



Lao People's Democratic Republic Rapid eTrade Readiness Assessment



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NOTE

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

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

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

The following symbols have been used in the tables:

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

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

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

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



PREFACE

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

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

As part of the initiative, demand-driven assessments are envisaged to provide a basic analysis of the current e-commerce situation in the countries concerned, and to identify opportunities and barriers. The resulting reports will serve as a valuable input to these countries' involvement in various discussions related to e-commerce and digital trade, such as in the context of the 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 Lao PDR Rapid eTrade Readiness Assessment is the seventh such assessment conducted by UNCTAD and the third for an ASEAN LDC after Cambodia (December 2016) and Myanmar (November 2017). With this report, UNCTAD has covered all three ASEAN LDCs and contribute to their effective participation in the ASEAN Work Programme on Electronic Commerce (AWPEC) 2017-2025. The AWPEC was finalized by the newly established ASEAN Coordinating Committee on Electronic Commerce (E-Commerce) and adopted by the ASEAN Economic Ministers (AEM) in late 2017. The AWPEC aims to facilitate cross-border e-commerce in ASEAN, covering multi-sectoral e-commerce initiatives in the areas of infrastructure, education and technology competency, consumer protection, modernization of the legal framework, security of electronic transactions, payment systems, trade facilitation, competition, and logistics. A key deliverable of the AWPEC is the development of an ASEAN Agreement on E-Commerce.

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

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ABBREVIATIONS

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
ATM	Automatic Teller Machine
B4ETD	Business for eTrade Development
BCEL	Banque Pour Le Commerce Exterieur Lao (Lao Foreign Trade Bank)
BCoMe	BCEL Community Money Express
BFL	Banque Franco-Lao (Group BRED)
BOL	Bank of the Lao PDR
COD	Cash on Delivery
DFS	Digital Financial Services
DP	Development Partner
EIF	Enhanced Integrated Framework
FDI	Foreign Direct Investment
FSP	Financial Service Providers
GoL	Government of Lao People's Democratic Republic
ICT	Information and Communication Technology
ISP	Internet Service Providers
IT	Information Technology
ITU	International Telecommunication Union
LICA	Lao ICT Commerce Association
LNCCI	Lao National Chamber of Commerce and Industry
MM4P	Mobile Money for the Poor
MAFIPP	Making Access to Finance More Inclusive for Poor People
MoIC	Ministry of Industry and Commerce
MoF	Ministry of Finance
MoST	Ministry of Science and Technology
MPI	Ministry of Planning and Investment
MPT	Ministry of Posts and Telecommunications
MPWT	Ministry of Public Works and Transport Ministry of Transportation and Communications
MSME	Micro, Small and Medium Enterprises
NIU	National Implementation Unit
NSEDP	National Socio-economic Development Plan
POS	Point of Sale
PPP	Public-Private Partnership
PSP	Payment Service Provider
RCEP	Regional Comprehensive Economic Partnership
SHIFT	Shaping Inclusive Finance Transformations
SME	Small and Medium Enterprises
TFA	Trade Facilitation Agreement
UNCTAD	United Nations Conference on Trade and Development
UNCDF	United Nations Capital Development Fund
UPU	Universal Postal Union
US\$	United States Dollar
WTO	World Trade Organization



EXECUTIVE SUMMARY

Lao PDR is actively working to graduate from the list of Least Developed Countries. The Lao PDR economy continues to perform well: in the last six or seven years, there certainly has been a noticeable shift in its economic outlook. In its quest to diversify its economy and trade Lao, now a member of the WTO, has turned to services as an engine of economic development. Services matter both because they make a significant contribution to export diversification and growth and because they play the role of an enabler of other sectors of the economy in moving up the value chain and contribute to the economic diversification process.

Information and communications technology (ICT) services are slowly becoming an important segment of the Lao economy, triggered by Lao's participation in international negotiating fora, because of its geographical position in the Association of Southeast Asian Nations (ASEAN) and the need to catch up with the development of digital economies at its borders. Despite this, the adoption of e-commerce both by firms and consumers has been limited, raising questions about the importance of persistent bottlenecks.

The concept of e-commerce is still new for Lao. For most respondents to the survey, e-commerce is about buying retail products, notably clothes, IT products and cosmetics online. The improvement of logistics and payment infrastructure has contributed to the recent growth of e-commerce, as many young people have started buying products online. Significant progress has also been made on trade facilitation, although more efforts are needed towards paperless trade. While interest has grown, e-commerce is not widely used in Lao PDR, due to underdevelopment of the telecommunications infrastructure and the low rate of formal banking and credit card use.

Access to telecommunication services, especially mobile phone services, has expanded dramatically over the past ten years. However, the absence of an independent regulator, lack of a licensing framework and lack of a level playing field in the market are

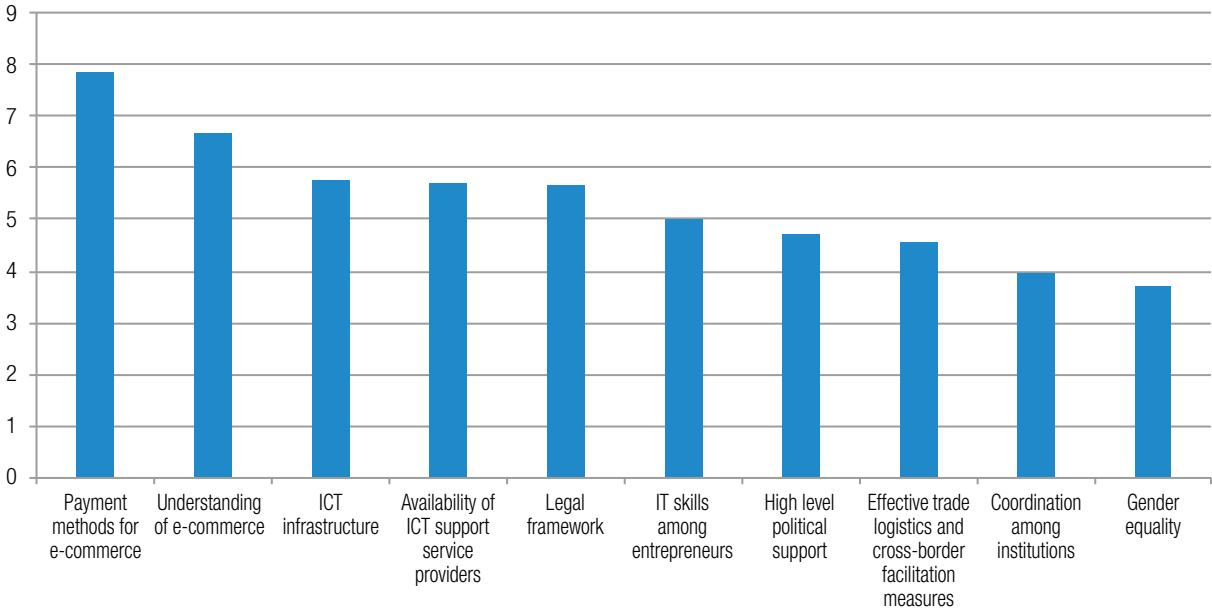
perceived by operators (both government and privately-owned) as key impediments to the continued development of the Lao telecommunications sector. Besides the significant growth of mobile connectivity in recent years, the Internet service needs to be strengthened to help people use digital financial services (DFS). In a country where more than 80 per cent of the population own a mobile phone and only 40 per cent are financially included although not banked, DFS hold significant potential to provide accessible and convenient services to Lao people. However, low literacy and limited understanding of technology represent major challenges to penetration and adoption of DFS in rural areas.

The Lao government passed a law on electronic transactions in 2012, paving the way for future growth in e-commerce. It has also enacted the Law on Prevention and Combating of Cyber Crime in 2016. A new law creating a National Payment System should be passed in 2018, providing much needed DFS regulations. The regulatory framework needed to enable interbank payments is being developed. Lao PDR still doesn't have a full set of laws to regulate e-commerce activities, the main missing legislation being on privacy and the protection of consumers online. The Government has been concerned about what have appeared to be potential revenue losses created by the absence of dedicated regulations for e-commerce activities (in particular from so-called Facebook and Instagram shops).

Needs for technical assistance are well perceived and were expressed at different occasions during interviews conducted for this assessment. Some of the priority actions this assessment recommends include, in priority order: creating awareness about e-commerce; developing a national vision and coordinating framework by the Government; adopting less restrictive regulations in the banking and telecom sectors to offer better and affordable e-commerce services; and recognizing the massive overhaul of ICT contents in education curricula and the value and potential of the tech start-ups flourishing in Lao PDR.



What are the most important technical assistance needs to boost adoption of e-commerce in Lao PDR (number of responses, several answers possible)



METHODOLOGY

A four-step approach was used for the Rapid eTrade Readiness Assessment for Lao PDR, to ensure a

high level of participation and engagement of key stakeholders in the consultative process:

Figure 1: Survey methodology



- ✓ Phase 1 | Stakeholder engagement and literature review, 1-30 October 2017. It included official communications between UNCTAD, the Lao PDR Ministry of Industry and Commerce (MoIC) and the Permanent Mission of the PDR in Geneva. Literature review and data analysis were made possible through access to up-to-date statistics provided by the International Telecommunication Union (ITU), The Universal Postal Union (UPU) and the World Bank, in addition to data compiled by UNCTAD on behalf of the eTrade for all initiative.
- ✓ Phase 2 | Online survey customization and dissemination, 20 November to 10 December 2017. Two (2) customized questionnaires for the public and private sectors were distributed by MoIC to more than 60 stakeholders in Lao PDR. A total of 34 completed questionnaires were used for this report (30 received online and 4 completed offline).
- ✓ Phase 3 | Semi-structured in-country interviews and local validation during the consultants' mission to Vientiane, on 27 November – 1 December 1 and 18-19 December, 2017. Eight focus-group meetings were held in MoIC facilities, in addition to 12 meetings in stakeholder's facilities.

A briefing on early findings and suggestions was presented to the Department of Planning and Cooperation of the MoIC on November 30, 2017.

- ✓ Phase 4 | Report writing and finalization with UNCTAD, 22 December 2017 – 6 March 2018.

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 based on data collected from respondents to the survey for both the public and private sectors and the stakeholders' meetings during the two in-country missions.



SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

MAIN FINDING	MAIN RECOMMENDATION
 e-Commerce Readiness Assessment and Strategies Formulation	
<p>Increased interest among Government entities for coordination of efforts and development of a conducive framework for e-commerce, stemming from negotiations, commitments and increasing pressure from private sector to regulate the sector and derive revenue from it. E-commerce not considered yet as a potential source of exports – in particular for agricultural commodities, handicrafts and garments.</p>	<p>Accelerate empowerment of MoIC as the lead entity for e-commerce development in Lao PDR. Encourage the development of a single strategy for e-commerce development, using existing sectoral strategies, supporting National Socio-economic Development Plan (NSED) vision for a digital economy.</p>
 ICT Infrastructure and Services	
<p>Access to telecommunication services, especially mobile phone services has expanded dramatically over the past ten years. However, the absence of an independent regulator, lack of licensing framework and lack of a level playing field in the market are perceived by operators (both government and privately-owned) as key impediments to the continued development of the Lao telecommunications sector.</p>	<p>Ease restrictions on licensing, promotion, marketing and pricing to allow the development of new customer-oriented services at a more affordable price. Accelerate deployment of 4G coverage in Lao PDR rural areas to take advantage of new e-commerce services offered by local providers.</p>
 Trade Logistics and Trade Facilitation	
<p>Local delivery services are only available in Vientiane and Luang Prabang. Express delivery services exist in Lao PDR, though they remain costly and are inhibited by the lack of a formal system of addresses. Furthermore, in many cases the Lao postal service must act as an intermediary. Traffic congestion and the absence of a conducive regulatory framework add to the constraints faced by third party logistics providers.</p>	<p>Public-Private Partnerships involving Lao Post could help ensure that more addresses are accessible for deliveries through innovative solutions, taking advantage of ICT. Accession to the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific could also help Lao in accelerating progress in implementing digital trade facilitation measures.</p>
 Payment Solutions	
<p>The main public bank in Lao has a de facto monopoly on e-payment through banks, in the absence of dedicated regulations that are currently being developed. Very little use, although increasing, of international debit cards, credit cards. Telecom operators in association with banks have developed mobile payment mechanisms but have not rolled them out yet. The lack of regulation has meant that no Fintech industry development is yet in place, instead replaced by temporary agreements with foreign payment providers' solutions.</p>	<p>The 2018 issuance of DFS regulations (National Payment System) by the BOL should see an uptake in payment services providers offers and adoption by the population. Healthy competition between banks and telecom operators should reduce the costs and increase the quality of solutions offered, including for rural population supported by United Nations Capital Development Fund (UNCDF) programmes. Roll out and upgrade of initiatives like road tax payments should be considered given popularity.</p>



MAIN FINDING	MAIN RECOMMENDATION
<div style="display: flex; align-items: center;">  Legal and Regulatory Framework </div>	
<p>A careful regulatory and legal framework development has ensured that Lao PDR meets some of its commitments under the e-ASEAN framework. Still, legal instruments are not being used fully, in particular for data privacy and protection of consumers online. Growing online consumer protection concerns in the context of increased unregulated border-trade.</p>	<p>The e-Transactions Law should be upgraded and form the basis of a dedicated e-commerce law. The 2016 Law on Prevention and Combating of Cyber Crime and the 2018 Digital Financial regulation should lead the efforts to upgrade the legal and regulatory framework. Lao PDR signing-up to the World Trade Organization (WTO) Ministerial Conference 11 (2017) statement on e-commerce could translate in more technical assistance being accessible.</p>
<div style="display: flex; align-items: center;">  e-Commerce Skills Development </div>	
<p>Despite several isolated initiatives, e-commerce skills and know-how are still very limited, even within the tech start-up community, delaying much needed investment in education, training, mentorship and coaching. In-company training and recruitment of foreign talents have compensated for the lack of ICT-related curriculum in the public education institutions.</p>	<p>Public (donor) and private support for upgrading co-working space and business groups into proper incubators and business accelerators could help bridge the gaps between the commerce players' needs and the insufficient ICT-related tertiary education curricula.</p>
<div style="display: flex; align-items: center;">  Access to Financing </div>	
<p>Local banks, although numerous, are not incentivized to provide loans to MSMEs, let alone e-commerce venture/tech start-ups. No dedicated banking support for tech start-up or Micro, Small and Medium Enterprises (MSMEs) wishing to move online. Nascent business incubators scene, supported by mentors and coaches from Thailand. Dynamic youth community shaping future tech start-up development (Global Shapers, TohLao, GDG STELLA) providing room for entry of venture capitalists.</p>	<p>Local start-up community paving the way to attract venture capitalists and business angels, in particular from Thailand, to invest in Lao PDR start-ups by upgrading the current ecosystem moving from a social to business-focus models.</p>



FINDINGS UNDER THE SEVEN ETRADE FOR ALL POLICY AREAS

1. E-COMMERCE READINESS ASSESSMENTS AND STRATEGY FORMULATION

Lao PDR's renewed interest in e-commerce is recent, promoted by the country's participation in and commitment to the e-ASEAN framework that calls for, among other targets, a robust legal and regulatory framework for e-commerce. It also urges that the country participates in ASEAN negotiations in trade in services, including e-commerce (ASEAN Framework Agreement on Services – AFAS) and the on-going Regional Comprehensive Economic Partnership (RCEP) negotiations. The year 2017 saw an acceleration in the upgrade of the country's preparedness for e-commerce uptake, through different interministerial consultations. The renewed interests have yet to be transformed into solid gains in making policy and vision align with private sector aspirations.

Lao PDR ranked 92 out of 144 economies in the 2017 UNCTAD B2C E-commerce Index. The Index 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. Lao PDR was ranked also 139 (up from 144 in 2016) out of 175 economies in the 2017 International Telecommunication Union (ITU) ICT Development Index (Table I).

Table I: IT Development Ranking in Selected Countries in Asia

Country	ITU IDI Ranking	UNCTAD B2C E-Commerce Index
Singapore	18	18
Malaysia	63	38
Thailand	78	49
China	80	65
Brunei	53	n/a
Vietnam	108	74
Philippines	101	96
Indonesia	111	101
Cambodia	128	115
Lao PDR	139	92
Myanmar	135	123

Source: ITU (IDI 2017 report), UNCTAD (2017 B2C Index)

The relatively low position and recent evolution of Lao PDR's ITU IDI rankings reflects the careful approach the Government of Lao PDR (GoL) has taken towards ICT development in general and e-commerce in particular. In addition, the 8th Five-Year National Socio-economic Development Plan (NSED) 2016-2020 has made the move towards a digital economy one of its development priorities. This was supported by various plans and strategies adopted in the past five years pointing in the same direction, namely:

- National ICT Policy 2015-2025 (draft)
- National Broadband Plan 2012-2020
- E-Government Master Plan 2013-2020
- ICT Vision 2030, Strategy 2025 and Development Plan 2020

While these plans and strategies are steps in the right direction to ensure that ICT and digital innovation become core to national development plans, the impact on e-commerce development is yet to be felt. There is currently no e-commerce strategy or policy developed.

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

Increasing the role of ICT to become a driving force of socio-economic development regarding regional and international integration is at the core of Lao PDR development plans.

