs.	High	MoPTIT, MoC, a2i, MoP, MoF, MoE, Bangladesh Bank, BBS, BTRC, sector associations (e.g. BASIS, e-CAB), UNCTAD, UPU, ITC
Institutionalize and strengthen inter-ministerial coordination (along with the private sector) related to e-commerce and, if necessary, task an existing taskforce with an additional mandate for coordinating e-commerce and digital economy issues. In parallel, assist the Ministry of Commerce in developing capacity for fulfilling its assigned mandate of e-commerce.	Robust mechanism of inter-ministerial collaboration with clearly set out designation of a lead ministry or agency and responsibilities of other involved ministries. Enhanced capacity of Ministry of Commerce for fulfilling its mandate.	High	MoPTIT, MoC, a2i, MoP, MoF, MoE, Bangladesh Bank, BBS, BTRC, sectors associations, UNCTAD, UPU, ITC
Enhance statistical backbone to monitor ICT and e-commerce related indicators by linking national statistics office (Bangladesh Bureau of Statistics (BBS)) with all ICT/e-commerce-based initiatives, and through capacity-building of the statistics department. Ensure that data are transmitted regularly between national sources and international sources such as ITU.	Essential data foundation for progress monitoring established. Indicator definition and setting of targets may accelerate or intensify implementation. Alignment between international and national IT and telecommunications data.	High	a2i, MoPTIT, MoC, MoP, Bangladesh Bank, BBS / SID, BTRC, sectors associations, UNCTAD, ITU, USAID, UPU
Develop a communications and investment promotion strategy to disseminate information about the governmental commitment to implementing “Digital Bangladesh” to aid investment promotion in the ICT/e-commerce sector.	Increased number of events or event participation of Bangladesh abroad enhancing the international recognition of the committed efforts of the Government. Mobilization of investments and international business linkages.	Medium	MoFA, a2i, MoPTIT, sector associations (e.g. BASIS, e-CAB)
Connect initiatives for cluster-based economic development and trade promotion efforts in priority sectors such as pharmaceuticals, apparel/jute, and food processing with e-commerce-based business models in order to spur e-commerce ventures in these sectors.	SME, cluster and trade promotion efforts of the GoB reach scale. Producers are getting prepared to participate actively in e-commerce that allows domestic and international business partnerships and buyer identification.	Medium	SME Foundation, MoC, sector associations, USAID, JICA, UNIDO
Review the current policies that do not allow business registrations at addresses in residential areas to remove barriers and to reduce costs related to the establishment of e-commerce ventures.	Removal of a significant entry barrier to e-commerce businesses. Reduction of additional pressures on the tight commercial real estate market.	Medium	MoC, sector associations, FNF



ICT INFRASTRUCTURE AND SERVICES			
Indicative action	Expected results	Priority Level	Potential support by
Ensure policy and implementation spotlight in ensuring 100 per cent coverage vis-à-vis 2G, 3G increasing 4G, while at the same time continuing to test, deploy and scale 5G coverage over the medium-long term.	Countrywide coverage of 2G/3G/4G, along with gradual deployment and increased adoption of 5G coverage.	High	BTRC, MoPTIT, mobile operators
Address the limited smartphone penetration as an impediment to e-commerce by: Actively encourage newer handset technology adoption among users. Promote technology upgrades of users e.g. through 0 per cent interest loan products for the purchase of new devices. Support local smartphone manufacturers through fiscal and market development incentives.	Increased availability of sufficient end device technology creating incentives for telecommunications operators to increase mobile Internet service levels to previously call-only customers.	Medium	BTRC, MoC, mobile operators
Reassess rollout plans for mobile and broadband network infrastructure jointly with the providers and prioritize measures to reach universal coverage (e.g. encouraging passive and active sharing of telecommunications infrastructure in remote areas) to allow competition, while reducing costs of infrastructure expansion. Determine strategic long-term policies for the effective utilization of the Social Obligation Fund for achieving universal access.	Cost-reduction effects for the telecommunications industry can be realized particularly in remote rural areas. With increasing to at least 3G access, the potential e-commerce customer base is increased.	Medium	BTRC, mobile operators, ITU
Enforce compliance of the telecommunications sector with net neutrality provisions to allow non-discriminatory access to e-services and e-commerce opportunities.	An achieved level playing field between the different operators increases investor confidence in the sector.	Medium	BTRC

