EXECUTIVE SUMMARY

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Executive summary

This background paper deals with the questions of how MSMEs can better exploit the opportunities offered by the digital economy, such as e-commerce and fintech, in order to expand into international markets; and how governments can effectively support MSMEs in taking advantage of the digital economy. For this, a selection of best practices is presented (see figure 1).

MSMEs are the backbone of the economy. In light of widespread digitalization - especially accelerated by the global pandemic - MSMEs must think about how to effectively take advantage of the digital economy. Possible benefits include access to wider international markets thanks to the use of platforms; improvement and efficiency in their operations by using digitally enabled services; reduction of trade costs enabled by digital solutions in trade processes and logistics; new marketing and sales tools; simplified payments; wider access to finance enabled by fintech; and new forms of interaction with customers and other MSMEs via social networks and platforms.

There are, however, crucial infrastructural needs that must be addressed before these advantages can be realized. These are: ICT infrastructure, in particular broadband access for rural areas; financial infrastructure, which will allow MSMEs to access credit and trade finance; and an enabling legal and regulatory infrastructure, which will simplify the regulatory environment for MSMEs and improve their export opportunities. Next to infrastructural aspects, digital skills and human capital are also crucial for MSMEs to take advantage of the digital economy.

While the digitalization of MSMEs is dependent on the series of factors mentioned above, part of the challenge of promoting the uptake of the digital economy also relates to safeguarding other aspects such as personal data protection, consumer trust, competitive markets, and cybersecurity.

Countries in Asia-Pacific could use learnings from policies implemented in parts of the region. Some Asia-Pacific countries are already leaders in digital competitiveness surveys (e.g., IMD World Digital Competitiveness Ranking, WEF Network Readiness Index) and have implemented policies in different areas successfully. This background paper presents examples of policies implemented on the ground to facilitate MSME digitalization and integration in international markets. For instance, some governments have allowed fintech services to be used as an alternative to traditional financing. Others are simplifying the regulatory infrastructure, for instance by creating one-stop-shop platforms and export promotion platforms, or by facilitating cross-border trade via single windows. There are also cases of policies directed to improve digital skill and human capital by offering training targeted to different sectors of the population. Furthermore, there are also efforts to improve the state of cybersecurity by offering training and cooperating with other countries, as well as to increase confidence in online transactions by creating cross-border dispute resolution mechanisms.

This background paper is organized in six main sections. The following section outlines the main characteristics as well as the economic relevance of MSMEs in the Asia and the Pacific. Section 2 offers an overview of the opportunities that the digital economy can bring to MSMEs. Section 3 explains what the digital economy is, including the main stakeholder with which MSMEs interact. Section 4 queries if MSMEs in Asia and the Pacific are digital ready. Section 5 explains the role of governments improving the factors influencing the digital ready. Section 5 explains the role of governments improving the factors influencing the digital economy as well as addressing the challenges by drawing from learnings from policy initiatives in the region. Section 6 concludes.
Figure 1: Selection of best practices at a glance

Source: Author’s own elaboration.
1. **MSMEs in the Asia and the Pacific**

Domestic legislations may define MSMEs for regulatory purposes and these definitions vary across Asia and the Pacific countries. For instance, in India, MSMEs are defined by sector (either providing goods or services) and on the value of their investments. In the Philippines, MSMEs are defined according to the value of their total assets; while in Malaysia, they are defined by the sales turnover as well as by the number of employees. Across Southeast Asia, defining a MSME can depend on different factors including the number of employees, assets, turnover, capital, sector and legal basis (ADB 2020, 12). Despite the variations in definition, the contribution of MSMEs to Asia and the Pacific economies is widely acknowledged as highly significant. Only for countries in the Association of Southeast Asian Nations (ASEAN), MSMEs represent around 95 to 99 per cent of the enterprise population (ASEAN et al. 2019, 1). In the Philippines alone, MSMEs accounted for about 99.5 per cent of all businesses in 2019. By 2017, Indonesia’s MSMEs accounted for 99.99 per cent of all businesses in the country and employed 97 per cent of the total Indonesian workforce (Capri 2019, 9). In spite of the significant role that MSMEs play in Asia and the Pacific economies, the potential of MSMEs with regard to cross-border trade is still limited.

While the Covid-19 pandemic has hit MSMEs the most, it has also become a catalyst for technology adoption. Some MSMEs added marketing channels through digital media, engaged in e-commerce platforms and adopted electronic payments (e-payments). However, digital adoption among MSMEs is still relatively low. In Bangladesh, a recent survey run by the International Finance Corporation (IFC) found that only 9 per cent of interviewed firms have increased or started using the internet, social media, specialized apps and other digital platforms in their daily business operations. This is due to lack of technological awareness, funds, infrastructure, and concerns over privacy and security (Kader and Pattanayak 2020, 5). In Nepal, only over half of MSMEs have also started using the internet, social media, specialized apps and digital platforms for business purposes.

This situation contrasts with the outlook for more advanced countries in Asia and the Pacific region. According to the Asian Development Bank (ADB), the region is home to some of world’s biggest and most developed e-commerce markets (i.e. China, Australia, Japan, New Zealand, Korea and Singapore) (ADB 2018, 10). In the case of Singapore, the country also has a thriving fintech ecosystem and, according to the 2020 IMD World Digital Competitiveness Ranking, the country ranks second worldwide in the use of digital technologies for economic growth (IMD 2020). This also highlights the different challenges and opportunities that Asia and the Pacific countries face when discussing MSMEs digitalization and e-commerce adoption. Not all countries are at the same level of development, but they could learn from best practices in the region.

Some of the tendencies that accompanied the rapid digital adoption experienced in 2020 are likely to outlast the pandemic. In fact, some of the opportunities that the digital economy offers, such as e-commerce, represent a new source of economic growth as it can help MSMEs internationalize and reach

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3 https://www.jica.go.jp/botswana/english/office/topics/c8f0vm0000f9vzxu-att/200612_02.pdf
broader markets, counteracting the effect of a weak domestic demand. Moreover, the acceleration of digitalization not only influenced MSMEs but consumers as well, hence affecting both demand and supply, possibly in the long term (Broom 2020).

**Key takeaway:** The economic importance of MSMEs across countries in the Asia and the Pacific is indisputable. As such there is a pressing need for MSMEs to take advantage of the digital economy. While some countries are at an advanced stage of digitalization, other countries can learn from best practices in the region.

2. **An overview of the opportunities that digital economy can bring to MSMEs**

MSMEs are naturally diverse, however, to some extent, they can be classified according to whether their main activities are related to internet enabled sectors or whether they are traditional businesses taking advantage of the digital economy. The first case is the so-called ‘digital native MSMEs’, while the second case corresponds to ‘traditional MSMEs’.

MSMEs that are digital natives function based on business models that take digitalization as one of their main aspects or have business models that themselves rely on digitalization. These types of MSMEs are prevalent in societies with a digital entrepreneurial culture and are born with the mindset of going global. This is the case of many services sectors, particularly offering B2B services, such as engineering, coding (or programming). The same is the case for many MSMEs engaged in other services sectors (Benz 2019).

Policy research is, however, concentrated in MSMEs in traditional sectors, such as manufacturing. For this type of MSMEs, digitalization presents a different set of opportunities. For instance, most of them are not digital natives and have low means to invest in e-commerce. At the most basic level, traditional MSMEs can maintain a web presence (and maintain and create content for the website, or join different social networks). At a more advanced level, traditional MSMEs can sell online (advertising in search engines and social networks, maximizing sales through search engine optimization). Traditional MSMEs can also establish online payment processes (via traditional banks or fintech alternatives). These MSMEs can take advantage of digital platforms, which offer them the opportunity to (i) access a wider customer base, (ii) reduce costs (in operating businesses as many services are integrated within platforms) and (iii) optimize their businesses (ASEAN et al. 2019, 9).

However, for digital native MSMEs, their business models already imply the digitalization of some of their business processes. They could already have a web presence, their company IT infrastructure may be supported by the cloud, and they could use data analytics or outsource back-office functions to digital platforms. What digital native MSMEs might lack is an appropriate legal and regulatory environment that will help them internationalize. Some academic reports also consider access to data (as seamless cross-border flow of data, availability of open government data and data privacy policies) as one of the factors influencing digital entrepreneurship (Chakravorti, Shankar Chaturvedi, and Filipovic 2019, 18).

Hence, there is a case for dividing MSMEs into subsets and adopting targeted strategies for traditional MSMEs and digital native MSMEs. Graphically this could depicted as:
An example of how the digital economy can facilitate MSME operations and integration in international trade is exemplified by fintech solutions. MSMEs face obstacles to access financial services due to a lack of collateral or credit history, or even because they are informal. Moreover, during the Covid-19 pandemic, the need for contactless payment methods has shed light on the importance of e-payments even for traditional MSMEs. Fintech offers several advantages in this regard. In comparison with traditional banking, fintech uses new technological solutions to complement, automate or replace traditional banking services. By using data and analytics, fintech firms can perform more efficiently than traditional banks. For fintech firms, each customer transaction is valuable as it generates data, which in turn can be used in models to measure the creditworthiness of an individual, helping to avoid the need of collateral or credit histories (Sahay et al. 2020, 13). As an example, when a person buys a product or service online, she or he not only transfers money but also data, which is a joint product of using fintech services. At the same time, this data can be combined with other data, such as social media data. This leads to faster credit scoring and other innovations. The innovative uses of data is what generates the efficiencies of fintech companies but raises concerns with regard to the use of such data as well as its adequate protection, for instance, against data breaches.

