



Nepal

Rapid eTrade Readiness Assessment





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NOTE

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

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

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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;

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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, the new UNCTAD Intergovernmental Group of Experts on E-commerce and the Digital Economy.

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

The Nepal Rapid e-Trade Readiness Assessment is the fourth such assessment conducted by UNCTAD. It has benefited from excellent collaboration with the Enhanced Integrated Framework (EIF), which funded the report. It is hoped that the report will contribute to the Government of Nepal's quest to build a robust, safe and business-friendly e-commerce ecosystem.

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

Shamika N. Sirimanne

Director, Division on Technology and Logistics, UNCTAD



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In Geneva, the assessment was made possible thanks to the timely support of the Permanent Representative of Nepal to the United Nations, the Executive Secretariat of the Enhanced Integrated Framework and UNOPS office, acting as the EIF Trust Fund Manager.

The assessment benefited from inputs from more than 60 Nepalese institutions in both public and private sectors, through the eTrade for all online surveys and subsequent interviews in Kathmandu. The consultant wishes to thank all individuals who took part in the focus group discussions in the Ministry of Commerce facilities in Kathmandu.

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TABLE OF CONTENTS

NOTE.....	III
PREFACE.....	IV
ACKNOWLEDGEMENTS.....	V
ABBREVIATIONS	VII
EXECUTIVE SUMMARY	1
METHODOLOGY.....	2
SUMMARY OF FINDINGS AND RECOMMENDATIONS.....	3
FINDINGS UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS.....	4
1. E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION	4
2. ICT INFRASTRUCTURE AND SERVICES	8
3. TRADE LOGISTICS AND TRADE FACILITATION	11
4. PAYMENT SOLUTIONS	14
5. LEGAL AND REGULATORY FRAMEWORKS	17
6. E-COMMERCE SKILLS DEVELOPMENT	18
7. ACCESS TO FINANCING.....	21
CONCLUSION	25
THE WAY FORWARD: ACTION MATRIX	26
ANNEX I: NEPAL COUNTRY PROFILE ON ETRADEFORALL.ORG	30
ANNEX II: BIBLIOGRAPHY AND WEBSITES USED	32



ABBREVIATIONS

ADB	Asian Development Bank
AFT	Aid for Trade
APGML	Asia / Pacific Group on Money Laundering
ASYCUDA	Automated System for Customs Data
ATM	Automatic Teller Machine
B4ETD	Business for eTrade Development
BFI	Banking and Financial institutions
BPO	Business Processing Outsourcing
CIB	Credit Information Bureau
CIC	Community Information Center
COD	Cash on Delivery
CRMSAP	Customs Reform and Modernization Strategies and Action Plan
DoC	Department of Customs
DP	Development Partner
DTIS	Diagnostic Trade Integration Study
EIF	Enhanced Integrated Framework
EIF ES	Executive Secretariat of the Enhanced Integrated Framework
EPI	Economic Policy Incubator Programme
ETA	Electronic Transaction Act
EU	European Union
FATF	Financial Action Task Force
FCGO	Financial Comptroller General Office
FDI	Foreign Direct Investment
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
FSP	Financial Service Providers
FY	Fiscal year
GoN	Government of Nepal
HLCIT	High Level Commission for Information Technology
IBN	Investment Board of Nepal
ICT	Information and Communication Technology
ICTPR	ICT Policy Review Programme
IME	International Money Express
ISP	Internet service providers
IT	Information Technology
ITES	Information Technology Enabled Services
ITU	International Telecommunication Union
MFS	Mobile Financial Services
MoC	Ministry of Commerce
MoF	Ministry of Finance
MoI	Ministry of Industry
MoIC	Ministry of Information and Communications
MoPIT	Ministry of Physical Infrastructure and Transport
MoSTE	Ministry of Science, Technology and the Environment
MoU	Memorandum of Understanding
MNO	Mobile network operator



MSME	Micro, Small and Medium Enterprises
NECAS	Nepal Customs Automation System
NEF	Nepal Economic Forum
NICTP	National Information and Communication Technology Policy
NIDMC	Nepal ID Card Management Centre
NPC	National Planning Commission
NPR	Nepalese Rupee
NPS	National Payment System
NRB	Nepal Rastra Bank
NTA	Nepal Telecommunications Authority
NTIS	Nepal Trade Integration Strategy
POS	Point of Sales
PPP	Public-Private Partnership
PSO	Payment System Operator
PSP	Payment Service Provider
QoS	Quality of Service
RTI	Right to Information Act
SAARC	South Asian Association for Regional Cooperation
SCWEC	SAARC Chamber Women Entrepreneurs Council
SDF	SAARC Development Fund
SME	Small and Medium Enterprises
TFA	Trade Facilitation Agreement
UNCTAD	United Nations Conference on Trade and Development
UPU	Universal Postal Union
USD	United States Dollar
VDC	Village Development Committee
WEAN	Women Entrepreneurs Association of Nepal
WEF	World Economic Forum
WTO	World Trade Organization



EXECUTIVE SUMMARY

The e-commerce industry in Nepal is at a nascent stage and represents an underexplored market. The fast-increasing Internet penetration, especially in the Kathmandu Valley, has opened opportunities for several e-trade niches. Domestic and foreign players are trying to address the needs of the e-commerce ready population, creating healthy competition, in particular among financial service and payment service providers. This marked increase in demand for e-commerce in Nepal is attributed to a growing segment of the population that is young, educated and technology-dependent. Sectors benefiting from this e-commerce development includes retail, mobile operators and payment sectors.

Despite these promising trends, e-commerce is currently not achieving its full development potential in Nepal. E-commerce could become a key contributor to economic growth and foreign trade in years to come, thanks to better ICT infrastructure and innovation. The steady rise of Internet use in Nepal has improved accessibility of e-commerce for the population. As of April 2017, Internet penetration was at 58 per cent, from 8 per cent in 2010. Most consumers in Nepal access the Internet through 2G or 3G mobile data services.

Several factors continue to hamper e-commerce development in Nepal:

- Transportation and distribution channels are major challenges, as volumes are well below the levels that will attract main logistics players. Cash-On-Delivery is the preferred e-commerce payment method; around 85 per cent of e-commerce users indicating preference for that method. Digital payment gateways such as eSewa, IMEPay are the second most popular method with 10 per cent of e-commerce transactions, leaving only 4 per cent of e-commerce customers using payment cards to buy online.
- Difficulties in cross-border money transfer, in accepting payments for both the exporter and retailer through international payment

methods, means that Nepalis cannot use their payment cards to purchase goods from international e-commerce platforms. High commissions charged by electronic payment services discourage businesses from using these services. These are “collateral damages” from the restrictions imposed on the Nepalese banking system as a whole and are not confined to the e-commerce Financial Service Providers (FSPs) and Payment Service Providers (PSPs).

- A lack of adequate logistics and transportation infrastructure, critical to supply chain management, and a lack of proper addressing system for houses hamper deliveries.
- A slightly outdated legal and regulatory framework, especially regarding restrictions on FDI for retail (since e-commerce is not recognized as its own separate industry), data protection and privacy and electronic transactions, is slowing down e-commerce uptake and online trust.

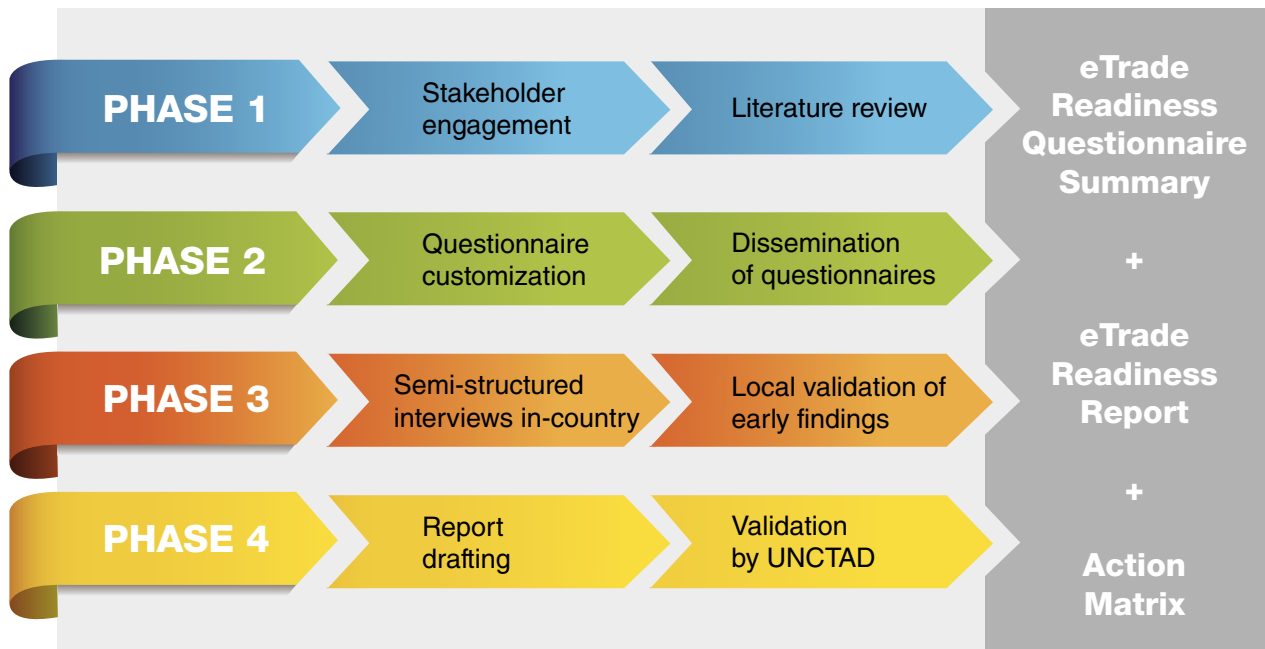
The Government of Nepal, through Nepal Rastra Bank (the Central Bank of Nepal), the Ministry of Commerce and the Ministry of Information and Communication have taken steps with a view to address constraints faced by the young e-commerce ecosystem. This includes developing an ambitious national ICT policy, singling out Information Technology Enabled Services (ITES) and Business Processing Outsourcing (BPO) as services export priorities, and setting up a joint task force on e-commerce.

Moving forward, it will be crucial for the Government to take steps to facilitate e-commerce and to seize opportunities from it. This involves dealing with potential cost and challenges arising from e-commerce development. Taking steps in that direction would be both timely and instrumental as e-commerce is expected to grow multi-fold in the coming years. The action matrix contained in this report includes recommendations to accompany and accelerate this process, along the seven policy areas promoted by the eTrade for all Initiative.



METHODOLOGY

Figure 1. Survey methodology



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

- ✓ Phase 1 | Stakeholder engagement and literature review, 10-30 June 2017. It included official communications between UNCTAD, the Nepal Ministry of Commerce (MoC) in Kathmandu and the Executive Secretariat of the Enhanced Integrated Framework (EIF ES) at the World Trade Organization (WTO) in Geneva (as the donor for this assessment). Literature review and data analysis were made possible through access to up-to-date statistics provided by ITU, UPU and the World Bank, in addition to data compiled by UNCTAD on behalf of the eTrade for all initiative.
- ✓ Phase 2 | Questionnaire customization and dissemination, 5-27 August 2017. Two (2) customized questionnaires for the public and private sectors were distributed by MoC to more than 100 stakeholders in Nepal. A total of 48 completed questionnaires were used for this report.
- ✓ Phase 3 | Semi-structured in-country interviews and local validation, 27 August to 1 September

2017 during the consultants' mission to Kathmandu. A total of six (6) focus-group meetings were held. Meetings were organized by the MoC with the following sectors: regulatory, ICT, banking and insurance, exporters, training and education and e-commerce vendors. Briefings on early findings and suggestions were presented to the Honourable Commerce Secretary on 31 August 2017.

- ✓ Phase 4 | Report writing and finalization with UNCTAD, 10 September– 25 October 2017.