Lao PDR is currently active in implementing its 8th NSED 2016-2020, with a vision of graduating from LDC status by 2020¹. The development of a digital economy is strongly promoted by the plan. The NSED prepared by Ministry of Planning and Investment was officially approved in April 2016. The Plan reflects the Socio-economic Development Strategy until 2025 and Vision 2030 with an aim to build a new foundation for graduating from LDC status by 2020 to become an upper-middle-income country by 2030.

¹ Although the 2020 target is clearly mentioned in the NSED (2016-2020), recent Government reports (<https://rtm.org.la/nsedp/criteria-ldc-graduation/>) moved the target to 2025.



Table II: ICT-related outcomes, output and actions in the 8th Five-Year NSEDP (2016-2020)

<p>Overall objective: To ensure political stability, peace and order in the society; the poverty of the people is reduced significantly in all areas; the country is developed out of LDC status by 2020 through continuous, inclusive and sustainable growth; there is effective management and efficient utilization of natural resources; development is enhanced through the national potential and advantages; Lao PDR participates in regional and international integration with ownership.</p>	
<p>Outcome 1, Output 7.2: Regional and International Cooperation and Integration, Integration of Information, Communications and Technology (ICT)</p>	<ul style="list-style-type: none"> • Increase the role of ICT to become a driving force of the socio-economic development regarding regional and international integration in order to facilitate communications and transform data transfer to be faster and safer as a favorable condition for attracting investment, manufacturing and tourism. • Focus on developing quality ICT networks with high-speed services in all areas and to meet technology standards of ASEAN and the world. • Develop and expand communications control systems to support the modernization of international gateways that can meet specific requirements in the short and long run. • Develop a system of ICT integration and Internet connectivity with countries in the ASEAN region.
<p>Cross-cutting outcome: Promote Local Innovation and Utilization of Science, Technology and Telecommunications and Management and Application of ICT</p>	<p>Target</p> <ul style="list-style-type: none"> • Establish automatic post boxes in post offices in all districts and provinces by 2020. • Construct an Internet backup centre in the Northern and Central Regions by 2018. • Establish two radio frequency management centres and promote the use of a Lao PDR satellite instead of a foreign one. • Establish a national data centre as a place for consolidated electronic data of both the public and private sectors by 2018. • Create an intranet and long-distance meeting system to link 50 per cent of government offices, districts and villages. • Strengthen e-governance at the central level to provide comprehensive services and extend e-governance service coverage in the provinces to 50 per cent. • Gradually develop e-management and services for 50 per cent of the government offices. • Complete installation of the management and services system on the national Internet service code (.la) before 2016. • Establish learning centres on the application of technology, communications and information in at least two centres at village group level and two centres at district level by 2020, by focusing the target areas under the Three-Builds directive to be training centres for the Government and the general population on ICT. • Increase the computer literacy rate to 30 per cent and Internet literacy rate to 40 per cent of the population, the proportion of households with computer literacy to 20 per cent of all households, the proportion of registered landline and wireless home phone users to 15 per cent, the proportion of registered mobile phone users to 100 per cent, and the proportion of registered landline and wireless internet users to 20 per cent of the total population, by 2020. • Expand the fibre optic transmission network, both aerial and underground, by 10,000 km to reach the Vientiane Capital and municipal districts of each province across the country as part of the infrastructure system to support e-governance. • Extend quality, efficient and low cost 3G and 4G transceiver stations to cover all areas nationwide. • Encourage the post and telecommunications sector to contribute its revenue to the GDP growth, to reach the target of GDP growth at eight per cent by 2020. <p>Priority Activities and Projects</p> <ul style="list-style-type: none"> • Review, develop and improve laws, decrees, agreements and regulations related to management of ICT application and services so they are consistent with international agreements and have adequate capacity to facilitate ASEAN Economic Community (AEC) participation. • Establish a National Information and Backup Centre with adequate capacity to efficiently meet domestic demand. • Establish an ICT development fund and regulate expenditure as indicated in the law on telecommunications. • Construct two national Internet backup centres in the Northern and Central regions.



	<ul style="list-style-type: none"> • Ensure 100 per cent Internet coverage across the country. • Expand telephone centres to ensure 100 per cent local connection. • Prepare for ASEAN integration in the area of telecommunications to support the installation of connections devices within and outside the country. • Establish a cybercrime monitoring system to ensure that the Internet system in Lao PDR is secure and enable links with international warning systems. • Construct a centre to monitor frequencies in the provinces where necessary. • Manage radio frequencies and maintain operational communications equipment that can be monitored to reduce impacts on society. • Continue implementing the e-government project and satellite project to ensure they are completed as planned. • Develop and expand media infrastructure and manage media products and improve IT as a central service <p>Policies and Legal Instruments</p> <ul style="list-style-type: none"> • Apply a policy that promotes and attracts both domestic and foreign private investment in the telecommunications sector. • Develop and improve telecommunications and Internet-related legislation to fit regional and international integration conditions. • Set up the national policy on broadband services to determine an expansion plan and the ability to ensure access to broadband services by people across the country. • Create policies to promote the development and application of open source software.
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Source: 8th NSEDP (2016-2020)

e-Government Action Plan

The GoL, through the Ministry of Posts and Telecommunication, has established ICT policies and programs supporting the 7th and 8th NSEDP, through administration reform, civil service reform, and infrastructure development by developing e-government initiatives for establishing a sustainable national innovation system.

Table III: Stages of e-Government Development to 2020

Stage1: Present stage (2013-2015)	Focus on G2G applications (maintain and rebuild applications established under previous e-Government Action Plan).
Stage 2: Interaction stage (2016-2018)	Integrate the Government data into one single service, initiate G2B service applications.
Stage 3: Transaction Stage (2019-2020)	Fully computerize the administration system and e-service, especially e-commerce by Government officers. Initiate G2C service applications.

The current scope of the e-Government Action Plan (2013-2020) is as follows:

- Establish an e-Government Service Centre consisting of a National e-Government Centre at

the Ministry of Posts and Telecommunications (MPT), and establish an e-Government office in each ministry and provincial offices

- Build the National e-Government Infrastructure
- Develop e-Government Applications (E-Commerce Project, E-Revenue Project, E-Banking Project, Government cross-sectoral information sharing Project, E-Health Project, ICT for the Blind Project)
- Deploy e-Governance system throughout the country for Human Resource Development
- Develop Procedures, Laws and Regulations related to e-Government
- Develop and define the National Standard, especially for data exchange and security concerns



Table IV: E-Government Action Plan targets

	Stage 1	Stage 2	Stage 3
End-user	Central Government (2,000 users)	Provincial Government officers and business people (1,000 users)	National Government officers (10,000 users) and Lao citizens (25,000 users)
Regulation	G2G regulations	G2B regulations	G2C regulations
Data	Online Government publications, information in standalone mode	Integration with Government data	Advanced integrated Government data
Application	G2G: online document management, employee management, work permit, workflow, inventory	G2B: online registration services, customs declaration and quarantine, online market and online procurement	G2C: online learning, e-citizen and passport/travel documentation
Teleconference	Central Government Teleconference	Provincial Government Teleconference	Nationwide Government Teleconference

Source: e-Government Development Plan (2013-2020)

1.2. National policies related to trade

E-commerce is not yet considered an avenue for foreign trade expansion or diversification, but the role of ICT services is starting to be appreciated.

The MoIC is the lead agency for trade policy formulation in Lao PDR. Lao PDR is an active member of the Enhanced Integrated Framework (EIF) programme and, as such, produced a Diagnostic Trade Integration Study (DTIS) in 2006, updated in 2012, and revised again in 2016, following a different methodology². All three documents put emphasis on export diversification, moving Lao PDR away from dependency on hydropower and mining for revenue, by developing business linkages between these two sectors and the rest of the economy, and in particular services. However, e-commerce, as a potential source of exports –in particular for agricultural commodities,

handicrafts, garments, is not mentioned in any of the reports, reflecting the low level of e-commerce development in the country. It is expected that the Trade and Private Sector Development Roadmap mid-term review to be produced in 2018 and the five-year trade strategy of MoIC will incorporate e-commerce and digital innovation as new engines of growth and new sources of economic and trade diversification.

1.3. National coordination (e-commerce task force, interministerial, Public-Private Dialogue)

Government-led coordination of e-commerce development efforts picked up in 2017.

In recent months, interest in e-commerce has risen again, prompting the GoL to intensify consultations among Government institutions with the objective to improve coordination of e-commerce development. Several factors can explain this recent interest:

- Lao PDR participation in and commitment to the e-ASEAN framework that calls for, among other targets, a robust legal and regulatory framework for e-commerce.
- Lao PDR participation in ASEAN negotiations in trade in services, including e-commerce (ASEAN Framework Agreement on Services – AFAS), in the future ASEAN Trade in Services Agreement (ATISA) and the on-going negotiations in the framework of the Regional Comprehensive Economic Partnership (RCEP) that include China.
- Discussions on e-commerce in the framework of the WTO prior and during the 11th Ministerial Conference, resulting in Lao PDR supporting the MC11 Statement on Electronic Commerce.³
- Strong call from the private sector for the Government to appoint a lead agency for e-commerce development and promotion.
- Growing concerns among Government agencies about the loss of revenue generated by informal and unregulated online commercial activities (e.g., Facebook and Instagram shops) with, in corollary, the lack of data and statistics on e-commerce.

² The MoIC-led revision is often referred to as the “Trade and private sector roadmap”

³ Statement available at: https://www.wto.org/english/thewto_e/minist_e/mc11_e/documents_e.htm



- Growing consumer protection concerns, because the Ministry of Industry and Commerce (MoIC), as the agency responsible for consumer protection, does not have the mandate, means and capacity to address consumer complaints.

As a result, following an inter-governmental meeting late November 2017, the Ministry of Industry and Commerce was confirmed as the lead agency for e-commerce development in Lao PDR. This will most likely reduce existing overlaps between competing or overlapping ministries' mandates.

Several MoIC departments could be involved in e-commerce work, namely:

Table V: Proposed division of labour on e-commerce among MoIC Departments

MoIC Departments	Proposed responsibilities
Legal Division (Minister's Cabinet)	Legal and regulatory framework for e-commerce, contribution to national strategy on e-commerce
Domestic Trade Department	Competition and consumer protection
Planning and Cooperation Department	Statistics, technical assistance requests and monitoring
Import – Export Department	Plaosme.org website, cross-border e-commerce
Trade Promotion Department	Promotion of e-commerce platforms for export
Foreign Trade Policy Department	Negotiations on e-commerce (ATISA, RCEP), consultations on e-commerce in the WTO
Economic Research Institute on Trade (ERIT) / Trade College	Training on e-commerce for Government officials and Small and Medium Enterprises (SMEs), policy briefs on e-commerce, research on e-commerce

Source: Focus-Group Discussion on MoIC role during the eT-Ready in country mission, November 27, 2017

As evidence of the growing interest in e-commerce among Government officials, the Department of Import and Export, Ministry of Industry and Commerce, launched in August 2017 its very first online trade portal. The plaosme.com website was created via a loan of US\$562,000 provided by the Asian Development Bank (ADB) as part of government efforts to promote small-and-medium-sized enterprises (SMEs) in Lao PDR using the theme “Enhance SME Access to Asian Market through E-commerce Platform”.

The e-commerce portal is in Lao and English and provides information about products and producers. Information on trade agreements, workshops on business and other important activities are also available on the website. At the end of 2017, more than 120 companies had registered with the portal for online trading. In the long run, the portal will be operated by the Lao National Chamber of Commerce and Industry (LNCCI).

Several business associations have developed ICT-related support services, although the public-private dialogue on e-commerce is almost inexistent. The table below lists main business associations and federations with activities supporting e-commerce development:

Table VI: List of key business associations/groups active in e-commerce fields and their activities

Institution	Activity / task force
Lao National Chamber of Commerce and Industry	SME Service Centre (SSC). Access to information on market, business and trade procedures, business opportunities. A special focus on start-ups has been at the core of the creation of the SME SSC.
Lao ICT Commerce Association (LICA)	Lao ICT Commerce Association is an umbrella association that groups information technology (IT) professionals, IT software and hardware companies as well as Internet Service Providers (ISP) and IT related Human Resource Development companies. It was established in August 2005 under the umbrella of (LNCCI) with the intention to build and maintain collaboration among ICT-related businesses: ISPs, hardware/software suppliers, software developers, ICT training and educational institutions. Supervised by Ministry of Posts and Telecommunications.
Global Shapers Community (Vientiane Hub), an initiative of the World Economic Forum	The Global Shapers Community is a network of hubs developed and led by young people who are exceptional in their potential, their achievements and their drive to contribute to their communities. In Vientiane, the local chapter supports tech start-ups development, through partnerships with leading start-up initiatives or the organization of TED-x events.

Source: UNCTAD

1.4. Access to relevant statistics

Efforts are underway to better capture the volume and impact of e-commerce in the economy, although starting from a low base.



Neither the Ministry of Finance, nor the Ministry of Planning and Investment, nor the Ministry of Industry and Commerce compile data or produce statistics on e-commerce or amounts generated through mobile payments. The Ministry of Posts and Telecom, together with the Lao Telecommunications Regulatory Authority, in partnership with mobile telephony operators, have improved collection of telecom statistics since 2014. Statistics on the telecom services used, fixed line subscription, mobile cellular subscription and

Internet Subscription through the four main operators are collected by the Statistics Division, under the Planning and Cooperation department of the Ministry of Posts and Telecom. During meetings at the MoIC, the Statistics Centre of the Ministry of Industry and Commerce indicated an interest in starting to compile e-commerce related data but do not have currently the capacity to collect data and produce e-commerce related statistics.

2. ICT INFRASTRUCTURE AND SERVICES

In line with what has been observed in other countries surveyed by UNCTAD in the region (Cambodia, 2016 and Myanmar, 2017), Lao PDR is a mobile-only country when it comes to broadband Internet. There has been a rapid expansion of mobile broadband Internet services on the back of the large-scale launch of 4G services by the mobile operators. In contrast, fixed broadband Internet growth until 2022 is expected to continue but overall market penetration will remain extremely low. The Government has steadily encouraged the main mobile operators to increase coverage while maintaining tight control over market conditions (entry of new players, price, marketing). The ICT sector is considered one of the backbone services industries in Lao PDR, providing important economic and social benefits. Besides its direct contribution to the economy, ICT allows people to stay connected and is considered an essential facilitator of economic growth in other sectors of the economy.

Lao PDR is a mobile-only country with very limited Internet broadband capacities. Despite the geographical landscape of Lao PDR, ICT infrastructure is in place with relatively good access for a majority of the population⁴, but not sufficient to cope with increasing e-commerce and telephony traffic. The government is making its best effort to improve telecommunications and ICT but despite that, the country lags behind its neighbours in telecom infrastructure.

Telecom services were started in Lao PDR in 1994 when the Lao government and a Thai investor entered into an agreement to start the first mobile telecom operations in the country. After this, ETL (Enterprise of Telecommunications Lao 2000), a 100 per cent state-owned company came into existence. In recent years, access to telecommunication services has expanded dramatically. The telecommunications market covers

fixed, mobile, voice-over-Internet protocol and Internet service. In 2017, the Lao telecommunications market supported the operations of three fixed line telephone service and broadband providers and four mobile telephone service providers.

At present, the leading telecom operators are Lao Telecommunication Company Limited (LTC), Star Telecom (Unitel), VimpelCom⁵ Lao Company Limited (Beeline), Enterprise of Telecommunications Lao (ETL), and Sky Telecom State Company. In all of these, the government has at least a small stake, but significant privatization took place and foreign entry has been allowed. The number of phone lines is growing and the rates are falling, driven by improved technology, enhanced competition, and increased access to low-cost Internet providers.

⁴ According to the responses to the only survey conducted for this assessment, in some areas connections are slower due partly to international bandwidth limitations combined with local congestion. Higher quality connections are available to those living near Vientiane Capital only

⁵ VimpelCom Ltd. (Global) became VEON in February 2017



Table VII: Mobile Internet providers

Company Name	Remarks/Services
Lao Telecom Co (LTC)	51 per cent Lao Government/49 per cent Thaicom, ADSL & 3.5G Mobile operator. 4G LTE FDD/TDD services in Vientiane, Luang Prabang and Savannakhet city areas only.
Enterprise Telecom Lao (ETL)	100 per cent Lao Government, ADSL 2G (GPRS), PSTN, Mobile operator
UNITEL (formerly Star Telecom Lao -STL)	51 per cent Lao Asia Telecom/49 per cent Viettel Global, ADSL 3.5G (HSDPA), PSTN, Mobile operator
Beeline Lao (formerly Millicom Lao - TIGO)	22 per cent Lao Government/78 per cent Millicom (VEON), 3G & 4G, WiMAX, PSTN, FTTH, Mobile operator. 4G LTE FDD/TDD services in Vientiane, Luang Prabang and Savannakhet city areas only.
Sky Telecom	Lao Private Company with Leased Line service

Source: MPT

2.1. Broadband/Mobile/smartphone penetration

The rapid expansion and coverage of the mobile Internet contrasts with the slow development of fixed broadband Internet.

The introduction of fibre-based broadband has provided a boost to commercial customers. Despite this initial uptake, fixed line telephone and/or fixed-broadband Internet are hardly used, considered by many customers and private companies as too expensive and not reliable. Fixed-line broadband market penetration has not grown significantly over the last five years, with penetration increasing from a very small base from 0.1 per cent of Internet users in 2012 to 0.4 per cent in 2017. Over the next four years to 2022, growth is expected to continue but overall market penetration will remain low.

