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Contribution by

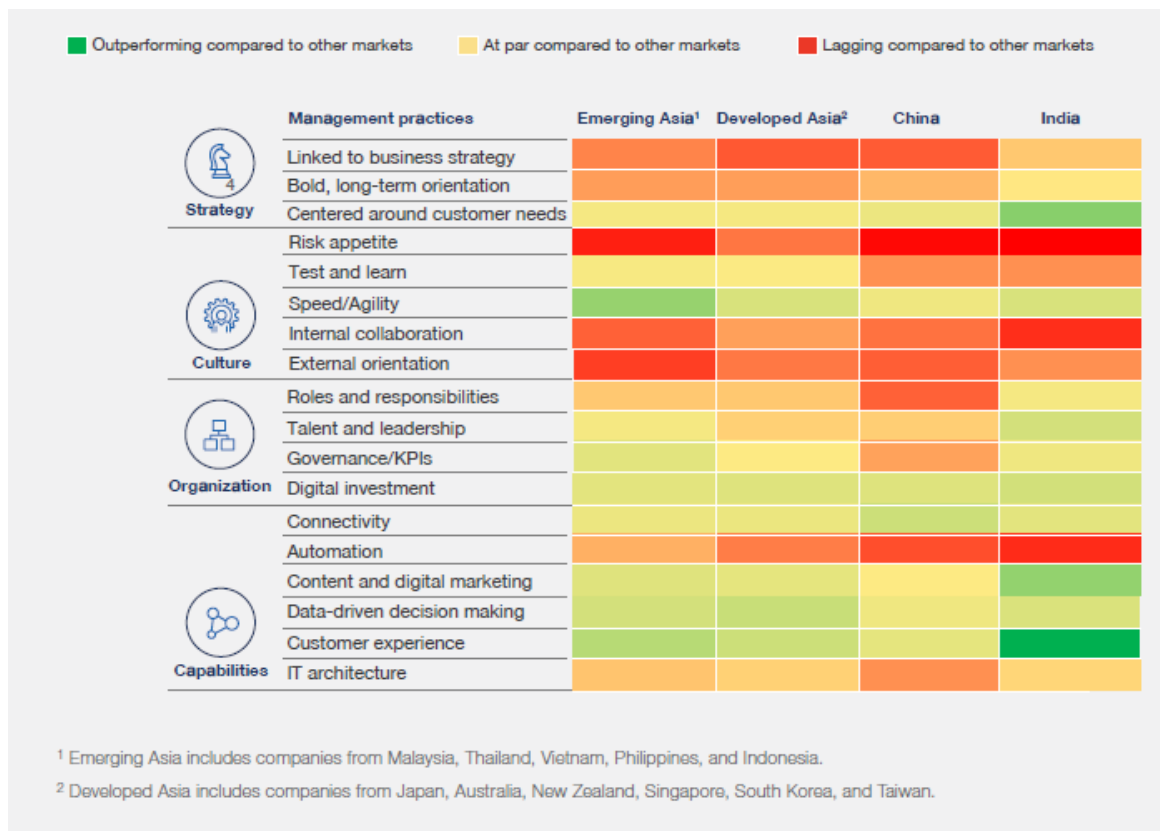
Sri Lanka

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Digital Economy of Sri Lanka: National goals and Lessons from the South

In an analysis of about 50 Sri Lankan companies across multiple industries, McKinsey analysts, place country's DQ at 35 places, higher than the global median of 33. The same analysis finds, in comparison with other Asia Pacific emerging markets, Sri Lanka exhibits strengths in connectivity, digital marketing, investment in digital initiatives, and the ability to move quickly. However, when compared with China, India, and more developed countries, Sri Lanka's position is not too satisfactory. (Figure 02) Sri Lanka's companies, states the survey, lag in appetite for risk, ability to integrate their digital priorities into the overall business strategy, automation of internal and customer-facing processes, and adoption of a collaborative culture between the digital teams and business functions. The analysis find most Sri Lankan companies, even in more digitally mature sectors, still have room for improvements in each of the four pillars of digital transformation: strategy, capabilities, organization, and culture.