As with 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
- ✓ E-commerce skills development
- ✓ Access to financing





The information provided in this report is therefore based on data collected from 48 respondents to the survey from both the public and private sectors and the 40 participants in the six (6) focus-group meetings in Kathmandu on 27 August – 1 September 2017. The study benefited from primary data collected using responses to

questionnaires and secondary data provided by the Ministry of Commerce (MoC), the Economic Policy Incubator (EPI) Programme for Nepal funded by the UK Department for International Development (DFID) and the Nepal Economic Forum (NEF) “Cross-border e-commerce ecosystem in Nepal” programme.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

MAIN FINDINGS	MAIN RECOMMENDATIONS
 e-Commerce Readiness Assessment and Strategies Formulation	
<p>Recent broad recognition of the untapped potential of ICT and e-commerce has led to initial steps towards inter-ministerial coordination but is hampered by the lack of a single vision and identification of e-commerce as a single sector.</p>	<p>Enhance inter-ministerial coordination to promote development gains from ICT and e-commerce, developing a national strategy spearheaded by recent efforts from the Nepal Rastra Bank to develop a supportive financial environment and backed by a supportive private sector.</p>
 ICT Infrastructure and Services	
<p>Steady investment in ICT, including mobile infrastructure, has enabled major growth in mobile and Internet penetration. There is still a lot of room for improvement in terms of mobile network coverage, international Internet bandwidth, secure Internet services and power supply.</p>	<p>More comprehensive geographic coverage would facilitate domestic e-commerce. Continued investment in fibre-optic backbone networks in the more remote areas would be welcome, ensuring charges for use of that backbone do not discourage the mobile operators from expanding their networks.</p>
 Trade Logistics and Trade Facilitation	
<p>Several logistics and regulatory bottlenecks hamper cross-border trade and impede e-commerce. This is coupled by a lack of a proper postal addressing system making last-mile delivery challenging. The lack of reliable logistics services outside the Kathmandu ring road inhibits the completion of e-commerce transactions.</p>	<p>Implementation of the Fifth Customs Reform and Modernization Strategic and Action Plan (CRMSAP) 2017-2021 will ensure increased digitalization of customs procedures. Efforts should be taken to encourage existing logistics providers to add value by bundling together various products and services (e.g. COD, cash management, etc.) and work with Postal Services to improve the addressing system.</p>
 Payment Solutions	
<p>Innovative solutions have been developed by new PSPs, banks and mobile operators, allowing for increased volumes of domestic e-commerce, while international payment is limited to “remittance gifts”, due to severe constraints on international means of payments. Payment was consistently rated as the single, most important factor hampering e-commerce development.</p>	<p>Accelerate upgrade of financial system by enhancing dialogue between Nepal Rastra Bank (NRB), Financial Service Providers (FSPs) and Payment Service Providers (PSPs), regarding access to cashless payments for international e-commerce. Efforts should focus on increasing the level of adoption of technology such as mobile banking, Internet banking, credit and debit cards, POS/POT machines and reducing regulatory impediments and usage barriers needs mismatch.</p>
 Legal and Regulatory Framework	
<p>Several acts approved in the past 10 years provide a basis, although an outdated one, for e-commerce legal and regulatory framework. Multiple ministries encompass e-commerce but a common platform for coordination has not been created. The unclear categorization of e-commerce as an industry has proven to be a barrier for foreign investment.</p>	<p>A supportive legal framework is required to generate trust in online transactions. There is a strong need to formulate forward-looking laws in various legal areas to improve users’ confidence in online transactions and to update existing ICT-related laws (all of which are more than 10 years old) to improve trust in online marketplaces as well as foster FDI in e-commerce.</p>



MAIN FINDINGS	MAIN RECOMMENDATIONS
 E-commerce Skills Development	
<p>Nepal's IT-savvy young segment of the population is a promising factor for e-commerce skill development. E-commerce requires a diverse array of skill sets ranging from content marketing to data analysis and programming that universities are only starting to embed or upgrade in their ICT curricula.</p>	<p>E-commerce has potential for job creation, both in the urban and rural areas of Nepal and beyond, use of social media networks and apps as trading platforms. Tertiary education providers can work more closely with the ICT industry to ensure employability of new entrants in the industry.</p>
 Access to Financing	
<p>Banks' ability to provide loans is hampered by a lack of confidence in the information provided by the Credit Information Bureau of Nepal. Reliance on informal financial services has important implications for the adoption of electronic payments and, consequently, stimulation of e-commerce. Similarly, e-commerce is considered a risky "sector" for which banks are not yet ready to develop customized financial products for MSMEs.</p>	<p>Help leading banks and prominent PSP develop innovative products for MSMEs wishing to invest in the e-economy, once they have been able to be formally registered. This should particularly target the increasing number of startups active in the financial technology (fintech) and cashless payments segments, whose business models can be nurtured through support to business incubators.</p>

FINDINGS UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS

1. E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION

The past 18 months have seen a remarkable increase in both the business' and Government's interests in capturing the untapped potential of e-commerce in Nepal. Several studies such as those listed in Annex II have highlighted the potential of e-commerce in the country from different perspectives.

The studies reviewed and interviews conducted for this assessment underscore the same factors as to why Nepal is considered to be on the verge of embracing e-commerce fully:

- ✓ Increasing Internet penetration;
- ✓ Existence of a basic ICT infrastructure;
- ✓ Readiness of the private sector;
- ✓ Commitment of several regulatory and facilitating agencies;
- ✓ Development of a rapidly expanding educated workforce;
- ✓ Increased use of social platforms and apps, including business transactions;
- ✓ Increasing demand for digital payments, including for utility bills and e-government services.

ICTs and e-commerce are increasingly at the core of strategies aimed at achieving the goals of sustainable development and stimulating economic growth. To that effect, the Government is taking the opportunity to integrate new technologies into different policy areas to reduce the development divide and increase the quality of life of its citizens.

Nepal's 2015 National Information and Communication Technology Policy (NICTP) aims to promote a stable, fair and competitive climate to facilitate e-commerce development in the country. The policy touches on different aspects of e-commerce: development of effective laws and regulations governing e-commerce; monetary and fiscal policy measures that increase consumers' confidence; promotion of e-payment solutions; and the culture of e-commerce in the country, among others. The policy is intended to create the groundwork for an overarching vision of a "Digital Nepal". In the realization of this vision, ICTs will be a key driving force in transforming Nepali society into a knowledge and information-based society and strengthening Nepal's pursuit of equality and sustainable growth by leveraging information and communication technology (Table I).

Similarly, on the trade side, the Ministry of Commerce (MoC) has started to recognize the role of IT services and the potential of the BPO sector to diversify exports (Table II).



Table I: National ICT Policy Objectives**NICTP Overall Objectives selected from NICPT 2015 Report**

- 11.3 To promote ICT to further productivity among the sectors that are key drivers of the national economy.
- 11.6 To further streamline clear strategies and obligations for licensed ICT service providers with respect to universal access/service goals and Quality of Service (QoS) and ensure cost-effective connectivity to ICT services such as Internet, e-commerce and e-government services.
- 11.9 To promote cost-effective and qualitative last-mile access technologies for providing secure access to Internet including commercial and public information services, e-government applications by communities.
- 11.17 To facilitate the participation of youths and women in ICTs particularly in media and content development initiatives.
- 11.30 To promote a stable, fair and competitive investment climate to facilitate the development of e-trade and e-commerce activities in the country.
- 11.31 To develop a highly competitive ICT industry capable of driving Nepal's active participation in global trade.
- 11.32 To facilitate the adoption of e-commerce especially by SMEs in agriculture, tourism and manufacturing as well as non-traditional exports to ensure productivity and growth.
- 11.40 To support formulation of a development strategy for ICT-converged services to support and plan for mid- to long-term solutions to overcome the digital divide.

Key NICTP Action 7.3: Promoting public access and content development

- 7.3.2 The initiative to transform Postal Offices and Community libraries as public access points for e-commerce, e-government and Internet-based services with the support of the private sector and civil society will be strengthened.

Key NICTP Action 7.6: ICT in SMEs and promotion of e-commerce

- 7.6.1 Measures will be taken to encourage and strengthen electronic payment system in the country to facilitate enhanced growth of e-commerce and enable on-line payment transactions in e-government services.
- 7.6.2 A comprehensive national e-Commerce Readiness Assessment, which will feature benchmarking with international best practices will be carried out.
- 7.6.3 Steps will be taken to create an internationally compatible legal and regulatory framework that accommodates rules for commercial transactions.
- 7.6.4 Appropriate monetary and fiscal policy measures will be established to ensure consumer confidence in e-commerce.
- 7.6.5 Mechanisms to protect intellectual property rights related to e-commerce will be strengthened.
- 7.6.6 Special program will be formulated in conjunction with trade and commerce related organizations to drive the uptake of e-commerce in Nepal.
- 7.6.7 In advancing its e-commerce strategy, the Government will promote its collaboration with the private sector and its international counterparts to position and promote e-commerce.
- 7.6.8 A conducive system for the protection of intellectual property rights in cyberspace will be put in place.
- 7.6.9 Measures will be taken to address issues relevant to privacy, such as protection of personal information and confidentiality of consumer-related matters.

Source: NICTP 2015



Table II: NTIS 2016 priorities for the IT and BPO sector

Outcome and Actions	2014 Baseline	Target by 2017 and 2020	Responsible Agencies
Outcome 18: IT Services and Business Process Outsourcing: New market for IT and BPO sectors developed and its export increased significantly.	Exports of IT and BPO services are estimated at USD30-35 million in 2014.	Exports of IT and BPO increased to at least USD100 million	MoIC, MoSTE, MoF, IT and BPO Private sector
Short-term Actions: 2016-2017			
Action 1: Ensure a clear oversight structure to support the sector.	Mandates and responsibilities of MoIC and MoSTE in the sector are not properly defined and are overlapping.	Clarified mandates and a single government agency defined responsible for supervising the sector	MoIC, MoSTE, OPMCM
Action 2: Provide incentives to attract investments in the sector.	Robust and competitive investment tax incentives for the sector are lacking.	(1) Corporate income tax holiday until 2020; (2) Zero (0) % excise tax on imported telecom and computer equipment; (3) 100% ownership and dividend / capital repatriation for foreign investors	MoF, MoI, NRB
Action 4: Lower the cost of bandwidth.	The cost of bandwidth is 30% higher than in India.	Reduced cost of bandwidth on par with India	MoIC, MoSTE
Medium-term Actions: 2018-2020			
Action 1: Improve legal framework for FDI in the sector by making necessary changes in FDI and Technology Transfer Act and Rules.	Foreign Investment and Technology Transfer Act 1992 and Rules have not been amended in accordance with WTO requirements.	Foreign Investment and Technology Transfer Act 1992 and Rules are amended to take into account the needs of the IT and BPO sectors.	MoI, MoC

Source: NTIS 2016

To substantiate the above actions, and to initiate the coordination of efforts at the policy level, MoC has recently constituted a high-level committee (Task Force), consisting of Nepal Rastra Bank (NRB), the Ministry of Information and Communication (MoIC), the Ministry of Science and Technology (MoST), the Financial Comptroller General Office (FCGO), the Ministry of Finance (MoF), as well as private sector representatives, to follow through with policy implementation.

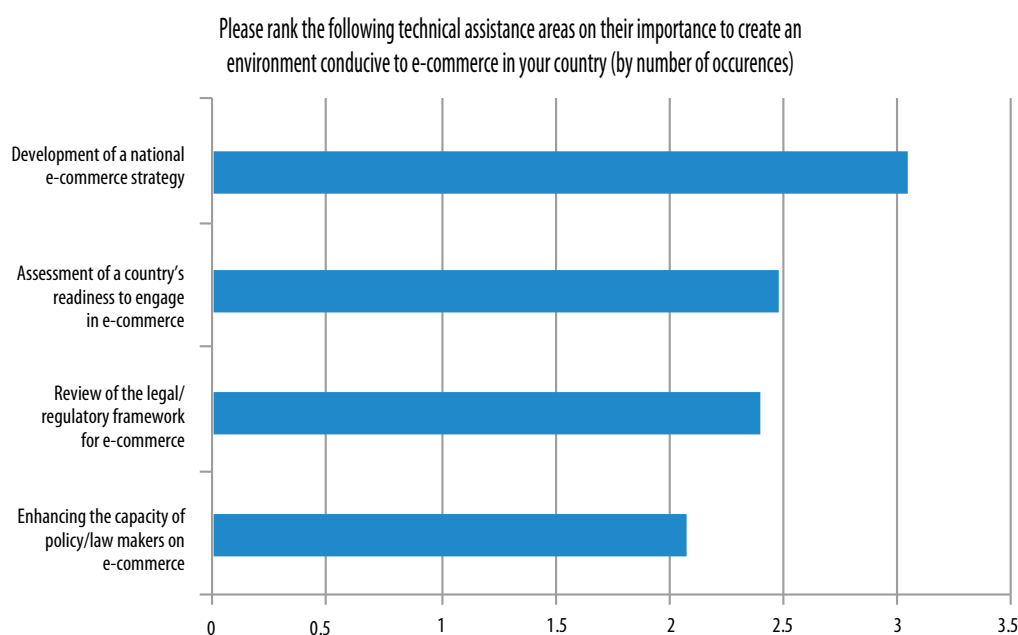
However, disparate policy initiatives and institutional arrangements for the development of the ICT sector in Nepal underscore the lack of a coherent strategy that is in line with technological trends, such as Internet and mobile wireless communications. These technological advancements have been accompanied by security and privacy concerns, personal safety and intellectual property rights. The wider uptake of ICTs also raises new regulatory issues that traditionally would be separated from telecommunications policy and regulations.

Overlapping mandates and spheres of influence surrounding the ICT sector in Nepal has complicated policy implementation and hampered the smooth rollout of public and private ICT projects.

Currently, the consensus among respondents and interviewees is that while an ICT policy does exist, a single shared vision for ICT and e-commerce development has yet to materialize. At the time of the production of this report, the National ICT Policy (NICTP) had been adopted, but no act or regulation had been enacted to support it. Overall, private sector respondents perceived that an overall vision would be difficult to develop. At the core of this is the belief that e-commerce may disrupt existing business models, and that Government and private sector views on this disruption are not aligned. This highlights the need for a continuous public-private dialogue.

The assessment also showed that there was a broad perception among the private sector respondents that the Government is ill-equipped to regulate the e-commerce



Figure 2: Priority technical assistance needs under the e-commerce strategy policy area

Source: UNCTAD

development process. Some respondents were also of the opinion that less Government intervention in the sector that is prone to move all its business procedures online would be welcome, as this would imply fewer dealings with the bureaucracy and less red tape. Most respondents concurred that the development of a national e-commerce strategy for Nepal - one that would recognize the specificity of the phenomenon and give it a proper status - was crucial and a priority. This will ensure that all stakeholders collaborate and are guided by and work toward the same goals, as seen in Figure 2.