Some countries in the Asia and the Pacific region have many fintech firms. In Singapore, there are more than a hundred fintech start-ups either in the B2C or B2B market⁷. Fintech firms can operate alone, in direct competition with banks, or in cooperation with banks and other financial entities. They can offer products ranging from mobile wallets and mobile money, to complex financing.

In the area of payments, fintech enables a myriad digital payments methods including mobile payments via scanning QR codes, peer-to-peer money transfers, and point of sale payments (POS). All of these methods are highly relevant due to the pandemic and will continue benefiting from adoption after 2020.

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⁷ [https://www.mas.gov.sg/development/fintech](https://www.mas.gov.sg/development/fintech)
Across countries in Asia and the Pacific, there are different players in the digital payments space, including e-wallets from Grab, Alipay, GoPay, WeChat, among several others. Some of these fintech firms have special programs to help with the digitalization of small business, which include integrating these businesses in their payment systems. GrabMerchant is a B2B platform that allows businesses to build their online stores, set a cashless payment option and create their own ads. This platform uses GrabPay remote payment link solution, which works by giving merchants a URL that is then sent to customers so they can execute the payment. The merchant receives GrabPay credits immediately. This provides an advantage over MSMEs only using social networks that do not integrate payment solutions. In some cases, fintech companies have partnered with traditional financial entities to expand their offering. The GrabPay card is powered by the MasterCard Network.

Beyond the easing of payments, digital payments can also benefit MSMEs in other ways. The Ministry of Micro Small and Medium Enterprises of India, incentivizes the use of digital payments as means to improve the credit scores of MSMEs, which can help them later to access finance. It is worth to remark India’s broader plans to move towards a cashless economy.

Other examples of how fintech can help MSMEs to access finance include MYBank. According to the IFC, MYBank, the Ant Group (formerly Ant Financial) digital bank, has provided loans to more than 20 million SMEs in China since it began its operations in 2015. MYBank leverages more than 3,000 variables, which are analyzed by an algorithm, to decide over an applicant’s ability to pay within 3 minutes. This contrasts the approach of traditional banks, often hesitant to extend loans to those without credit history, collateral or in the informal sector (IFC 2020). In Indonesia, Amartha, a fintech firm that started as a microlending enterprise, has disbursed 5.1 million USD in loans to 30,000 microentrepreneurs, raising the maximum loan value from 225 USD to 750.27 USD (UNCTAD 2017, 2012). Both MYBank and Amartha leverage the use of data and digital solutions, such as machine learning.

Fintech also holds promise in the area of supply chain finance. In January 2019, Ant Group announced the launch of a new blockchain supply chain finance subsidiary: Ant Shuanglian Technology or Ant Duo-Chain. This initiative targets SMEs working with large corporate customers. By using blockchain, each transaction is recorded and can be transmitted in real time. What this allows is that transactions between a large corporate customer, a SME and banks can be verified immediately. The execution of the pilot illustrates this point. A car manufacturer raises an order and the SME delivers the goods and sends the invoice. As soon as the buyer approves the invoice, the SME can sell this invoice to a bank, which, knowing the ability to pay of the car manufacturer, buys the invoice and executes the payment. Meanwhile the car supplier can pay when the invoice is due directly to the bank. All this can happen through the use of blockchain, which enables each of the stakeholders to verify transactions immediately, avoiding any risk of duplication or fraud. Project Ubin, a blockchain solution implemented by Temasek and the Monetary Authority of Singapore, is also seeking to facilitate supply chain financing by using blockchain (Temasek and Monetary Authority of Singapore 2020).

Another area where fintech can be used is resource mobilization. Kitabisa, a crowdfunding platform based in Indonesia allows individuals to organize fundraisers, donate, and distribute resources. During the Covid-19 pandemic, Kitabisa has allowed companies to raise money by connecting with individual

9 https://www.grab.com/sg/pay/card/grabpay/
10 https://my.msme.gov.in/mmysme/SurveyWelcome.aspx
12 Kitabisa.com
donors.\textsuperscript{13} Crowdfunding can also play a role in overcoming the lack of domestic venture capital investment. UNCTAD (2017, 2010) notes that facilitating crowdfunding, particularly for equity investments, can increase international investments in the local digital industry. Platforms for equity crowdfunding investments exist in Asia and the Pacific countries. Crowdo\textsuperscript{14} is a regional fintech platform operating in Singapore, Malaysia and Indonesia. Crowdo connects businesses with investors, and so far has helped to finance 3,500 projects. Yet equity crowdfunding is subject to domestic financial and foreign investment regulations. In India, equity crowdfunding is illegal,\textsuperscript{15} while in other countries such as Korea, financial regulations have been eased to allow equity crowdfunding for small companies.\textsuperscript{16}

To sum up, the rapidly expanding digital economy offers opportunities for MSMEs to improve their business processes, access international markets, and get access to finance. By establishing their own digital presence or by using e-commerce platforms, MSMEs can access new markets without having to invest in their own infrastructure (World Trade Organization 2018; Pasadilla, Wirjo, and Liu 2017). Simple steps, such as having a website, can enable firms in developing countries to start their engagement in Global Value Chains (GVCs) as importers or exporters (Ganne and Lundquist 2019, 128). One of the key attributions that businesses pay attention to when they want to enter in a business relationship with SMEs is the level of ICTs usage (Ganne 128, APEC 2014). Similarly, there is a reduction of trading costs thanks to the use of digital platforms and access to digitally enabled services (such as back office, data processing, etc.) (World Trade Organization 2018). Importantly, MSMEs can also access finance thanks to fintech solutions.

**Key takeaway:** Some of the advantages that the digital economy offers to MSMEs are the improvement of business processes, access to international markets thanks to digital platforms, and access to alternative modes of financing enabled by fintech.

### 3. What is the digital economy?

As with the lack of a uniform definition of MSMEs, there is no single agreed definition on the term ‘digital economy’ or a methodology to measure it. Broadly speaking, digital economy can be understood as the use of digital technologies for performing economic activities, while narrowly speaking it only represents ICT infrastructure and ICT-producing sectors (UNCTAD 2019b, 49). Recognizing that the majority of economic activities can be empowered by digital technologies, the definition of digital economy that this background paper advances is a broader one. A similar approach has been put forward by the G20 and the OECD (Digital development Report, 21). Furthermore, the transformations arising from the Covid-19 pandemic will affect the scope of what we understand as the digital economy, as the pervasive use of ICT for everyday activities means that the boundaries between core digital sectors and traditional sectors have become blurrier. The term ‘digital economy’ is different from ‘digitalization’ and ‘digital transformation’, but it covers both. Digitalization is defined as the ‘transition of businesses through the use of digital technologies products and services’ (UNCTAD 2019b, 5). ‘Digital transformation’ is associated with disruption, and to the transformation of traditional sectors to digital ones, as well as the emergence of new ‘digital enabled sectors’ (UNCTAD 2019b, 5). Within the digital economy, MSMEs can be subject to both digitalization and digital transformation.

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\textsuperscript{13} https://www.id.undp.org/content/indonesia/en/home/presscenter/articles/2020/5-tips-on-how-to-help.html  
\textsuperscript{14} https://crowdo.com/  
\textsuperscript{15} https://www.investindia.gov.in/team-india-blogs/crowdfunding-india-0  
\textsuperscript{16} http://www.koreaherald.com/view.php?ud=20200211000730
Besides suppliers and other actors in the value chain, in the digital economy, MSMEs interact with three key stakeholders: consumers, platforms and governments.

**Consumers**

Consumers engage in the digital economy through the consumption of goods and services offered online. E-commerce adoption on the consumer side varies according to age, gender and level of education (OECD 2019c, 46). Older people are less likely to engage in e-commerce and there is also a gender gap in some countries. Younger people are more likely to use new services, such as mobile wallets and new apps. Similarly, there are variations regarding the level of education, with e-commerce transactions being more frequent among higher educated individuals than lesser ones (which is also closely related to the levels of income). For OECD countries, individuals with higher education are 33 per cent more likely to engage in e-commerce when compared with individuals with medium levels of education, and more than twice as likely when compared with individuals with low levels of education (OECD 2019c, 49). Similar effects regarding the level of education play out in countries in the Asia and Pacific region. In Cambodia, the majority (23 per cent) of interviewed consumers for a study undertaken by LIRNEasia mentioned that they do not buy online because they do not know how to (OECD 2019b, 87). As such, education itself can be a policy to promote e-commerce uptake.

There are additional differences between domestic and international consumers (McKinsey, 2020). To tap the potential of consumers abroad, an important element is the level of trust that these consumers have in the successful delivery of a good or a service. Here, there is policy space for establishing trust in e-commerce transactions, for instance, by establishing agile cross-border dispute resolution services.