In contrast, there has been the rapid expansion of mobile broadband Internet services on the back of the large-scale launch of 4G services by the mobile operators. After peaking in 2011⁶ mobile subscriber penetration in Lao PDR declined; since then there had been some recovery thanks to the introduction of more affordable packages (97 per cent of Internet users use prepaid cards to access the Internet). Of late, the

Government has supported deployment of the 4G, 3G and 2G coverage across different parts of the country. At present, 13 per cent of the country, which includes the centre of Vientiane and leading centres of some of the larger provinces, has access to the 4G network. Sixty-five per cent of the population uses the 3G network and 91 per cent population enjoys 2G network, provided at affordable yet controlled prices.⁷

Lao PDR has seen strong increases in mobile broadband penetration over the past five years. However, the mobile broadband market is still at an early stage of development and penetration remains relatively low compared to neighbouring countries. Strong growth is predicted over the next four years to 2022. The mobile broadband market will be driven by a rising level of mobile subscribers, increasing speeds offered by the mobile operators as they roll out their 4G networks and falling prices due to strong competition (Figure 2). Cheaper and faster Internet will help the start-up ecosystem to thrive.

⁶ The decline was triggered by the decision of the MPT in 2012 to have all SIM-card properly registered

⁷ The summation of percentages is greater than zero, because some subscribers have access to different speeds.



Figure 2: Mobile broadband coverage in Lao PDR (2017)



Source: MPT

Table VIII: Access to Internet in Lao PDR (2017)

Population	6.7 million
Households	1.2 million
Fixed-telephone subscriptions per 100 inhabitants	17.7
Mobile-cellular subscriptions per 100 inhabitants	51.8
Fixed (wired)-broadband subscriptions per 100 inhabitants	0.4
Mobile-broadband subscriptions per 100 inhabitants	13.9
Households with a computer (%)	12.3
Households with Internet access at home (%)	11.7
Individuals using the Internet (%)	24.8
Internet users in Lao PDR who go online through mobile phone devices (%)	96

Source: several, compiled by the author

2.2. Reliability, affordability, latency, speed, coverage

Tight regulations of the sector, a direct consequence of the 2011 “price war”, have constrained the development of new services

and kept mobile Internet price high and limited in quality, especially outside urban areas.

According to the interviews conducted for this assessment, mobile Internet is considered expensive by the private sector, with reduced quality of service over past few years. However, all concur with the fact that speed could increase and prices decrease if some regulations were changed, such as those limiting competition, entry of new players or the determination of price by market forces only. Bandwidth limitations, price control, volume control, packaging control have an impact on services being offered and on foreign direct investment (FDI) in the telecom sector in general.

According to a World Bank study, Lao PDR is one of the countries with most expensive ICT services in the world. In ITU IDI, Lao PDR was ranked 144 out of 166 countries for an ICT price basket, which represents an average of fixed telephone, mobile cellular and fixed broadband sub-baskets. For example, Lao PDR Telecom (the public provider) regulates minimum prices at prices above those charged in Thailand or Vietnam, for example, which prevents foreign providers from competing on price. They also limit promotions or special offers to two weeks with prior approval. There were also issues reported with the international gateway through which international phone traffic passes through. The Government created a “Lao



Gateway”⁸, through which all international traffic needs to pass, meaning that the costs increased from 3 cents to 6.5 cents for calls into Lao PDR. The low performance of Lao PDR in terms of ICT affordability highlights the need for further liberalization and for progress in the removal of restrictive and anti-competitive practices.

The ICT sector is considered one of the backbone services industries in Lao PDR, providing important economic and social benefits. Besides its direct contribution to the economy, ICT allows people to stay connected and is considered an essential facilitator of economic growth in other sectors of the economy.

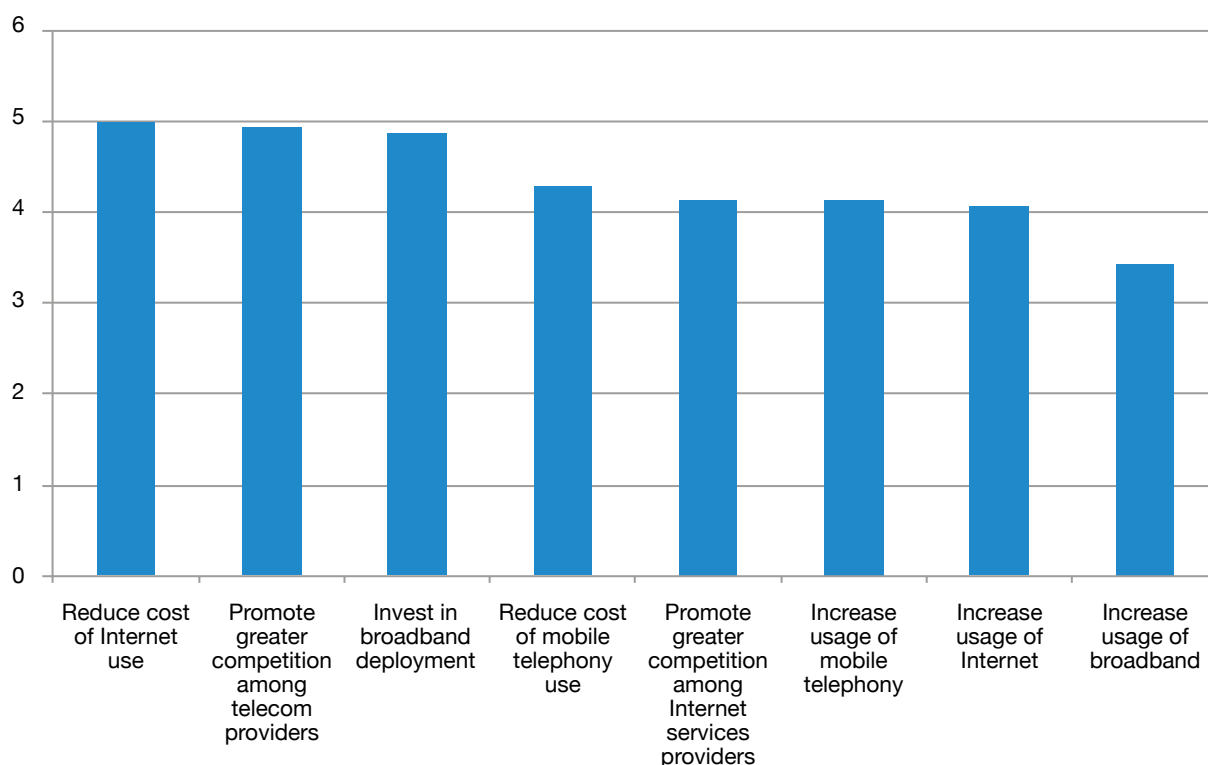
⁸ Authorities have developed infrastructure to route all Internet traffic through a single gateway, enabling them to monitor and restrict content. The National Internet Committee under the Prime Minister’s Office administers the Internet system. The office requires Internet service providers to submit quarterly reports and link their gateways to facilitate monitoring, but the government’s enforcement capability appears limited.

The ICT sector in Lao PDR still has numerous issues to address. For a number of years, the rate of regulatory reform has been well behind wider industry development. However, Lao PDR started to make significant progress in strengthening its telecommunications infrastructure. As a result, it attracted more FDI into the sector and quickly saw the introduction of the latest telecom technologies.

Access to high quality ICT at an affordable price (Figure 3) is crucial to improve the competitive edge of Lao PDR in services such as tourism, increasing the expenditures per day of tourists. ICT plays a role in the pre-travel, travel and post-travel phases. In the pre-travel stage it provides a range of tools to facilitate information searches about the region and to create travel plans. Those services are happening outside Lao PDR, and through foreign-based agents, as the local offer for such services is very limited.

Figure 3: ICT Infrastructure priorities

Please RANK the following areas according to their relative importance to create an environment that is conducive to e-commerce, (number of responses)



Source: UNCTAD



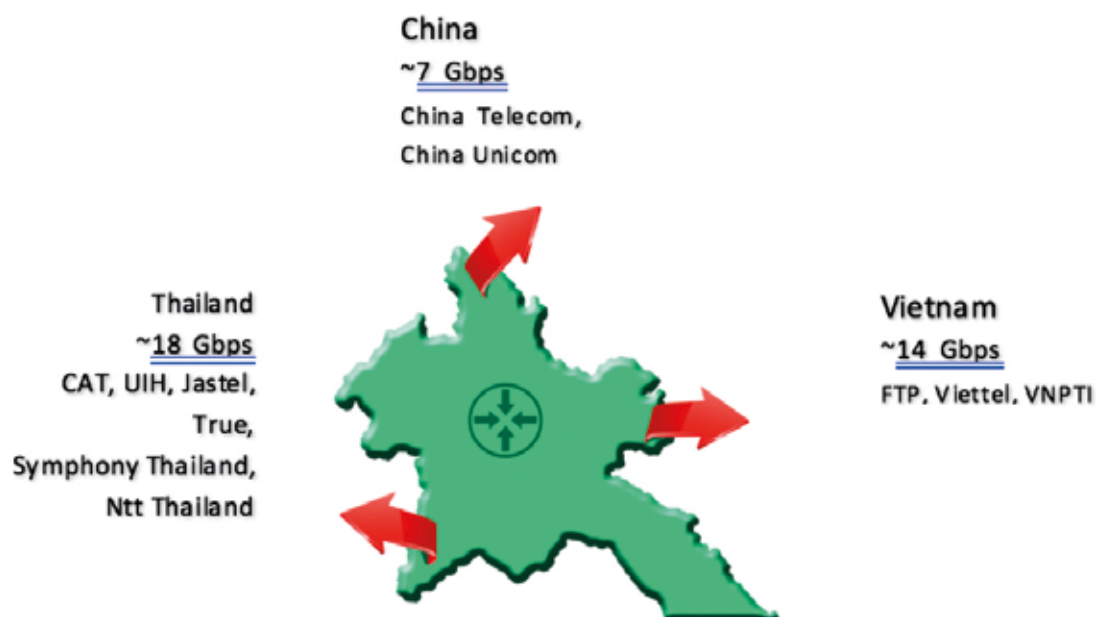
2.3. Major infrastructure projects (submarine cable, fibre optic, and others.)

Lao PDR has secured access to several gateways to ensure reliable and affordable access to the Internet.

Currently, Lao PDR has access to Internet through two main “gateways” (Figure 4):

- Via Optic Fiber Connections to China, Thailand, Vietnam (see Figure 4).
- Via satellite (LaoSAT, Lao first satellite, was launched by China in 2015). The satellite is designed to provide communication links for government work, television transmission and a range of telecommunication applications.

Figure 4: Lao Internet gateways (land)



Source: MPT

Several challenges of broadband Internet are important:

- Geographical, since the country is landlocked and mountainous, and therefore needs cross-border connection, resulting in higher Internet prices.
- Lack of digital literacy made even more acute by limited digital content and services in the Lao language.
- Small market size, with many telecom operators, leading to a duplication of network investment.
- No universal service fund (lack of resources for additional development).
- Several regulations needed to accommodate the fast-changing technology.

The Lao Broadband Development Policy is vowing to address those challenges by:

- Improving broadband-related policies
- Increasing investment in ICT, in particular through Public-Private Partnerships (PPP)
- Selecting the right technologies (data centre, cloud, servers, LTE technology)
- Promoting local content
- Enhancing regional collaboration and cooperation in harnessing digital connectivity

3. TRADE LOGISTICS AND TRADE FACILITATION

With the added difficulty of the challenging geographical landscape—rugged mountainous terrain that makes up three-fourths of the country—the Lao PDR e-commerce logistics scene is still underdeveloped. Last mile delivery is a critical issue, due to lack of physical addressing system. Lao Post delivery services are not efficient: its services are hardly used to deliver small packages in cities, so people would rather deliver by themselves or use local companies doing pick-up, delivery and door-to-door services, some of them having integrated ICT in their operations. WTO TFA implementation and participation in the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific⁹ are expected to have a positive impact on cross-border e-commerce.

As the e-commerce ecosystem is slowly becoming established in Lao PDR, so are the local delivery solutions. E-commerce is limited to domestic retail—IT, clothing, gifts, and retail imports from neighbouring Thailand (Vientiane is only across the Mekong from Thailand, a 15-minute drive from the nearest Thailand town and 1h30 minute drive from Udon Thani, the capital city of Udon Thani Province).

Typical of LDCs logistics and transport market—with the added difficulty of challenging geographical landscape with rugged mountainous terrain that makes up three-fourths of the country—the Lao PDR e-commerce logistics scene is still underdeveloped:

- Lao PDR is sparsely populated, and many communities are not connected to the main road network or are only connected for part of the year during the dry season. Road transport is the dominant mode of transport, accounting for 70 per cent of freight transport and 90 per cent of passenger transport.
- There are only few logistics and transport companies able to provide both domestic and international third-party logistics. The larger firms provide warehousing forwarding and customs clearance services and some also provide transport.
- Since most export production is controlled by foreign investors and sold on an ex-factory basis, it is the foreign buyer or the parent company that organizes the international transport (Figure 5). Most of the large international firms have withdrawn from the

logistics market because volumes were small and government regulations required that they form joint ventures with domestic firms or use a domestic firm as an agency (Figure 6).

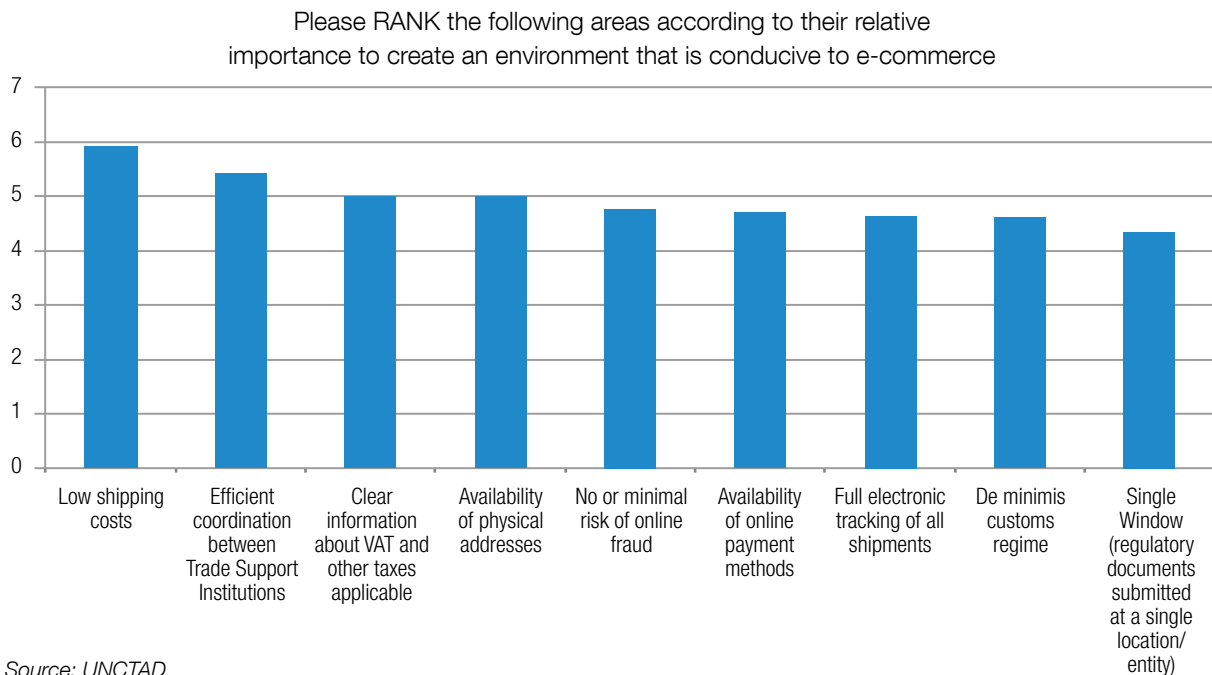
- Freight forwarding companies in Lao make minimal use of ICT systems (other than e-mail) to manage their shipments and services including inventory.
- Last mile delivery is a critical issue, due to the lack of physical addressing system.
- Lao Post delivery services are not efficient, in spite of having achieved a score of 84 in the UPU postal reliability index¹⁰: its services are hardly used to deliver small packages in cities, so people would rather deliver by themselves.
- *De minimis* threshold for e-commerce packages is not well known.

⁹ <http://www.unescap.org/resources/framework-agreement-facilitation-cross-border-paperless-trade-asia-and-pacific>

¹⁰ See UNCTAD B2C Index: http://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d09_en.pdf



Figure 5: Trade logistics factors



Source: UNCTAD

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

A small market for logistics firms hampered by barriers to entry and lack of a physical addressing system.

Because of the lack of interest of international players and the barriers to their entry in the relatively small logistics markets, local firms have been innovative in expanding their traditional delivery services to embrace e-commerce. Most companies working in the individual shipments/delivery markets are coming from the start-up world, a clear contrast with the Lao logistics scene 10 years ago.