To develop a national shared vision on e-commerce development, the following steps were recommended/ have been identified during this rapid assessment:

- Appreciation of the role of ICT for development: e-commerce cannot be fully developed without robust hard and soft ICT infrastructure;
- Recognition of the need to co-ordinate initiatives amongst various service providers and relevant regulatory institutions;
- Creation of a regulatory environment conducive to e-commerce: in such a rapidly evolving ecosystem, traditional ways of regulating among public institutions will not match the pace of technological and business advancements. The Government's role is

primarily to create a reliable ecosystem for e-commerce, recognizing its crosscutting nature (versus treating ICT and e-commerce as a subset of retail commerce);

- Acceleration and expansion of the scope of e-government applications: this can be possible by selecting a lead institution able to integrate e-commerce application in its services and provide public support to facilitate adoption by MSMEs and citizens.¹

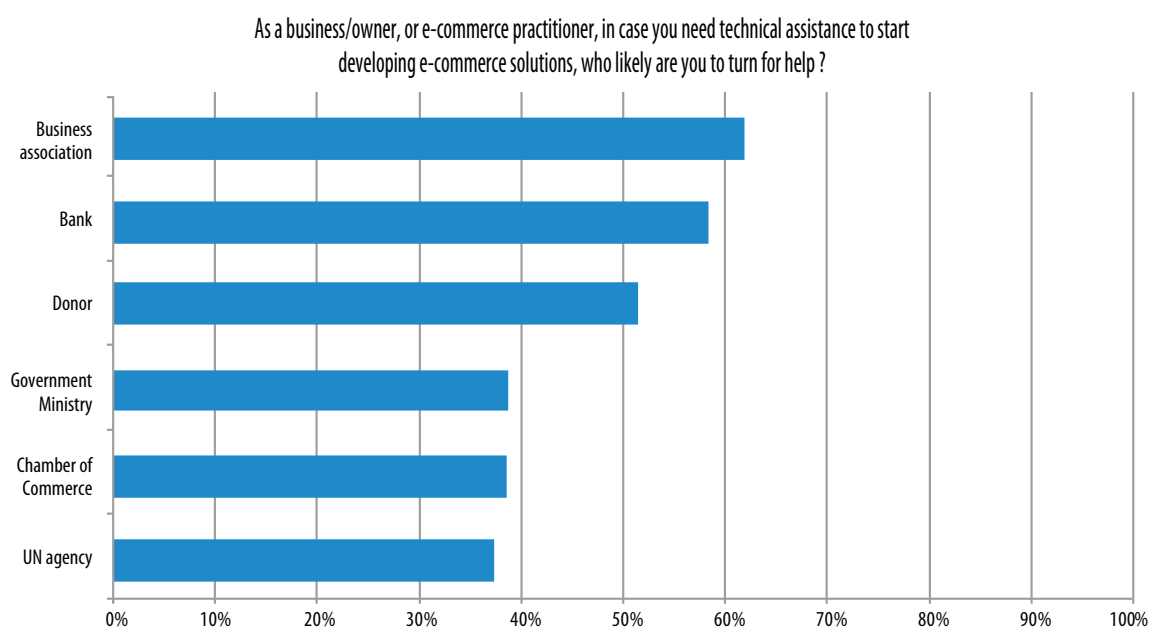
An illustration of the lack of confidence of the private sector in the capacity of the Government to promote a business-friendly development of the sector is shown in Figure 3. Most respondents expressed that they would rather turn to private sector organizations for assistance in the development of e-commerce solutions than to a government entity.

Nonetheless, support for major Government institutions is considered critical to address the knowledge and skills gap of the disruption of existing business models facilitated by ICT and other e-commerce services and solutions and of developing e-government services (for a fee) through dedicated e-commerce platforms. This

¹ For instance, the Ministry of Finance partnered with the ADB, the European Union (EU) and UKAid to develop an ambitious e-Government procurement system for Nepal (e-GP). See www.adb.org/knowledgeshowcases



Figure 3: Possible providers of technical assistance



Source: UNCTAD

is essential if a national e-commerce strategy is to be developed and promoted and can help foster trust and create a conducive environment for e-commerce in the country.

2. ICT INFRASTRUCTURE AND SERVICES

a. ICT Infrastructure

Recent international rankings confirm that there is significant room for improvement in ICT infrastructure development in Nepal to be at par with its regional neighbours. Nepal ranked 108th out of 144 economies in the 2017 UNCTAD B2C E-commerce Index, which measures the readiness of countries to engage in online commerce, using four indicators: Internet use penetration, secure servers per one million inhabitants, credit card penetration, and a postal reliability score.

Nepal ranked 142nd out of 175 economies in the 2016 International Telecommunications Union (ITU) ICT Development Index and 118th out of 139 economies in the World Economic Forum (WEF) Networked Readiness Index. Nepal's performance in the rankings differs drastically depending on the sub-index considered, with good scores for affordability and poor scores in terms of infrastructure development. This confirms the current gap in mobile network

Table III: IT Development Ranking in Selected Countries in Asia

Country	Ranking
China	81
Sri Lanka	116
Bhutan	117
India	138
Nepal	142
Bangladesh	145
Pakistan	146

Source: ITU IDI 2016 report

coverage, international Internet bandwidth, secure Internet services and electricity production.

Estimates of Internet penetration differ. While the above rankings generated in 2016 indicated average Internet penetration of 17 to 20 per cent in 2015, most recent updates provided by the Nepal Telecommunications Authority (NTA) indicated that, as of April 2017², Internet penetration in Nepal is now estimated at 58.31 per cent, with approximately 15 million Internet users. An estimated 97 per cent of total Internet users are doing so through 2G or 3G mobile data services. Almost all the growth in web connectivity is attributed to development in mobile data services.

² <http://kathmandupost.ekantipur.com/news/2017-05-09/one-in-two-nepalis-use-internet-nta-report.html>



Table IV: Data subscribers, breakdown by operators, 2017

Mobile operators	Number of data subscribers / Market share
Nepal Telecom	7.85 Million (54 per cent)
Ncell	6.21 Million (40 per cent)
Smart Telecom	118,772 (1.8 per cent)
Others	(Less than 1 per cent)
Internet Service Providers	
WorldLink, Subisu and Vianet	200,000 (3.2 per cent)

Source: Nepal Telecommunications Authority (2017)

Growth in the number of private sector operators in the ICT sector has resulted in a dramatic increase in ICT coverage in Nepal. Effective teledensity³ increased from 18.8 per cent in 2009 to 64.9 per cent in 2012 to 131 per cent in 2016⁴. The increase in the subscriber base meant great success for past investments, both domestic and foreign. Survey respondents confirmed that private sector enterprises have already committed to increase

³ Telephone density or teledensity is the number of telephone connections for every hundred individuals living within an area. It varies widely across countries and also between urban and rural areas within a country (Source: Wikipedia)

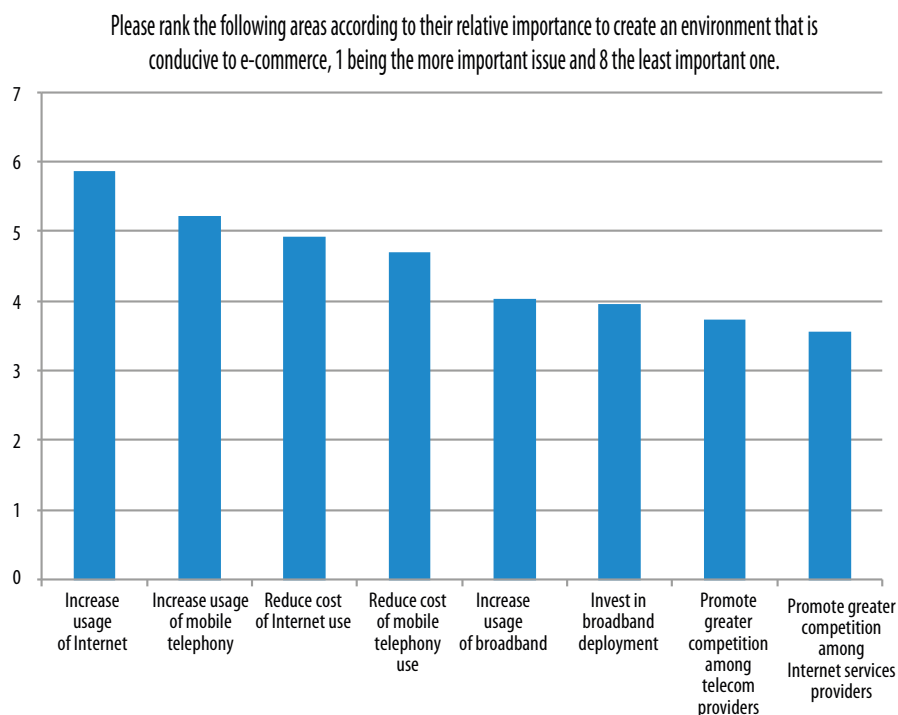
⁴ Source: NTA

investments for extending ICT infrastructure throughout the country.

The increased subscriber base and greater data use has led ICT companies to put more emphasis on the data segment. Likewise, increased competition among service providers has helped to bring down tariffs, making it more affordable. For instance, Nepal Telecom has introduced 4G service in Kathmandu Valley and in limited areas in Pokhara, while Ncell has received permission from the NTA to launch its 4G service. Internet service providers (ISPs), which have already begun to introduce value-added services, have also been expanding their cable and fibre networks to tap into the market.

However, there are concerns regarding the future growth in the number of users, as there are significant gaps in coverage in the remote areas of Nepal (see Figure 4 below). In this regard, the NTA has initiated a program of investment in fibre-optic backbone networks, which will allow mobile operators to extend their service coverage. Currently, there are three (3) complete East-West fibre-optic backbones in the country. A fourth Kathmandu-Hetauda backbone is available through the Nepal Electricity

Figure 4: ICT Infrastructure priorities



Source: UNCTAD



Authority, which has commenced hauling optic fibre cable with the roll-out of high power electrical lines infrastructure. In addition, a fifth backbone running through Kathmandu, Pokhara and Butwal has likewise been rolled out⁵.

b. ICT Services (Government-led)

To bridge the digital divide, the Government supports the development of ICT services specifically for remote provinces, where the gap is most apparent. It has sponsored programs to establish Community Information Centers (CICs)⁶ at 81 different locations in 52 districts and to construct five model-CICs in each of the development regions under SAARC Development Fund (SDF). As of September 2015, two CICs had been established in Sipapokhare and Irkhu Village Development Committees (VDC), the latter located in the Sindhupalchowk District. Similar CICs are being established in two locations in the Dolakha, Kathmandu, Lalitpur and Bhaktapur Districts.

At a central level, the Government has established an authorized single window National Business Web Portal (<http://www.nepal.gov.np>) as well as a License Portal (<http://www.licenseportal.gov.np>), which provide information related to the services that the different Government bodies offer and licensing businesses online. In summary, the relatively recent and rapid growth in Nepal's ICT sector can be attributed to the developments in the telecommunications industry as well as to the improvement in Internet services crucial to the development of e-commerce.

c. Leading services and sectors

The survey respondents indicated that the retail industry, banks and mobile operators are the sectors that benefit the most from e-commerce in Nepal. Remarkably, the tourism sector, one of the important providers of foreign currency in the country, was not mentioned. The Nepali online travel market remains a largely untapped potential. For example, there are currently no reliable domestic online platforms for making hotel reservations in Nepal. This is primarily due to the impossibility for small- and medium-enterprises (SMEs) to receive

international payments in Nepal. This remains a critical barrier to "international e-commerce".

Online shopping is currently the most popular usage of e-commerce in Nepal⁷. Electronics, home appliances, fashion and beauty products are some of most popular products sold online. Most online shopping portals are operating under the B2C model, with popular services including platforms that connect buyers and sellers and offer a wide catalogue of products.

Similar to many other LDCs, Nepal hosts interesting cases of businesses starting out on Facebook⁸, becoming profitable, and then opening physical stores to keep up with demand. Such businesses use their social media pages as advertisement platforms for their products, providing detailed descriptions and prices. Instant messaging applications such as Viber and WhatsApp are also being used to sell different products. Businesses operating over social media and messaging platforms represent an informal market and are, therefore, unregulated. These platforms are not designed to be commercial platforms and lack many of the features that are required for e-commerce platforms - e.g. mechanisms for electronic payments.

A supporting infrastructure, capable of reinforcing services in a suitably reliable, efficient and secure manner, is needed. This requires, inter alia: (1) secure, payments-grade hosting services, with reliable uninterrupted power supply; (2) high-speed broadband connectivity, supported by multiple, redundant routing (not two wires down the same single pipe); and (3) disaster recovery sites. There are a number of hosting services in Nepal that are capable of offering such services, although there are questions about their overall capacity, in terms of the number of e-commerce services that could be hosted by the infrastructure that is in place.

In conclusion, there will be intensified demand for ICT services driven by increased public sector deployment of ICT application and services. In turn, these will create conditions to stimulate private sector investments. The risks perceived by the Government, as described in the NICTP, include

⁵ Source: NICTP 2015, NTA

⁶ The basic idea of CIC was to create access points for the delivery of basic e-government services to citizens all over the country though access to Internet.

⁷ Source: Kaymu.com.np

⁸ There are an estimated 6.4 million Facebook users in Nepal (Source: <http://www.internetworldstats.com/stats3.htm>)



Table V: Main online shopping platforms

Platform	Description
Hamrobazar	Hamrobazar is free online classified store that allows all types of sellers to list a variety of products online for potential consumers.
Daraz Nepal	Daraz.com.np (previously Kaymu.com.np) is the leader of online retail in Nepal, offering e-commerce services for apparel, accessories, shoes, beauty products, electronics and general merchandise.
Nepbay	Nepbay online store provides a platform for buyers and sellers. Sellers can easily retail their products online on the website while the consumers can order whatever they want.
Sasto Deal	Sasto Deal is one of the largest online shopping site in Nepal. They have got a variety of products with affordable prices; deliveries are mostly free inside Kathmandu Valley.
Muncha	Muncha is an extension of Muncha House, a general store that has been in Nepal for over 70 years. It helps all Nepalese residing abroad to send gifts and money to Nepal, as well as for locals to shop online locally.

delays in legal, regulatory and institutional reforms and may hamper much-needed investments in the sector. Chronic power shortages and associated persistent challenges could also dampen overall demand for ICT services and create disincentives for investment.