**Platforms**

Understanding the role of internet platforms is key to understanding the digital economy. Internet platforms act as conduit for e-commerce. They include e-commerce marketplaces (such as Tokopedia), social media networks (Facebook), app stores and internet search engines (Google, Bing), among others.

Platforms operate under their own terms of service. In some cases they may require information related to the country of origin of the seller, the bank account and currency used by the seller (i.e. eBay) or they can only accept sellers from the country where the platform is located (e.g. Taobao). In other cases, platforms only request an e-mail account to register a new merchant (e.g. Tokopedia). E-commerce platforms function either based on (i) profit-sharing models or commissions based on transaction (e.g. Shopee, Grab), (ii) subscription models (e.g. Alibaba, Amazon), or in some cases (iii) mainly through advertisement (e.g. Taobao). Next to e-commerce marketplaces, social media platforms can also be used to offer goods of services. Typically, they do not require MSMEs to be formal and they can be useful to MSMEs when building their brands. Social network platforms such as WeChat, Weibo, Line, Facebook, Instagram, Twitter, WhatsApp, YouTube, among others, are very effective channels to reach social media users, which in 2017 in Southeast Asia alone reach to 305.9 million active users or to an internet penetration rate as high as 47 per cent (ASEAN et al. 2019, 5).

MSMEs with basic digital skills may not be immediately ready to offer their goods or services in an e-commerce or social media platform. For instance, basic issues such as how to present a product, their description, among others, may influence whether a MSMEs is visible in these platforms. For this, MSMEs may see the need to count with the help of an intermediary that acts as facilitator of how to engage in platforms, how to better present products, how to communicate with users, etc. (Pasadilla,
Wirjo, and Liu 2017). These intermediators can be purely private or can be funded by the government as part of efforts to digitalize MSMEs.

Government led platforms can also be used to help MSMEs digitalize, engage in e-commerce and even export. Beyond countries in the Asia and the Pacific, some German provincial states have created platforms to encourage local MSMEs to offer their goods and services locally. In this case, an initial package which covers online presence, marketing and last mile delivery is offered to local MSMEs to encourage them go online.\(^{17}\)

However, the platform economy also carries a set of risks, including the unregulated use of data and certain anticompetitive behavior. Platforms collect and aggregate large amounts of consumer personal information and other types of data (such as product preferences, location data, etc.). Based on this data, platforms can generate insights to improve their services, to refine customer experience, or to expand into new services or businesses. At the same time, this use of data can conflict with personal data protection laws, which are tending towards higher standards around the globe. Platforms also tend to be prone to market concentration. This is because platforms benefit from network effects (which means that the more users a platform have, the more other potential users will be attracted to it, making the platform to grow bigger and capture a larger share of the market) and economics of scope (which means that they can penetrate other markets, horizontally and vertically, such as Amazon, which started as an online book shop to become seller of many different products on its own website and to have its own cloud infrastructure business). These characteristics can lead to a platform enjoying a market position where anticompetitive conducts are possible.

**Governments**

Governments can act as regulators and enablers of the digital economy. During the Covid-19 pandemic, different government initiatives have taken place to encourage the insertion of MSMEs in digital channels (World Trade Organization 2020, 5; G20 2020). Governments can also act as partners in the establishment of platforms that help MSME internationalize, or train talent. Several initiatives are mentioned along this paper. Finally, some governmental policies can inhibit taking advantage of the opportunities offered by the digital economy for MSMEs. Examples include restrictions on online advertisement\(^{18}\), as well as policies directed to overly restrict cross-border data flows.\(^{19}\)

**Key takeaway:** The digital economy should be understood in broad terms, as there are no given constraints of what is susceptible of digitalization. MSMEs in the digital economy interact with three key stakeholders: consumers, platforms and governments.

**4. Are MSMEs in the Asia and the Pacific digital ready?**

MSMEs in Asia and the Pacific countries have taken advantage of the digital economy to different degrees, but in general terms, the uptake remains low. A study by ASEAN and ERIA on the level of digitalization of MSMEs in the ASEAN region has found that most MSMEs adopted basic digital tools and processes (56 per cent of interviewed firms), followed by an intermediate use, including having a website, social media use, access to a printer (34 per cent of interviewed firms), and only a small

\(^{17}\) https://wiesbaden.kiezkaufhaus.de/


percentage of MSMEs (10 per cent) have adopted advanced digitalization tools (ASEAN et al. 2019, 4). A different study released by the Singapore government in 2019 also notes that MSMEs have adopted digitalization but only at a most basic level (“Digital Adoption among Firms and Impact on Firm-Level Outcomes in Singapore” 2019, 47). Against this background, it is important to note that the indicators of the levels of digitalization (either basic, intermediate or advanced) varies among these studies, as depicted below:

Table 1: Levels of MSME digitalization

<table>
<thead>
<tr>
<th>Level of digitalization</th>
<th>Eria-Asean Study (Asean et al. 2019, 4) (Focused on MSMES in Asean)</th>
<th>Singapore study (Digital Adoption among Firms and Impact on Firm-Level Outcomes in Singapore” 2019, 49) (Focused on digital adoption by firms in Singapore, including SMEs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>Microsoft office, email, access to computers and mobile phones</td>
<td>Internet usage, computer usage, web presence and ICT security</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Online presence via website, social media, e-commerce platforms, access to tablets and printers</td>
<td>e-payments, e-commerce, software as a service</td>
</tr>
<tr>
<td>Advanced (digitalization integrated in the business model)</td>
<td>Enterprise resource planning, Customer relationship management, analytics, big data, automation, scanners, bank card readers, central servers</td>
<td>Internet of the Things, data analytics and artificial intelligence</td>
</tr>
</tbody>
</table>

*Source: Based on ASEAN et al. 2019; and “Digital Adoption among Firms and Impact on Firm-Level Outcomes in Singapore” 2019.*

Similarly, data from the World Bank Group’s Enterprise Survey also confirms the low level of even basic and intermediate digitalization across MSMEs. The survey measures the level of innovation and technology adoption by firms and sheds light on two aspects: the percentage of firms using email to interact with clients and suppliers, and the percentage of firms with their own website (IFC 2017). These are aspects considered basic and intermediary levels of digitalization. Even by these standards, for countries in Southeast Asia, the OECD notes a large gap between the levels of digitalization between SMEs and large firms. For instance, by 2016, 45 per cent of SMEs reported using email versus 86 per cent reported by large firms; and only 26 per cent of small firms reported having their own online presence (website) versus 62 per cent in the case of larger firms (OECD 2019b, 70-71). More details about the World Bank Group’s Enterprise Survey for countries in the Asia and the Pacific can be found in Annex I and II of this paper. Other studies have also noted that in countries in Southeast Asia only 16 per cent of SMEs were truly digitalized (OECD 2019b, 71). Data available at the country level also notes that in Malaysia, by 2015, ‘e-commerce only made up approximately 6 per cent of SME’s total revenue’ (Pasadilla, Wirjo, and Liu 2017, 68).

While MSMEs are encouraged to begin their digital journey at the most basic level, this is by no means a flat trajectory. The adoption of one additional digital tool corresponding to intermediate or advanced levels (see table 1) is associated with an increase of the firms value-added and productivity, at 25 per cent and 16 per cent respectively (“Digital Adoption among Firms and Impact on Firm-Level Outcomes in Singapore” 2019, 47).
Another study has shown that the higher productivity gains are associated with firms in sectors of highly intensive routine tasks (Gal et al. 2019, 20). However, these productivity gains are not automatic to firms in every sector but depend on sector-level structural and policy factors affecting firm-level capabilities, including the regulatory environment and the availability of managerial, electronic and technical skills (Gal et al. 2019, 23).

The availability of skills is in fact an important factor that should be considered. In the digital economy small firms require a diverse set of skills ranging from ICT generic skills (how to use technologies and applications for professional purposes), ICT specialist skills (how to program apps, develop applications and manage networks) to ICT complementary skills (how to communicate on social networks, manage brands, analyze big data) (OECD 2019b, 79). The availability of these skills is larger in digital-savvy countries such as Singapore, but this is not the case for other countries in the Asia and the Pacific. Developing countries, in particular, lack technical skills and business knowledge relevant to go digital. According to the World Economic Forum (WEF) Network Readiness Index 2016, there is a great disparity between countries such as Singapore that rank first in terms of ability of skills (5th pillar of the index) and developing countries such as Philippines, Indonesia and Thailand that rank in places 54, 65 and 73 respectively.

The road to adopt digital solutions by MSMEs can also be slowed down by the lack of awareness of the existence of these digital solutions. MSMEs may be hesitant to adopt solutions where English is the predominant language. The availability of local content can help alleviate this problem. This content can be created by existing platforms, leveraging tools such as automated translation, but also can be created by governments in their own platforms (OECD 2019b, 86-87).