Figure 02: Digital Maturity Heat-map for Sri Lanka's Strengths and Weaknesses when compared with other Asian Markets



Source: De Bustis et al, 2019

2.1 Sri Lanka's Digital Economy Size

There has never been a universal technique to calculate the size of Digital Economy element within an economy. The lack of a generally accepted definition of “Digital Economy” or “Digital Sector” and the absence of product and industry classifications for Internet platforms and related services are obstacles to measuring the digital economy. Still, there have been many workarounds. They all depend on the manner how Digital Economy is defined.

In 2016, G20 Hangzhou summit defined Digital Economy as “a broad range of economic activities that includes using digitized information and knowledge as the key factor of production, modern information networks as an important activity space, and the effective use of information and communication as an important driver of productivity growth and economic structural optimization” Just like agriculture and industrial economies use land, labour and capital as the key factors of production, data becomes the key factor of production in Digital Economy digitization has infused many activities, and indeed almost the entire economy can be included in a broadly defined 'Digital Economy'. However, at the heart of digitization, it is more realistic to focus measurement efforts on a specific range of economic activity. While the term "Digital Sector" denotes specific limits to economic activity, the term "Digital Economy" is often used to indicate that digitization (for example, the use of the Internet) extends to all sectors of the economy, from agriculture to warehousing. Available evidence suggests that the digital sector in most economies is still less than 10% when measured by value added, income, or employment.

An IMF staff paper identifies the five following components as the most visible in any Digital Economy. The aggregate of these five components represents the Digital Economy size.

- ICT equipment, semiconductors industry
- Telecommunication and Internet access services
- Data processing, software and other information services
- Online platforms, including e-commerce platforms
- Platform-enabled services, (e.g., the “sharing economy”)

This method has been selected to calculate the Digital Economy size in Sri Lanka for its simplicity and straightforwardness. Table 01 provides the estimated sizes of each component with their corresponding magnitude with reference to GDP.

Table 01: Size of the Digital Economy in Sri Lanka

	Component	Size in LKR million	Size in USD millions(Taking 1 USD = 200 LKR)	Percentage of GDP	Original Source
1	ICT equipment and semiconductors industry	162,800 ¹	814	1.01%	SLEDB, 2019
2	Telecommunication and Internet access services	192,000 ²	960	1.19%	Central Bank of Sri Lanka, 2021
3	Data processing, software and other information services	291,000 ³	1455	1.80%	Central Bank of Sri Lanka, 2021
4	Online platforms, including e-commerce platforms	60,000 ⁴	300	0.37%	Daily News, 2019
5	Platform-enabled services, (e.g., the “sharing economy”) ⁵	-	-	-	-
	Total	693,800	3,469	4.37%	

Source: Author calculations based on information from SLEDB, Central Bank of Sri Lanka and Daily News

¹ Sri Lanka’s electronic industry is relatively small. Most electronic equipment including computers with peripherals and mobile phones are imported. As only the export figure was available, it was assumed the local market is just as large as the export market.

² This figure is based on the aggregate monthly data usage of the month 2020 (all telcos) and the cost of data in the open market.

³ As only the export IT/BPO services figure was available assumed local market is half the size of the export market.

⁴ A reasonable extrapolation of the market figures from 2019

⁵ Sri Lanka’s digital platforms (except in e-commerce, which has already been counted) are not too large; so this component is negligible.

2.2 Digital Economy workforce

ICT workforce in Sri Lanka is undergoing deep structural changes. The overall strength of the workforce, according to the last ICT-BPM survey conducted in 2018, has grown from 82,854 in 2014 to 124,873 in 2018 which amounts to a growth of 51% for five years or annual growth of 11% for 2018. Assuming the same growth rate for the next three years by 2021 end total ICT-BPM workforce could be 170,000. This is a conservative estimate as this rate itself is expected to grow annually.