3. TRADE LOGISTICS AND TRADE FACILITATION

a. At the infrastructure level

Logistics and transport infrastructure have long suffered from underinvestment and have been vulnerable to natural disasters. Despite this difficulty – i.e. Nepal's geography will always present a challenge – and with the exception of 2015, in the aftermath of the deadly earthquake, there has been marked progress in the past 10 years. Logistics remain a challenge because of the lack of transport infrastructure; with limited road access, e-commerce has been confined to the Kathmandu Valley and certain urban areas.

Goods come to Nepal through India by land or via air, and a marginal part is traded over the border with China. While the air network is extensive, the air cargo

business has been limited, with no dedicated freighter services. Transportation of goods over land is largely dependent on trucks operated by cartels, which have rendered transport costs to be some of the highest in the region, and have also affected the quality of transport infrastructure.

As observed in all LDCs surveyed by UNCTAD in the framework of Rapid e-Trade Readiness Assessments thus far—Bhutan, Cambodia, and Samoa—two (2) common bottlenecks also affect Nepali logistics.

First, the lack of a reliable physical addressing system, both in the Kathmandu Valley and beyond, remains a key logistics bottleneck. Delivery of goods in a city and country without street addresses creates a problem. To overcome these challenges, several providers have developed innovative GPS-based solutions, which involve reference to landmarks or the use of collection/pick-up points in delineated delivery zones. Second, while most e-commerce packages are small in volume and weight, there is no dedicated solution for Micro, Small and Medium Enterprises (MSMEs), for example in the handicraft sector, to export small individual items. An exporter cannot economically post small items internationally – it does not make economic sense to use

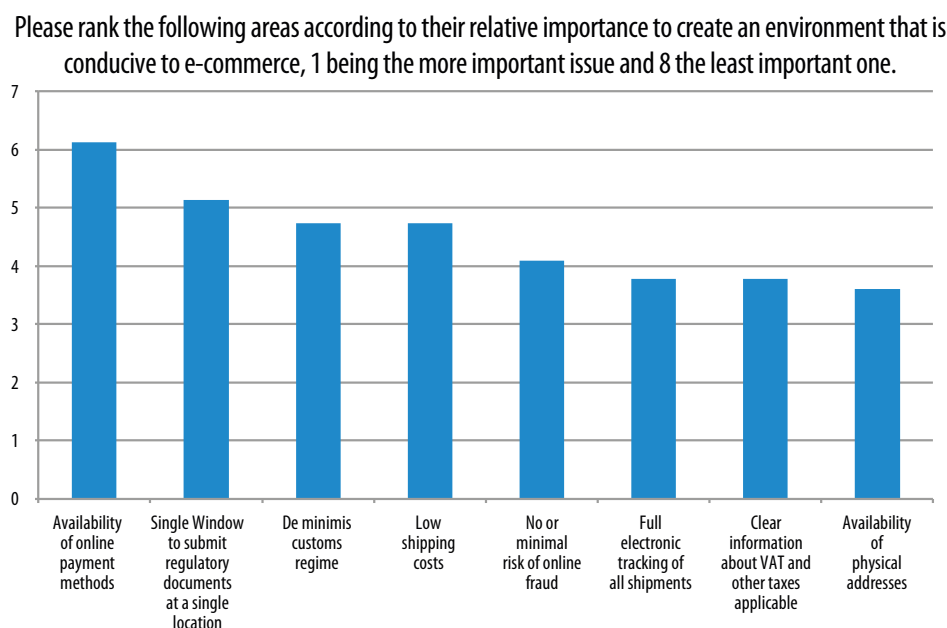
Table VI: Comparative Analysis of the Quality of Transport Infrastructure of Nepal

Indicators	Rank	Rank	Rank	Rank
	Nepal	Bhutan	Bangladesh	India
Quality of roads	118	67	105	55
Quality of airport infrastructure	133	84	115	61
Quality of port infrastructure	135	133	85	47
Quality of overall infrastructure	117	54	118	46

Source: World Economic Forum, *The Global Competitiveness Report 2014-2015*



Figure 5: Trade Logistics and Trade Facilitation Solutions



Source: UNCTAD

international couriers for small items - and such a service is not offered yet by the Nepalese Postal Service.

Limited quality and reliability of the Nepal post services is a major concern. In the 2017 UNCTAD B2C E-commerce index, Nepal's postal reliability score is 52 out of 100. The Nepal Postal Services Department has been negatively affected by digital advancements – reliance on e-mails and increased dependence on advanced technologies in mobile phones. These have severely restricted their income stream from both letter delivery and telephone landlines, resulting in a lack of investment over a period of years. Consequently, the Postal Service is currently unable to offer suitable e-commerce logistics services.

Given the challenges cited above, the private sector has developed innovative delivery and logistics solutions, generally bundling several services into one to add value. For instance, third party logistic service providers that provide logistics services to Nepali e-commerce businesses have emerged. Since almost all e-commerce transactions operate on a cash-on-delivery basis, collecting cash and managing it are handled by logistics providers.

Logistics/courier service providers include international couriers (e.g. DHL, UPS and TNT) and a significant number of domestic Nepalese firms that

cover the whole of Nepal, including remote areas. However, it would appear that domestic courier services have not fully integrated technology into their delivery services.

In the long run, it is envisaged that the Nepal Postal Services could be made more efficient and become a key player in e-commerce delivery nationwide. The Postal Services, a valuable national resource with good networks and strong physical presence in all the districts of Nepal, could be used in e-commerce delivery system. As one respondent to the UNCTAD survey indicated, "Just because a service cannot reach 100 per cent of the population doesn't mean that its potential should be ignored; instead, consideration should be given to adopting a dynamic, "launch with what you have, and seek to grow" approach."⁹ Other services (e.g. handling COD transactions) could potentially be carried out by the Postal Services.

b. At the regulatory level

In spite of the introduction of UNCTAD ASYCUDA in Nepal, customs clearance remains a key bottleneck affecting Nepal's trade competitiveness (Figure 5 above). Most respondents involved in international trade cited customs clearance as their main difficulty. They often described the customs laws in Nepal as "convoluted

⁹ UNCTAD eTrade Readiness Assessment online survey questionnaires



Figure 6: Nepal Trade Facilitation Indicators, 2016



Source: Trade Facilitation Indicators, OECD, 2016

and confusing”. At present, there are no regulations in Nepal that govern cross-border e-commerce, while more than 60 per cent of Nepal foreign trade is with India. The potential benefits of e-commerce cannot be realized unless the Government and businesses exert effort to create a strong foundation for e-commerce involving Indian counterparts. The implementation of the new framework under BBIN Motor Vehicle Agreement (MVA) is expected to enhance and ease cross-border trade¹⁰.

¹⁰ Source: Confederation of Nepalese Industry (CNI)

In this context, it can be inferred that significant progress in improving customs procedures has been made and that Nepal has a well-designed plan for continued customs reform helped by the introduction and recent upgrade of the ASYCUDA platform. Priorities are well-identified and understood; thus, the focus is primarily on further implementation of relevant reforms.

The Fifth Customs Reform and Modernization Strategic and Action Plan (CRMSAP) 2017-2021 includes several actions geared towards improving customs procedures:

Table VII: Trading across borders in Nepal and in other regions

Indicator	Nepal	South Asia	OECD High Income
Border compliance			
Time to export (hours)	56	59	12
Cost to export (USD)	288	376	150
Time to import (hours)	61	116	9
Cost to import (USD)	190	645	115
Documentary compliance			
Time to export (hours)	19	78	3
Cost to export (USD)	85	183	36
Time to import (hours)	48	1106	4
Cost to import (USD)	80	348	26

Source: Doing Business in Nepal 2016 Report (“Trading Across Borders” Category)

Table VIII: Nepal Enhanced Customs Automation and Data Management Priorities

Strategy 3: Enhanced Customs Automation and Data Management

- 3.1 Improve the Nepal Customs Automation System (NECAS)
 - 3.1.1 Assess and extend NECAS functionality to include expedited shipment, pre-arrival processing, digital signature, e-payment, selectivity module, performance module. 12
 - 3.1.2 Update/adjust the path for expedited shipment, pre-arrival processing, digital signature, e-payment, selectivity module, performance module relating to 3.1.1.
 - 3.1.5 Develop mobile application for NECAS functionalities.

Source: Fifth Customs Reform and Modernization Strategic and Action Plan (CRMSAP) 2017-2021, Department of Customs



4. PAYMENT SOLUTIONS ¹¹

The Nepalese e-payment ecosystem has been singled out - both in the online survey and subsequent interviews - as the most important barrier slowing the development of e-commerce.

On the one hand, international e-commerce is constrained by payment restrictions, making it very challenging to conduct international trade operations through e-commerce. On the other hand, there are very few transactions for domestic trade (apart from food and retail delivery services) that originate within Nepal. Nepalese overseas buying goods for deliveries into the country, so-called “remittances in kind”, characterizes “domestic” transactions. Selling of services is almost non-existent. Consequently, even domestic e-commerce includes international payment transactions in majority of cases.

According to recent research by the online marketplace Kaymu¹², approximately 85 per cent of e-commerce users prefer COD as their payment method. Digital payment gateways such as eSewa and IME pay

(see below), are the second most popular payment methods with 13 per cent of e-commerce users opting for them. Debit, credit cards are used by only 2 per cent of e-commerce users.

a. Nepalese e-commerce payments

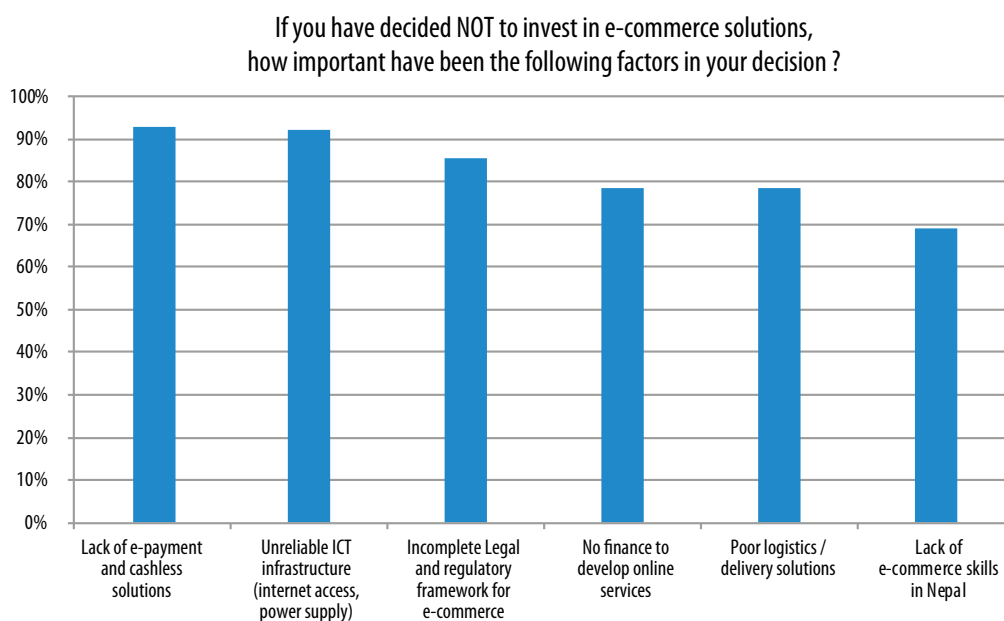
Nepal’s financial sector is diverse and active with, at the time of writing, 28 commercial banks, 54 development banks, 33 finance companies, and 50 micro-credit development banks. There are five large commercial banks, each of which is a full Visa or Mastercard member and each with commercial relationships with a subset of the smaller banks. Each member has a group of smaller banks associated with it, as “scheme associates”, which access the international payment scheme through the member.

As mentioned above, 85 per cent of e-commerce payments are COD and 10 per cent are made through payment gateways. However, a range of alternative non-bank payment mechanisms that support e-commerce transactions are beginning to emerge. The most prominent is eSewa, which offers a mobile wallet that can be linked to accounts at a wide range of banks and supports both face-to-face and online payments at an increasing range of merchants and payees. The eSewa customers can also load or withdraw cash at an eSewa agent location.

¹¹ Information and data mentioned in this section were provided by the Nepal Economic Forum (NEF) and the Economic Policy Incubator (Nepal)

¹² <http://www.kaymu.com.np/research/>

Figure 7: Key factors preventing investments in e-commerce



Source: UNCTAD



Another provider, IME pay, is a mobile money service offered by International Money Express (IME) that can be linked to accounts at a range of banks and supports both face-to-face (offline) and remote (online, e-commerce) payments at a range of merchants and billers. Customers can also load or withdraw cash at an IME pay agent location.

More recently, Prabhu Bank launched a range of different cards under the RuPaiya brand (<http://www.prabhutech.net/#>). These include a prepaid card, which is intended for bill payments, domestic e-commerce and general retail purchases.

b. Factors affecting adoption of e-payment

Restrictions to the use of e-payment in Nepal identified during the study are three-fold:

(1) Cultural, behavioural and cash flow factors:

- ✓ “Remittance in kind”: Most international purchases (export) are made by overseas Nepalis offering gifts to relatives living in Nepal, usually for major religious ceremonies; this is a recurrent feature in LDC markets. In this scenario, ecommerce websites are mostly based outside Nepal where credit card verification services are available. Credit card transfers and transfers from e-banking websites are accepted for payments on these websites.
- ✓ Prohibitive costs in the use or purchase of technology and online services: the costs of renting/buying the Point of Sale (POS) device and card transaction charges (between 1.75 and 3 per cent) are still prohibitive for MSMEs, which do not always assess the costs and risks associated with facilitating and handling transactions that entail or involve cash.
- ✓ Insufficient funds to facilitate e-commerce related transactions: to protect online consumers against fraud, merchants must be able to fund a substantial charge-back deposit, or have sufficient funds on hand to operate for 30 days or more without settlement of the e-commerce-related payments received. This is next to impossible for most MSMEs with business bank accounts.
- ✓ Lack of trust and confidence in the electronic system: people are still afraid of using electronic

payments. This is compounded by the unreliable power supply and Internet in Nepal.