Finally, it is not surprising that the higher number of MSMEs participating in e-commerce originate from countries with high connectivity (Singapore, Japan, Korea, China, Australia, and New Zealand) (see Annex III). This contrasts with the outlook in countries such as Lao PDR, where ‘limited internet connectivity, high costs of internet use, and lack of a regulatory framework for e-commerce business contributed to the slow development of domestic e-commerce and digital industry’ (ADB 2020, 19).

**Key takeaway:** Across countries in Asia and the Pacific, the levels of MSME digitalization is still relatively low. There are differences at the country level, but in general, there is ample space for MSMEs to further digitalize.

### 5. How can governments help MSMEs to take advantage of the digital economy?

#### 5.1. Improving the factors that influence the digital economy

The factors affecting the successful integration of MSMEs in the digital economy are not only limited to issues regarding ICT infrastructure, as some indexes showcase (World Bank 2016), but also cover aspects such as digital skills or how able are individuals to take advantage of digital technologies (CISCO 2019). A summary of these factors is presented below:

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20 Skills are measured according to the quality of the education system, quality of math and science education, secondary education enrollment rate, and adult literacy rate.

### Table 2: ICT indexes

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<th></th>
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</thead>
<tbody>
<tr>
<td>Basic Needs</td>
<td>Life expectancy, mortality rate, access to safe drinking water, access to electricity</td>
<td>Mobile, fixed subscription, secure internet servers, household internet access Mobile device penetration, cloud services</td>
<td>Bandwidth speed; mobile broadband prices</td>
<td>Secure servers, postal reliability</td>
<td>Broadband and mobile internet access, secure servers</td>
</tr>
<tr>
<td>ICT infrastructure</td>
<td>Connectivity (including, universal access, spectrum management, protection of domain names)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial infrastructure</td>
<td></td>
<td></td>
<td></td>
<td>Account ownership at a financial institution or with a mobile service provider</td>
<td></td>
</tr>
<tr>
<td>Regulatory infrastructure</td>
<td>Including data privacy and security, cross-border data flows, data security and enforcement, logistics, payments, consumer protection, intermediary liability, electronic signatures</td>
<td>Start-up environment (New business density, patents granted and trademarks registered, venture capital investment and availability)</td>
<td></td>
<td>Including e-customs, e-procurement and digital identification</td>
<td></td>
</tr>
<tr>
<td>Digital skills and human capital</td>
<td>Labor force participation rate, adult literacy rate, harmonized test score, internet usage</td>
<td>ICT skills (basic computer skills, standard skills and advance skills) Internet usage, mobile device ownership, gender gap</td>
<td></td>
<td>Internet usage per individual</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s own elaboration.

As shown in table 2, current indexes measure different aspects of the digital economy. However, two cross-cutting aspects or factors can be observed. First, ICT indexes measure the availability of the necessary infrastructure, including ICT infrastructure and technology adoption, financial infrastructure, and legal and regulatory infrastructure. Second, ICT indexes also measure the availability of digital skills and human capital. There are also aspects that are highly relevant for the digital economy that are not explicitly covered by these indexes, but nonetheless are measured by specific ones. This is the case of cybersecurity, covered by ITU’s global cybersecurity index. Similarly, the indexes reviewed above do not measure macroeconomic factors, such as a countries’ economic structure, population size or predominant trading partners. The next subsection will provide a summary of the two cross-cutting factors: infrastructure and digital skills and human capital.

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22 The World Bank’s index and UNCTAD e-commerce index measure the security of servers based on the Netcraft secure server survey (https://www.netcraft.com/internet-data-mining/ssl-survey/). However, the survey does not cover all the aspects referred by ITU’s cybersecurity index.

5.1.1. Infrastructure

Infrastructural aspects related to the digital economy can be classified in three broad components. The first component is ICT infrastructure (including technology adoption); the second is financial infrastructure; and the third is the existence of an enabling legal and regulatory environment.

a. ICT infrastructure

ICT refers mainly to telecommunication networks, which can be subdivided into: (i) international networks, responsible for ensuring a country’s connectivity with the rest of the world (supported by submarine cables, fiber-optic or microwave terrestrial networks, and satellite communications); (ii) domestic transmission backbones, which support the transport of signals between urban centers (supported by fiber-optic, microwave, or satellite links), and (iii) access networks, deployed to reach the ‘last mile’ of telecommunication users (supported by copper wires, fiber-optic, cable modem links and wireless networks). Each of these technologies evolves over time, for instance wireless networks evolved from 2G, 3G, 4G, to the current 5G (ITU 2020a, 7). To measure how this ICT infrastructure brings connectivity, ICT indexes measure broadband access, covering fixed and wireless broadband, enabled via fiber optics, wireless, cable, DSL and satellite. Some statistics also include speed and prices (256 kbit/s) (OECD 2015).

As showcased in Annex III, in certain Asia and the Pacific countries the levels of broadband access is still very low, being mobile connectivity the main key driver to access the internet in many countries (see Annex III). However, as ITU notes, even if mobile cellular penetration is high, this does not mean that everybody owns a mobile phone, as the cost of mobile devices might be unattainable for low income groups. This is an aspect related to technology adoption (ITU 2017, 148).

In light of the Covid-19 Pandemic, a recent report by ITU advises that a substantial amount of investment is needed for upgrading telecommunication networks and other critical infrastructure, so as to deliver universal internet access, particularly in rural areas (ITU 2020b). For Southeast Asia, the investment needed amounts to 135 billion USD, and for East Asia and the Pacific, it amounts to 83 billion USD (see figure 3). Investment in telecommunication networks are important because the digital economy (and e-commerce) need reliable and fast connectivity. If the telecommunication infrastructure does not perform adequately, there will be a negative impact on the whole digital ecosystem.
While the availability of strong telecommunication networks is vital for the digital economy, it is by itself not sufficient as an indicator of internet usage or actual ‘connectivity’. Increased access to the internet via broadband and mobile networks only addresses the supply side of connectivity, which should be complemented by measures aimed at boosting the demand side of connectivity. These measures include affordability and capability (including digital literacy) (ITU 2017, 173; 2020a, 23). In fact, while reliable ICT infrastructure is key for the digital economy, access to the internet per se does not mean internet usage. Internet usage can be almost universal among young people, but this is not the case for every sector of the population. Moreover, as ITU’s Measuring Digital Development index has highlighted, there is a gender gap as regards to internet usage and technology adoption. Other gaps can be observed among rural and urban populations, levels of income and education. This makes evident that as the digital economy unfolds, new ‘digital divides’ are likely to emerge.

In addition to broadband and mobile access to the internet, some of the review indexes reviewed measure not only broadband connectivity but also the availability of secure internet servers and cloud services (CISCO 2019). Furthermore, some indexes cover highly relevant non-ICT infrastructural aspects, for instance, the existence of affordable electricity to guarantee that servers can run and computers operate (CISCO 2019), as well as reliable postal services so that packages can be delivered (UNCTAD 2019a).

Good practices to bridge the ICT infrastructure digital divide currently exist in different parts of the world. The Alliance for Affordable Internet (A4AI) has compiled several of those. In addition A4AI has recently partnered with UNESCAP to support meaningful internet connectivity in the Asia and the Pacific. Some of these good practices involve public investment (for those countries counting with universal service funds), public-private cooperation (such in the case of Microsoft Airband Initiative),

24 https://a4ai.org/were-partnering-with-unescap-to-advance-affordable-internet-access-in-asia-and-the-pacific/
and purely private initiatives, such as lifting the data consumption caps, as observed during the Covid-19 pandemic (ITU 2020a, 31).

**Box 1: Programs for enhanced ICT infrastructure**

Australia’s NBN Co has establish a financial relief package to help internet service providers support their residential and MSME customer base. In addition, there are large investments being undertaken by NBN Co ($3bn) to roll out fiber-to-the-home broadband to meet surging demand due to Covid-19.

In Canada, Bell announced in April 2020 that it was accelerating the roll-out of its new “Wireless Home Internet (WHI) service” in rural areas.

Korea has established the ‘New Digital Deal’ which includes among others, investment in 5G, digital learning infrastructure, smart cities, etc.

The Philippines has adopted guidelines to promote shared passive telecommunication tower infrastructure, in order to improve connectivity via wireless network coverage across the country.

Temporary measures were also adopted in some countries to cope with the demand of remote work due to the Covid-19 pandemic. In the United States, the Keep Americas Connected initiative directed internet service providers to provide relief to customers via increasing broadband speeds, lifting of data caps and making Wi-Fi available to anyone.

The private sector has also launched programs to increase internet access, particularly for rural areas and especial sectors of the population. For instance, Microsoft launched the Rural Airband initiative, which aims to bring broadband to rural unconnected areas by using TV white spaces spectrum (unused spectrum in UHF television bands channels). The initiative also counts with different projects in countries such as India, Nepal and Bangladesh. In July 2020, Ericsson and UNICEF teamed up for the project ‘School Connectivity Mapping’, which is a global three-year initiative to help map school connectivity in 35 countries. It intends to bridge the digital divide by providing internet access for the next generation.

**Key takeaway:** Levels of ICT infrastructure and connectivity (measured as broadband access or mobile access) vary across countries in the Asia and the Pacific. Less developed economies face the biggest hurdles.