The most important characteristic seen over the last few years is the structural change that has taken place in respective shares of major employers in the total workforce. ICT companies have become the dominant employer with a share of 66% of the workforce, overtaking non-ICT companies (22%) by a wide margin. Government organizations and BPM companies have reported 7.1% and 4.2% shares, respectively. Parallel to this, the BPM workforce in the country has increased from 17,427 in 2014 to 25,510, which indicates a growth of 46%. (Annual growth rate of 10%)

The composition of the ICT workforce, in terms of the share of workers in different job categories and gender distribution, has undergone significant changes from the previous workforce surveys. The dominance of software engineering category has increased from 21% in 2013 to 36% in 2018. Its share has gone even higher (46%) in ICT companies followed by software quality assurance (15%), jointly covering more than 60% of the workforce in ICT companies.

The main job categories in non-ICT companies are technical support (47%) and client support (16%). The gender composition of the workforce has improved from 29% women participation in 2013 to 34% in 2018. As in 2013, BPM companies maintained a situation of near gender balance in BPM workforce with over 48% women participation.

The quality of the workforce as indicated by qualifications and experience has improved from the previous surveys. The share of employees with a Bachelor's degree or above has increased from 63% in 2013 to 85% in 2018. The highest share of graduates was reported from ICT companies (> 90%) while in other major employers it increased over 50%. Bachelor's degree has become the standard entry qualification for majority of job categories in all major employer categories.

The survey found demand for graduates has increased from 6,246 in 2014 to 21,216 in 2019. The survey also reported an increase in supply of the total number of graduates produced by training organizations from 6,611 in 2014 to 9,076 in 2019. The quality of the training staff in ICT training organizations has improved significantly in terms of academic qualifications and experience. Despite the growth in numbers of graduate output, however, the projections indicate a situation of a widening gap between demand and supply of ICT workforce in the country. This implies that the training system of ICT in the country is still not geared to cater for the market demand by producing sufficient numbers of graduates; a key challenge that calls for urgent attention of policy makers, ICT industry stakeholders as well as educationists.

2.2.1 Freelancers

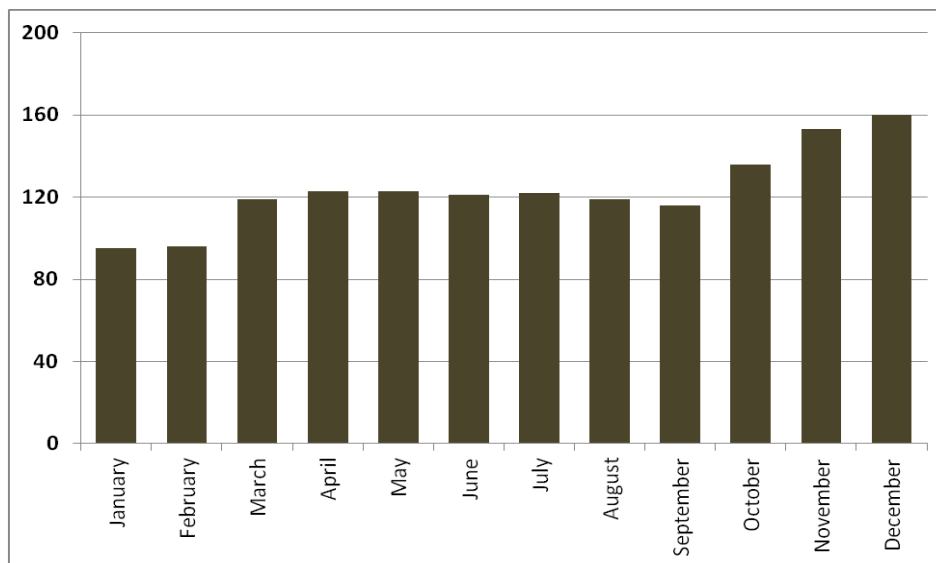
Online freelancing is growing rapidly and gaining popularity within younger generation in Sri Lanka as it providing avenues to make extra income with ones skills and knowledge while being at home. Typical “jobs” that are outsourced by Sri Lankans through platforms such as Fiver.com, Freelancer.com, Upwork.com etc include graphic design, data entry, proofreading, translation, copyediting, market research, programming and data verification. A survey conducted reveals 26% of the Sri Lankans between the age group 16 to 40 are aware of online freelancing and among those who aware 9% expressed interest in working on online freelancing jobs. Based on the responses received, Galpaya et el estimate, there could be 17,000 to 22,000 freelancers in Sri Lanka in 2016. As no follow-up surveys were conducted this is the latest figure available. It has been found those engaging in part-time freelancing work, earn a monthly income of approximately LKR 20,000 - 30,000 (USD 100-150). In most cases this amount is in addition to a salary, because majority of them earn this amount while engaging in a full-time job. This additional earning has assisted many freelancers to improve their living standards. The survey has also found online freelancing among youth is preferred due to the flexibility working where one chooses, being your own boss and being able to maximize their skills in an income producing activity. Sri Lankan Freelancers say, English skills in not necessarily a pre requisite to become successful in this field, just the basic would be adequate to communicate the message to the client. (Galpaya et el, 2016)