- ✓ Reliance on face-to-face retail, which is readily available everywhere in Kathmandu, add to the fact that people with time on their hands prefer to purchase goods in physical stores.
- ✓ Merchants’ preferred mode of payment limits the appreciation of e-payments: Because merchants are not inclined to use electronic means of payment, the consequence is that customers will not appreciate its value.

(2) Tax/registration factors:

- ✓ Most Nepali MSMEs are not large enough to register with the MoC as businesses. Instead, they are registered and recognized as micro merchants with their local authorities (ward). These micro merchants are numerous and represent a high proportion of daily business transactions. Because they are not formally registered, these micro merchants cannot open a business bank account; without this, they are unable to set up alternative payment mechanisms with a bank/financial institution.
- ✓ Moving to e-commerce and e-payments makes it harder for companies to evade paying taxes (if there is no record of a transaction, either electronic or paper-based, then the transaction cannot be used as the basis for taxation). Most MSMEs indicated that there was little incentive for them to enter the formal sector and therefore pay taxes. Similarly, local MSME logistics providers also prefer COD payment methods, which provides an avenue for tax evasion.
- ✓ Sales made through social media and messaging applications are popular in Nepal. Such platforms represent an informal and unregulated market.

(3) Regulatory factors

- ✓ Control of foreign capital and foreign currency flows: foreign investment controls, which seek to preserve the autonomy of Nepali businesses and other assets by restricting the inward flow of funds, hamper exports. Similarly, because of its very significant trade deficit, foreign exchange is regulated and is, therefore, not easily available. As foreign currencies are not easily



available, buyers cannot purchase goods online on foreign sites and sellers cannot receive payments in USD. E-commerce merchants only cater to the domestic market as a consequence. Nepalis with no dollar accounts cannot make payments in foreign currency.¹³ This affects exporters, who are then unable to receive payments. It affects imports as well, if there are no US Dollars available.

- ✓ Some regulations related to the functioning of the Nepalese banking sector have proven controversial with the Financial Action Task Force (FATF)¹⁴, which calls for stronger controls and reform measures by Nepal Rastra Bank. It is particularly the case for Nepali ID cards, which have been paper-based and prone to fraud (see more in the section on “Access to financing”). This may have repercussions on the regional and international credibility of Nepalese banks and the electronic payment means they could offer, as well as on the premium they would have to pay to access international payment schemes such as Visa, Mastercard, JCB, China UnionPay, and the like.

c. Recent financial and mobile money reforms

NRB has been at the forefront of reforms to accelerate the adoption of e-payment. A strategic plan to develop the country’s National Payment System (NPS) has been proposed. This system will allow direct fund transfers between financial institutions, facilitating small value, large volume digital transactions. It will also establish a dedicated Payment and Settlement Department to oversee the payments market.

In 2016, two milestones were reached to create a more secure mobile payment system for merchants.

¹³ In 2014, Nepal Rastra Bank (NRB) started allowing Nepalis with US dollar accounts to purchase goods online using debit/ credit cards, with a monthly cap.

¹⁴ The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 by the Ministers of its Member jurisdictions. FATF’s objectives are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system. Nepal is a member of the Asia/Pacific Group on Money Laundering (APGML), the regional body responsible for conducting Mutual Evaluations of national compliance with FATF Recommendations.

First, the Nepal Telecommunications Authority issued a Memorandum of Understanding (MoU) with the NRB for facilitating mobile financial services, including:

- ✓ Special Guidelines for Mobile Network Operator (MNO) and Payment System Operator (PSO)
- ✓ Special Guidelines for Mobile Financial Services (MFS) Platform in Relation to Mobile Financial Services and;
- ✓ Working Procedures Related to Mobile Financial Services.

It is understood that NTA will be responsible for the supervision of the technical aspects of mobile services, while NRB will retain responsibility for matters pertaining to banking. Part of the MoU indicates that NRB will remain as the principal regulator for mobile financial services.

Second, in line with the views of survey respondents shown in Figure 8, NRB has been moving towards issuing licences to more Financial Service Providers (FSPs) and Payment Service Providers (PSPs), allowing them to offer e-payment services to the public. As defined by NRB, Payment Service Providers (PSPs) are institutions that provide payment activities through electronic means, that carry out domestic money transfer business, and that have been established with the objective of paying bills of both goods and services. PSPs are required to have agreements with banks and financial institutions licensed by NRB.

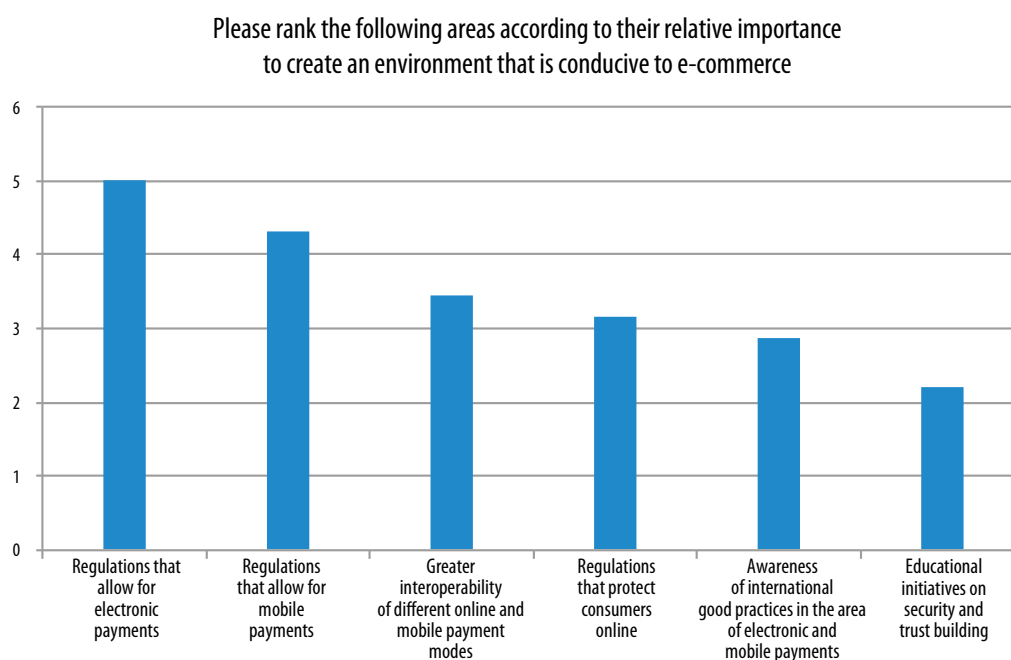
NRB opened the PSP licensing application system in August 2016 and instructed all companies providing payment-related services to apply for the licence¹⁵. According to the NRB¹⁶, over 67 companies applied for the licence by the given deadline. As of June 2017, the NRB has issued licences to three companies: eSewa, IME, and Prabhu Technology. By bringing mobile financial service providers under their jurisdiction, the central bank will be able to regulate, monitor and supervise transactions, making the system more secure.

¹⁵ See https://nrb.org.np/psd/files/Licensing_Policy_in_English-2016.pdf

¹⁶ The Licensing Policy for Institution/Mechanism Operating Payment Related Activities 2016 laid down the legal requirements for institutions to register as Payment Service Providers or Payment Service Operators.



Figure 8: E-payment regulation priorities



Source: UNCTAD

5. LEGAL AND REGULATORY FRAMEWORKS

At present, the e-commerce legal and regulatory readiness of Nepal is constrained by two separate challenges:

- a. The current legal framework is outdated, with most relevant laws and acts being more than 10 years old.**

UNCTAD Cyberlaw Tracker lists Nepal as having e-commerce related legislation in three (3) areas:

- ✓ Electronic Transactions
- ✓ Privacy and Data Protection
- ✓ Cybercrime

At the time of this assessment, there was no consumer protection law or act in place.

In 2008, Nepal enacted an Electronic Transaction Act (ETA), which covers both electronic transactions and cybercrimes in one regulation. This replaced the previous Electronic and Transaction and Digital Signature Act of 2004. The ETA encompasses a wide range of legal issues including intellectual property, privacy, freedom of expression online and jurisdiction. Its aim is to protect users online against cybercrime. Though the law exists, it has not been updated. In addition, a lack of proper

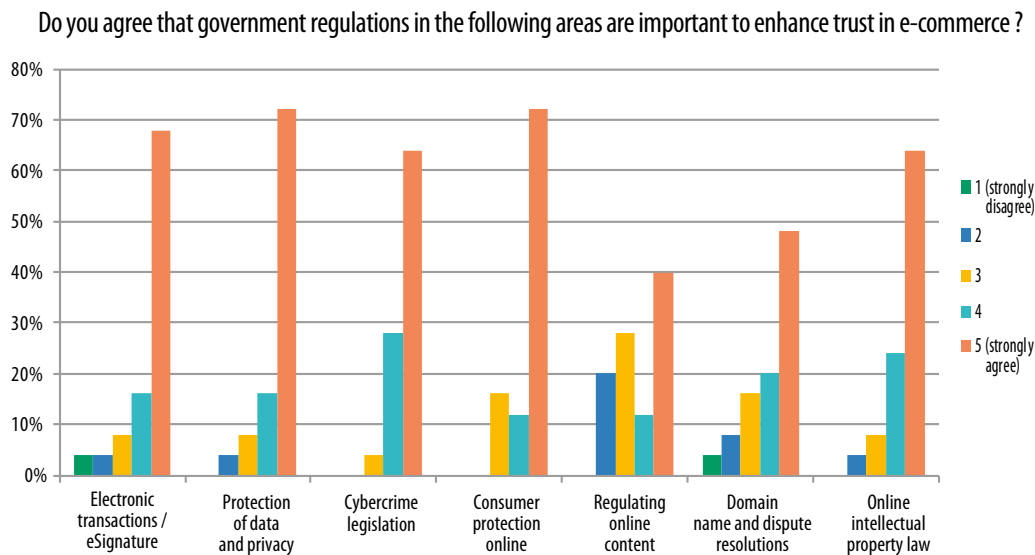
monitoring (and means to monitor its use) has reduced its impact, while Internet dynamics have changed drastically since 2008. Cybercrimes are on a rise in Nepal, with Nepal Police reporting 39 cases in 2015, a 105 per cent increase from the year 2014.

The Right to Information (RTI) Act came into force in 2007. In 2009, the Right to Information Rules were adopted, detailing appeal procedures before the National Information Commission and regulating its competencies, structure and functioning. The purpose of the RTI Act is to make the functions of the state open, transparent, responsible and accountable to citizens in accordance with the democratic system.

The Nepalese Consumer Protection Act was promulgated in 1998 and is still valid today. It can be reasonably said that, after 20 years, the law is no longer in line with international standards: for instance, it does not cover online sales (Figure 9). At the time of its passing, the Consumer Protection Act was a comprehensive legislation to ensure consumer rights. This Act has established a different kind of state authority for the settlement of consumers' disputes and adopted Consumer Protection Rules and Guidelines. However, enforcement of the legislation has been poor. Interviews with regulators indicate that there are other laws besides the Consumer Protection Act to



Figure 9: Priority regulations for e-commerce development



Source: UNCTAD

uphold consumer rights. But, these are scattered and are often perceived as inconsistent and contradictory with each other. There was broad consensus among survey respondents that the Consumer Protection Act should be amended to include complex aspects of e-commerce and online consumer protection.

b. Multiple ministries are involved in e-commerce, but a common platform for coordination has not been created.

In addition to the above institutional arrangements, business-related aspects of e-commerce are coordinated by other ministries. Industries are handled by Ministry of Industry, trade is handled by MoC, and technology falls under Ministry of Science, Technology and Environment.

It is clear from the points above that a supportive legal framework is required to create trust in e-commerce. There is a strong need to formulate forward-looking laws in various legal areas to increase users' confidence, starting with an update of existing laws that would promote secure electronic transactions, consumer protection, privacy and data protection. Review of the pertinence of existing laws should also consider taxation aspects: the ambiguous status of e-commerce as a subset of retail trade has created confusion with regards to tax imposed on sales. Taxation issues have been blurred and double taxation cannot be ruled out.

Box 1: Institutional Arrangements for ICT regulation

The Ministry of Information and Communication (MoIC) has the mandate to develop and support ICT sector activities at the policy level. Under the MoIC, other administrative bodies support the ICT sector at the regulatory level, specifically, the Nepal Telecommunications Authority (NTA) serves as the sector's economic and technical regulator.