**b. Financial infrastructure**

One of MSMEs biggest hurdles, particularly during the Covid-19 pandemic, is access to finance (World Trade Organization 2020, 1-2). It has been reported that 49 per cent of MSMEs in Bangladesh do not have sufficient liquidity to sustain their businesses over the next three months (Kader and Pattanayak 2020). The private sector has also launched programs to increase internet access, particularly for rural areas and especial sectors of the population. For instance, Microsoft launched the Rural Airband initiative, which aims to bring broadband to rural unconnected areas by using TV white spaces spectrum (unused spectrum in UHF television bands channels). The initiative also counts with different projects in countries such as India, Nepal and Bangladesh. In July 2020, Ericsson and UNICEF teamed up for the project ‘School Connectivity Mapping’, which is a global three-year initiative to help map school connectivity in 35 countries. It intends to bridge the digital divide by providing internet access for the next generation.

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26 https://www.ft.com/content/c7c0dd2e-3cca-4279-9586-70d4b6f23be0
31 https://news.microsoft.com/rural-broadband/
Alternative financing mechanisms, and in particular fintech, can contribute to alleviate this problem (Sahay et al. 2020).

Regulatory approaches to promote fintech expansion include the use of regulatory sandboxes (allowing new fintech products to be tried out in a controlled testing environment and on a limited number of customers) and open-banking (or the exchange among different financial entities of user’s financial data based on user’s consent). This showcases the need to develop smart regulations for fintech that will allow further innovation while safeguarding consumer and data protection concerns. Some examples are provided below:

**Box 2: Programs for enhanced financial infrastructure**

As part of Indonesia's Payment System 2025 Vision, the Bank of Indonesia launched in 2019 the Quick Response Code Indonesia Standard (QRIS) which enables the creation of a digital payment channel (QR code-based transactions) for MSMEs. Earlier, in 2018, the Bank of Indonesia also launched the Financial Information Recording Application (SI-APIK system) for MSMEs. This is an application for recording and generating financial reports according to financial standards. SI-APIK intends to ease MSMEs financial administration so they can be ready to request loans to financial institutions.

The Philippines’ central bank has set the BSP’s Digital Payments Transformation Roadmap 2020-2023, which has the objectives to: (i) convert 50 per cent of the total volume of retail payments into digital form and expand the proportion of citizens with access to financial services to 70 per cent; (ii) have more available innovative digital financial services that will enable the national ID system, and (iii) the modernization of payment systems. On the private sector front PayMaya released the ‘Sulong Negosyo’ program, through which it offers cashless payment tools for MSMEs. This includes QR codes, payment links and checkout plugins. PayMaya is also offering a rewards program for MSMEs to go cashless. The benefits include free advertisement and marketing tools, rewards and online training.

In 2018, the Singaporean Association of Banks supported the Monetary Authority of Singapore to promote the Singapore Quick Response Code (SGQR), which is a unified payment QR code system that will be adopted by 27 payment schemes. In 2020, a consortium of government agencies has also launched the ‘Unified e-Payment Solution’ nationwide in order to provide an e-payment solution for small food businesses in coffee shops, hawker centers and industrial canteens. In 2020, Singapore also launched ‘Hawkers Go Digital’ to promote the use of the unified e-payment solution.

India’s National Payment Corporation launched in 2016 a ‘Unified Payment Interface’ (UPI), which is a system that incorporates multiple bank accounts into a single mobile app. It works based on an ID and PIN, which are sufficient to transfer and receive money. India also has the BIHM Aadhaar Pay, managed by the National Payments Corporation of India. This payment system uses biometrics collected by Aadhaar to authenticate payments (currently limited to fingerprints).

Japan amended its Banking Act in 2016 to enable financial entities to invest in finance-related IT start-ups, as well as to allow fintech firms connect with financial entities systems through the use of open Application Programming Interfaces (APIs). Since 2015, the country also operates a Fintech Support Desk, and since 2017, the FinTech PoC (Proof of Concept) Hub, run by the Japan Financial Services Agency, to respond to inquiries, including legal inquiries, about Fintech projects. In an effort to incentivize cashless payments, Japan’s Ministry of Economy, Trade and Industry executed a temporary

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For a set of regulatory initiatives on fintech sandboxes see (Baker McKenzie 2018).
program for SMEs to offer a 5 per cent discount on purchases made with cashless payment methods, including through smartphones.

Another aspect that is of relevance for MSMEs is trade finance. The ADB has estimated that the trade finance gap amounts to 1.5 trillion USD, particularly affecting MSMEs (and Women-led MSMEs the hardest), who account for 40 per cent of all those applications rejected by banks. Some of the key barriers for accessing trade finance include anti-money laundering and ‘know your customer processes’ (Kim et al. 2019). These hurdles can be eased by leveraging mobile internet access, Distributed Ledger Technologies (which also covers ‘blockchain’); and Artificial Intelligence (AI). Technologies such as blockchain enable trade authenticity verification and AI leverage non-traditional data such as logistics data, e-commerce sellers trust scores, etc., to improve MSME risk-profiling, hence reducing the time for approving credits. Nonetheless, the ADB also remarks that MSMEs seem to be unaware of fintech solutions that could help them achieve trade financing (Kim et al. 2019, 7), which suggest that further outreach and education might be valuable.

**Box 3: Programs to facilitate trade financing**

In October 2018, the Hong Kong Monetary Authority and 12 banks launched Hong Kong’s first blockchain-based international trade finance platform: eTradeConnect. Blockchain is a technology that allows to keep digital records of transactions. It functions in a decentralized and distributed fashion, allowing digital records to be shared, verified and validated, in a secured, transparent and traceable manner, across peer-to-peer computer networks. In the case of eTradeConnect, the platform’s objective is the digitalization and storage of trade documents (i.e. purchase orders, invoices). This enables transmitting and distributing these documents among a set of stakeholders, including buyers, sellers, import and export banks and logistics service providers. The sharing of these documents using blockchain technology allows the automatization of trade finance processes (including pre-shipment and post-shipment) and reduces the risks of fraudulent financing, as the origin of these documents can be traced back and cross-checked.

The potential of closing the trade finance gap via platforms such as eTradeConnect is enhanced when these platforms are linked with other initiatives in order to break data silos. This can take place through the collaboration between trade finance platforms and private sector technological solutions, and among trade finance platforms across regions. An example of the first case include the proof of concept (PoC) between eTradeConnect and Cargo Smart, a shipment management technology solution provider. Under the PoC, the two entities were able to exchange information, including historical records provided by ocean carriers and terminals. This allowed banks to have a better understanding of customers and risks, accelerating the trade financing process. An example of the latter case include the MoU between eTradeConnect and ‘we.trade’, the first blockchain trade finance platform in Europe (Patel and Ganne 2019, 12).

**Key takeaway:** Access to finance, both to trade domestically, as well as in order to engage in international trade, is one of the MSME sector’s biggest hurdles. Fintech constitutes an alternative to traditional financing mechanisms and it can help to alleviate this problem. Fintech leverages the use of

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33 https://www.etradeconnect.net/Portal
data and ICT solutions, avoiding, for example, the need of collateral or credit history for granting a loan.

c. Legal and regulatory infrastructure

An important factor for MSMEs to thrive in the digital economy is to have a supportive legal, regulatory and business infrastructure. Firstly, in order to successfully take advantage of the digital economy MSMEs need to be supported by laws that promote digitalization uptake. These include the existence of laws on digital signatures and electronic authentication, among others. The main objective is to ensure that online contracts will have the same value as paper-based contracts. Governments that do not have these laws in place do not need to reinvent the wheel. There are different international instruments that can be used immediately. For instance, the United Nations Commission on International Trade Law (UNCITRAL) has already developed a model law on electronic signatures which can be used as guidance for countries to develop their own e-signature laws.37

Secondly, beyond the existence of legal frameworks, MSMEs often have to deal with complex administrative systems. These hurdles can be simplified with the help of the government. The creation of one-stop-shops where MSMEs can find all the information on how to deal with administrative and legal requirements facilitates a conducive business environment.

**Box 4: Programs for simplified interaction with the government**

In 2020, the Small Industries Development Bank of India announced that it will launch a single window platform only for MSMEs, with the aim to facilitate their businesses and digitalization. This new platform is set to be a dashboard of all schemes being implemented by the central government, state governments, banks, and industry associations. It is envisioned that the platform will also include a repository with a list of tools such as automated accounting, tax reconciliation, cloud services, cyber security, video conferencing, online meetings, etc., which could be made available for a limited period of time, for free, to MSMEs.38 This new platform is set to replace a previous platform (msmeshopping.com) that was launched in 2014. In addition, in 2020, the Bank of India has launched ‘MSMEs Prerana’, which aims to empower MSMEs through skill development and business coaching.39

New Zealand’s ‘Business Connect’ platform supports the drive towards a more consistent and coordinated business customer experience between the government and companies. It provides companies with a more transparent view of their interactions.40 New Zealand also offers e-invoicing services for the direct exchange of invoices between suppliers’ and buyers’ financial systems.