TRADE LOGISTICS AND TRADE FACILITATION			
Indicative action	Expected results	Priority Level	Potential support by:
Review and rationalize the de-minimis regime, which constitutes a burden for customs authorities and importers alike to allow cross-border e-commerce to expand rapidly.	Customs procedures can be accelerated, and Bangladesh consumers will have easier and faster access to international marketplaces to purchase demanded products of minor value.	High	MoC, MoPTIT, Customs, Excise & VAT Commissionerate, BRTA, Export Promotion Bureau, USAID, World Bank, ITC
Support the piloting and introduction of insurance products for trade logistics firms to minimize the risk imparted due to product breakage, consumer fraud, and security challenges encountered during delivery.	Risks burden currently shouldered by e-commerce businesses and consumer can be diverted to an insurance provider increasing public appetite for e-commerce solutions.	High	IDRA, private insurance companies, sector associations



TRADE LOGISTICS AND TRADE FACILITATION			
Indicative action	Expected results	Priority Level	Potential support by:
Review challenges in the national physical addressing system. Align national standards with international standards in order to facilitate interoperability of name and address data, enable address validation and provide guidelines for building and maintaining address infrastructures.	Delivery times and costs can be reduced, as shipment recipients can be located more quickly.	Medium	MoPTIT, UPU
Conduct a post office revitalization pilot in conjunction with postal authorities, existing marketplaces, and sector associations. Develop the capacities of remote/rural post offices through technology and best practices available to the private sector.	Enhanced capacity demonstrated through a pilot, which can potentially be scaled up.	Medium	Bangladesh Post Office, marketplaces/e-commerce companies, courier service companies, BASIS/ e-CAB
Facilitate service provider development for last-mile delivery in rural areas, by providing training to existing micro-businesses that are offering the last mile delivery.	Enhanced capacity and professionalism of last mile delivery firms.	Medium	Bangladesh Post, logistics firms, marketplaces/e-commerce companies, BASIS/ e-CAB
Implement the reform recommendations of the Trade Facilitation and Paperless Trade Implementation Survey.	Improved performance, moving towards paperless trade and increased efficiency (with reduced times/costs) for trade facilitation operations.	Medium	MoC, UNESCAP, UNCTAD

PAYMENT SOLUTIONS			
Indicative action	Expected results	Priority Level	Potential support by:
Initiate dialogue with the private sector on options for a move to “digital cash on delivery” that allows customers to inspect an ordered item before agreeing to release a payment digitally, which would reduce security risks for private courier companies.	Scaling up of e-commerce operations and use of MFS by consumers, enhanced security of payments and ease of refund options.	High	Bangladesh Bank, Financial Institution Division, sector associations, commercial banks, MFS providers, card-based payment providers, FNF
Address severe challenges of e-commerce businesses resulting from ceiling amounts for outbound funds and review particularly the online transaction limits for individuals and corporate entities.	Improved operating business environment for e-commerce firms (and SMEs in general), especially those required to make international payments for business expenses and for procuring inputs.	High	MoC, Customs, sector associations, FNF, UNESCAP, USAID
Encourage commercial banks to issue corporate bank accounts, credit and debit cards, possibly also encourage MFS providers to tailor MFS to SME clients.	Transactions of corporate accounts are tracked, resulting in enhanced assessment of the creditworthiness of the company.	High	Bangladesh Bank, Financial Institution Division, sector associations, commercial banks, MFS providers, card-based payment providers



PAYMENT SOLUTIONS			
Indicative action	Expected results	Priority Level	Potential support by:
Establish and communicate clear return guidelines for online purchases and identify options to strengthen after-sale services in e-commerce.	Enhanced buyer confidence in e-commerce, leading to greater marketplace activity.	High	MoC, sector associations
Foster interoperability of payment services and transfers between mobile-money and banks and between mobile-money providers.	Scaled up e-commerce activity due to increased payment options for consumers.	High	Bangladesh Bank, commercial banks, MFS providers
Rationalize KYC requirements of commercial banks in comparison to less-complex requirements for MFS providers.	Increased banking penetration and usage of card-based payments.	Medium	Bangladesh Bank, Financial Institution Division, commercial Banks, card-based payment providers