Policy Level

Ministry of Information and Communication

Ministry of Science, Technology and Environment

Regulatory and Implementation Level

Nepal Telecommunication Authority (regulator with semi-judicial authority)

Department of Information Technology

Controller of Certification Authority

Advisory and consultative bodies

High Level Commission for Information Technology

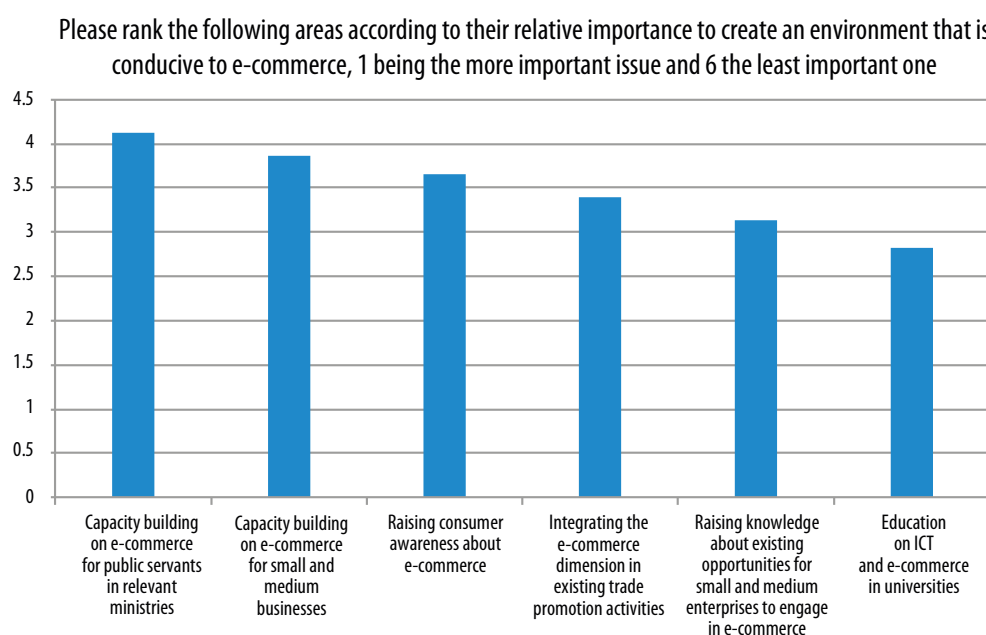
National Information Technology Center

Source: NICTP 2015, MoIC

6. E-COMMERCE SKILLS DEVELOPMENT

The Nepal population is relatively young, with almost a third of the population aged between 10 and 24 years old. This generation is IT-savvy and very comfortable with using mobile phones for a range of applications. It is, for instance, the main target market of social media



Figure 10: Capacity-building priorities for e-commerce development

Source: UNCTAD

platforms, such as Facebook and Instagram and messaging applications such as Viber and WhatsApp, that are increasingly being used to sell goods and services. The same young people are more comfortable using electronic platforms for business transactions.

The situation of merchants – especially MSMEs – and Government officials, is less than exceptional. As the online survey shows, most respondents indicated that capacity-building efforts should be primarily targeted towards civil servants in relevant ministries, followed by MSMEs (Figure 10 below). The interviews conducted confirmed this trend. There are important knowledge and skills gaps among civil servants on the concept of e-commerce, its different applications, and methods of e-commerce payment. There is persisting confusion between e-government (providing public services using ICT means) and e-commerce (the act of ordering, paying on line for goods and services).

The ICT market in Nepal is perceived as innovative and booming, with new apps in Nepali and new market platforms appearing on a monthly basis (see Table V for most prominent ones). This underscores the need for the Government to prioritize its development in light of the exodus of workers migrating to other countries. Better working conditions at home could attract them back to the country after having acquired skills and experience abroad. This can

assist in human capital formation contributing to Nepal's development.

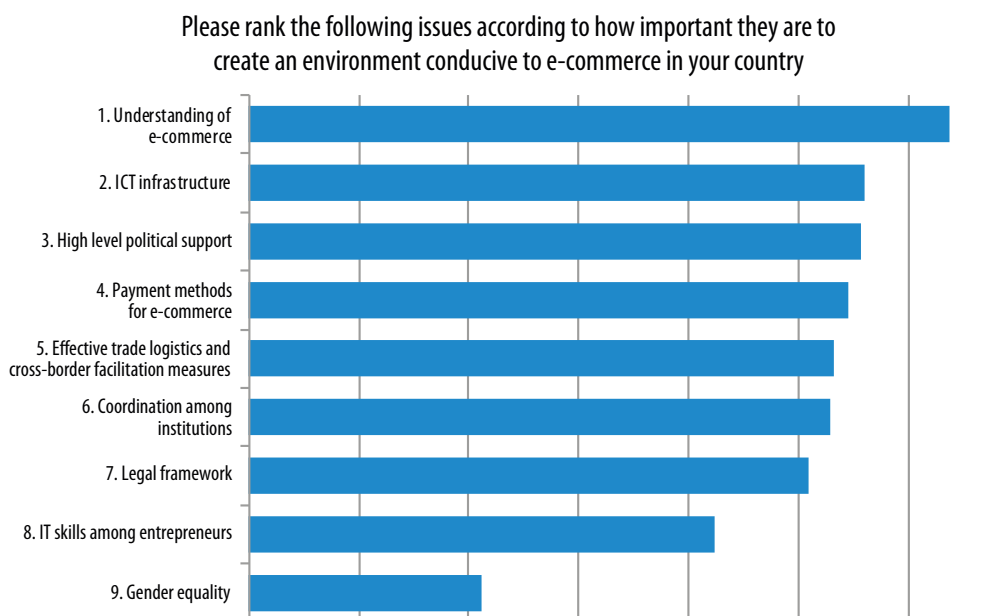
E-commerce has a potential for job creation, both in the urban and rural areas of Nepal. It requires a diverse array of skill sets ranging from content marketing to data analysis and programming. E-commerce could create jobs in various sectors including logistics, warehousing and technology. There is significant demand for skilled workers among ICT firms and a deepening skill mismatch. While it is estimated that Nepal produces around 5,500 IT¹⁷ graduates per year, many of them lack expertise in specialized areas and are not immediately employable. Kathmandu Valley hosts a very high number of public and private institutions offering management courses, but according of the survey, very few management graduates have the skills required to enter the e-commerce markets immediately. Instead, the current e-commerce business model is driven by IT-savvy youth creating “market platforms” out of social media networks (e.g. “Facebook” and “Instagram” shops).

As shown in Figure 11, access to IT skills is not considered a top priority to accelerate adoption of e-commerce in Nepal, versus the need for Government officials and merchants alike to understand e-commerce.

¹⁷ Source: NTIS 2016, Ministry of Commerce



Figure 11: Priority areas for e-commerce development



Source: UNCTAD

Support to skills development

The Government has taken measures to facilitate the development of IT-literate and IT-ready youth:

- ✓ It has developed a Master Plan for ICT in Education (2013-17) to facilitate digitalization of the country's education system. This makes ICT-enabled education services an attractive avenue for investment for tertiary education and training providers.
- ✓ The Ministry of Industry has also established an IT park to facilitate the development and promotion of information technology and services in the country. The facility was established with the purpose of supporting the development of software, promoting IT-based businesses, and providing investment promotion services in related fields. The park can accommodate 50 computer engineers to work within the periphery.
- ✓ Special priority has been given to IT and BPO services due to their export potential. The Nepal Trade Integration Strategy (NTIS) 2016 identifies Information Technology Enabled Services (ITES) and Business Process Outsourcing (BPO) as two of the five priority export potential services. The export revenue from ITES- BPO in 2013 was

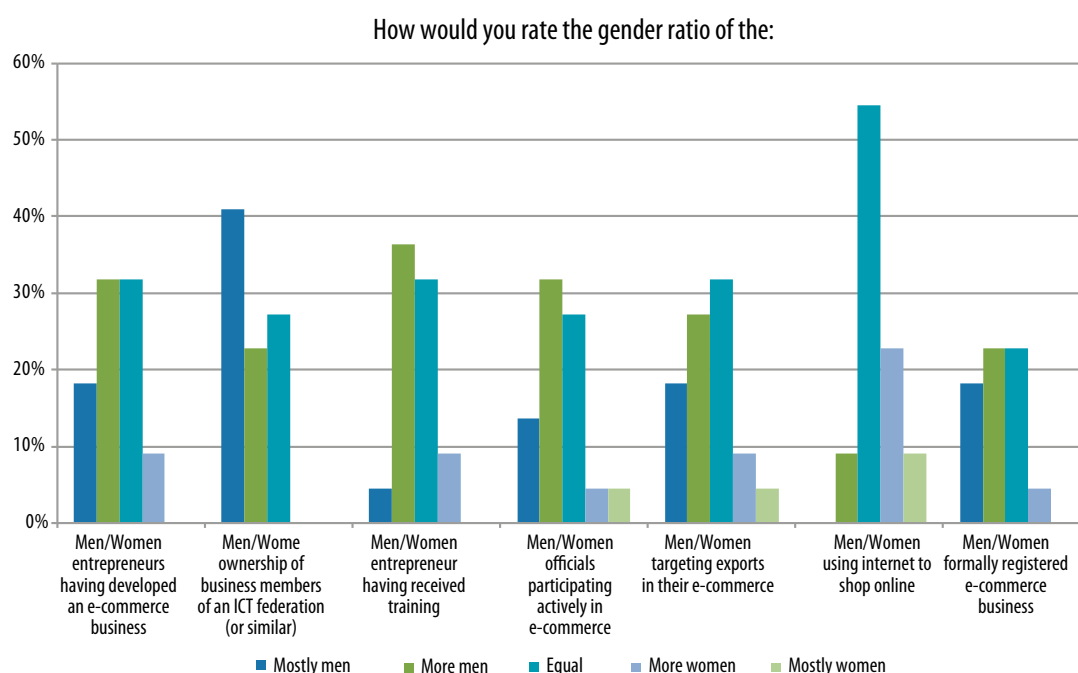
approximately USD 357,290. Owing to its large, young, skilled, and low-wage English-speaking labour force, the potential for development of BPO services in Nepal is considerable. It is also expected that, with labour costs increasing in India, Nepal may become more attractive as an IT investment destination. In this regard, ICT-related services are open to FDI. Up to 80 per cent equity stakes are allowed in telecommunications-related businesses, whereas for IT and ITES, 100 per cent FDI is permitted.

In addition, special attention should be given to the promotion of women and women-owned businesses in the development of the ICT, ITES and BPO sectors. The number of women-owned businesses has been growing over the past decade. However, evidence shows that most of these businesses do not scale and integrate technology, as shown in Figure 12.

Female literacy rates are much lower than for men. Women's enrolment in science, technology and related fields, including engineering, is also very low relative to other fields such as education, humanities, and management. Further, women have fewer opportunities for graduate education. This has a flow-on impact on the number of women working in technology and its associated sectors. Women



Figure 12: Priority areas for e-commerce development



Source: UNCTAD

represent only between 5 per cent and 10 per cent of people in IT in Nepal¹⁸.

Interviews indicated that IT-related entrepreneurship has traditionally been seen as a male domain and the idea of women taking up entrepreneurial activities has not always been considered seriously. Various efforts are underway to boost women’s participation in business such as those developed by women-led associations like the the Federation of Women Entrepreneurs Association of Nepal (FWEAN), South Asia Women’s Network (SWAN) and the SAARC Chamber Women Entrepreneurs Council (SCWEC). Through such initiatives, women are in the position to get guidance in all phases of enterprise development - from training on leadership to new forms of financing. Similarly, the Government, through the Ministry of Information and Communication and the NTA, coordinated with Equal Access International Nepal, and with support from the International Telecommunication Union (ITU) to accelerate IT education for women. Organizations such as the Society for Information Communication Technology (SICT) Nepal are also working with the Government to enhance ICT skills in women.

¹⁸ See: “Women in Science and Technology in Asia” The Association of Academies and Societies of Sciences in Asia (AASSA), 2016

7. ACCESS TO FINANCING

Over the past 20 years, Nepal’s financial sector has broadened as the number and type of financial intermediaries have expanded; however, access to financial services for individual entrepreneurs and firms remains limited. Overall financial inclusion is a significant issue in Nepal. The reliance on informal financial services has significant implications for the adoption of electronic payments, and therefore, in stimulating the e-commerce sector.

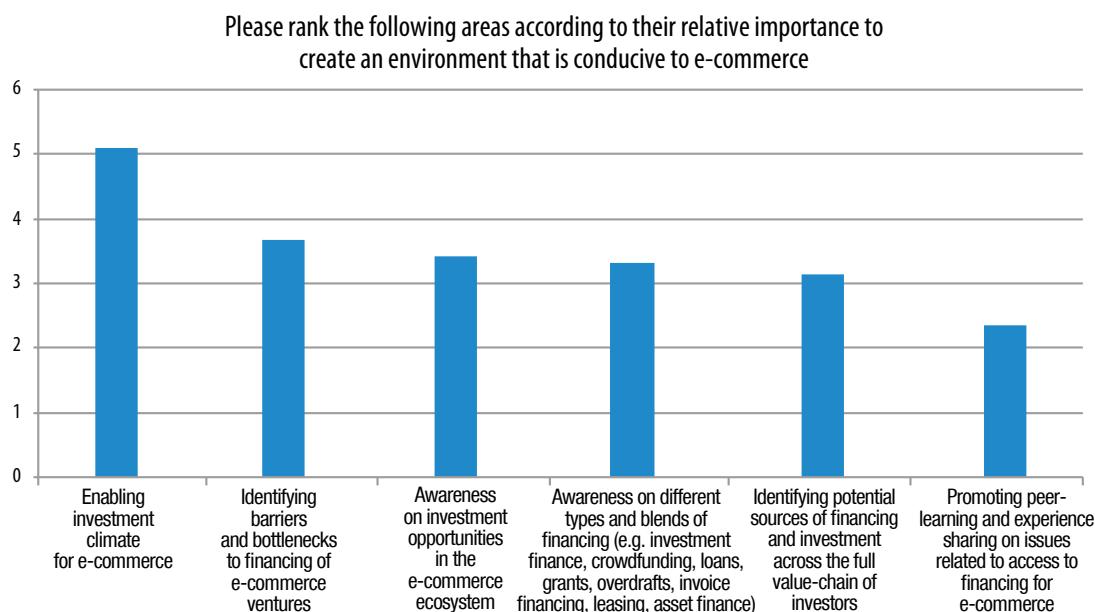
According to the IFC, small and medium enterprises (SMEs) are vital to Nepal’s economy. The country’s 111,442 SMEs employ 1.75 million and account for 22 per cent of the gross domestic product. Only 39 per cent of Nepal’s SMEs have access to finance¹⁹. Yet, access to finance in Nepal, as measured by the proportion of firms that have a loan or a bank account, is one of the lowest among comparable countries.