Thailand established in 2017 the Digital Economy Promotion Agency (DEPA).41 The Agency offers many services for MSMEs, which main tool is the Digital Transformation Fund. To promote ICT adoption, SMEs are offered vouchers for digital transformation.

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40 https://businessconnect.govt.nz/
41 https://www.depa.or.th/en/home
In Indonesia, the ‘MSME Go online’ program provides capacity building to MSMEs to support their digitalization. Indonesia also launched the MSME Digital Heroes program, which selects 10 innovators that will help the government promote digitalization across MSMEs.42

Thirdly, governments can also offer online platforms where MSMEs can connect with consumers or other businesses. In this way, governments can help MSMEs reach broader markets. Examples of how these aspects have been tackled in countries in the Asia and the Pacific are provided below:

**Box 5: Programs for encouraging MSMEs to export**

Korea encourages MSMEs to internationalize through a dedicated support programme: ‘UtradeHub’, a digital trade platform which integrates the paperless-trade system operated by KTNET. It covers 5 areas: trade, logistics, finance, marketing, and customs.43

In 2020, Singapore’s Infocomm Media Development Authority (IMDA) and Enterprise Singapore (ESG) launched ‘Grow digital’, a platform that connects Singaporean SMEs with overseas buyers. It covers B2B and B2C markets. The platform also offers cross-border payment facilities and last mile delivery service, as well as coaching on cross-border e-commerce.44 Next to ‘Grow digital’, IMDA has also team-up with OneConnect (the financial technology arm of Ping An) to launch ‘OneSme’, a B2B platform dedicated to SMEs. It is designed to connect Singapore SMEs with buyers in Mainland China. The platform will include direct financing for SMEs based on data collected by OneConnect, so as to expedite trade financing processes.45

The Indonesian government offers running product campaigns at the virtual ‘Karya Kreatif Indonesia’ (KKI) exhibition. The exhibition matches Indonesian MSMEs with potential buyers from Singapore, Italy, South Korea, Japan, China and Australia, as well as aggregators from Indonesia.

Finally, an enabling legal and regulatory infrastructure also includes the facilitation of international trade through trade procedures. For trade in goods, there can be substantial challenges regarding the movement, release and clearance of goods crossing borders. Exporters have to submit documentation regarding the shipping details, customs declarations, evidence of payments, certificates regarding the safety and security of products, among other requirements varying according to the type of product and destination. Customs authorities (and in some cases other government agencies) will decide on the clearance of goods based on this documentation. If this process is successful, goods are cleared and can enter the market. However, the complexity of this process can be a burden for MSMEs, which in addition to having limited resources, have to deal with complex procedures in order to export (International Trade Centre 2017, 19). According to the World Trade Organization (WTO), this complexity increases trade costs, particularly in developing countries, to an equivalent of applying 291 per cent of ad valorem duties (WTO 2015, 7). This implies that while platforms for e-commerce can help MSMEs reach international markets, it is the trade cost of sending products abroad the aspect that could be impeding realizing the opportunities offered by the digital economy.

Digitalization can play a role in alleviating this problem. The WTO Trade Facilitation Agreement (TFA), an instrument designed to facilitate and reduce the cost of trade across borders, contains different

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43 https://www.utradehub.or.kr/porgw/index.jsp?so=ok
45 https://onesme.ocft.com/
measures that involve the use of digital solutions. Article 1 requires that information on requirements for import, export, and transit procedures should be published online. Article 7 requires the adoption of procedures for submitting import documentation, preferably in electronic form as well as accepting electronic payments of duties and fees. Article 10 encourages the use of electronic copies for the submission of documentation requirements. It also establishes the use of national single windows. It is estimated the implementation of these commitments can lead to reduction of trade costs up to 40 per cent for least developed countries (Duval, Utoktham, and Kravchenko 2018, 33).

In addition, several organizations have been working towards promoting the digitalization of different trade aspects. The Pan-European Public Procurement On-Line (PEPPOL) is a framework that provides a set of technical specifications on how to make the disparate e-invoicing systems across Europe interoperable, but has also been used outside Europe in Singapore, Australia and New Zealand. The Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific, accessible to all 53 member economies of ESCAP, is aimed at accelerating digital trade through paperless trading procedures. The ASEAN Single Window creates an interoperable environment which connects and integrates single windows of individual ASEAN members. The World Customs Organization (WCO) Revised Kyoto Convention Chapter 7 provides that customs shall apply ICTs to support customs operations, where it is cost-effective and efficient for customs and trade.

Against this background, the level of automatization and adoption of digital solutions to facilitate paperless trade processes varies across countries and across specific trade processes. Based on data of the 2019 UN Global Survey on Digital and Sustainable Trade Facilitation, across countries in the Asia and the Pacific, paperless and cross-border paperless trade measures that have been partially to fully implement are: automated custom systems, internet available to customs, electronic submissions of customs declarations and sea cargo manifests. Aspects least implemented include: electronic exchange of sanitary and phytosanitary (SPS) certificates and paperless collection of payments from a documentary letter of credit, as depicted in figure 4.

47 United Nations Economic and Social Council, ‘Promoting cross-border paperless trade in Asia and the Pacific’ https://www.unescap.org/sites/default/files/CTI_3_item%204%20-%20Cross-border%20paperless%20trade_E_0.pdf
48 ASEAN, ‘What is the ASEAN Single Window’, https://asw.asean.org/
50 According to the methodological note, 3 represents full implementation, 2 represents partial implementation, 1 represents pilot implementation, and 0 no implementation. It should also be noted that the UN Survey measures aspects beyond those included in the WTO TFA.
Beyond the measurement of horizontal actions towards paperless and cross-border paperless trade, the UN Survey also measures aspects that affect SMEs directly, for instance, if a government has taken action to make single windows more accessible to SMEs (for instance, by providing technical consultation and training services to SMEs on how to register and use single window platforms). Across countries in the Asia and the Pacific, only in a handful of cases, SMEs have access to these government policies. These are the cases of Malaysia, Korea, China, Singapore and Uzbekistan (see also UN 2019, 26).

**Box 6: Programs to simplify trade facilitation by means of digitalization**

Singapore’s Single Window Networked Trade Platform (NTP).\(^{51}\) This is a one-stop trade information management platform, serving large and small companies, logistic providers and trade financiers. It allows uploading documentation to the platform that could later be shared or reused among the different stakeholders in the system, in a secure way. As an example, since 2019, traders can give consent to the NTP platform to share their data with financial institutions of their choice in order to access trade finance.\(^{52}\) The platform also supports legal compliance when exporting. The reduction of trade cost associated to the use of digital solutions in trade processes, and the possibilities that this can offer (e.g. by encouraging secure data reuse and sharing) should encourage countries to adopt digital solutions.

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Other examples of the implementation of single windows in Korea and Japan are described in detail in the collection of regional best practices of single window for trade facilitation published by UNESCAP in 2018 (UNESCAP 2018).

**Key takeaway:** Some countries have sought to facilitate the legal and regulatory environment for MSMEs by providing government-sponsored platforms in which MSMEs receive advisory services on general laws and regulations applicable to them. Other countries have developed government led e-commerce platforms where MSMEs can advertise their products. Another set of countries have sponsored, or cosponsored platforms where international buyers can meet with MSMEs, or where they can get access to market information on how to export. A handful of countries have encouraged the digitalization of trade processes, including using single windows.

### 5.1.2. Digital skills and human capital

Digital skills is a broad concept that refers to how an individual accesses, understands, uses and creates information through digital tools so that she or he can participate in society. They include competences that are often referred to as ‘computer literacy, ICT literacy, information literacy and media literacy’ (UNESCO 2018, 6). The existence of digital skills is a key factor not only for the digital economy, but for a successful life in our interconnected society. It is also one of the factors being measured by the UN sustainable development goals (SDG).53

MSMEs can be directly affected by lack of sufficient digital skills. In order to successfully take advantage of the digital economy, entrepreneurs and employees need to obtain sufficient ‘digital literacy for the digital economy’. This includes using ICT tools to maintain a MSME web or social media presence, sell online, use the cloud and digitalize their back-office functions. Pasadilla and Wirjo, based in consultations with SMEs, also point to skills necessary to satisfy the expectation of customers who cannot examine the products physically. This includes skills necessary to present products with pictures, videos or written descriptions, manage endorsement from other customers, make the products discoverable with the use of relevant keywords and ad words (Pasadilla and Wirjo 2018).

While the role of governments in this regard is to support MSMEs to get digital literacy, particularly as MSMEs may not have the budget to train their employees, there is also a role to promote business support services so that MSMEs can outsource some of the ‘digital skills’ necessary to participate of the digital economy. This will depend on the availability of services suppliers domestically (for instance, developers or digital marketing companies), platforms offering these services, or whether these services can be outsourced from other countries, highlighting the importance of facilitating cross-border trade in services relevant for the digital economy (software publishing, computer programming, and other IT services).