Four companies have been cited during interviews in Vientiane:

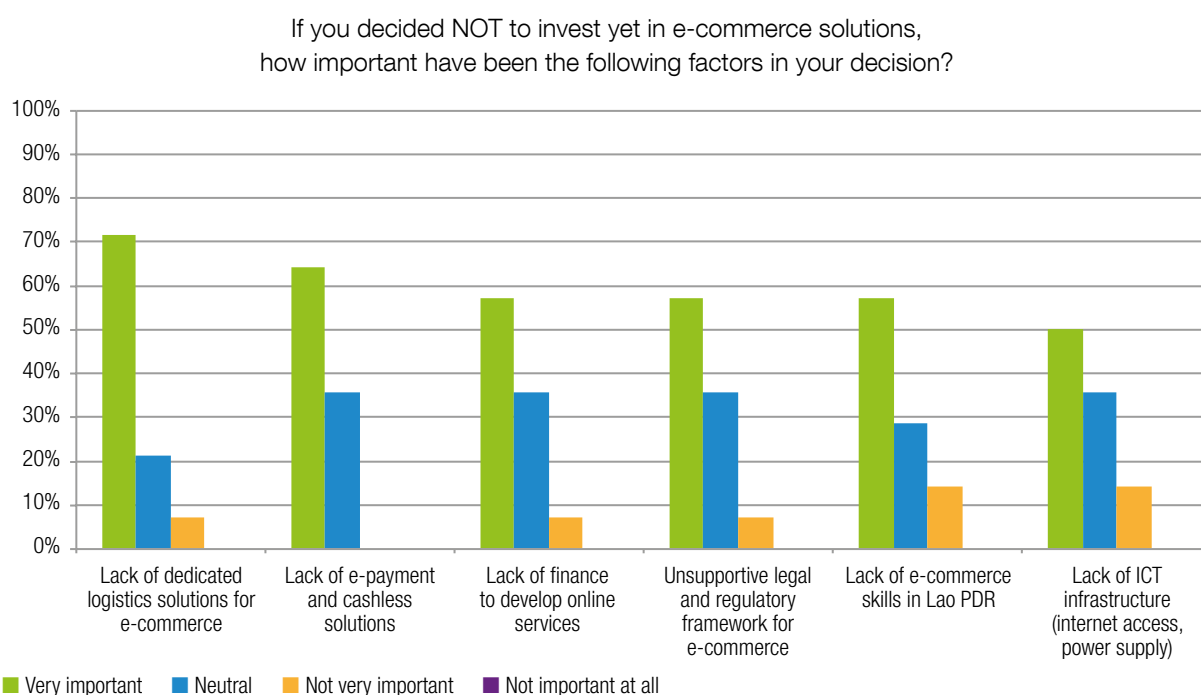
- FOXPRESS offers courier services that, with the help of motorbike drivers, delivers everything starting from personal documents to official files to food, beverages and birthday gifts to anywhere in the capital city of Vientiane.
- Book Delivery delivers books, newspapers and all type of documents to consumers in Vientiane.

- Mydelivery.la specializes in food delivery in Vientiane, using motorbikes.
- Hin Sai online takes online request to deliver construction material, such as bricks, sand, cement blocks, stone, soil.

Because of the limited number of buyers and sellers, their business model is quite identical. They can target both individual customers and corporate ones. Develop a simple website but rely on social media apps—Facebook, Instagram, or messenger apps like WeChat, Line, WhatsApp, Facebook Messenger—to get their order. Orders are either processed immediately (e.g., food) or delivered within 24 hours, during which time, the firm will collect all the orders, put everything in a package, and then call the customers to agree on a time and place to deliver the product and collect the money (cash on delivery—COD—in 96 per cent of the cases). Once a customer has sufficient volume to be delivered on a regular basis, a contract can be signed. Surprisingly, one of their main clients is an individual selling consumer goods through Facebook or Instagram shops. There are a lot of sellers online, but most sellers are working full time somewhere else, selling online in their free time, and are not customer-oriented when it comes to delivery.



Figure 6: Factors preventing investment by private firms in e-commerce solutions



Source: UNCTAD

The delivery of packages ordered online continue to face teething problems in Lao PDR (concentrated in Vientiane, the capital city—and Luang Prabang—the main tourist hub). These are:

- Physical addressing system is almost inexistent outside downtown Vientiane (capital city). Delivery personnel must use a combination of personal networks, knowledge of the terrain and repeated phone calls to find delivery addresses.
- Traffic has become very dense in Vientiane, express delivery is a challenge, especially during rush hours. For small sellers who can only deliver a few packages per day at rush hour time, making it cost effective is almost impossible.
- It is not possible to hire delivery personnel and keep them idle the whole day if the company has only a few orders to deliver daily.
- In class-conscious Lao PDR, working as delivery men, despite relatively good take-home pay, is not considered a noble profession, and might be frowned upon by families (lot of physical strength needed, dangerous environment, long

working hours under the sun and the effects of air pollution), so delivery companies have difficulties hiring qualified staff.

- People don't use computers and don't use browsers. Facebook is the only way the delivery companies can advertise, send promotional material, and the like, while they all recognize that Facebook has limitations.
- As delivery companies provide the only "human" interaction between buyers and sellers, they are identified as representing the sellers while, in effect, they are only providing the delivery service. Customers would complain to the delivery company about the product quality. Nowadays, most delivery companies have invested in marketing tools (jackets, stickers, carrying boxes) that identify them clearly.

In the long run, delivery companies will need to innovate to be able to access larger or different markets. Including online payment solutions, integrating all parts of the packaging/delivery/payment chain and promoting their services with overseas customers shipping to Lao PDR are some of the options companies interviewed for this assessment have been considering.



3.2. Trade Facilitation

Cross-border e-commerce is still in its infancy, calling for policy guidance and support from the member States.

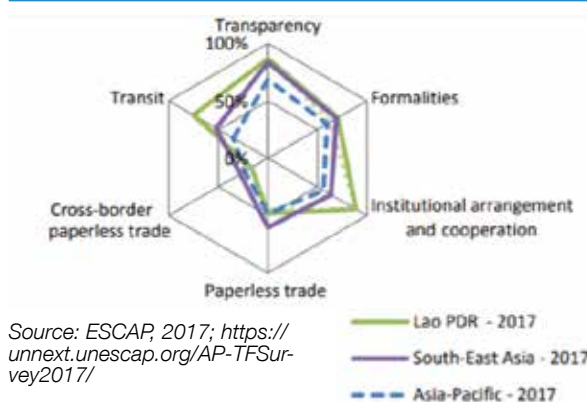
Lao PDR Customs has continuously promoted the construction of ‘informatization’ in the aim to improve electronic customs clearance and eventually form a comprehensive implementing framework of the e-customs, e-administration, and e-port. At present, Automated System for Customs Data (ASYCUDA) has been applied at all ports in Lao PDR and is planning to realize digitalization of international trade by 2017, including the business to government (B2G) digitalization, as well as government to government (G2G) digitalization. At the present time, the import and export of e-commerce packages has not been tracked, and it is therefore difficult to assess the readiness of the Lao Customs for e-commerce. Figures below are provided as a means of comparison with other LDCs assessed by the UNCTAD.

Table IX: Lao PDR Trade Facilitation Indicators, 2017

Indicator	Lao PDR	East Asia and the Pacific	OECD High Income
Border compliance			
Time to export (hours)	12	55.9	12.7
Cost to export (US\$)	73	387.5	149.9
Time to import (hours)	14	70.5	8.7
Cost to import (US\$)	153	431	111.6
Documentary compliance			
Time to export (hours)	216	68.2	2.4
Cost to export (US\$)	235	112.1	35.4
Time to import (hours)	216	65.6	3.5
Cost to import (US\$)	115	111.4	25.6

Source: *Doing Business in Lao PDR 2018 Report* (“Trading Across Borders” Category)

Figure 7: Trade Facilitation and Paperless Trade Implementation in Lao PDR, 2017



The results of the UN Global Survey on Trade Facilitation and Paperless Trade Implementation show that Lao PDR overall implementation of trade facilitation measures (at 61 per cent) is quite high, on par with the average implementation in Southeast Asia and significantly higher than that in Asia-Pacific (50.4 per cent). Among the six core groups of trade facilitation measures covered in the Survey, the most implemented in Lao PDR are “Transparency” measures as well as institutional arrangement and cooperation measures, with a well-functioning national trade facilitation committee (see Figure 7). However, Lao PDR lags behind the Southeast Asian average paperless trade and cross-border paperless trade.¹¹ Technical assistance and capacity-building opportunities provided through the WTO TFA and ESCAP Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific may help Lao address this gap and accelerate the digitalization of its trade procedures.

¹¹ See ASEAN and other ESCAP reports at: <https://unnex.unescap.org/content/un-global-survey-trade-facilitation-and-paperless-trade-implementation-2017>



4. PAYMENT SOLUTIONS

Digital financial services (DFS), which include savings, credit, insurance and payment facilities through electronic devices, are at a nascent stage. However, the payment ecosystem is about to embark in a massive uptake in 2018, as financial institutions, prominently the Bank of Lao PDR (BOL), have been putting in place the necessary regulations and incentives. Up to 2017, only the main public bank was able to offer e-banking services, some in partnership with development partners, to facilitate financial inclusion. Mobile operators have been preparing their offers for mobile payment (e-wallet, mobile money) but have not been authorized to release them. A giant leap would have to be made to move from a deeply-rooted culture of cash-only transactions to a cashless one. Agent banking, such as those proposed by Banque Pour Le Commerce Extérieur (BCEL), has gained popularity over the years.

The e-payment ecosystem in Lao PDR is just starting to emerge, with most existing solutions operating in a grey area, since the National Payment System regulations was introduced early 2018. The slow adoption of e-payment solutions has its roots in the careful approach to development that characterizes the Lao economy, as described below:

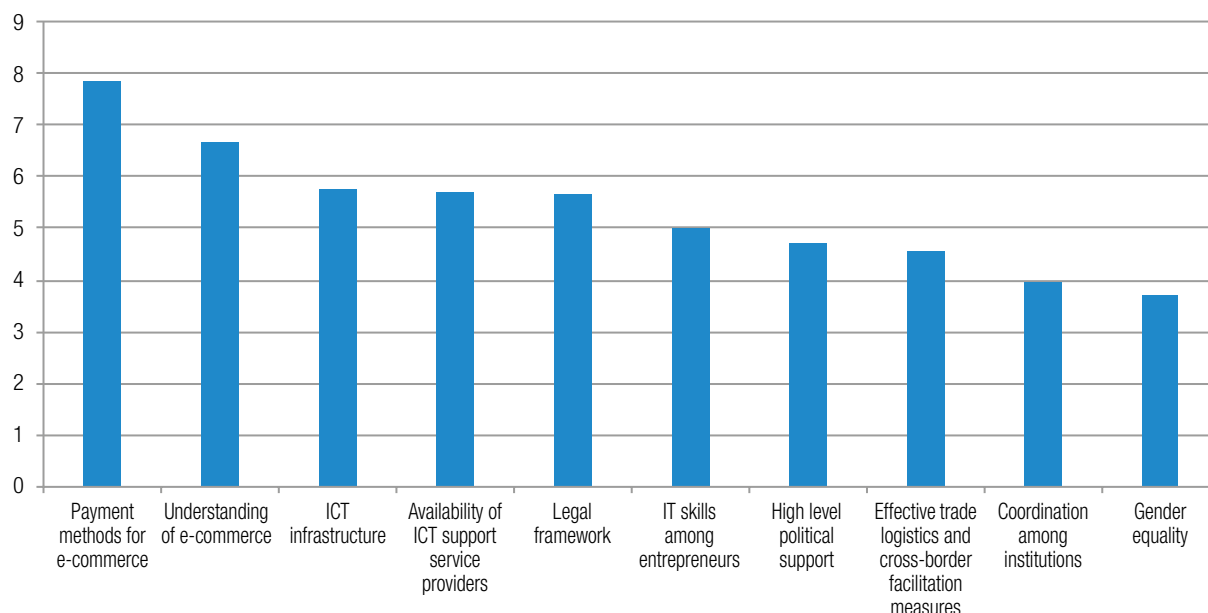
- First, the cultural constraints, of leapfrogging from being a cash-based society to being a cashless society in a record time. All stakeholders—customers, banks, merchants, Government—are sceptical about whether this leap could happen soon, bearing in mind that Lao PDR has a small population.
- Second, the high cost and time-consuming process of available DFS are a disincentive. It takes a few days to transfer money from one bank account to another through electronic payments (no bank interoperability). The high costs of doing so is another disincentive.
- Third, mobile operators and non-bank payment service providers have been willing and ready to invest in solutions, but up until 2018, the regulatory framework was not available, and the licensing options were sparse, as it would mean operating in a grey market, something easily frowned upon in Lao PDR. This is especially important given that mobile payment options can act as a middle ground between a cash-based and totally cashless society, possibly circumventing the challenge described above.
- Finally, as has been observed in other markets (Bhutan, Nepal), the private sector and banks in particular are expecting the Government to

provide a conducive, open and transparent framework before investing. This framework in Lao PDR is being built, with timely and efficient support from the donor community, including the Mobile Money for the Poor (MM4P), Making Access to Finance More Inclusive for Poor People (MAFIPP) and Shaping Inclusive Finance Transformations (SHIFT) programmes implemented by the United Nations Capital Development Fund (UNCDF) in the framework of their global work on financial inclusion.



Figure 8: Major technical assistance needs

What are the most important technical assistance needs to boost adoption of e-commerce in Lao PDR (number of responses, several answers possible)



Source: UNCTAD

4.1. Banking penetration and financial inclusion

Financial transactions in Lao PDR are mainly in cash, that has made introduction of mobile payment solutions a low priority for years by the relatively under-developed banking sector.

The Lao financial sector is still in the early stages of development, even though the banking reform was initiated in 1988, when a two-tiered banking system was established. Presently, due in part to the agricultural nature of the country and to its dispersed population, the financial sector does not play a significant role in intermediation as demand for services is somewhat limited. As in most countries in the early stages of financial-sector development, banking dominates the sector but is still relatively small. Penetration of bank branches is amongst the lowest in the world, with almost three branches per 100,000 people in 2013. In general, over the past decade, the Lao banking industry has seen a consolidation of numerous state-owned banks and a significant expansion of private-owned banks through a market liberalization process. However, state-owned banks still dominate the industry.

Currently, the financial sector is still underdeveloped in terms of products offerings and lacks the necessary technical, operational, and supervisory capacity to develop in a safe and sound manner. Liberalization will present challenges to the supervisory and regulatory regime to ensure that new entrants will support growth in a safe manner. Therefore, any liberalization commitments must take effect only after the weaknesses in the regulatory framework have been remedied.

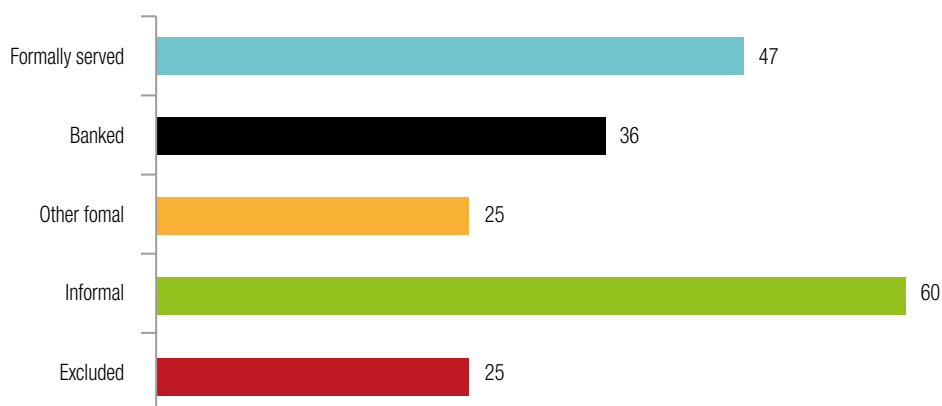
In 2016 Lao PDR had a total of 36 state-owned financial institutions, 15 insurance agencies, 48 non-bank financial institutions, 64 microfinance institutions and around 4,000 village funds. Another report on the use of financial institutions by young people suggests that 38.5 per cent of adults have access to the formal financial institution, 25.5 per cent use micro-finance institution, 60.2 per cent use informal services and 25.7 per cent don't use any financial services¹².

As far as financial inclusion is concerned, the latest detailed data available are from 2014 (in per cent of the Lao adult population):

¹² It is possible for one single person to use both formal and informal services



Figure 9: Banking penetration (in per cent)



Source: FinScope Consumer Survey Lao People’s Democratic Republic 2014

47 per cent of adults are formally served¹³, including both banked and other formal non-bank products/services

- 36 per cent of adults are banked
- 25 per cent of adults have/use other formal non-bank products/services
- 60 per cent of adults have/use informal mechanisms for managing their finances
- 25 per cent of adults are financially excluded

Financial transactions in Lao PDR are mainly done in cash, including salary disbursements by several government departments. Most Lao people also tend to keep considerable cash at home. As such, banks in Lao PDR usually consider that there are not many bankable people (Figure 9).

Banks have been adjusting to the national mindset for both traditional and digital banking, i.e., in a conservative way. Most respondents to the survey considered that momentum for DFS will come when bank interoperability will become effective, and competition can thrive (at present, state-owned BCEL has a 40 per cent market share, which comes as a disincentive for other banks, in particular new entrants, to develop new products).

Bank transfers in Lao PDR are similar to traditional money transfer transactions: upon making a deposit, the sender receives a code and shares it (through a phone call) with the receiver who can in turn withdraw money.

Use of credit and debit cards, Internet banking and Point of Sale (POS) devices is limited to high volume business transactions in the major cities such as Vientiane, Luang Prabang and other provincial capitals. According to the banks surveyed for this assessment, an emerging middle-class, with means of travel, has started using international debit card options, but banks are still reluctant to offer credit card services (low volumes).