Sri Lankan freelancers face many issues for which they expect solutions from authorities. Some workers face difficulties in collecting their full payments, as intermediaries charge substantial transaction fees. Sri Lankan freelancers are also unable to receive payment because PayPal inward remittances are not allowed. Further, lower job security, lack of job recognition, inability to maintain work life balances are some of the negatives freelancers encounter while working on platform.

2.3 Data usage in Sri Lanka

In an environment data is being increasingly termed as the ‘oil of new economy’ the aggregate data usage indicates the maturity of the Digital Economy. Figure 03 illustrates the total monthly data usage in Sri Lanka in 2020, in Peta Bytes, obtained from data operators and collated by the Central Bank of Sri Lanka. This shows a clear growth of data consumption for the period.

Figure 03: Monthly aggregate data consumption in Sri Lanka 2020 (Peta Bytes)



Source: Central Bank of Sri Lanka, 2021

2.3 Digital Financial infrastructure

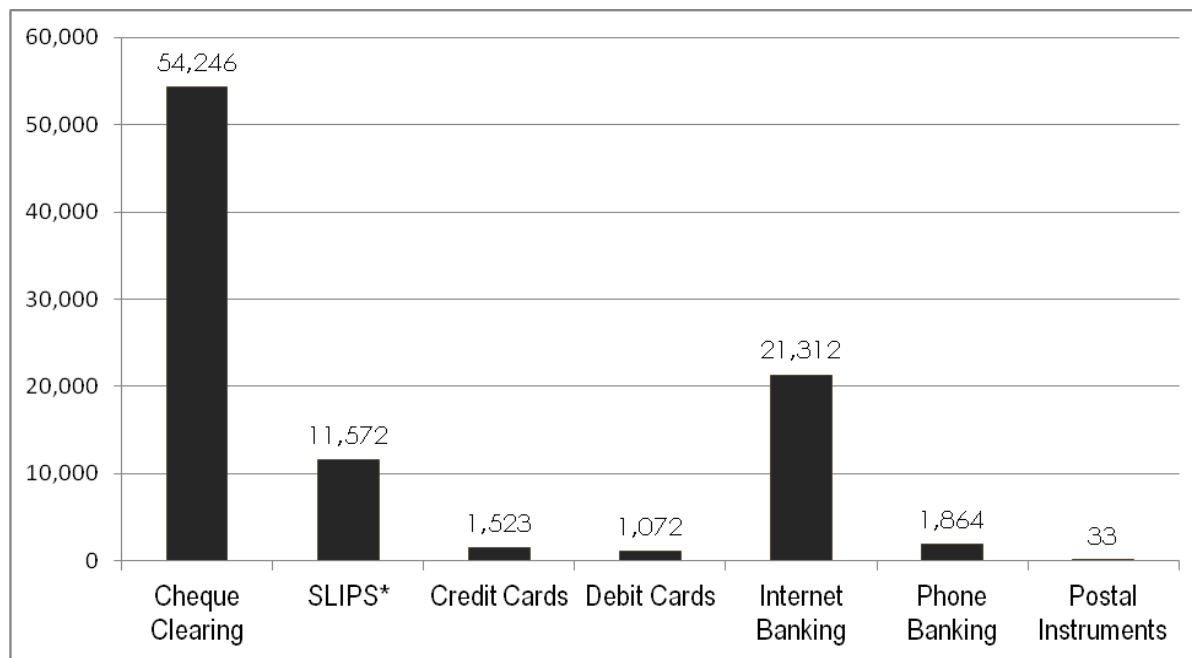
Sri Lanka's banking sector constitutes 32 banks with island-wide networks having a total of 7,387 outlets and 5,571 ATMs. Financial sector is perhaps the most automated sector with most banks offering online facilities for conducting transactions. A well-banked society, Sri Lanka records more than 25 million debit cards for a population of 21.3 million.