A set of initiatives to foster digital skills for MSMEs is presented below:

**Box 7: Programs for fostering digital skills for MSMEs**

In 2017, the Indonesian government in partnership with online commerce marketplaces launched UMKM Go online, which is an online training and mentorship platform for MSMEs. It was estimated

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53 In particular, SDG 4.4.2 measures the ‘Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills.’
that as of late 2017, nearly four million MSMEs have participated in online commerce as a result of these programs (McKinsey & Company 2018, 70).

In Indonesia, the private sector has also engaged in offering training for MSMEs. Gapura Digital (an program from Google) offers free digital training for MSMEs that want to develop their websites and go digital.\(^{54}\)

The Asian Foundation with support from Google have launched Go Digital ASEAN, which will provide access to information, training, mentoring and networking opportunities for MSMEs across ASEAN member states. The program is implemented through in-country program partners. It will offer lessons and assistance that will help support their continued operation.

Offering training for digital literacy for the digital economy, though, is only an immediate policy response to accelerate MSMEs digitalization. Long term policy responses to foster human capital should also include efforts to improve digital skills more comprehensively. This includes, ensuring that digital literacy skills are part of the standard school curricula; and organizing lifelong learning opportunities for all, as many new types of jobs will emerge and others disappear, and workers will need to retrain in specific job-relevant skills (Deming and Noray 2018, 37-38). Hence the usefulness of coding camps, open education courses or other lifelong learning mechanisms that will ensure that workers stay relevant. Policy responses should also distinguish between digital literacy needs by: (i) geographic location (i.e. urban vs. rural population) (OECD 2019a, 13); (ii) socio-economic background; and importantly (iii) gender.

**Box 8: Programs for developing human capital**

In June 2020, Microsoft launched the Microsoft Digital Skills Initiative. The initiative offers free digital skills classes with the goal of helping to train 25 million people for new or improved jobs by the end of the year. The courses are offered over LinkedIn and leverage data about what is requested in job boards. Microsoft’s GitHub provides the platform for learners to practice their new skills.

In partnership with UNESCO, Ericsson launched Ericsson Educate, a global platform delivering online learning content focused on improving digital skills for students in secondary schools and universities. Another platform is focused on teaching basic information about AI - how it works and what it means to secondary students.

Since 2018 Thailand’s DEPA offers ‘Coding Thailand’, an online platform that is a collaboration between DEPA and tech partners including Microsoft, to develop coding curriculum and encourage young Thais to learn coding.\(^{55}\)

Singapore’s IMDA has launched in 2020 Seniors Go Digital,\(^{56}\) which is a targeted program for the elderly to engage with digitalization by learning how to do video calls, use QR codes, etc.

**Key takeaway:** The availability of people with digital skills is a key aspect in the digital economy. There are examples of platforms created to deliver training for MSMEs so they can get digital literacy for the digital economy. There are also examples of policies designed for specific groups (seniors, students).

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54 https://gapuradigital.withgoogle.com/
55 https://codingthailand.org/
56 https://www.imda.gov.sg/for-community/Seniors-Go-Digital
It should be noted that the major cross-country efforts involve a public-private partnership between governments and ICT platforms or firms.

5.2. Addressing the challenges

While it is important to pay attention to the positive impacts of the digital economy on MSMEs, it is similarly important to pay attention to the emerging challenges. Some of these include data protection and cybersecurity (OECD 2020b, 2), exposure to digital fraud, competition issues, and a persistent digital divide (Karr, Loh, and Wirjo 2020; Chen 2019, 6). While these challenges have been recognized for many years, the rapid adoption of digitalization due the Covid-19 pandemic have demonstrated the need to work on them immediately.

5.2.1. Data policies

As transactions go online, more and more personal data will be collected, processed and held by MSMEs. Personal data, generally speaking, is data about a natural person who is directly or indirectly identifiable. It can include names, addresses, among others, but also sensitive data, such as health data. During the past decade, and especially after the adoption in the European Union (EU) of the General Data Protection Regulation (GDPR) in 2016, there has been a global tendency towards adopting higher levels of personal data protection. Laws in this regard contain obligations for those who collect this data (controllers) or process it (processors). MSMEs collecting data from their customers can find themselves as controllers of such data. The violation of data protection obligations, as set in domestic laws, carry monetary penalties, which could have damaging effects on MSMEs. In other cases, MSMEs may prefer to use third party services, for instance, for collecting payments. In these cases, MSMEs themselves do not collect or store personal data. Hence, to different degrees, MSMEs face compliance issues with data protection laws, which highlights the role for governments to offer training and raise awareness as well as to develop mechanisms that will allow MSMEs comply with these legal requirements.

Next to the legal risks of non-compliance with data protection obligations, MSMEs may be affected by data protection laws and policies in another way. Cross-border personal data flows can be restricted in some countries based on objectives such as the protection of personal data or national security. In practice, these restrictions mean that certain data (or a copy of it) needs to be stored in servers in the country where the data was originally collected. This can cause friction in global digital supply chains. Many firms rely on business models in which services are offered continuously (over 24 hours) and for which data transfers across jurisdiction are vital. Another example is the supply of cloud computing services. If firms can choose between providers located in different parts of the world, they can also have access to more competitive prices. This can affect MSMEs that want to internationalize or that cannot afford to count with their own IT infrastructure. Countries in Asia and the Pacific that have established significant data localization requirements include Vietnam (for online service suppliers), India (for payment service suppliers), Indonesia (for providers of public services) and China (for important data and data collected by critical infrastructure operators). The impact of these type of restrictions contrast with the nature of the digital economy, which depends on the use of data for innovation. As such, there is an increased need to find a balanced approach towards data protection.

regulation and other policies favoring international trade. Some of the alternatives are found in the adoption of standards and certifications, such as APEC’s Cross-Border Privacy Rules (CBPR) System.

**Box 9: Programs for balanced data policies**

In the Asia Pacific Region, the APEC Privacy Framework sets a minimum standard of protection for personal data. The APEC Privacy Framework, which was formally endorsed by APEC ministers in 2004, is of a voluntary nature. The Framework was updated in 2015, to be in line with the updated version of the OECD’s Guidelines from 2013. In comparison to other international instruments, such as the OECD Privacy Guidelines, the APEC Privacy Framework explicitly intended to reconcile personal data protection and trade. For this, the framework includes the Cross-Border Privacy Rules (CBPR) system, which essentially works as a certification mechanism to certify that a company complies with the APEC Privacy Framework, and therefore allow transfers of personal data.

Another approach for balanced data policies is the use of industry standards. ISO/IEC 27001\(^{58}\) is the international standard for information security and provides a basis for achieving the technical and operational requirements necessary to comply with the EU’s GDPR. The BS 10012 standard allows firms to comply with legal requirements when collecting, storing, processing, retaining or disposing of personal related data. The BS 10012 standard was updated in 2017 to incorporate the requirements of the GDPR\(^ {59}\).

**Key takeaway:** The protection of personal data, but also its movement across borders, is crucial for the digital economy. Policy approaches need to find a balance to protect both objectives.

### 5.2.2. Trust in online transactions

MSMEs can face an issue of trust with regards to consumers as well as with regard to other MSMEs or larger firms, if participating in GVCs. On the one hand, consumers might not be satisfied with the quality or safety of products ordered online. On the other hand, MSMEs may also be at risk of acquiring defective products. These concerns are aggravated in cross-border transactions, where often there is a lack of a redress mechanism.

And while laws regarding consumer protection and misleading, deceptive and/or fraudulent practices exist at the domestic level, there is a lack of enforceable laws for cross-border transactions. For instance, the International Consumer Protection and Enforcement Network (ICPEN) is a platform for sharing regulatory experiences on consumer protection. ICPEN also counts with an initiative to tackle consumer protection in the context of e-commerce (econsumer.gov), where consumers can submit complaints. However, the resolution of these complaints depend on each domestic consumer protection agency.

As new consumers engage in e-commerce, and MSMEs participate in GVCs, there is a need to reinforce trust in digital transactions, particularly through adequate consumer protection laws but also through effective cooperative mechanisms where cross-border disputes can be resolved in a seamless way.

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\(^{58}\) [https://www.iso.org/isoiec-27001-information-security.html](https://www.iso.org/isoiec-27001-information-security.html)

Box 10: Programs for promoting trust in online transactions

India has recently enacted the Consumer Protection Act (2019) and Consumer Protection (E-Commerce) Rules (2020)\(^{60}\) applicable to Indian and foreign e-commerce entities. The Act and Rules include provisions on the collection of personal data as well as the right of consumers to seek redress. Other countries, such as China, have developed dispute resolution systems dedicated to e-commerce. China has set up an ‘internet court’ system in Hangzhou for cross-border e-commerce disputes.\(^{61}\)

These policies are aimed at complementing or filling the gaps left by MSMEs themselves, which often are unable to rely on online dispute resolution or redress mechanisms because of their lack of capacity or financial resources. The situation is different for e-commerce platforms, some of which have adopted policies to protect consumer trust. Zalora Indonesia has introduced money-back guarantees. Other platforms such as Rakuten also offer online dispute resolution systems.