The only electronic means of payment is for mobile airtime top-ups and utility bill payments (electricity and

Table X: Banking services used by the banked adult population

Banking products/usage (of those currently banked)	%	Approximate Number
Transactions (includes remittances)	74	1.1 million
Savings book/account	67	1.08 million
Debit card/Automatic Telling Machine (ATM)	27	410,000
Personal loan account	5	70,000
Foreign currency account	4	66,000
Fixed-term deposit/Special savings	3	45,000
Other	2	28,000

Source: FinScope Consumer Survey Lao People’s Democratic Republic 2014

¹³ Formally served: have/use formal financial products and/or services provided by a financial institution (bank and/or non-bank)



water), both of which are regular and recently offered through digital means.

Interviews conducted for this assessment with business associations indicate that despite widespread use of cash for financial transactions, business communities and people in Lao PDR are ready for digital finance provided it is convenient, cheap and hassle-free. To mirror this, financial institutions are themselves piloting projects to assess the readiness of businesses in Lao PDR to adopt DFS.

4.2. Financial regulation (financial service providers, payment service providers, cashless, e-payment gateways)

Promising developments have finally yielded results as BOL prepares to introduce digital financial services to move current services from “grey” to “white” areas.

Lao PDR has started the journey towards digitizing its cash-based economy and introducing digital financial services (DFS) to both its banked and unbanked populations. Lao PDR is currently in the early start-up phase of the DFS market. The country is a greenfield environment when it comes to mobile money. Several providers in the market have begun to develop their DFS offerings; however, the lack of regulations has limited their ability to launch services.

In 2015, the BOL released draft guidelines for providers (banks and non-banks) to implement DFS and for the market to begin its journey towards DFS. This allowed for both Financial Service Providers (FSP) and Payment Service Providers (PSP) to start developing their products and offers, which will be rolled out progressively in 2018, following the positive experience of the OnePay payment system offered by the main Lao commercial bank (BCEL).

The BOL, with support from UNCDF, has taken a leading role in ensuring consultation and coordination on DFS development. Digital Finance Services Working Group serve as the main official channel of communication between the DFS industry and BOL. Initiated in 2015, it provides a platform for DFS stakeholders to learn, dialogue and partner to advance DFS in Lao PDR. The DFS Working Group meeting held in December 2017 was a milestone for digital payments in Lao, with the announcement of the forthcoming issuance of the

ratified National Payment Systems Law, about to give more clarity to the DFS industry about the roles they can play within the digital finance ecosystem.

The National Payment System Law mandates the creation of a payments department within BOL to issue licensing to payment services providers (PSP) and payment system operators (PSO). The law is a very clear signal to industry players to bring innovative, accessible, affordable payment solutions to Lao PDR.

4.3. Main mobile, cashless payment solutions available

Mobile payment solutions led by the largest public bank, with e-wallet and cashless ready to be released by other banks and telecom operators.

Up until 2016, mobile top-up and utility bill payments through a formal bank account, the Internet or cell phones were the only digital financial activities prevalent in Lao PDR, working through SMS only. There is hardly any Fintech start-up in the country. Innovations come in the form of exclusive agreements with foreign-based payment providers.

The draft guidelines for providers (banks and non-banks) to implement DFS released by BOL in 2015 marked the beginning of the interest of FSP and PSP to consider the possibility and profitability of DFS in Lao PDR. As fund transfers and saving facilities are the two products that Lao customers appear to need the most, banks have looked at those as ways to drive adoption of DFS. These could provide the necessary short-term revenue and building of trust while DFS providers develop customer awareness and interest in savings and mobile money transfers.

The BCEL has developed a mobile application, BCEL One, to facilitate cardholders' payments and transaction inquiries through mobiles or the Internet. The service is only available for individual customers. This app can be installed either on smartphones or personal computers. The BCEL One app allows customers to transfer funds between accounts, pay utility and phone bills, pay taxes, and more, right from their mobile phone.

In late 2017, BCEL launched OnePay, an application allowing users to pay anyone, anywhere, directly from



their account by simply scanning a QR code¹⁴. The cost of goods and services is then deducted directly from the user's account and deposited in the vendor's account, eliminating the need for cash altogether. At time of the production of this report, there were talks between BCEL and other commercial banks to standardize the QR code system to be used by all banks in Lao PDR. One Pay is currently free to use for BCEL customers, but, as the service is rolled-out, BCEL expects to charge a small fee per transaction in the future.

BCEL is planning to expand the reach of both products further. It hopes to have OnePay services as an e-commerce payment gateway. It has also partnered with the Government for payment of taxes through BCEL OnePay. At the present time, this only includes Road Tax payments, but discussions are ongoing about the extension to other taxes, in particular at the borders.

Based on interviews conducted for this assessment, the limits to this agent-based model pertain to the lack of a commercial culture at BCEL: BCEL is reputed for creating great products but doesn't always know how to sell them. In this context, BCEL is dependent on the will of the agents to develop their own franchise, with uneven results. By reviewing results and adjusting the network regularly, BCEL could keep on board the most motivated agents. Incoming competition from Unitel U-Money (e-wallet) is expected to provide the stimulus and examples for commercial proactivity.

Separately, the Bank of the Lao PDR (BOL) has taken an initiative to launch branchless banking with support from Australian Aid and UNCDF. The commercial bank, BCEL, and a mobile network operator, UNITEL, are working to start mobile money operations in which customers can deposit money to a network of agents of UNITEL, who will convert it into e-money and send it to the distant locations. In any case, DFS providers will have to deploy one agent per cluster of three to four villages, which are typically located in such a radius (i.e., 5–10 km). An agent will thus cover an average target population of 300 to 400 households, if the approach is to be successful.

Other commercial banks are preparing to roll-out their DFS solutions in 2018. The Banque Franco-Lao (BFL) is a joint venture between BRED Banque Populaire SA, the second largest bank in France and BCEL, the largest bank in Lao PDR. This partnership brings considerable expertise to the DFS scene in this country. BFL plans to pilot its brand new DFS solutions, combining mobile banking and e-wallet solutions, and focusing on SMEs and corporate, in particular in the retail sector.

On the PSP side, Alipay and WeChat Pay are currently actively recruiting merchants in Lao PDR catering to Chinese tourists before attracting domestic users, pending regulatory approval by BOL.

According to interviews with banking actors, it is still difficult to start DFS pilots (beyond BCEL and UNITEL) because so few banks and telecom operators have large investment capacities (a minimum of US\$1.0 million is needed to kick-start operations in DFS). The largest banks in Lao PDR in terms of retail market share are state-owned and therefore have a severe lack of capital. This is now changing as companies realize they can leverage different assets or partnerships, such as the Phongsavanh Bank using the network of petrol stations from the Phongsavanh Group.

¹⁴ A QR code, abbreviated from Quick Response Code, is the trademark for a type of matrix barcode (or two-dimensional barcode). Source: Wikipedia



Box 1: United Nations Capital Development Fund (UNCDF) assists in accelerating DFS to serve rural areas

On 12 May 2015, the first branchless banking transaction was completed in a rural village in Lao PDR. This ground-breaking transaction took place with a service launched by BCEL, one of the country's leading banks. The service, BCEL Community Money Express (BCOME), was the first of its kind in Lao PDR. The BCOME service relies on agents, so BCEL needed to build a relationship of trust with them and in turn inculcate trust in the agent within the community and by individual customers. After operating for over a year, the BCEL branchless banking service has seen positive signs of development. By the end of 2016, there were 128 agents working in all provinces nationwide, there were 220+ by end 2017.

Villagers can use BCOME currently to deposit cash into their own account or into someone else's account and transfer cash to anyone in Lao PDR. They are able to open an account at the BCOME agent and receive immediately a card to make withdrawals from BCOME agents or BCEL ATMs, make interbank fund transfers, and pay utility bills.

DFS in Lao PDR can have significant impact by providing access to services that the dispersed population is sorely missing. The journey to launch digital finance and branchless banking took investment and planning that began years ago, in 2012, with the engagement of the Bank of the Lao PDR (BOL) and UNCDF.

Bringing digital finance to Lao PDR required a serious commitment by BOL, the Central Bank, which had not yet established a regulatory framework for DFS at the time. But BOL had a vision for digital finance - that it would be an important service to broaden financial inclusion and to accelerate local development.

In 2013, BOL requested a scoping mission to assess the potential for DFS in the country be conducted by the UNCDF programme Mobile Money for the Poor (MM4P), through the national implementation programme called Making Access to Finance More Inclusive for Poor People (MAFIPP). The project received generous financial support from the Australian Government.

In parallel, with the support of UNCDF, BOL went to work on creating an enabling regulatory framework for DFS to permit banks and non-banks to offer services. UNCDF supported BOL in its regulatory efforts by assisting BOL staff to attend different workshops and go on exposure visits to Cambodia as well as providing international regulatory experts to advise on the development of appropriate regulations.

Source: UN Capital Development Fund, June 2017

Besides BCOME, UNCDF has invested heavily in winning buy-in and trust in a country without any previous experience with mobile money or agent banking. UNCDF has taken the lead in various

actions regarding DFS, including regulation issuance, application review, pilot preparation and the first branchless banking launch by BCEL, as shown below:

Table XI: List of main support activities to electronic payment by UNCDF in Lao PDR

Partner	Type	Amount (US\$)	Start date	End date	Purpose
BCEL	Grant	65,000	Mar. 2016	Dec. 2017	To commercially institutionalize the BCOME Pilot as well as to enhance agent network management and customer awareness campaigns
Unitel	MoU	25,000	May 2015	Dec. 2016	The MoU guides the relationship between MAFIPP and Unitel in the preparatory phase of their DFS pilot and supported business case development, platform vendor selection and general capacity-building
Star Telecom	Technical assistance	95,000	Nov. 2016	Dec. 2017	To support the launch of the first mobile wallet in Lao PDR throughout all phases of preparation and launch. Specific focus on human centred product design in the preparatory phase to assure appropriateness for the Lao context
Star Telecom	Grant	150,000	Nov. 2016	Dec. 2018	Additional funding to Unitel to incentivize a timely and successful launch of the wallet with effective outreach activities
Banque Franco-Lao	Grant	290,000	Aug. 2016	Mar. 2019	Digitization of payments across a consumer goods distribution chain serving as launch pad of DFS targeting women-owned small catering and retail businesses

Source: UNCDF



5. LEGAL AND REGULATORY FRAMEWORK

The massive efforts to become member of the WTO in 2011 and to meet its commitments under the e-ASEAN framework and ASEAN Work Programme on Electronic Commerce (AWPEC) 2017-2025 translated into Lao PDR having a relatively good and recent set of supportive laws. Privacy and consumer protection laws need improvement and update in their compatibility with e-commerce development in the country. Similarly, the entry of new e-commerce services in Lao PDR would call for innovative yet careful review by relevant bodies to ensure they are in line with corresponding laws and regulations. This calls for Lao to adopt a more proactive and open-minded approach to support the development of new “digital business”.

Lao PDR’s relative legal and regulatory readiness for e-commerce stems in part from the efforts made by the GoL to ensure that it adheres to the commitments made under the 2000 e-ASEAN framework agreement¹⁵ and other ASEAN e-commerce initiatives:

- AEC Blueprint 2025 – to intensify cooperation on e-commerce with a view to developing an ASEAN Agreement on E-commerce to facilitate cross-border e-commerce transaction.
- The ASEAN ICT Masterplan 2020 - launched in November 2015, aims to transform ASEAN into a digital economy by 2020.
- ASEAN Strategic Action Plan on Consumer Protection 2025 – to develop a Common ASEAN Consumer Protection Framework that

includes product liability, safety and consumer data privacy.

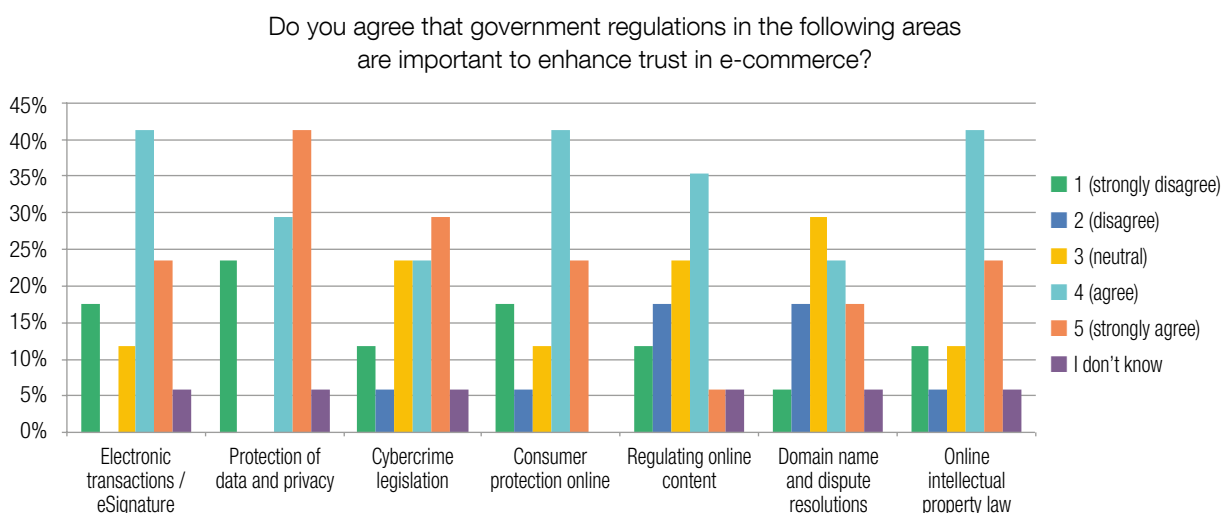
- E-commerce provisions in ASEAN FTAs - AANZFTA (2010) transparency and online consumer protection.
- Negotiating on e-commerce chapters under RCEP.
- Inclusion of e-commerce into the future ATISA.

In addition, commitments made by Lao PDR in ASEAN (since 2005) and on RCEP (since 2012) on e-commerce services must be adhered to, a responsibility shared by different GoL agencies.

The recent uptake in e-commerce has meant that private sector associations, in particular in the banking sector, have called the attention of GoL to upgrading its legal and regulatory framework, so as to attract much-needed foreign investors.

¹⁵ See: *e-ASEAN Reference Framework for Electronic Commerce Legal Infrastructure*, ASEAN Secretariat, 2001

Figure 10: Priority regulations for e-commerce



Source: UNCTAD



5.1. Status of four key laws as per UNCTAD Cyberlaw tracker

An update to the slightly outdated legal framework for e-commerce is currently being considered, in line with regional and international commitments made by Lao PDR.

According to the data collected for the assessment and interviews with relevant stakeholders in the Ministry of Industry and Commerce and the Ministry of Science and Technology, the legal and regulatory framework is in place but outdated or not containing provisions covering recent progress in technology. In detail:

- There is currently no e-commerce law (neither in place or in draft), although assistance is being received from several development partners, in particular Korea.
- The Electronic Transactions law was passed in 2012, but to-date, its use has been very limited. Review of the law in 2017 by the World Bank showed that the law was outdated.
- The Law on Prevention and Combating Cyber Crime was passed in 2016.
- The Law on Consumer Protection was passed in 2010 but does not include any disposition to protect consumer online¹⁶.
- There is no law on data protection.

According to the interviews conducted for this assessment, the complexity of laws and regulations call for support from development partners (DP) to improve existing and prepare future drafts. Awareness raising among both Government officials and private sector will be critical in coming months to increase trust in and credibility of the new regulations to be developed.

¹⁶ The Consumer Protection Division, Domestic Trade Department, MoIC is the main body responsible for coordination between GoL and consumers. It has however no authority over complaints concerning products purchased online

5.2. Other related laws, acts, regulations

In the past few years, the GoL has passed a number of e-commerce supportive laws and regulations (Figure 10), in line with international commitments and in order to keep up with ICT development in the region.

Telecommunications

The Lao Telecommunications Sector Regulatory Assessment carried out in 2015 identifies key compliance gaps in Lao PDR's current law and regulations with WTO's Telecommunication Reference Paper and other areas of the sector regulatory environment that are essential to provide greater certainty for operators and other market participants. The Assessment concluded that while Lao PDR has in place most of the primary legislation necessary to ensure WTO compliance and regulatory best practice the priority should now be to implement key secondary legislation - in the form of regulations or other instruments to give effect to the required measures, that will strengthen overall regulatory framework for the sector.

Among others, in the ICT sector, the absence of an independent regulator, lack of a licensing framework and the lack of a level playing field in the market are perceived by operators (both government and privately-owned) as key impediments to the continued development of the Lao ICT sector. Reforms needed in this area include the establishment of an independent regulatory agency, developing adequate regulatory and technical capacity for infrastructure sharing, interconnection and licensing, and providing open access to existing infrastructure using cost-based prices.

Business registration and taxation

Two government departments that deal with start-ups are Department of Small and Medium Enterprise Promotion (DOSMEP) and Ministry of Science and Technology (MOST). There are currently no registration procedures for e-commerce firms or tech start-up. Both types are usually registered under the SMEs rules. The same applies to taxation, as tax authorities treat SMEs and start-ups alike.