ACCESS TO FINANCING			
Indicative action	Expected results	Priority Level	Potential support by:
Strengthen linkages between commercial lenders and associations in sectors in which digital economy can play an important role, develop lending instruments specific to the needs of e-commerce businesses. Explore possibility of introducing a subsidized loan scheme of SME Foundation linked to an integrated capacity-building program (e.g. in collaboration with BASIS).	Diversified lending options for e-commerce businesses. Improved awareness of commercial banks about financing requirements and constraints of e-commerce businesses related to collateral requirements.	High	MoPTIT, SME Foundation, BASIS/e-CAB, commercial banks, MFS providers, Association of Bankers, FNF, UNCDF, USAID
Encourage the market entry or expansion of local or international venture capital firms through investment promotion activities about opportunities in Bangladesh's e-commerce and ICT sectors.	Greater level of available start-up capital.	High	MoPTIT, MoC, Board of Investment, sector associations
Promote business innovation challenges for entrepreneurs, hackathons to identify aspiring entrepreneurs and link them up with financiers and venture capital firms.	Facilitated linkages between e-commerce firms and alternate sources of investment capital.	Low	BASIS/ e-CAB, MoPTIT, MoC

LEGAL AND REGULATORY FRAMEWORK			
Indicative action	Expected results	Priority Level	Potential support by:
Conduct a dedicated review of the legal and regulatory framework for e-commerce, particularly paying attention to introducing the "e-aspect" into older laws/regulations.	Legal and regulatory challenges are addressed at an early stage of the Bangladesh's e-commerce journey. Gaps in legislation regarding e-transactions, consumer protection, domain name issues are addressed. Increased e-consumer confidence.	High	Bangladesh Bank, MoPTIT, UNCTAD



LEGAL AND REGULATORY FRAMEWORK			
Indicative action	Expected results	Priority Level	Potential support by:
Amend Consumer Rights Protection Act to include provision for distant sales, including e-commerce transaction sale of digital content. Ensure that accompanying structures for reporting and addressing grievances are suitably adjusted.	Increased coverage of the Act and its accompanying reporting and resolution structure to include e-transactions.	High	MoPTIT, MoC, BASIS/e-CAB
Develop a data protection act or amend existing Digital Security Act to include provision for data protection of digitally produced content.	Data protection gap for digital content is covered.	High	MoPTIT, MoC, BASIS/e-CAB
Amend existing intellectual property laws (i.e. copyright, trademarks and patents) to include e-aspects. Ensure that domain name protection exists for e-commerce websites.	Extension of intellectual property rights and domain name protection to the digital economy sector.	Medium	MoPTIT, MoC, BASIS/e-CAB
E-COMMERCE SKILLS DEVELOPMENT			
Indicative action	Expected results	Priority Level	Potential support by:
Carry out a national skill demand forecast or skill gap analysis for realizing “Digital Bangladesh” identifying quick-win and longer-term solutions. Develop and institutionalize a feedback loop between the public sector, academia and the private sector on a national and local level.	Reduction of skill-mismatch. E-commerce sector access to talent with demanded skill profiles. Reduction of youth unemployment and underemployment. Improved coordination for reflecting changes in the educational landscape and the private sector. Upgraded skills curriculum related to e-commerce issues.	High	MoE, MoPTIT, private educational institutions, BASIS/e-CAB, ITC
Address challenges of youth at the interface of education and private sector through: <ul style="list-style-type: none"> a. university-based incubation / acceleration programs for e-commerce and ICT entrepreneurs. b. public-private internship fund and employability skill development support. c. introduction of short e-commerce diploma courses and build-up courses for any educational level. 	Development of employment or start-up ready youth to fuel the emerging e-commerce sector with required skills. Diploma courses may be considered a quick-fix solution, while the comprehensive amendment of university curricula and syllabi may require more time.	High	Public and private educational institutions, BASIS, e-CAB, MoE, MoPTIT, ITC
Conduct capacity-building workshops to boost the awareness of public sector/civil servants on essential e-commerce-based issues.	Enhanced knowledge of digital economy issues within the public sector.	High	BASIS/ e-CAB, MoPTIT, MoC, ITC
Develop higher education (university-level, technical and vocational education, and certificate level curricula for e-commerce and ICT. Ensure sufficient inclusion of digitalization topics equally at primary and secondary levels.	Systemic change in the education sector to shape future opportunities for youth and to reflect the dynamism of “Digital Bangladesh” in education sector reform.	Medium	MoE, MoPTIT
Awareness raising throughout the e-commerce ecosystem, e.g. legal and regulatory framework, available payments systems, available e-marketplaces.	Public participation in and enhanced support for “Digital Bangladesh”.	Medium	a2i, MoPTIT, MoC, BASIS, e-CAB, FNF, ITC