The reasons for limited access are complex, but include large unbanked population (even among MSMEs), weak financial infrastructure, inability of

¹⁹ <https://ifcextapps.ifc.org/ifcext/pressroom/ifcpressroom.nsf/0/4D86DE099DFC6CF28525813D00362908>



Figure 13: Access to finance capacity development priorities



Source: UNCTAD

banks to provide profitable lending to MSMEs at acceptable costs, eligibility criteria for loans, and lack of appropriate financial products.

a. Access to finance for individual entrepreneurs

According to the Nepal Financial Inclusion Roadmap, 2017–2022²⁰, although 61 per cent of the adult population have access to formal financial services, only 40 per cent are formally banked; the remaining 21 per cent are using what are described as “other formal” products. Of the remaining unbanked population, 21 per cent of adults use only informal financial services, and 18 per cent do not use financial services at all, whether formal or informal. When the overlaps in use of financial channels are considered, informal channels emerge as the most popular, with 57 per cent of the adult population reporting the use of financial services through informal channels.

Access to financing in Nepal is still at a nascent stage. Experience from other countries could be studied and adapted to fit the Nepali context. Two important barriers preventing better access to financing for individual entrepreneurs in the e-commerce industry - although these do not apply to e-commerce businesses only - were mentioned recurrently in the interviews.

²⁰ Nepal Financial Inclusion Roadmap, 2017–2022, Cenfri, Finmark Trust and UNCDF, 2016

- ✓ Registration for a financial service in Nepal is currently based on the Nepal Citizenship Card, a paper-based card that includes a photograph and two thumbprints. The low-quality documents are prone to abuse, such as opening bank accounts in several institutions with different details. This issue has been slowly addressed by NRB, which requires banks to include digital identity information in their customers’ data.
- ✓ Credit information is of poor quality. Credit information services are key to economic development. If these are not available or are inaccurate or incomplete, lending institutions are unable to rely on the information to make lending decisions. They are therefore less likely to make finance available, due to (perceived) increased or high risks. Banks are partly to blame for this deficiency as they are often reluctant to provide detailed information about loans and their customers.

Other bottlenecks mentioned by respondents include regulatory impediments and usage barriers, including stringent collateral requirements, high cost of usage (due to branches being in distant locations) and a generic product offering/consumer need mismatch among others (Figure 13).

NRB has taken various initiatives such as requiring banks to open branches in rural areas prior to establishment of offices in urban areas, and providing interest-free loans/



Box 2: Access to finance for the poor: the Sakchyam Programme

The Sakchyam – Access to Finance for the Poor Programme works in partnership with financial institutions, especially commercial banks, and facilitates easy access to innovative new financial products and services to SMEs. The programme provides technical support to financial institutions in rolling out innovative financial products and services (savings, credit, payment and insurance), and in the use of alternative delivery channels to increase the outreach of the financial service provided in far-flung areas. The programme also provides technical assistance to partner financial institutions to help them service the SME sector in a more focused and structured way. These interventions work towards ensuring improved SME finance as banks and other financial institutions provide tailored, suitable and better financial services to SMEs.

The programme is funded by the Department for International Development (DFID), to facilitate development of financial services for poor households and farmers in Nepal. The program aims to improve livelihoods in Nepal through creation of 88,000 sustainable new jobs or job equivalents and improved access to a range of financial products and services for households and at least 8,000 enterprises. The programme aims to:

1. Create a favorable regulatory and institutional environment for equity investment in small and medium enterprises.
2. Develop a Nepali challenge fund that co-invests with private sector institutions to help expand innovative financial services delivery to micro, small and medium enterprises.
3. Develop appropriate financial products for small farmers, more suitable to their cropping patterns and cash flows.
4. Stimulate economic activities in lagging regions by providing increased microfinance support and creating linkages between poor households and small enterprises.

Source: UKaid

refinancing to Banks and Financial Institutions (BFIs) that open branches in identified rural areas, but with limited success. Similarly, international financing institutions such as the IFC, interviewed for this survey, have created facilities to increase access to finance.

b. Access to finance for SMEs

While many efforts have been made by the government to support start-ups and MSMEs and in spite of the huge increment of BFIs in Nepal, business financing in Nepal is still done in a rather conventional way. MSMEs and start-ups widely use personal sources to fund their business in the seed phase, followed by friends and family. Because of the complexity of getting loans from Banking and Financial Institutions (BFI), they are not considered as a main source of funding for MSMEs. Options provided by business angels and venture capitals are not widely known (see Table IX below), especially outside Kathmandu. Similarly, MSMEs do not consider business associations as possible supporters for access to finance. Such organizations are viewed by respondents as associations for promotional and informational activities rather than possible platforms to streamline acquisition of fund for start-ups and MSMEs.

As a result, “personal” sources are the preferred ways of accessing finance for MSMEs. However, such sources are limited and cannot fulfil all the funding needs at different stages of business development. Once these sources have been exhausted, MSMEs would then turn to BFIs, but are faced with bottlenecks that are recurrent in LDCs in terms of complexity of procedures, document requirements and types of collateral requested.

According to the World Bank²¹, access to finance in Nepal, as measured by the proportion of firms that have a loan or a bank account, is one of the lowest among comparable countries in South Asia. Firms make little use of financial services: less than half of the enterprises have a checking or a savings account, only one out of three firms has a line of credit or a loan from a financial institution and one out of ten has an overdraft facility. Firms also make little use of loans from banks to finance their current expenditure or their investments because they usually resort to internal funds. Only two out of five firms with five or more employees have a line of credit or a loan from a financial institution. On average, Nepalese firms finance 82 per cent of their day-to-day working capital needs through internal funding and the rest through external financing, with services firms financing 83.4 per cent of their day-to-day needs through internal funding but only 8.2 per cent through bank loans.

Women entrepreneurs in Nepal have been facing problems as well with accessing finance. Women entrepreneurs suffer from inadequate financial resources and working capital. They are unable to afford external finance due to absence of tangible assets as security. Women have even less property and lower bank balances in their name. Women entrepreneurs fail due to lack of proper financing facilities. Issues related to access to finance are obstacles for which even capacity development does not significantly address. Some problems are structural in nature and beyond the control of women entrepreneurs.

²¹ Source: World Bank Enterprise Surveys, latest available year.



Other obstacles affecting the supply of financial services mentioned include stringent eligibility requirements, processing times, and high interest rates. All play a role in determining the extent to which firms can and will access financial services. Given the high degree of informality in Nepal, only a small proportion of the population and small businesses can produce the numerous documents required by BFI to grant loans.

Over the past five years, the number of business angels and venture capitalists have increased drastically in Nepal. Table IX below lists some of the more prominent venture capitalist active in the “impact investment” and “social investment” area in Nepal. Most participants met as part of the assessment were either not aware of their existence or believed that funds were only provided to medium-sized firms.

Table IX: Venture capitalist supporting SME development in Nepal

Name	Website
Lotus Holdings Pvt. Ltd	www.lotusholdings.com
Business Oxygen Pvt. Ltd.	www.bo2.com.np
M&S NEXT Venture Corp	www.mnsnext.com
Biruwa Ventures	www.biruwa.net
Gazaab Social Ventures	www.gazaab.org/
Dolma Foundation	www.dolmafoundation.org/

Source: various, compiled by the author

Finally, in recent years, start-up accelerators and incubators have also started to emerge in Nepal. These companies act as a platform for the new start-ups and provide them with opportunities that allow them to grow. While many young Nepali entrepreneurs have emerged, it can be quite difficult for them to develop those ideas into a profitable business. The ambitions of business incubators such as Rockstart and Biruwa Ventures are to strengthen the entrepreneur’s capabilities and vision about how to grow their business by giving entrepreneurs access to mentors, experts and investors. Other popular business accelerators include the incubator created by the Nepalese Young Entrepreneurs’ Forum (NYEF) in partnership with Centre for Creation of Economic Wealth (CCEW) and Idea Studio, launched jointly by UNICEF and the Kathmandu University School of Management (KUSOM).

To help BFIs to increase small business lending, the government should develop an enabling environment that makes small business lending safer, cheaper, and faster. Mixed approaches where businesses use different funding sources for different needs can be good alternatives to minimize the risks and costs associated with business developments in early stages. Business angels, venture capitalists and, to a lesser extent, business incubators can be crucial sources for those start-ups and MSMEs that do not fit in other lending source categories. These sources should be studied more intensely by MSMEs and business associations.

Box 3: SME access to finance in Nepal: BO2 Venture Capital

WLC Ventures, a subsidiary of WLC, manages Nepal’s first Equity Investment Fund Business Oxygen (BO2). In addition to providing financing, WLC Ventures supports investees to grow their business through change management, knowledge building, financial transparency, networking and mentoring.

BO2 is a private equity (SME Ventures) Impact Fund. BO2 makes equity investments in Nepal’s high-growth SMEs, helping them achieve their potential and create more jobs. The BO2 investment is part of IFC’s SME Ventures program for low-income countries where such funding is not available because of the risk profile and difficult operating conditions. It is jointly owned by IFC (80 per cent) and WLC (20 per cent). It can invest up to 49 per cent of total equity, with investments between USD 100K to 500K. No collateral is required and no interest needs to be paid. The funding is for four years with a harvest period of six months. It is not a grant nor subsidized funding.

How does BO2 scheme work?

BO2 helps entrepreneurs running Small and Medium Enterprises (SMEs) to scale up their operations by injecting equity and providing technical assistance. The SMEs need to have enterprise value and a track record before it can commence doing business with them.

Basic Qualification

Business should not be in the IFC’s exclusion list of industries.

Business should not have a negative history with any government authority.



SME Basic Criteria

Company must respect any two of the followings:

Company should have < 50 staff.

Annual turnover must be < USD 3 Million.

Company should have < USD 3 Million assets.

Operations

Business must be registered with the Company Registration Office as public or private limited company.

Preferably it should be in operation for at least two years; or it can be a new venture that is a part of an old business in operation for over two years.

Accounts

Preferably, the company should not have double books of accounts.

If you do then they should be able to convert to a single book; and

There should be a set of books showing actual data of previous years.

Loans

Preferably, the company shouldn't have bank loans; or

Loans should be repaid by the time of investment.

In some cases, B02 investment maybe used for loan repayment as long as other basic criteria are not contravened.

Source: IFC and WLC

CONCLUSION

The e-commerce industry in Nepal is at a nascent stage and represents an underexplored market. However, after years of slow development, the combination of rapid innovation and investment in the ICT sector and an overhaul of the financial sector have created the seeds for accelerated development of e-commerce in the country. There are several avenues of success for e-commerce ventures if it can take the necessary (hard) decisions proposed below.

Challenges still abound that need to be tackled in the coming months and years, combining public, private investment and technical assistance. As clearly identified in the survey and interviews, these should primarily target:

- ✓ ICT infrastructure and logistics bottlenecks (physical addressing, customs clearance efficiency, support services, reliable Internet access, even in remote areas). The development of Nepal's ICT infrastructure will provide tremendous opportunities for social and economic growth. Without it, e-commerce cannot be expected to grow and develop its full potential in Nepal.
- ✓ Somewhat outdated e-commerce legal framework needed to generate trust in electronic systems.

- ✓ Remove restrictions on electronic payments, both for imports and exports.
- ✓ Remove bottlenecks in FDI in the ICT sectors to create the necessary conditions for employment generation, including restrictions on capital flows for women. Services sectors like tourism, ITES and BPO are anticipated to benefit the most.
- ✓ Facilitate access to finance and innovative business development tools –incubators, business accelerators, venture capitalists for MSMEs and local investors in priority.

The Government of Nepal realizes the potential of e-commerce for economic development by accelerating the upgrade of the e-commerce legal and regulatory ecosystem. E-commerce can help reduce the cost of doing business, increase efficiency, expand domestic and external market access to locally produced goods and services, broaden business opportunities to MSMEs including women entrepreneurs, contribute to developing ICT in the country, and generate employment and self-employment opportunities for the increasing youth population. It needs to be encouraged in that direction.