Laws on foreign investment make it difficult for foreign investors to collaborate or invest in any start-up in the country. Lao National Chamber of Commerce and Industry and the Lao ICT Commerce Association both



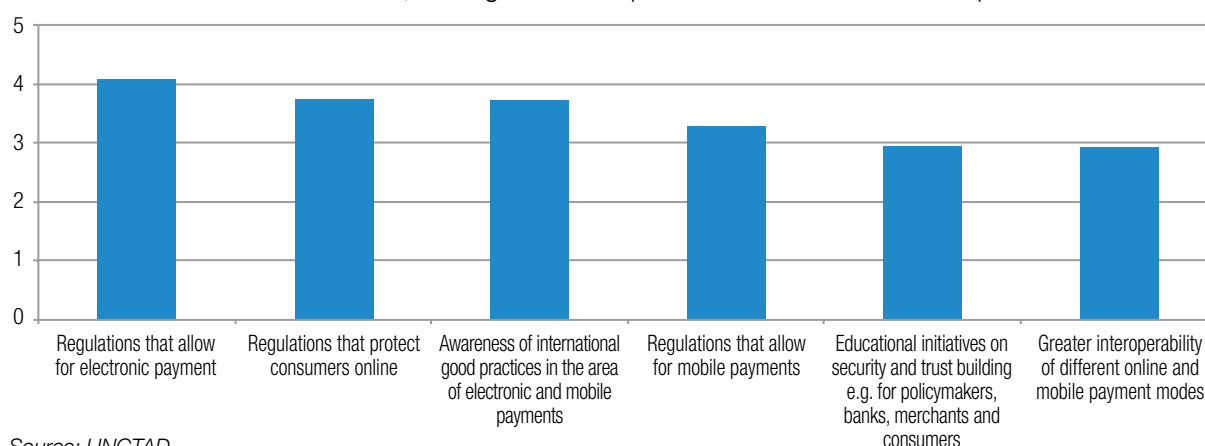
work closely with tech start-ups to help them scale up in their business activities. Many private sector partners meeting for the assessment suggested that the Government should come out with incentives and encourage regulation for start-ups to boost a start-up ecosystem in the country.

Financial services

As mentioned earlier, (Section 4), the Law on National Payment is to be released early 2018, and digital financial services decrees are being prepared (Figure 11).

Figure 11: Key payment regulations for e-commerce

Please RANK the following areas according to their relative importance to create an environment that is conducive to e-commerce, 1 being the least important issue and 6 the most important one.



Source: UNCTAD

Box 2: Challenges of disrupting markets and regulations

Kiwi Group Ltd, a Lao-owned and managed Internet company, is the first fully integrated e-marketplace company in Lao PDR, grouping several online applications for end-consumers ease of use. In the last three years, Kiwi has launched successful apps used every day by more and more people including local and foreign.

Launching local versions of popular B2C online services as a pioneer in Lao PDR has proven challenges, notably on the regulatory aspects. Kiwi had to deal with numerous gray areas when it started to disrupt the food delivery, taxi rides and online payment systems. MyDelivery.la, VaiVai.la, KiwiPay.la are some of the websites/applications running already in Lao PDR.

MyDelivery.la is the food delivery service for ordering in Vientiane. As a food delivery service, the company had to deal with business registration issues (e-commerce is not a recognized sector), transport and traffic regulations (as it provides a transport services with its own transport means), and food safety (because it delivers food products).

VaiVai.la is the first application in Lao that connects people to a taxi driver in a few minutes. More than 100 taxis (out of 300+) in Vientiane are using the app, attracting partnership with Mercedes, Toyota, Avis and Sixt group for cross-marketing activities. Vaivai has to operate with registered taxis only and cannot therefore offer cheap rides since taxi fares in Vientiane are regulated.

Kiwipay.la is an online payment processing solution service that receives, distributes and settles money with local merchants. This is the only existing service that is processed in local currency. Kiwipay had to partner with a BFL, as e-payment solutions by Payment Service Providers are not authorized yet, although the decree is being drafted, according to the Bank of the Lao PDR. End 2017, ANT Financial, affiliate company of the Chinese Alibaba Group, has chosen Kiwi to become its partner in Lao PDR and abroad to deploy the ALIPAY E-wallet.

Kiwi's continued engagement with both authorities and leading e-commerce providers has only recently paid off. Because of the diversity of the new products and the disruption it may create, authorities have not always been able to facilitate a business development process. Delivery app services for instance needed to be registered with the MoIC (business registration), the MPWT (as a transport service), with Ministry of Finance (for mobile payment options) and a score of other entities.

Competitors have started to appear in the services mentioned above, leading e-commerce and digital start-ups to consider other forms of advocacy and lobbying to have their service specificities recognized.

Source: Interviews by the author during the in-country mission



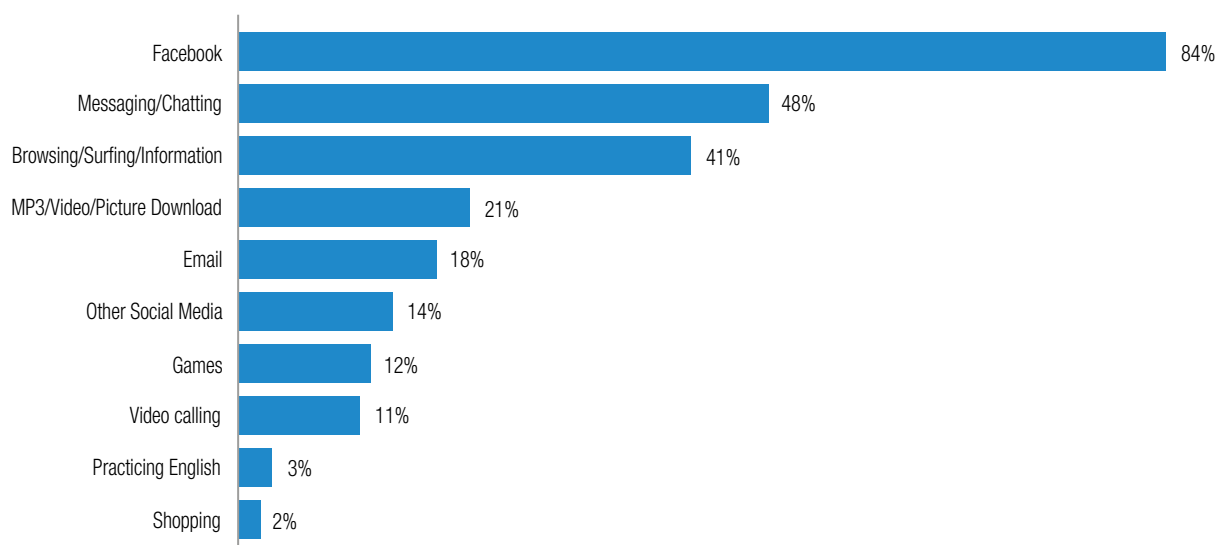
6. E-COMMERCE SKILLS DEVELOPMENT

E-commerce knowledge and skills gaps are becoming evident as e-commerce ventures are trying to develop their products and tech start-up are lacking the right ecosystem to develop further. There are still lots of confusion or “grey areas” when discussing e-commerce in Government and business circles alike in Vientiane, tainted by lack of understanding and lack of trust. Digital companies are importing labour from neighbouring markets or invest massively in in-house training, with the risks of seeing staff leave to offer their services elsewhere. The tech start-up community is slowly starting to appear, attracting much-needed mentoring services and capital. As the needs grow, tertiary education and other training institutes, such as the MoIC own Economic Research Institute for Trade (ERIT), include e-commerce related contents in their curriculum.

Most respondents to the online survey part of this assessment cited lack of consumer and merchant trust as the main bottleneck for e-commerce uptake in Lao PDR. The lack of trust stems in turn from a lack of information readily available in Lao language on what e-commerce is, how it works and how it can benefit consumers and businesses alike. The key phrase mentioned in several interviews were “we need to educate the market”.

While Internet is becoming accessible and affordable for larger segments of the population, getting information, knowledge on e-commerce and how to benefit from it is very difficult. As shown below, mobile Internet is primarily used for consulting Facebook, interacting with friends, but very seldom to do shopping or even less so, mobile banking (Figure 12):

Figure 12: What is mobile Internet used for?



Source: Indochina Research, 2017

The GoL has taken some short- and long-term measures to address the skills gaps in the ICT and e-commerce sub-sectors. But most initiatives are donor-dependent and are difficult to maintain over time. The tertiary education system is not supplying enough ICT graduates with the knowledge and skillsets needed to work in the e-commerce industry. The nascent tech start-up scene is trying to address this, by attracting talent from overseas and the interest

of a few investors, despite adverse conditions for investing in certain services markets.

6.1. Skill gaps identification

The weak linkages of ICT and e-commerce services with other sectors of the economy to some extent related to the lack of available specialized professionals in the economy.



The Lao economy suffers from a considerable shortage of qualified professionals in almost all professional services. Domestic supply-side weaknesses are largely due to shortcomings in academic facilities and institutional arrangements for professional training and development especially in the ICT sectors.

In order to overcome the supply shortages, further liberalization both under AFAS (ASEAN Framework Agreement on Services) and GATS (WTO's General

Agreement on Trade in Services) is needed, and the identified domestic shortcomings need to be addressed with well-coordinated policy, institutional, and regulatory reforms, in partnership with the concerned industries.

In the meantime, companies needing specialized skills must outsource them or create their own training facilities.

Box 3: Digital Monkey Lao (digitalmonkey.la), attracting talents and staying ahead of digital strategies

"The online landscape in Lao PDR is evolving and growing in a very positive way. Everyday more people go online on social media, websites and apps through their mobile phones. At Digital Monkey, we understand the potential this has for companies in Lao PDR to communicate and engage with their current and potential customers, in Lao PDR and overseas" says Jeppe Bauer Carlsen, CEO of Digital Monkey.

The challenges facing companies like Digital Monkey for sourcing local talents are enormous. Public institutions do not yet offer ICT-focused, let alone e-commerce friendly curricula, resulting in most companies having to source from neighbouring countries and/or train new graduates from scratch.

In order for Digital Monkey to develop integrated digital marketing strategies to achieve its client's goals (e.g., launching new beverages, soft opening of hotels, and other projects) they need to first identify the client's target audience and then develop campaign objectives that define the best possible way for the clients to reach their audience. They can then provide services such as online media planning, website and app development for the clients to become "creative influencers". This allows the company to constantly stay ahead of the curve and attract tech talents.

As the company grew, each new "enterprise" may become a business unit in the Digital Monkey group, with a different knowledge and skillsets for team members. When it comes to e-commerce, Digital Monkey is about to make the move to offer e-commerce services, such as developing marketplaces. To match the skills needed to do so, the company is planning to develop an e-commerce academy, which could ensure that e-commerce skills could be nurtured in-house.

Source: UNCTAD based on the interview of Jeppe Bauer Carlsen, CEO, Digital Monkey during the in-country mission

6.2. Availability of tertiary education/curriculum, professional training

ICT-related tertiary education focusing on hardware and network management, not much on web development, web application, content management, although recent evolution in the National University of Lao PDR marked a shift in the education world's interest in accompanying ICT development.

Colleges and universities only teach one or two subjects related to entrepreneurship and none has directly focused on e-commerce. Specialized training is only available on a request basis, customized for client by private training providers (Figure 13).

Some steps have been taken, in particular by the Ministry of Education and Sports (MoES) and the

Ministry of Industry and Commerce (MOIC) to address the skills gaps in the education system. However, most Government-led initiatives are about access to ICT hardware and software (e.g., e-learning), not yet on ICT skills and knowledge for industry and for businesses. Initiatives like those of the Lao E-Government Center (for Government officials) plus the E-Education project of MoES (computer labs were established in 50 schools and free Internet access was provided to more than 500 schools) are steps in the right direction to increase IT and ICT-literature. The MoES is also trying to promote use of e-learning in the education system. Currently Lao PDR has 18 e-learning classrooms nationwide, or one classroom per province. The Ministry of Education and Sports plans to introduce e-learning at the National University of Lao PDR and teacher training colleges initially and later at other colleges that officials recommend to



the government. E-learning will also be introduced in lower and upper secondary schools in the future; each school will have at least one e-learning classroom.

The Economic Research Institute for Trade (ERIT) of the Ministry of Industry and Commerce, with support from UNCTAD, has developed a diploma programme on e-commerce, taught in the Lao language in its Trade College. The curriculum taught over 16 weeks (four hours per week) include the following chapters:

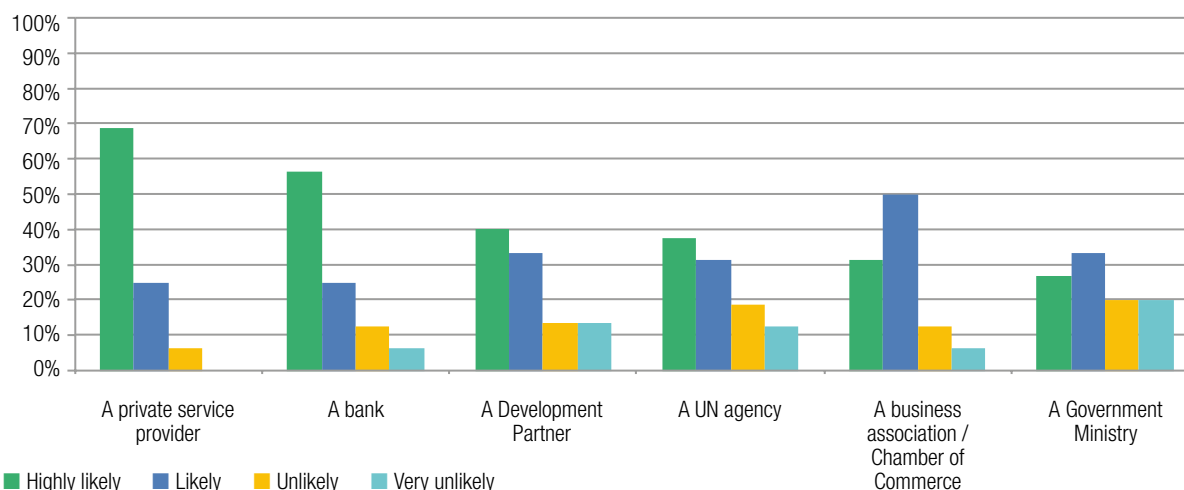
1. Basic knowledge of Internet
2. How to use the Internet in business

3. E-commerce activities
4. Business models in e-commerce, B2C and other topics
5. Electronic transactions
6. Payment systems
7. Case studies: e-Bay and PayPal

The diploma will be turned into a three-day training course for Government officials, both at central and district levels and will be opened partially to SME business owners.

Figure 13: Technical assistance providers

In case you need technical assistance to start developing e-commerce solutions, how likely are you to turn to:



Source: UNCTAD

6.3. Tech start-ups scene

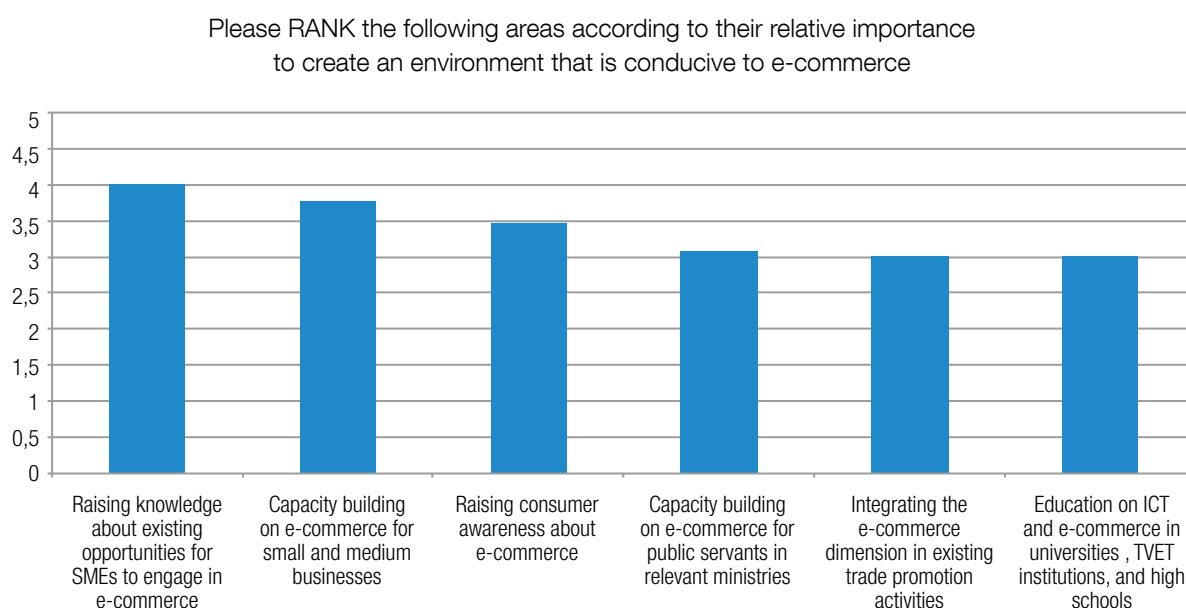
A dynamic tech start-up community is slowly developing and accessing support (coaching, mentoring) from neighboring countries.

Faced with the widespread absence of dedicated training and curriculum on ICT and e-commerce and faced with the persistent lack of interest from Internet and e-commerce powerhouses for a small market like Lao PDR, an active community of tech enthusiasts and dynamic youth is starting to emerge, creating a Lao tech start-up community and responding to some of the capacity gaps identified.

There is an abundance of willing would-be business owners, with bright ideas brought with them from their experience overseas. Some have capital to invest—a young entrepreneur declared during interviews that “in Lao PDR, users are growing and growing. It is also cheaper to start online, you don’t need a big initial investment, so there is not a big risk there”. Some would just like to emulate the approach used successfully by Rocket Internet in South East Asia, i.e., taking proven online business models to new, fast-growing markets. Some of them, like FOXpress (see Section 3) and 108JOB (Lead job site in Lao PDR, with almost one million monthly views and around 100 jobs being added every day) have been successful in starting small, with an idea and a niche market, and growing bigger. However, this is still very limited.