Sri Lanka also has a relatively well developed Financial infrastructure, that is being utilized efficiently. Participants to Real Time Gross Settlement (RTGS) System, which functions as Sri Lanka's

only large value payment system utilised an average value of Rs. 63 billion per business day in 2019. During the year under review, LankaClear, which operates the Cheque Clearing System of the country, cleared a total volume of 46.8 million cheques amounting to Rs. 9,863 billion which accounted for 7.4 per cent of the total value of non-cash payments. The Sri Lanka Interbank Payment System (SLIPS) which facilitates low-value retail bulk payments such as salaries and pensions recorded 36.6 million transactions worth of LKR 2,104 billion. Common Card and Payment Switch (CCAPS) which operates under the brand name ‘LankaPay’ recorded a significant progress. A Common Point of Sale Switch (CPS) has been launched in the same year, in addition to other three switches launched so far, namely the Common ATM Switch (CAS), Common Electronic Fund Transfer Switch (CEFTS) and Shared ATM Switch (SAS).

Figure 03 presents a summary of the transactions done through retail value payment systems in USD million. It appears that physical cheques still play an important role in transactions, while credit and debits cards are not that prevalent. On the other hand, Internet Banking is advancing.

Figure 04: Annual Aggregate Transactions through Retail Value Payment Systems 2019 in USD million



Source: Central Bank of Sri Lanka, 2020

* - Sri Lanka Interbank Payment System

Sri Lanka Pay has made other advances. An application called JustPay eliminates the dominance of the one-bank-one-app system, allowing one to pay for goods and services to any bank account using a

smart mobile device to transfer funds directly from one's bank account directly to the merchant. Both customers and merchants benefit from this easy-to-use, real-time money transfer system. It has boosted the FinTech perspective with more than 15 payment applications already use JustPay as a base. Lanka Pay further integrated its digital payments perspective with the recent introduction of PEN (Payment Exchange Name). This allows for hassle-free cash transfers via mobile phones. With PEN, the bank assigns a nickname to the customer's bank account linked to that user's registered mobile number. This will ultimately transform Sri Lanka's peer-to-peer payments ecosystem.

The National QR Code Specification branded as “LankaQR” has been launched to promote customer convenience and safety with no transaction cost, instant payment notification etc., while encouraging more merchants to join as acquirers due to zero maintenance cost, low set up and transaction cost. “LankaQR” also ensures interoperability of different payment mechanisms and instruments. Several financial institutions launched “LankaQR” based payment products during the year under review. (Central Bank LK, 2020)

To meet the business requirements arising, the Central Bank has appointed a Working Committee on Blockchain Technology to assess the possibility of adopting the same in the financial industry in Sri Lanka. As per the recommendations of the Committee, the Central Bank initiated to develop a Proof-of-Concept for the Blockchain Technology based Shared Know-Your-Customer (KYC) facility, which could facilitate to streamline KYC processes in financial institutions. It is expected that this would increase efficiencies in the financial sector and thereby enhance financial inclusion in Sri Lanka. (Central Bank LK, 2020)

2.3.1 Fintech in Sri Lanka

Sri Lanka's Fintech industry has a long way to go before reaching its full potential, compared to some of its more developed neighbours such as Singapore and Malaysia. Startups.lk, which can be termed the digital 'meeting point' of Sri Lankan startups offers information on only 31 startups offering fintech solutions among a total of 409 listed. Only a fraction of fintech market is served by these firms. Many Sri Lanka based clients still select international solutions either continuing the tradition or in the absences of the nature of the solutions sought.