THE WAY FORWARD: ACTION MATRIX

E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop a single shared vision for national e-commerce development in Nepal (for instance, through a National e-commerce strategy, or policy).	Recognition by all stakeholders of the importance of e-commerce for Nepal economic and trade development, focusing efforts on remaining gaps in the current e-commerce ecosystem.	High	MoC, UNCTAD
Formalize the role and functions of the Government task force on e-commerce, through a rationalization exercise aimed at identifying and reducing overlaps, duplications and gaps in government mandates, as well as improve the coordination between the various support institutions.	Overlaps, duplication and contradiction among government institutions strategies for e-commerce are reduced and up-to-date knowledge is shared among relevant stakeholders.	High	MoC, NPC
Ensure further synergies among ICT and e-commerce development reports through the appointment of a lead Government institution for e-commerce development.	Public and businesses are able to find up-to-date information about Government-led, e-Government and e-commerce friendly regulations and projects.	Medium	MoC, NPC
Attribute a proper status to ICT and e-commerce in line with the potential that the e-commerce "industry" brings for economic development, through formalization of e-commerce in business registration and for taxation purposes.	Specific economic incentives for trade and investments are created, generating more revenues from taxation and reducing regulatory loopholes.	Medium	MoC, MoI

ICT INFRASTRUCTURE AND SERVICES			
Indicative action	Expected outputs	Priority Level	Potential support by:
Adopt measures to stimulate investment in mobile data networks as more comprehensive geographic coverage would facilitate domestic e-commerce.	New segments of the population would have increased accessibility to the mobile Internet.	Medium	NTA, IBN, IFC, ADB
Assess current hosting capacities and likely development to ensure that secure, payments-grade hosting services are able to offer availability of power and connectivity.	Hosting capacities grow at par with increased traffic.	Medium	NTA
Promote ITES and BPO as source of services export diversification (in line with NTIS 2016 recommendations).	New sources of growth increase Nepal services export.	Medium	MoC, NRA, IBN
Ensure that the charges for the use of the new NTA fibre-optic backbone do not discourage the mobile operators from extending their networks.	Increased use of mobile Internet would lead to greater use in e-government services and mobile payments in areas outside Kathmandu Valley.	Low	NTA, ADB
Promote fair competition and consumer protection best practices in the mobile telephony sector.	FDI and national investments in the mobile telephony sector increase as a consequence of the confidence created by the level playing field.	Low	NTA, MoC



TRADE LOGISTICS AND TRADE FACILITATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Foster development of PPP between private sector couriers and Nepal Postal Services, to strengthen Nepal's logistics infrastructure.	Postal sector is revitalized, ensuring broader options for shipment of parcels outside Kathmandu Valley, reaching new segments of population.	High	MoPIT, Nepal Post
Accelerate implementation of the Fifth Customs Reform and Modernization Strategic and Action Plan and actions supporting introduction of paperless trade and TFA implementation.	Clearance of international e-commerce orders would be faster and at a reduced overall cost.	High	DoC, MoC, UNCTAD (ASYCUDA), UNESCAP
Develop Nepal's Postal Services to support small packets for international e-commerce, including the adoption of a self-declaration scheme for customs duties.	The international dispatch of packages weighing less than 50 grams (representing an important share of MSMEs export potential) become affordable and are dispatched faster.	Medium	MoIC, Nepal Post
Support the development of a physical addressing system and increase "findability".	Delivery time would be reduced, "findability" of customers increased/improved and coverage of deliveries both in and outside Kathmandu Valley would be broadened	Medium	Courier companies, B4ETD
Local logistics providers to bundle services offers to add value to e-commerce product deliveries.	Overall costs of delivering goods and collecting money in COD deliveries on behalf of merchants would be reduced, providing cheaper delivery options for customers.	Low	Private Sector Organization, Logistics Providers, B4ETD

PAYMENT SOLUTIONS			
Indicative action	Expected outputs	Priority Level	Potential support by:
Support the MSMEs' entry into international e-commerce by ensuring the availability of a PSP (existing or new) that can accept international card payments on their behalf.	Stimulate the international e-commerce sector, by taking away many of the regulatory, technical and financial barriers.	High	NRB, Banks, ICT Association of Nepal, MoF, MoC
Allow the PSPs to move into retail payments, both for domestic e-commerce and face-to-face retail.	Electronic payment mechanisms, as an alternative to the conventional banking infrastructure, are improved and more available.	Medium	NRB, MoC, B4ETD
Develop a card-based Nepali payment scheme.	Trust in a local payment system using local switch is increased.	Medium	NRB, Banks, B4ETD
Merchant confidence in accepting electronic payments is increased, through dedicated awareness raising programmes, moving from a cost approach to an investment approach, with a special focus on MSMEs.	The number and value of transactions is increased using electronic means of payments, reduction in COD; consequently, tax evasion more difficult.	Medium	NRB, Banks, NCCI, CNI, ICT Association of Nepal



LEGAL AND REGULATORY FRAMEWORK			
Indicative action	Expected outputs	Priority Level	Potential support by:
Update e-commerce related laws to include most recent e-commerce developments on electronic transactions, data protection and cybercrime.	Duplications, overlaps among legal texts and loopholes are removed to create a robust and secure e-commerce legal ecosystem.	High	MoC, MoI
Support NRB in their supervisory duties through the development of regulatory tools, and require their use by all bank and non-bank FSPs.	NRB uses modern regulatory tools that match the innovations seen in the fintech sector, easing its supervisory responsibilities.	High	NRB, Banks, PSPs
Facilitate ICT-ready MSMEs registration with MoC or relevant Government institutions.	Informal trade and possible tax evasions could be reduced, integrating more business players into formal economy.	High	NRB, MoC, ICT Association of Nepal, ADB, World Bank
Initial drafting of an e-commerce law for Nepal once the national e-commerce strategy has been designed.	The e-commerce law improves the confidence of e-commerce players (merchants, ICT firms, mobile telephony providers) and Government institutions, and provides a single vision for e-commerce development.	Medium	NRB, MoC
Accelerate development of an online consumer protection law or integrate it in a broader consumer protection law.	Increased confidence for e-commerce website among the population could lead to increases in online sales.	Medium	MoC, MoI, MoIC
Develop a strategy to address the issues around foreign investment controls and foreign exchange reserves to foster additional investments in the Nepali e-commerce sector.	Import and export volumes could be increased through online means.	Medium	NRB, MoF
Adopt and enforce cyber security standards across both domestic and international e-commerce service providers.	Confidence and trust for e-commerce users foster broader adoption of electronic payments could be increased.	Medium	MoC, MoICT

E-COMMERCE SKILLS DEVELOPMENT			
Indicative action	Expected outputs	Priority Level	Potential support by:
Support the upgrade of tertiary education provider's curricula to include marketable knowledge and skills and to reduce the current skills gaps	IT and ICT related curricula could gain popularity among IT-savvy youth.	High	MoE, MoIC, MoC
Assess the current mismatch between industry and universities regarding development of e-commerce platforms and electronic payment solutions.	Increased marketability of young IT graduates could reduce the IT brain drain to India.	Medium	MoE, MoIC, MoC, MoI, ICT Association of Nepal
Facilitate inclusion of women in entrepreneurship support programme.	Diversify sources of revenue for women in business.	Medium	WEAN, SCWEC, B4ETD
Develop awareness raising programme for e-commerce for merchants (focusing on e-commerce platform solutions, mobile and cashless payment solutions, and online consumer protection).	Increase confidence among merchants for e-commerce.	Medium	MoC, FNCCI, CNI, ICT Association of Nepal



ACCESS TO FINANCING			
Indicative action	Expected outputs	Priority Level	Potential support by:
Develop a financial sector-specific identity tool and attached services that uniquely identify all holders of bank/PSP accounts.	Increase confidence of FSP and PSP in credentials of potential customers leading to more loans being disbursed to MSMEs.	High	FSPs, NRB, NIDMC
Provide technical assistance and financial literacy training to firms (especially to SMEs) in order to enhance their capacity to develop and present bankable proposals, and provide support to SMEs to keep better accounts.	SMEs have the capacity to successfully apply for a loan and effectively utilize loans for the growth of their businesses.	High	FSPs, NRB
Design and implement partial risk guarantees and other financial products aimed at reducing the risk associated with existing collateral, and support the banking system in adopting better risk assessment measures (based more on cash flows rather than on fixed assets).	Reduce costs of processing small credits for FSPs.	Medium	FSPs, NRB
Accelerate measures to improve financial inclusion, especially for youth and women, by encouraging banks to develop products and allowing PSPs to offer innovative products and at the same time improve financial literacy and creditworthiness (e.g. training on proper bookkeeping) of loan seekers.	Diversify cashless solutions available to all segments of population, based on financial means.	Medium	NRB, GoN, ADB, PSPs
Increase awareness of incubators, business accelerators and venture capitalists among MSMEs, through business associations and targeted information campaigns.	Create diversified and innovative sources of funding for MSMEs and entrepreneurs with ICT and e-commerce ventures projects.	Medium	NRB, Business Associations, mainstream media
Encourage FSP to call in and biometrically register their existing banking customers, and give them a personal unique identifier.	Reduce the number of fake identities and persons holding multiple loans in different FSP.	Medium	FSP, NTA
Impose on banks and other financial institutions to provide complete lending information about their customers to CIB and other accredited credit information services. Have banks and other financial institutions incorporate credit information from CIB into their lending decisions.	Improve the effectiveness of Nepal's credit information services to bolster economic development through better targeted loans.	Medium	NRB, MoF, Banks, CIB



Annex I: Nepal Country Profile on etradeforall.org



COUNTRY PROFILE: NEPAL

Contact: info@etradeforall.org

GENERAL INFORMATION - 2015

Population 28.4 Millions	GDP 20 588 Millions current US\$	Merchandise trade 7 171 Millions current US\$
Internet users 5.0 Millions	GDP growth 2.8 %	Land area 143 350 km ²

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

E-COMMERCE ASSESSMENT - 2016

Rank in UNCTAD B2C E-commerce Index 118/137	Rank in ITU ICT Development Index 142/175	Rank in WEF Networked Readiness Index 118/139
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Source: UNCTAD, ITU and WEF (complete URL address in the General Notes) Note: 1 = Best

ICT INFRASTRUCTURE AND SERVICES - 2015

Internet users; 17.6

Active mobile broadband subscriptions; 21.1

Fixed broadband Internet tariffs, PPP \$/month

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

PAYMENTS - 2014

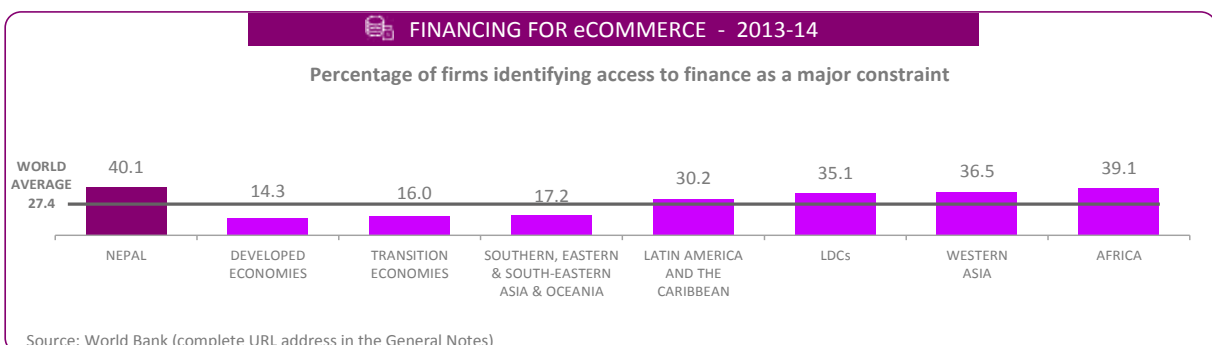
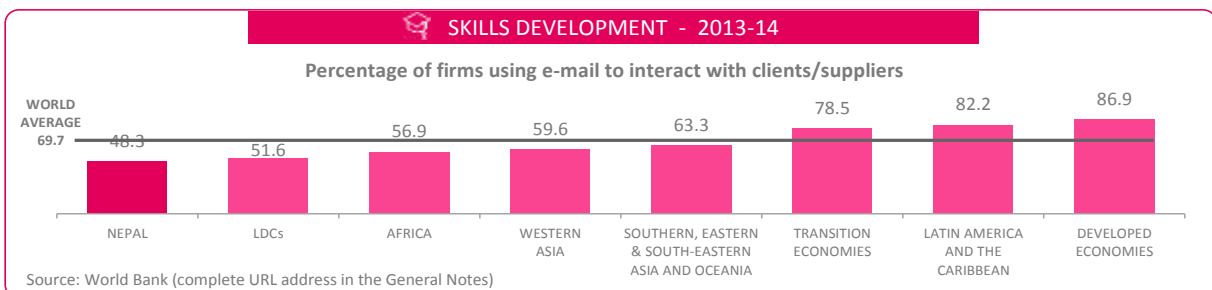
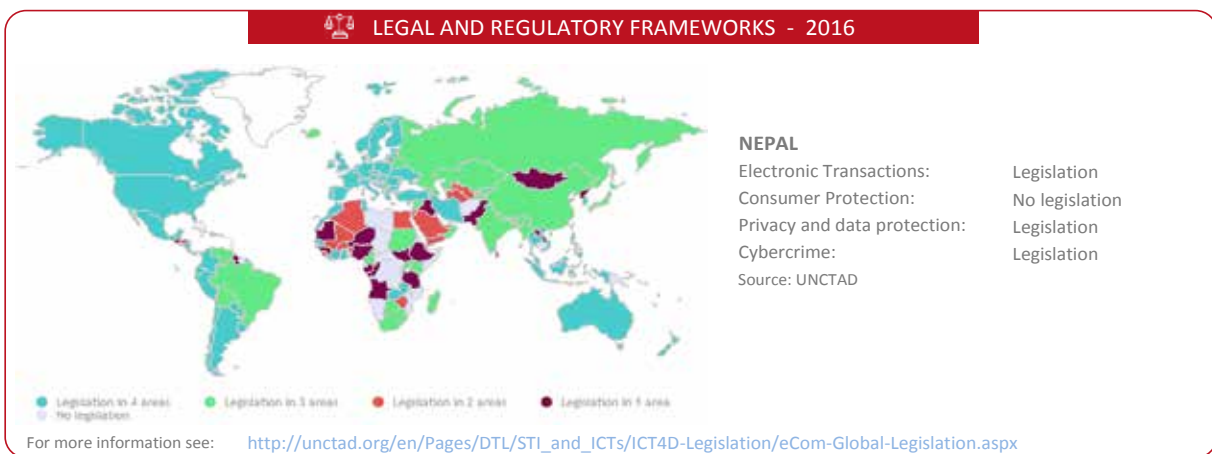
Debit card used in the past year	NEPAL; 2.6	SOUTHERN, EASTERN AND SOUTH-EASTERN ASIA & OCEANIA; 13.3	WORLD; 21.5
Credit card used in the past year	NEPAL; 0.1	SOUTHERN, EASTERN AND SOUTH-EASTERN ASIA & OCEANIA; 7.7	WORLD; 13.3
Used an account to make a transaction through a mobile phone	NEPAL; 0.5	SOUTHERN, EASTERN AND SOUTH-EASTERN ASIA & OCEANIA; 7.3	WORLD; 8.3

Per 100 inhabitants

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



COUNTRY PROFILE: NEPAL



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