Figure 14: Main capacity-building needs



Source: UNCTAD

At present, the Lao tech start-up scene is characterized by low capabilities (Figure 14):

- Limited mentorship support
- No special treatment for start-ups by GoL or banks
- Insufficient co-working spaces and incubators (and those who survive are operating in Vientiane only)
- Lack of international exposure (most ideas are duplicated from overseas)
- Weak English skills (limitation to pitch to foreign angels/venture capitalists)
- Limited ambition to grow
- Low Internet penetration rate in Lao PDR
- Lack of locally-grown IT talents

However, a handful of organizations are now engaged in community-building exercises in Lao PDR. These community builders organize Start-up Weekend, Mekong's Next Top Mentor, Start-up Boom Camp, other workshop and seminars to encourage creative thinking and initiatives.

- TOHLAO is a co-working space in the capital city of Vientiane that has progressively become

something of an incubator for start-up talent in the tech sector.

- STELLA is a social enterprise willing to inspire, empower and connect young and promising stars in Lao PDR to make personal positive change. It provides a platform for young entrepreneurs to collaborate for innovative thinking and supports existing youth groups to contribute to positive social change, be it goals or social campaign.
- Google Developer's Group (GDG) helps young people come together to share their knowledge and experience with the help of resources from Google.
- Lao IT Business Incubation Center (LIBIC) is the first business incubation centre in Lao PDR that promotes entrepreneurial leadership and provides a platform to mentor those entrepreneurs who are working on a potentially viable product or service in the IT sector.
- Asiastar is another co-working space which provides mentoring and workshops.
- Global Shapers Community (Vientiane) and Young Entrepreneurs Association of Lao PDR drive young people towards innovative thinking.



7. ACCESS TO FINANCING

The lack of a proper economic status for e-commerce vendors and the lack of understanding surrounding the digital world has meant that MSMEs active in the e-commerce field and tech start-up face challenges accessing financing through banks. Instead, they use personal savings or turn to relatives to fund their development, hoping to catch the interest of foreign investors or venture capitalist to fuel their financial needs. For others, in particular outside Vientiane capital city, support offered by development partners like UNCDF and the World Bank, has helped in broadening both access to finance and business development.

Lao tech start-ups and e-commerce SMEs are currently operating “under the radar” of banks and MFIs. This is partly due to the nature of MSMEs in Lao PDR as well as the belief by bank and other financial institutions that ICT companies and start-up are risk-prone ventures.

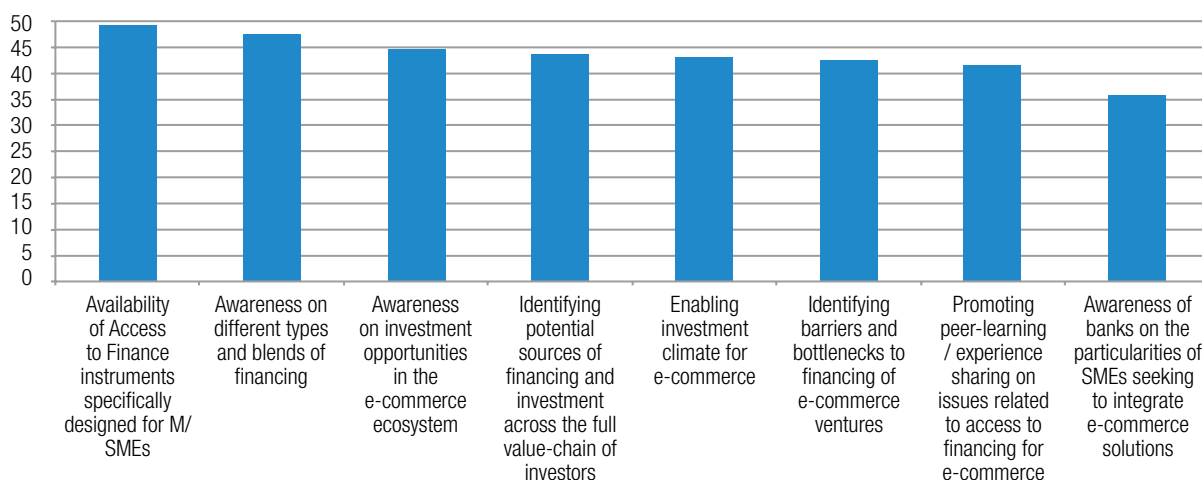
All stakeholders who met for the assessment agreed that improving MSME access to credit and other financial services will contribute to the development of the private sector in the Lao PDR and in particular of e-commerce. As access to finance through formal banking channels seems impossible for e-commerce firms, their innovative nature has led them to access other sources of funding. While angel investors and venture capitalists have yet to gain an interest in the Lao markets, several business accelerators are bringing more visibility to the needs of e-commerce ventures. Several development partners are working

with the GoL, BOL, and commercial banks to improve access to finance for SMEs in general.

Access to finance is commonly cited as a constraint by enterprises in Lao PDR, and particularly by MSMEs. In the 2014 GIZ Enterprise Surveys, 38 per cent of firms rated lack of capital as a “big” or “very big” constraint, making it the biggest of 10 internal constraints for MSMEs. Beyond access to bank credit, there is a clear need to improve MSME access to a broader range of modern financial services that have yet to be developed and implemented in the Lao PDR market. The Bank of the Lao PDR is working on creating a legal and regulatory framework that strengthens the national payments system, supports innovative payment mechanisms (such as mobile banking), and encourages the introduction of MSME-friendly financial products.

Figure 15: Access to financing priorities

Please RANK the following areas according to their relative importance to create an environment that is conducive to e-commerce



Source: UNCTAD



The private sector in Lao PDR is highly fragmented. Official figures for registered enterprises provided by the MoIC show that small enterprises (1-19 employees) comprise about 99 per cent of all enterprises in Lao. The country has only about 1,100 medium-sized enterprises (20-99 employees) and 200 large enterprises (100 or more employees). High rates of informality suggest that many firms perceive that the benefits of registration (including improved access to finance) are outweighed by the costs of registration and compliance with regulations and taxation. In this way, informal MSMEs sometimes enjoy a competitive advantage over registered firms in their industry.

Start-ups suffer from the misunderstanding concerning their status, and in particular as regards their classification as SMEs or not. For instance, while MoIC and MoST work closely with community builders and start-ups and their understanding of start-ups are similar to the start-up community, the tax department considers start-ups that have been registered the same way as SMEs. For banks, start-ups come with ideas only, no assets, no collateral and are therefore not targeted customers, while SMEs are small businesses that have been existing in the market and there are potential opportunities for banks to finance.

7.1. Financing by banks and MFIs

Limited interest from commercial banks—from both public and private sector—for the risk prone ICT, e-commerce and start-ups market.

Although Lao PDR has 41 banks servicing a population of just seven million people, the banking sector is highly concentrated, with four state-owned commercial banks accounting for nearly two thirds of all loans.

Each state-owned bank has a specific lending focus, with BCEL (the largest bank) concentrating on large corporates, Lao Development Bank (second largest) focusing on SMEs, and the Agricultural Promotion Bank and Nayoby Bank focusing on the agriculture sector. ACLEDA Bank is one of the more active private lenders of credit to SMEs, with loans of less than US\$10,000 comprising about 85 per cent of total active borrowers, and 33 per cent of total loan value (data provided by ACLEDA Bank in May 2014).

The microfinance industry is relatively small in the Lao PDR, with total loans of about US\$28 million at the end of 2014. The Lao Microfinance Association (MFA) interviewed for this assessment confirmed that at present, they were not providing loans to any start-ups or ICT firms, but mostly to individuals. The association also confirmed that most MSMEs rely on informal sources of finance in Lao PDR (figure 14).

7.2. By business incubators, business accelerators, venture capitalists

Despite several attempts at raising awareness in the Mekong region, Lao PDR is not yet on the radar of most venture capitalists and angel investors because the e-commerce and start-up ecosystems are not mature enough for funding.

Most people interviewed for this assessment considered that (1) Lao PDR is too small to attract international investors at the very beginning and (2) it is too early for angel investors to invest in Lao PDR. In addition, the FDI landscape is not considered favourable for foreign investors (legally, there are restrictions for certain industries, like media, that don't allow foreigners to own 100 per cent of the enterprise). Very disruptive and innovative start-ups, like Fintech, might encounter problems while entering the market, since they would disturb the existing system.

As described in the previous section, support services to Lao tech and e-commerce start-ups is limited: only a few low-profile business incubators or co-working spaces are hosting a small number of start-ups, with the hope that some of them will follow the same development pattern as FOXpress or 108JOB (see Section 6 on e-commerce skills). No start-ups met for the purpose of the assessment had access to any substantial institutional backing (operational or financial).

Compared to nearby Cambodia, Myanmar or Vietnam, the Lao start-up ecosystem still lacks key players and components, including incubators, accelerators, angels and venture capital investors. Although angel investing by definition means seeking companies that are extremely high risk, the investors found little opportunity to financially commit to these start-ups in Lao PDR. Most start-ups seem not to have reached the stage of investing, but rather of advising and refining their business model.



The ecosystem itself needs support in order to thrive, such as access to cheaper and faster Internet, better capacity to pitch in English, better regional connections. In addition, there is little to no media specific for start-ups or ways to disseminate information to the public regarding the start-up life cycle. Knowledge of start-ups and business accelerators is mostly imported from neighboring countries, especially Thailand. LNCCI and LICA are offering support to MSMEs, but their knowledge and tools for e-commerce are limited.

Several attempts were made, in the context of regional gatherings, to bring international and regional angel investors, with promising yet limited success. One of these is TIGERs@Mekong, whose goal is to accelerate the entrepreneurial ecosystems in Cambodia, Lao PDR, Myanmar, Thailand and Vietnam to start and grow technology start-ups. They do this by partnering with existing champions, mentors and organizations in the ecosystem. Another is Mekong Angels, which is providing insights into opportunities and challenges surrounding angel/seed investments in Cambodia, Lao PDR, Myanmar and Vietnam with support from development partners (Department of Foreign Affairs and Trade of Australia and ADB).

7.3. Financing by development partners

Faced with the impossibility of raising funds through banking or angel investors, specific segments of MSMEs may gain access to funding through development partners programmes, be they grants or loans.

Three development partners have been active in supporting better access to finance for MSMEs, including, in some cases, for tech and e-commerce start-ups.

The World Bank supports the Small and Medium Enterprise Access to Finance Project for Lao PDR. The project goal is to provide long-term funding sources for banks so they, in turn, can provide long-term credit to small and medium enterprises. This is achieved by increasing the supply of long-term finance provided by commercial banks and by strengthening the capability of Department of SME Promotion (DOSMEP) to formulate and implement public policies that promote access to finance for SMEs.

This project comprises three components. The first component, a Line of Credit Facility, aims to

alleviate the lack of long-term sources of funding that prevents commercial banks from providing long term credit (more than two years) to SMEs. The second component, Risk Sharing Facility, provides a partial credit guarantee to eligible private commercial banks that lend to SMEs. Third, Technical Assistance helps strengthen the capacity of the Department for Small and Medium Enterprise Promotion and other agencies in areas such as formulation and implementation of a MSME development strategy, SMEs census, design of new MSME lending and non-lending products, impact assessment, MSME business advisory services. It focuses as well on project implementation, monitoring and evaluation, including outsourcing of procurement and financial management functions of the National Implementation Unit of the Ministry of Industry and Commerce. As part of project restructuring in 2016, the second component was cancelled and funds allocated to this component were transferred to the Line of Credit. As a result, the project currently has two components: (1) a Line of Credit (\$15 million); and (2) Technical assistance (\$5 million).

The Mekong Business Initiative (MBI) is a development partnership between the Asian Development Bank and the Government of Australia to accelerate growth in Cambodia, Lao PDR, Myanmar, and Vietnam. The MBI works along three main dimensions: (1) through business advocacy, so that Government policies can support business reform and enable commercial environments; MBI partners with enterprises to advise governments in formulating policies that encourage entrepreneurship; (2) providing access to finance, considering that traditional banking services to the lower income population are often limited or unavailable. The MBI collaborates with financial service providers on exploring opportunities for alternative finance, including venture capital, angel investment, and Fintech and (3) supporting innovation, by promoting business incubators and accelerators, piloting innovative business models, and increasing knowledge.

MAFIPP is a joint UNCDF-UNDP sector support programme, in partnership with Bank of the Lao PDR, funded by the Australian Government. MAFIPP provides support and technical assistance to all stakeholders in the ecosystem to develop an enabling environment for branchless banking and mobile financial services to flourish.



Working in partnership with BOL, UNCDF has programmed \$9.8 million for financial inclusion interventions in Lao PDR since 2011 by implementing MAFIPP. MAFIPP has focused on improving policy and regulatory environment in parallel with strengthening the financial infrastructure and capacity of financial service providers (FSPs) using a market development approach. MAFIPP will end in September 2018.

UNCDF plans to continue supporting the uptake of Digital Financial Services (DFS) in Lao PDR. UNCDF is uniquely placed with its established constituency in DFS to spread electronic payments in Lao PDR to generate efficiencies across the entire economy and

to include the population traditionally on its fringe. Relentlessly testing user acceptance of new business models will develop linkages between different tiers of financial institutions and leverage the payments infrastructure ahead, ultimately paving the way for Fintech. UNCDF plans to (1) promote business use cases for uptake and innovation in DFS across business sectors, identifying champions and market leaders to lead them to digitize their value chains, (2) develop capacity and understanding of DFS through intensive communication and national awareness rising campaigns and (3) increase merchant acceptance of DFS.

Box 4: UNCDF Shaping Inclusive Finance Transformation (SHIFT): Formalizing women businesses through supplier relationships

The UNCDF's SHIFT Challenge Fund invests in financial service providers to develop new and innovative business models that expand levels of financial inclusion and women's economic participation. In 2016, SHIFT invested in a new digital financial services product developed by Banque Franco-Lao, and Lao PDR's leading state-owned bank, Banque Pour Le Commerce Exterieur Lao Public (BCEL). Banque Franco-Lao serves more than 22,000 retail and business clients in Lao PDR and has an asset base of US\$150 million. In 2016, the SHIFT Challenge Fund co-invested US\$290,000 into Banque Franco-Lao's new mobile money platform. Banque Franco-Lao contributed an additional US\$457,000.

The challenge:

Most of Lao PDR's 100,000 micro-, small- and medium-sized businesses need sources of external funding, especially for the roughly 50 per cent that are owned and managed by women. However, with fewer than half of women in Lao PDR in possession of a home or a title deed in their name, women-owned businesses have a much harder time providing the collateral required for loans from formal financial institutions.

The solution:

Create a mobile money product for unbanked women who own or manage micro-, small- or medium-sized businesses, and link it to a supplier—a fast moving goods company—that has an established commercial relationship with the clients. Among other benefits, the women will begin building a formal financial history and be able to use their relationship with the supplier as partial collateral for business loans. While adults in Lao PDR may be less likely to have access to formal financial services, most of the population uses mobile phones, including 82 per cent of women. Mobile phone ownership offers new ways for financial service providers to deliver affordable financial services.

Business model:

Banque Franco-Lao's new mobile money platform is designed for women-owned businesses that resell products supplied by fast moving goods companies. Banque Franco-Lao's mobile money service enables these women business owners to carry out their business and personal financial transactions in an affordable and convenient manner. Clients can then use their credit scores to take out business loans. Going cashless will lower costs. The supplier of a fast-moving goods company, meanwhile, could see the following benefits as a result of its involvement. The company will be able to switch to sending and receiving digital payments with its resellers, a move that will lower both the costs and risks associated with using cash.

Source: UNCDF SHIFT Website



CONCLUSION

Lao PDR finds itself at the crossroads of e-commerce adoption. After having invested massively in ICT infrastructure to guarantee reliable access to mobile telephony and updated its legal and regulatory framework to adhere to its regional and international commitments, the Government needs to adopt ambitious policies in coming months regarding the acceleration of the use of ICT and e-commerce, as well as the creation of a supportive ecosystem for further social and economic development.

The e-commerce market in Lao PDR is set to take off amidst the rapid growth of Internet penetration in the region but the country does not have up-to-date and supportive laws to regulate such activities. In particular, much-needed regulations for a national payment system, to accelerate the adoption of digital financial services, will be a key test of Government willingness to allow an uptake of e-commerce in the country. The cautious approach that the Government has taken over the years has resulted in Lao PDR losing out on the benefits from the growth of this form of business, especially compared with its immediate neighbours, as well as on the possibility to further diversify its economy and generate revenue from e-commerce.

The ability to leverage ICTs to boost innovation and online participation depends heavily on the availability of a reliable and cost-effective ICT infrastructure. Lao PDR MSMEs are unlikely to gain a competitive advantage where businesses and investors do not have ready access to global sources of knowledge

and other resources and are relatively isolated from global markets.

Similarly, while access to finance is particularly challenging for informal enterprises, the difficulties that even formal MSMEs experience in obtaining bank credit diminishes the incentive for unregistered firms to formalize. The lack of innovative financial services available in the Lao PDR (such as mobile banking) is another missed opportunity to encourage businesses to formalize. If informal firms perceive they are missing out on the benefits of the mobile payments systems available to formal firms, then they could be more likely to formalize. While development of innovative financial products and mobile banking platforms may not directly address the lack of access to capital for MSMEs, these initiatives are an important aspect of financial inclusion. They will improve the efficiency and competitiveness of MSMEs, as well as their ability to integrate into value chains. In the longer term, the development of new financial products that are attractive to SMEs will encourage more enterprises to formalize.