HatchX, Sri Lanka's first fintech accelerator hosted showcased seven selected fintech startups shortlisted out of 20 applicants. Hatch mentioned that the intention was not just to discover promising fintech startups, but rather it was also “to open a new door towards creating a transformation in the financial sector in Sri Lanka by bringing together all the stakeholders playing a key role in the financial ecosystem. The showcased startups are solving problems including bridging the credit gap faced by the

micro-SME sector, utilising machine learning and data analytics to help organisations make more accurate financial decisions, Sri Lanka's first peer-to-peer lending platform, cashless payments and offering micro-insurance to the Sri Lankans.

One of the main barriers against the development of fintech solutions in Sri Lanka is regulatory. To overcome this hurdle Central Bank of Sri Lanka (CBSL) has introduced a "FinTech regulatory sandbox", a mechanism where the regulator is able to identify regulatory barriers that hinders innovations. It can be utilised by both foreign and local players. The applicants will be accepted to the sandbox on a continuous basis rather than in group basis (cohorts). In order to enter the sandbox, an applicant should either be a CBSL licensed financial institution or a partner and have a solution that is tested in a lab and verified by an independent third-party. CBSL may relax a regulation that is hindering the product from being released to the market based on the progress and success of the product/solution while in the sandbox. In a situation where a product successfully exit the sandbox and enters an undefined area then introduction of new regulations can be seen.

2.4 E-commerce Readiness

E-commerce appears to have already taken root in the country, with a number of companies already offering goods and services online, according to the Sri Lanka E-Commerce Readiness Assessment Report. E-commerce applications are primarily available for travel and hospitality services. Almost all of the companies surveyed indicated their intention to engage in E-Commerce while many have been doing so for a long time. Almost half of the companies surveyed have either bought or sold products online. However this is in a restricted product line, consisting mainly of consumer electronics, fashion products and imported clothing. Despite this, with the business optimism on the use of e-commerce, the current state of e-commerce developments in the country can further advance. The potential for expansion, both for the domestic market and for cross-border trade, appears substantial

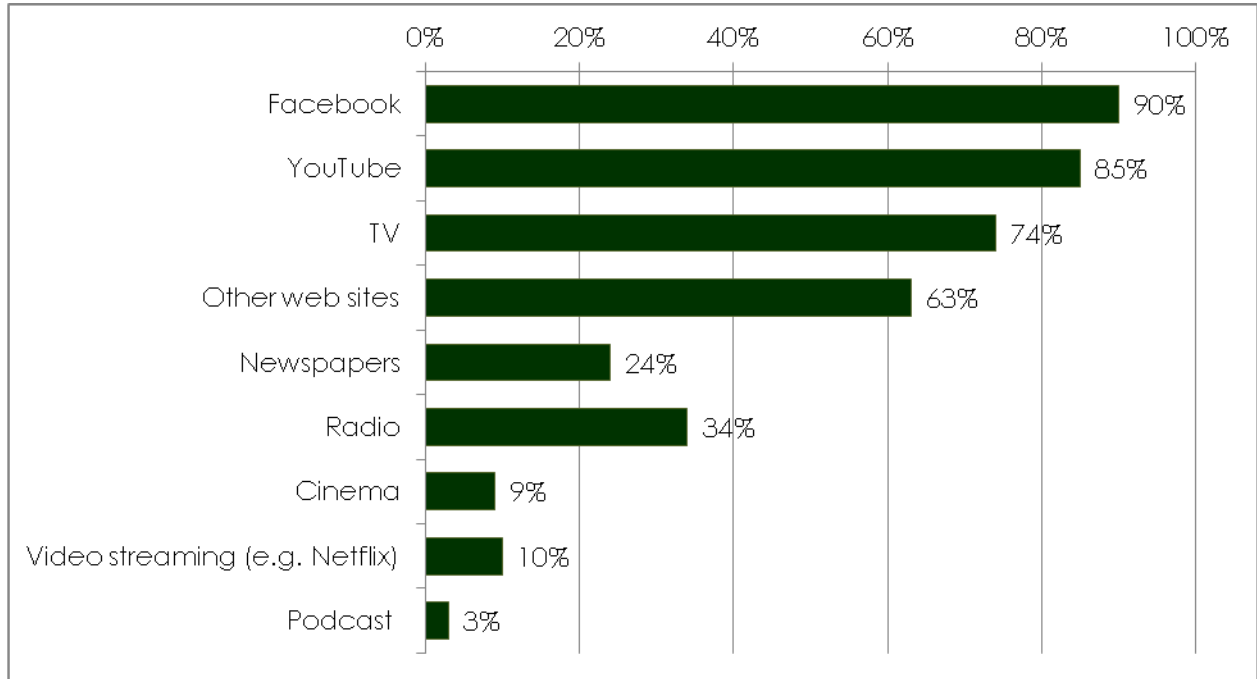
According to the above study, the maturity of citizens for e-commerce still remains low. Challenges appear in terms of low internet availability and low use of electronic payment due to lack of awareness, skill and trust. Business maturity for e-commerce in Sri Lanka is estimated at 34%. This indicates that companies have started using e-commerce, but the current level of maturity is still insufficient. On average, companies score poorly in terms of the availability of skills, know-how and technological infrastructure as well as the estimation of technology for sale and purchase. The study also estimates the Internet penetration to be at 30%. This may be the figure at the time of the survey. Other sources, however, now present higher figures, some of which as high as 50%. Thus the arguments here may not necessarily be valid to the extent presented here at present.