Annex I: Bangladesh country profile on etradeforall.org



COUNTRY PROFILE: BANGLADESH

Contact: info@etradeforall.org

GENERAL INFORMATION - 2016

Population 163.0 Millions	GDP 220 837 Millions current US\$	Merchandise trade 79 803 Millions current US\$
Internet users 29.7 Millions	GDP growth 7.1 %	Land area 130 170 km ²

Source: UNCTAD and ITU (complete URL addresses in the General Notes)

E-COMMERCE ASSESSMENT - 2017

Rank in UNCTAD B2C E-commerce Index 103/144	Rank in ITU ICT Development Index 147/176	Rank in WEF Networked Readiness Index 112/139
---	---	---

Source: UNCTAD, ITU and WEF (complete URL address in the General Notes) Note: 1 = Best

ICT INFRASTRUCTURE AND SERVICES - 2016

Metric	Value
Internet users	18.2
Fixed broadband subscriptions	4.0
Active mobile broadband subscriptions	27.1

Value	Description
874.4	Highest tariff
500	Upper whisker
34.1	Tariffs in 50% of eco. are below this value
11.3	BANGLADESH
5.1	Lowest tariff
5	Lower whisker

Source: ITU (complete URL address in the General Notes)

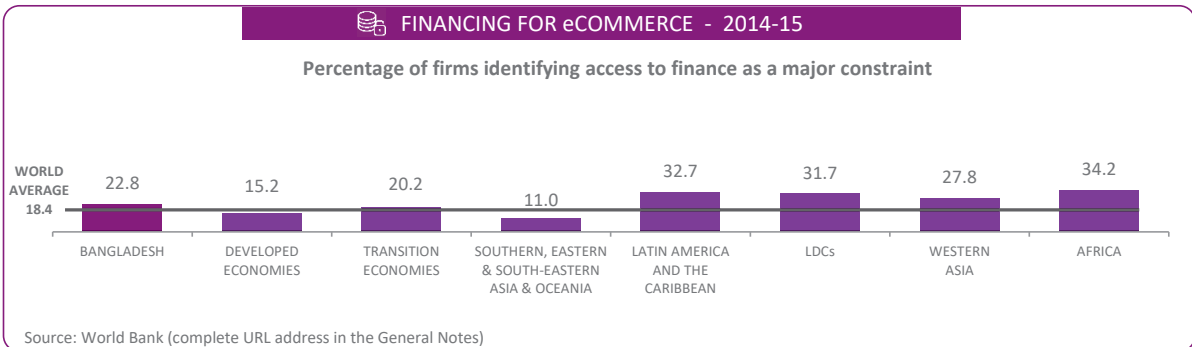
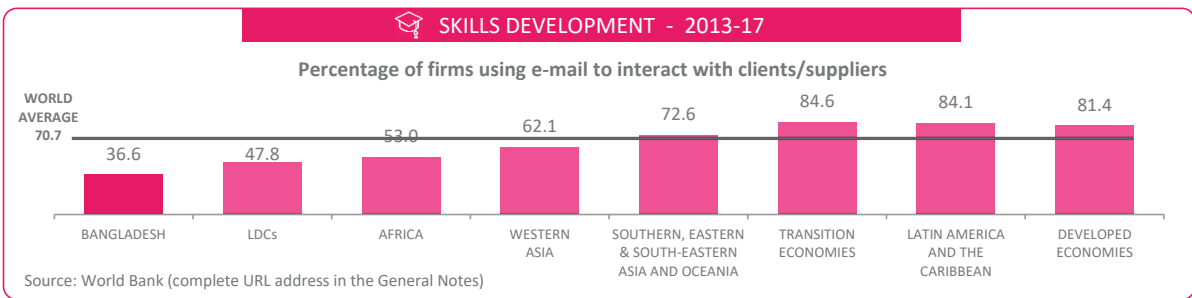
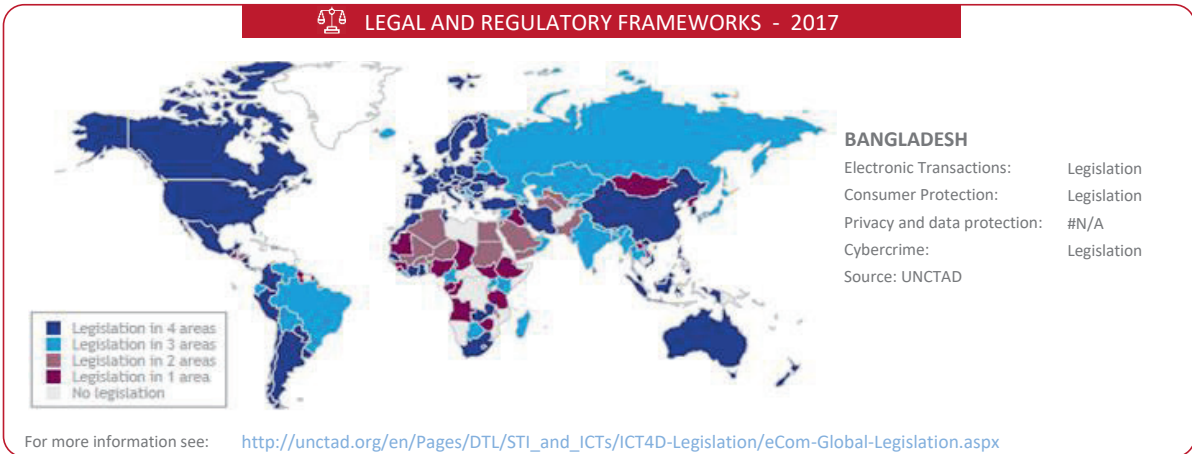
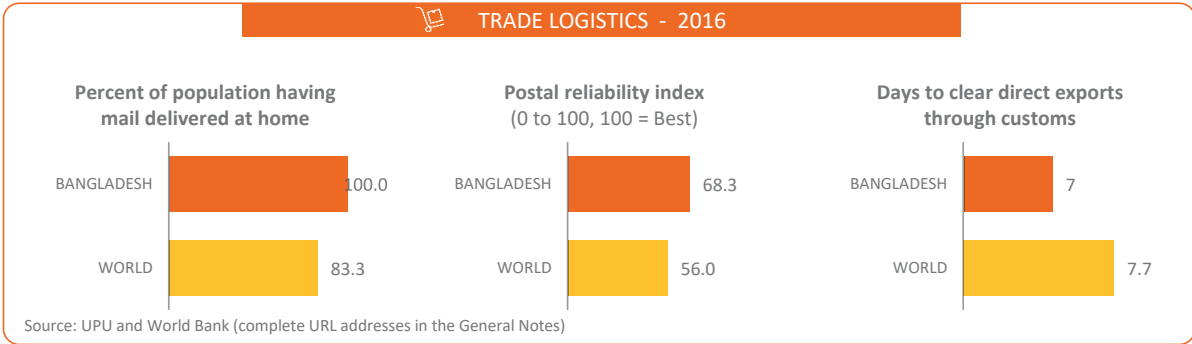
PAYMENTS - 2014