The Government needs, finally, to play a vital role to incentivize entrepreneurship and boost a start-up culture in the country. Of late, some measures have been taken to collaborate with foreign institutions to encourage start-ups initiatives in the country. However, unless the government continues to pay attention to providing incentives and funding to start-up activities, digital progress might remain a slow process in the country.



THE WAY FORWARD: ACTION MATRIX

E-COMMERCE READINESS ASSESSMENT AND STRATEGY FORMULATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Formalize the existing interministerial discussions on e-commerce into a proper task force or committee, involving all relevant Government agency, with MoIC in the leading role (or, possibly, use existing interministerial committee active in the ICT/digital innovation field, in order to avoid duplication).	Reduced overlaps and duplication among government institutions strategies, plans and regulations on e-commerce.	High	MoIC
Develop a national strategy or development plan for e-commerce development in Lao PDR, taking advantage of the momentum generated in 2017 for increased coordination.	Recognition by all Government stakeholders of the importance of e-commerce in Lao PDR triggers increased interest from domestic and foreign players.	Medium	MoIC, MPI, UNCTAD, ASEAN
Accelerate compliance with AEC blueprint and e-ASEAN framework to boost interest and investment in Lao PDR e-commerce ecosystem development.	Lao PDR is up-to-date on its contributions to framework agreements in ASEAN, sending a strong signal to potential investors.	Medium	MoIC, GIZ/IAI, ASEAN
Define roles and contributions for the e-commerce ecosystem development of each relevant MoIC department.	MoIC has morphed into a driving force for e-commerce development in Lao PDR, including such aspects as trade negotiations, statistics, regulations, training, research, start-up registration and development.	Medium	MoIC
Develop a Government-wide awareness raising programme on the business aspects of e-commerce.	E-commerce is mainstreamed in relevant Government and sub-sector development strategies, separately from ICT and e-Government.	Medium	MoIC (ERIT, NIU), ASEAN
In the context of the recently signed statement on e-commerce at the WTO MC11, implement a training programme for negotiators on e-commerce-related matters (including ITA, TISA, RCEP and ATISA).	Lao PDR obtains better deals in current and future free trade agreement negotiations and uses its experience under RCEP to become more proactive on e-commerce among LDCs.	Medium	MoIC, GIZ/IAI, WTO
Strengthening Lao e-commerce and ICT Association by linking it up with domestic and foreign tech start-up community and leading e-commerce and ICT associations.	Increased acceptance and recognize value of services provided.	Medium	LNCCI, LICA, MoIC, EU/ARISE+, B4ETD, ITC
Include e-commerce as a potential driver of export diversification in future trade development strategy updates.	ICT services and e-commerce contribute to Lao trade in services diversification, as export earners.	Low	MoIC, WB, ITC

ICT INFRASTRUCTURE AND SERVICES			
Indicative action	Expected outputs	Priority Level	Potential support by:
Gradually review impact of restrictions on competition in the telecom sector (fixed price, limitations on promotion, barriers to new entrants) with a view to remove the counter-productive regulations and increase adoption of affordable Internet.	Increased affordability and use of Internet for e-commerce and e-payment transactions, new entrant able to provide up-to-date, quality e-services.	High	MPT, TRA MoF



ICT INFRASTRUCTURE AND SERVICES			
Indicative action	Expected outputs	Priority Level	Potential support by:
Conduct market-based assessment of ICT Industry skills gaps, including recommendations to be implemented by relevant agencies.	Up-to-date information and data is made available to MoES and training providers about skills needed to develop an e-commerce and ICT industry.	High	MoES, LICA, LNCCI, EU/ARISE+, ILO, AMCHAM, ECCIL
Encourage infrastructure-sharing among operators to cover less populated/rural areas.	Increased Internet penetration outside Vientiane capital at affordable prices.	Medium	MPT, Telecommunications Regulatory Authority
Promote the growth of e-services, new media and digital contents in the Lao language.	New segments of the population with Internet access can use a diversity of contents, not limited to Facebook and messaging apps.	Medium	MPT, MoICT, AMCHAM, ECCIL
Accelerate deployment of electronic document management system by ministries, following initiative by the Finance Ministry.	Improved overall document verification process among Government institutions enabling faster and more efficient G2B and G2C services.	Low	MPT
Facilitate the development of infrastructure for local tech communities and start-ups, Internet services, co-working spaces for innovative start-ups through tax exemption.	Local entrepreneurs and start-ups get better and easier access to know-how and prepare more professional outreach to angel investors and business accelerators.	Low	MoF, MoIC

TRADE LOGISTICS AND TRADE FACILITATION			
Indicative action	Expected outputs	Priority Level	Potential support by:
Foster development of PPP between private sector providers and Lao Post to increase reach of postal services to underserved areas.	Postal sector is revitalized ensuring broader options for shipment of parcels outside Vientiane and Luang Prabang.	High	MPT, UPU, AMCHAM, ECCIL
Review cost structure of local logistics delivery services market with a view to lower the barriers to entry preventing the further development of pick-up, delivery and door-to-door services.	Single set of regulations apply to delivery services providers using e-commerce platforms.	High	MPWT, MoIC, MoF, B4ETD
Support the development of a physical addressing system and increase "findability" through targeted improvement and cooperation with Lao Postal Services.	Reduction in delivery time, increase findability of customers and broaden coverage of deliveries both in and outside Vientiane capital.	Medium	MPT, Lao International Freight Forwarders Association, Local express/courier companies, UPU, B4ETD
Gather data and statistics on cross-border e-commerce, in particular at the Thai-Lao Friendship bridge and Wattay Airport.	Relevant Government agencies get estimates of cross-border e-commerce to measure revenue loss and appraise needs for informed policy-making and regulation-setting for e-commerce.	Medium	Lao Customs Department, MoIC, Lao Trade Portal, UNCTAD, UNESCAP
Accelerate readiness of Lao PDR for cross-border paperless trade through its participation in the UNESCAP Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific.	Relevant agencies have obtained support to accelerate implementation of WTO TFA and use of e-Government platforms, and to conduct legal and technical readiness assessment for cross-border paperless trade.	Medium	MoIC, Lao Customs Department, UNESCAP



PAYMENT SOLUTIONS			
Indicative action	Expected outputs	Priority Level	Potential support by:
Establish and maintain an interbank payment system clearinghouse.	Costs of doing business online and offline is decreased thanks to faster processing time.	High	BOL, Banks
Launch an interbank campaign on the risks and benefits of e-commerce, electronic payment.	Adoption of e-commerce by consumers and merchants increases thanks to a better understanding of the different tools available and the processes generated by online payments.	High	BOL, Banks, UNCDF
Facilitate the development of mobile payment services by telecom operators by regulating mobile payment services and allowing their mobile payment services to be formally released in the market.	Increased competition among operators and payment solution, diversified offer for consumers, including in rural areas or areas without bank branches/agents, increased adoption of electronic payments.	High	BoL, Telecommunications Regulatory Authority, Banks, Telecom operators
Accelerate adoption of industry standards for electronic payments (QR codes and others).	Adoption of mobile payments by smartphone users is facilitated, reducing costs for merchants, banks and non-banks payment service providers.	Medium	BOL, Banks
Increase confidence of merchants to accept electronic payments, through dedicated awareness raising programmes, moving from a cost-approach to an investment approach, with a special focus on MSMEs.	Increased number and value of transactions using electronic means of payments, reducing costs of handling cash and of investing in several solutions.	Medium	UNCDF, B4ETD

LEGAL AND REGULATORY FRAMEWORK			
Indicative action	Expected outputs	Priority Level	Potential support by:
Update e-commerce related laws to include most recent e-commerce development on data protection (privacy), cybercrime and consumer protection.	Duplications, overlaps among legal texts and loopholes are removed to create a robust and secure e-commerce legal ecosystem. Lao PDR commitments under the 2012 ASEAN Data Protection Framework are met.	High	MoIC, MoST, UNCTAD
Implementing decree and monitoring and evaluation (M&E) mechanisms for the National Payment System law are released in 2018.	Accelerate investments of FSP and PSP in new electronic payment solutions, removing grey areas in which current providers operate.	High	BOL
Introduce an obligation on relevant licensees to offer a defined entry-level mobile broadband product at a specified retail price that is widely affordable while still being profitable.	4G connectivity accessible to most populated areas outside Vientiane, allowing access to more elaborate contents, including mobile money.	Medium	MPT, Telecommunications Regulatory Authority
Review roles and responsibilities of each ministry, in the framework of MoIC taking a coordination role for regulation drafting, amendment, and enforcement.	E-commerce supportive regulations are drafted in a coordinated way, with inputs from private sector through Public-Private Mechanisms. Regulations benefit from review of bottlenecks to implementation (in particular on e-transaction, consumer protection).	Medium	MoIC, MoST, UNCTAD
Initial drafting of an e-commerce law for Lao PDR once the national e-commerce plan/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	MoIC, MoST, UNCTAD



LEGAL AND REGULATORY FRAMEWORK			
Indicative action	Expected outputs	Priority Level	Potential support by:
Involve start-up community in drafting the laws and regulations that support start-ups, by encouraging more talks between the government and start-ups (through LNCCI and LICA).	ICT and innovation related laws and regulations benefit from domestic players' inputs, as foreign-inspired start-up models might not be applicable to Lao PDR.	Low	MoIC, LNCCI, LICA, Young Entrepreneurs Association of Laos
Develop policies supportive of investment in innovative start-up ecosystems (e.g., on registration, taxation) separate from SMEs.	The nascent tech start-up ecosystem increases outreach and visibility by obtaining targeted measures supportive of their development.	Low	MPI, MoIC, LNCCI, LICA, B4ETD, AMCHAM, ECCIL
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 e-commerce, app development knowledge and skills.	IT and ICT related curricula gain popularity among students as they have become aligned with industry's needs.	High	MoES, ILO, ITU, ITC
Assess the current mismatch between industry and universities regarding development of e-commerce platforms and electronic payment solutions and ensure that a working feedback loop is created to make certain that proposed corrective actions are implemented.	Increased marketability of young IT graduates, reducing costs for companies no longer needing to outsource ICT-related jobs to foreign labour.	Medium	MOES, MPT, BOL, LICA, B4ETD, LNCCI, AMCHAM, ECCIL, ITC
Design and deploy a capacity development and mentoring program for start-ups, coaching sessions and training for business incubators and accelerators, inviting professionals and experts to give talks.	Increased interest from regional angel investors network in the singularity and readiness of Lao start-ups. Lao start-up ecosystem gets better represented locally and overseas (through dedicated association).	Medium	LICA, Young Entrepreneurs Association of Laos, B4ETD, ITC
Implement awareness raising programme on e-commerce for merchants (focusing on e-commerce platform solutions and consumer protection).	Increased confidence among merchants for e-commerce adoption, in particular for boosting trust in payment systems.	Medium	MoIC, LICA, LNCCI, Banks, ITC
Raise public awareness about tech start-ups and entrepreneurship by means of mass communications.	Positive attitude towards investing in tech start-ups, better image of the e-commerce/start-up sector among population, in particular for future students and innovators.	Low	LICA, Young Entrepreneurs Association of Laos, Lao Women's Union, Lao Trade Portal, B4ETD, ITC



ACCESS TO FINANCING			
Indicative action	Expected outputs	Priority Level	Potential support by:
Enhance a level playing field between local and foreign banks so as to increase the supply of funds available for Lao MSMEs to borrow and keep pressure on all lenders to keep rates competitive.	Customized loan products for MSMEs and tech start-ups become available and increases access to much-needed finance at affordable rates.	High	BOL, UNCDF, Lao Microfinance Association (MFA), World Bank
On the model of the A2F funds, develop innovative “Challenge Fund” or “Market Access Fund” for Lao e-commerce, tech start-ups development.	Diversified sources of financing for firms not able to access traditional lending markets for their initial development.	High	Young Entrepreneurs Association of Laos, World Bank, UNCDF, B4ETD
Gather forces to establish a local “Angel Investors Network”, taking advantage of angel investors active in Cambodia, Myanmar, Thailand and Viet Nam, pooling resources from domestic and foreign investors.	Local and regional investors are encouraged to invest in Lao start-ups who have gained visibility thanks to joint outreach activities.	Medium	Young Entrepreneurs Association of Laos, B4ETD
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.	Diversified financial access solutions available to all segments of population, based on financial means.	Medium	BOL, Lao Women’s Union, Young Entrepreneurs Association of Laos, Lao Microfinance Association (MFA), World Bank, UNCDF
Increase awareness of incubators, business accelerators and venture capitalists among MSMEs, through business associations and targeted information campaigns.	Diversified and innovative sources of funding for MSMEs and entrepreneurs with ICT and e-commerce ventures projects.	Medium	Young Entrepreneurs Association of Laos, Lao Trade Portal, B4ETD



Annex I: Lao PDR Country Profile on etradeforall.org



COUNTRY PROFILE: LAO PEOPLE'S DEM. REP.

Contact: info@etradeforall.org

GENERAL INFORMATION - 2015

Population 7.0 Millions	GDP 12 523 Millions current US\$	Merchandise trade 8 002 Millions current US\$
Internet users 1.3 Millions	GDP growth 7.0 %	Land area 230 800 km ²

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

E-COMMERCE ASSESSMENT - 2016

Rank in UNCTAD B2C E-commerce Index 115/137	Rank in ITU ICT Development Index 144/175	Rank in WEF Networked Readiness Index 104/139
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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; 18.2

Active mobile broadband subscriptions; 14.2

Fixed broadband Internet tariffs, PPP \$/month

Highest tariff	1 083.2
500	
50	
Tariffs in 50% of eco. are below this value	34.8
LAO PEOPLE'S DEM. REP.	36.8
Lowest tariff	7.15
5	

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

PAYMENTS - 2014

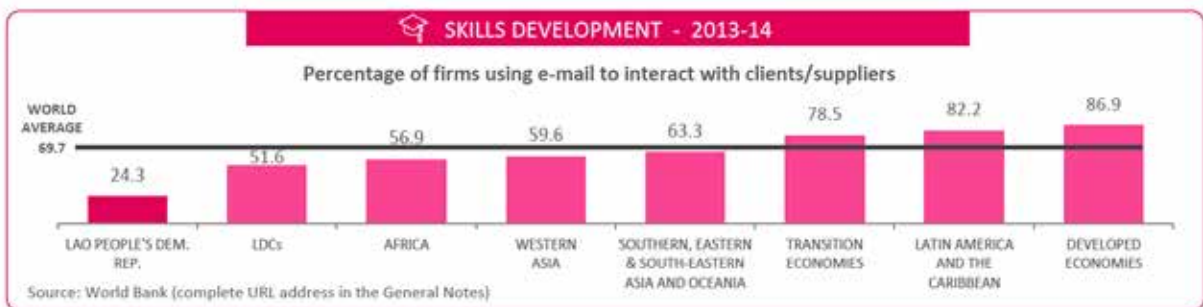
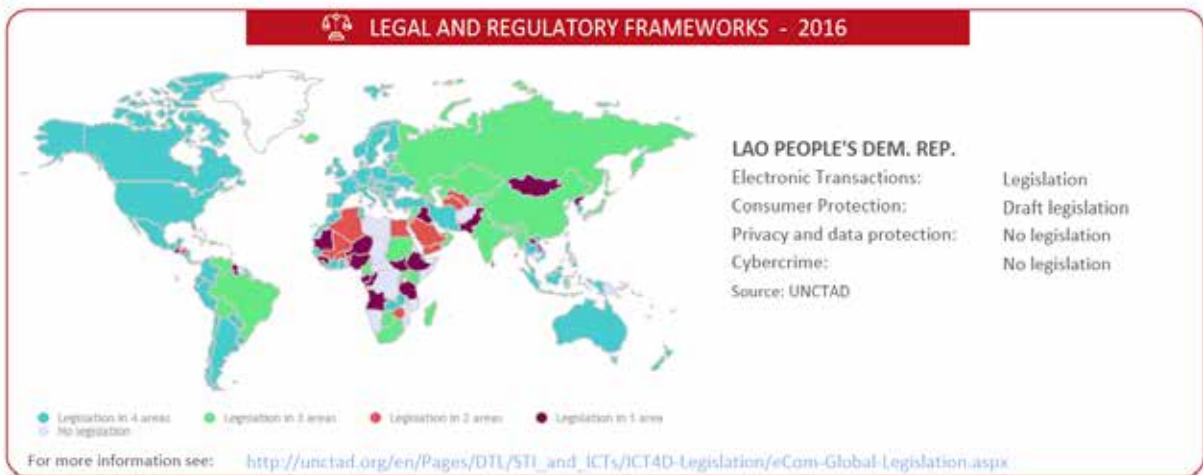
Debit card used in the past year	LAO PEOPLE'S DEM. REP.; #N/A	SOUTHERN, EASTERN AND SOUTH-EASTERN ASIA & OCEANIA; 13.3	WORLD; 21.5
Credit card used in the past year	LAO PEOPLE'S DEM. REP.; #N/A	SOUTHERN, EASTERN AND SOUTH-EASTERN ASIA & OCEANIA; 7.7	WORLD; 13.3
Used an account to make a transaction through a mobile phone	LAO PEOPLE'S DEM. REP.; #N/A	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: LAO PEOPLE'S DEM. REP.



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