Sri Lanka has extensive logistics and transport infrastructure in terms of railways, roads, waterways and air transport; meanwhile, a large number of logistics companies provide a range of logistics services. However, at present, the study finds, logistics companies may not be able to effectively support e-commerce companies. While some logistics companies are embracing information and communication technologies, this is not the case for the entire delivery chain. Lack of resources, skills, knowledge - the way and awareness, and indeed the lack of automation in material handling, is a major challenge facing businesses in effectively supporting e-commerce. Substantial investments are needed to transform existing logistics companies and create new logistics companies specifically designed for e-commerce IT infrastructure and accessibility as well as policy and logistics parameters are assessed to be at a level of maturity higher than the other three parameters.

Sri Lankan firms sometimes use international platforms for e-commerce than their own ones. Amazon is the preferred international platform such used, accounting for nearly half of external platform usage. The main considerations in the choice of external platforms are security, search engine optimisation (SEO), search and guided navigation. These are also stated as the key factors for locally designed in-house platforms.

Sri Lanka has recently seen its media consumption patterns changed substantially. The use of traditional media has become less prominent with more new media becoming popular. This has created the ideal environment for the emergence of a healthy E-Commerce market. (Figure 05)

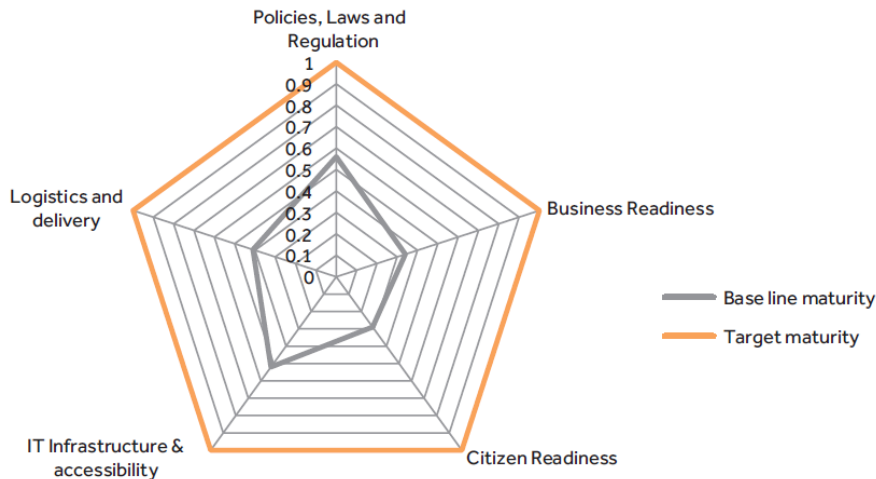
Figure 05: Daily media consumption of a randomly selected sample of Sri Lankans



Source: Asia Pacific Institute of Digital Marketing, 2021

Figure 06 represents the Baseline e-commerce maturity Sri Lanka against the target maturity and Figure 07 represent the most visible Sri Lankan brands on Internet. The key shareholder of the most visible Internet brand daraz is Alibaba.