Method	Bangladesh	Southern, Eastern and South-Eastern Asia & Oceania	World
Debit card used in the past year	1.0	13.4	21.9
Credit card used in the past year	0.2	7.7	13.5
Used an account to make a transaction through a mobile phone	1.7	7.4	8.5

Source: World Bank (complete URL address in the General Notes)



COUNTRY PROFILE: BANGLADESH



Annex II: Bibliography and websites used

Policies and reports

- a2i (2007): e-Governance Horizon Scan Report: An assessment study of e-Governance in Bangladesh, Access to Information (a2i) Programme, Updated in December 2007
- a2i (2013): Global e-Indices' Rankings and Bangladesh: Indicators for Measuring Digital Bangladesh, 2013
- a2i (2015): Gender Strategy for Access to Information Programme
- ADB (2017): Trade and Transport Facilitation Monitoring Mechanism in Bangladesh, Asian Development Bank, 2017
- AFI Global (2017): Survey Report on SME Finance Policies for Micro, Small and Medium Enterprises (MSMES) owned by Women and Women Entrepreneurs, Survey Report, March 2017
- Ahmed (2009): Country brief on trade facilitation – Bangladesh, Conference 20-22 May 2009, Beijing, China
- BASIS (2016): ICT Journey of Bangladesh, Presentation of Mostafizur Rahman Sohel, Joint Secretary General of BASIS
- BB (2017): Annual Report: Bangladesh Bank (The Central Bank of Bangladesh), July 2016-June 2017
- BTRC: Managing Competition in Bangladesh, Bangladesh Telecommunication Regulatory Commission (BTRC), Presentation of Sunil Kanti Bose
- GSMA (2014): Country overview: Bangladesh, GSMA Intelligence, August 2014
- GSMA (2015): Towards a “Digital Bangladesh”: supporting mobile affordability and investment, Mobile Taxation Report
- IMF (2018): 2018 Article IV Consultation - Press Release; Staff Report; and Statement by the Executive Director for Bangladesh, International Monetary Fund, 2018
- Khalid (2011): Digital Divide between Teachers and Students in Urban Bangladesh, Md. Saifuddin Khalid, Conference Paper - Proceedings of INTED2011 Conference, 7-9 March 2011, Valencia, Spain
- Melinda and Bill Gates Foundation, Intermedia (2017): Financial Inclusion Insights, Applied research for digital financial inclusion - Wave 4 Report - FII Tracker Survey Bangladesh, September 2017
- Ministry of Foreign Affairs of Denmark (2006): Business Opportunity Study within the IT and Telecommunication Industry in Bangladesh, The Danish Federation of Small and Medium-Sized Enterprises in collaboration with Muhammad Hasibul Hasan, Bangladesh, November 2006
- Moazzem (2011): Micro, Small and Medium Enterprises in Bangladesh: Are They Scaling Up?, Dr Khondaker Golam Moazzem, 12 October 2011
- Murshid (2016): Skill Gap Analysis for Selected Sectors, Bangladesh Institute of Development Studies Research, BIDS
- Nyenrode Business Universiteit (2014): ICT Sector Study Bangladesh - Bridging the Gap between Dutch and Bangladeshi ICT sectors, Nyenrode Business Universiteit, 2014
- Parvez et al. (2015): Mobile Financial Services in Bangladesh - A survey of current services, regulations and usage in selected USAID projects, 2015
- UNCDF (2016): Building Digital Bangladesh: The Way Forward for Digitizing Payments, Better Than Cash Alliance, United Nations Capital Development Fund, November 2016



- UNCTAD (2015): Services Policy Review: Bangladesh (I), Publication code: UNCTAD/DITC/TNCD/2015/2
- UNESCAP (2011): Status and Challenges of Trade Facilitation and Supply Chain Efficiency Improvements in Bangladesh, United Nations, 2011
- UNESCAP (2017a): Business Process Analysis of export of plastic kitchenware and tableware from Bangladesh to Bhutan, United Nations, 2017
- UNESCAP (2017b): National Consultation Workshop on Cross-border Paperless Trade Facilitation in Bangladesh, 5 March 2017, Dhaka, Bangladesh
- World Bank (2014): Strengthening Competitiveness in Bangladesh — Diagnostic Trade Integration Study, 2016

Main websites

- Access to Information Program: a2i.gov.bd
- Association of Mobile Telecom Operators of Bangladesh: amtob.org.bd
- Bangladesh Association of Software and Information Services: basis.org.bd
- Bangladesh Road Transport Authority: brta.gov.bd
- Bangladesh Telecommunication Regulatory Commission: btrc.gov.bd
- e-Commerce Association of Bangladesh (e-CAB): e-cab.net
- eTrade for All: <https://etradeforall.org/>
- ICT Division, Ministry of Posts, Telecommunications and Information Technology: ictd.gov.bd



Annex III: List of UNCTAD Rapid eTrade Readiness Assessments of LDCs

- Islamic Republic of Afghanistan: Rapid eTrade Readiness Assessment (March 2019).
- Madagascar: Évaluation rapide de l'état de préparation au commerce électronique (January 2019).
- Zambia: Rapid eTrade Readiness Assessment (December 2018).
- Uganda: Rapid eTrade Readiness Assessment (December 2018).
- Burkina Faso: Évaluation rapide de l'état de préparation au commerce électronique (September 2018).
- République du Togo: Évaluation rapide de l'état de préparation au commerce électronique (September 2018).
- Solomon Islands: Rapid eTrade Readiness Assessment (July 2018).
- Republic of Vanuatu: Rapid eTrade Readiness Assessment (July 2018).
- République du Sénégal: Évaluation rapide de l'état de préparation au commerce électronique (July 2018).
- Lao People's Democratic Republic: Rapid eTrade Readiness Assessment (April 2018).
- Liberia: Rapid eTrade Readiness Assessment (April 2018).
- Myanmar: Rapid eTrade Readiness Assessment (April 2018).
- Nepal: Rapid eTrade Readiness Assessment (December 2017).
- Samoa: Rapid eTrade Readiness Assessment (October 2017).
- Bhutan: Rapid eTrade Readiness Assessment (April 2017).
- Cambodia: Rapid eTrade Readiness Assessment (April 2017).

And: <http://unctad.org/en/Pages/Publications/E-Trade-Readiness-Assessment.aspx>