Figure 06: E-Commerce maturity in Sri Lanka against target maturity



Source: Commonwealth, 2020

Figure 07: Most visible Sri Lankan brands on Internet



Source: Asia Pacific Institute of Digital Marketing, 2021

2.5 Policy Initiatives for Building Digital Economy

2.5.1 Taxation relevant to Digital Economy

Government of Sri Lanka has, over the last two decades, frequently changed the tax policies relevant to the Digital Economy with both positive and negative consequences. Follows below the taxation landscape as of May 2021, with the most recent changes described, in some cases.

Corporate Income Tax

This is applicable to ICT industry, in the same way it applies to any other. The standard income tax rate is 24% while a rate of 18% is applicable for manufacturing industry and 14% is for exports, tourism, education, healthcare, construction and agro-processing. The rate applicable for betting and gaming, liquor and tobacco is 40%. A five-year tax exemption is given to start-up businesses since

January 2021. A 0.25 % commitment fee will be charged for follow up and extension of services. (Ministry of Finance, 2021)

Personal Income Tax

Historically Sri Lanka has maintained relatively low income tax rates for IT professionals. Industry has accepted this as a positive initiative towards the development of the sector.

Currently, earnings from both domestic and foreign sources by those engaged in businesses of Information Technology have been exempted from income taxes, enabling them to obtain packages at their market rates. Others, with few exceptions are taxed on monthly earnings above LKR 500,000 (about USD 2,500) The rate starts at 4% and incrementally increases in 4% steps for each LKR 600,000 block. The highest income bracket is taxed at 24%.

Taxation on Telecommunication Internet Services

The most recent changes have been made on December 01, 2019 and the following tax components are applicable on telecommunication and Internet services.

Table 02: Tax on Telecommunication and Internet services

Item	Internet Services	Telecommunication Services other than Internet Services
Cess	2.04%	2.04%
Telecommunication Levy (TL)	0%	11.48%
Value Added Tax (VAT)	8.16%	9.08%
Total	10.20%	22.60%

Source: TRCSL, 2019

Value added Tax (VAT)

Previous standard rate of 15% has been reduced to 8% since January 2021. Information Technology and enabling services are exempted from VAT with effect from 1 January 2020.

The response from the industry to this move is mixed. While it appears favorable for the industry prima facie, a section finds the opposite, complaining they have no means getting the tax component their suppliers charge compensated.

Nation Building Tax

A 2% tax previously applicable to revenues from all industries (including Telecommunication and Internet) has been removed since January 2021.

2.5.2 Domestic Preference

The Cabinet of Ministers on July 15, 20 has approved the Cabinet memorandum on 'Amending the procurement guidelines to support Domestic Industries' establishing the policy for the software and hardware industries. This was followed by the Public Finance circular No 03/2020 which has provided specific guidelines for government entities in purchasing software, hardware and composite solutions. (MoF, 2020) The objective of this exercise is to encourage local and international firms establishing their presence in Sri Lanka contributing towards the industry. Specifically, a boost for local startups was also intended.

According to this circular, in calling for bids for the procurement of application software, where the estimated cost is less than Rs.02 million, bids shall be called exclusively from startups, registered with the Information Communication Technology Agency (ICTA) and published on the website <https://startups.lk>. For the purpose of this section, startups are those that have been registered as a business with a relevant authority for more than six months and less than five years and also registered on the <https://startups.lk>.

For the procurement of software or Information Communication Technology (ICT) solutions estimated to be more than Rs.02 million, says the circular, preference must be given to Domestic majority ownership firms' also offering software solutions with a minimum 25 % local value addition, which will include cloud solutions and contribution of Local Material, Local Expertise, and Local overheads Support/ Maintenance/Systems Integration. Bidders who satisfy the requirement for at least 25 % of local value addition will be awarded 30 % preference for the prices quoted by the respective bidder over the other bidders only in the financial evaluation and not in the technical evaluation. The same principles hold good for hardware and composite solutions as well.