At the cross-border level, there are initiatives to establish online dispute resolution mechanisms that would facilitate the engagement of MSMEs in international trade and GVCs. In the context of APEC, Japan has sponsored the APEC Collaborative Framework for Online Dispute Resolution, which has led to the publication of the APEC Procedural Rules for Online Dispute Resolution. These procedural rules can be implemented by platforms and alternative dispute resolution centers (i.e. mediation and arbitration centers). The scope of application of the procedural rules is B2B transactions, including MSMEs, which is of particular relevance for GVCs (APEC Economic Committee 2019).

In 2016, ASEAN has launched the Strategic Action Plan for Consumer Protection 2016-2025, with one of its strategic goals being the development of a mechanism for cross-border B2C transactions. This initiative will be based in three tenets: (i) the development of national online dispute resolution systems, (ii) a network of ASEAN online dispute resolution systems, and (iii) a mechanism for cross-border complaints and investigations.\(^{62}\)

**Key takeaway:** Trust in online transactions is key to facilitate cross-border e-commerce. As consumer protection laws apply domestically, there is a pressing need to work on cooperative mechanisms to resolve cross-border disputes.

### 5.2.3. Anticompetitive conduct

One of the risks associated with the digital economy is development of anticompetitive conduct, particularly by platforms. Platforms collect and aggregate large amounts of consumer personal information and other types of data (such as product preferences, location data, etc.). Based on this data, platforms can generate insights to improve their services, to refine customer experience, or to incur in new services or businesses. At the same time, this use of data can conflict with personal data protection laws. Platforms also tend to be prone to market concentration and to the creation of ecosystems. These characteristics can lead to a platform enjoying a market position where anticompetitive conducts can occur, such as predatory pricing against sellers (including MSMEs) and consumer profiling and price discrimination.


\(^{62}\) [https://aseanconsumer.org/file/post_image/The%20ASEAN%20Strategic%20Action%20Plan%20For%20Consumer%20Protection%202016_2025%20Meeting%20The%20Challenges%20of%20A%20People%20Centered%20ASEAN%20Beyond%202015.pdf](https://aseanconsumer.org/file/post_image/The%20ASEAN%20Strategic%20Action%20Plan%20For%20Consumer%20Protection%202016_2025%20Meeting%20The%20Challenges%20of%20A%20People%20Centered%20ASEAN%20Beyond%202015.pdf)
One example case illustrates this point. In November 2020, the European Commission opened an investigation against Amazon for using third-party sellers’ data collected in Amazon’s marketplace to boost the sales of Amazon’s own-label goods.\(^{63}\) This sheds light on the dual role of Amazon as a platform (as it provides a marketplace where independent sellers (and MSMEs) can sell products directly to consumers) as well as a retailer itself (as it sells its own products on the same marketplace as Amazon’s sellers, in direct competition with these).

Similarly, in the United States, only recently, several congressional hearings have left open questions regarding the market dominance by internet platforms and the suitability of competition law frameworks in the digital age.\(^{64}\) A recent report issued by the House Judiciary Committee highlighted the monopoly power that digital platforms possess, acting as gatekeepers of key distribution channels, which allows them to control access to digital markets (Nadler and Cicilline 2020).

The regulatory solutions to reduce anticompetitive behaviors vary, including among others, rules regarding mergers and acquisitions, but also includes rules data portability and rules that promote interoperability. Overall, what these policies should ensure is that barriers to enter digital markets, either by traditional or digital MSMEs, remains low and that MSMEs are able to switch platforms with ease, for instance by being able to migrate consumer lists and other important data.

**Box 11: Programs for ensuring a competitive market**

In November 2020, Singapore passed amendments to the country Personal Data Protection Act, including an obligation on data portability.\(^{65}\) This new provision allows individuals to issue a request to an organization holding their data to transmit that data to another organization. In 2019, Singapore also launched the Trusted Data Sharing Framework. The Framework works as a guide of how to share data across organizations and explains what to take into account when establishing a data partnerships.\(^{66}\)

The competition authority of Australia has recently released the final report of ACCC Digital Platforms Inquiry, which envisions a revision of Australia’s privacy law, revision to media content laws and voluntary notification protocols for acquisitions that may affect competition, among others (Australian Competition and Consumer Commission 2019).

Governments can also encourage the reuse of government data. This can be done by having open data portals or by establishing data exchanges. In 2019, Indonesia launched One Data Indonesia, in order to have more structured and integrated data governance. The case of Malaysia is another good example to showcase. ‘MyGDX’ is the Malaysian Government Central Data Exchange\(^{67}\) that serves mostly government agencies, but that could indirectly have positive effects on MSMEs. The reason is that by having open government data (free from licenses and intellectual property), MSMEs can freely use this data to innovate and create new products or services. The importance of open data is also being recognized in the current WTO negotiations towards an agreement on e-commerce. Several WTO

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\(^{66}\) [https://www.imda.gov.sg/-/media/Imda/Files/Programme/AI-Data-Innovation/Trusted-Data-Sharing-Framework.pdf](https://www.imda.gov.sg/-/media/Imda/Files/Programme/AI-Data-Innovation/Trusted-Data-Sharing-Framework.pdf)

\(^{67}\) [https://www.malaysia.gov.my/portal/content/30598](https://www.malaysia.gov.my/portal/content/30598)
members have submitted proposals encouraging open government data domestic frameworks (“Joint Statement Initiative on E-Commerce: Co-Conveners’ Update” 2020). Some companies are also aware of the benefits of making data more widely accessible. In April 2020, Microsoft launched an Open Data campaign to help to address the emerging data divide, so as to generate more innovation.68

**Key takeaway:** Policies to alleviate competition concerns, particularly with regards to platforms, are not widespread in Asia and the Pacific countries. However, some examples exist, including the establishment of data portability obligations within data protection laws. In other cases, competition authorities have launched general consultations on how competition policies tackle the shortcomings of the digital economy.

### 5.2.4. Cybersecurity

MSMEs that have recently gone digital might not think about cybersecurity until after a security breach occurs. Typical security breaches affecting MSMEs include ransomware69 and phishing70 attacks, and the stealing of passwords (Verizon 2020, 94). Policy reports have highlighted that some countries in Southeast Asia are becoming hotspots of malicious cyber activities and that there has been an underinvestment in hard and soft infrastructure for cybersecurity. In the ASEAN region, the regional expenditure in cybersecurity represented 0.07 per cent of the GDP, below an average of 0.13 per cent in other regions (Digital Development Partnership 2019, 92). This is in line with similar remarks about the state of MSMEs cybersecurity in other regions, particularly during the Covid-19 pandemic. As the OECD has stated, ‘many SMEs did not have Virtual Private Networks (VPNs) in place, did not use multi-factor authentication for remote access, or had to allow employees to use their own devices, which were not as secure as the ones provided by the organization’ (OECD 2020c).

The lack of high cybersecurity standards can hurt MSMEs financially. It can also impact consumer trust. Cyberattacks can expose sensitive personal data of consumers (for instance, financial information) enabling identity theft, and as a result some consumers might be hesitant to engage in digital transactions, download apps with inadequate privacy policies, among others (The Harris Poll 2020). As concerns over cybersecurity arise, MSMEs need to invest in cyber resilience (for instance, by training personnel, using reliable authentication methods, investing in secure IT infrastructure, etc.) and governments can assist in specific ways. These include, by setting basic national cyber security goals, offering voucher schemes for training, hardware and software tools, establishing specialized agencies (i.e. CERTs). Some of those activities are currently being observed in certain countries in Asia and the Pacific, as presented in Box 12.

**Box 12: Programs for strengthening cybersecurity**

In light of the Covid-19 pandemic, the Indonesian government has partnered with Mastercard to offer mentoring in cybersecurity for MSMEs. The training is delivered over the preexisting government platform [https://edukukm.id](https://edukukm.id).

69 Ransomware is a type of malware that encrypts users’ data and threatens to block access to data unless a ransom is paid.
70 Phishing is the fraudulent practice of sending emails purporting to be from reputable organizations to lure individuals into revealing personal data, providing credentials, opening malicious attachments, among others.
Thailand, through bilateral support from Japan, has set up the ASEAN-Japan Cybersecurity Capacity Building Centre (AJCC BC) to advance skills of cybersecurity professionals in governmental agencies and critical information infrastructure operators. It also established the ASEAN-Computer Emergency Response Team (CERT).\footnote{https://asean2019.go.th/en/infographic/the-asean-japan-cybersecurity-capacity-building-centre-ajcc-bc/}

Singapore has been proactively working to enhance cybersecurity in the ASEAN region. The country launched in 2019 the ASEAN Singapore Cybersecurity Centre of Excellence (ASCCE), which complements the ASEAN Cyber Capacity Program (ACCP) launched in 2016. ASCCE will train CERTs in ASEAN and facilitate information sharing (Kono 2019).

In the financial sector, both the central banks of Singapore and Malaysia have developed fintech sandboxes to assess the potential cybersecurity risks in the fintech sector (Digital Development Partnership 2019, 93).

**Key takeaway:** There are efforts to adopt regional frameworks to cooperate in the deterrence of cyberattacks.\footnote{In November 2017, the ASEAN Declaration to Prevent and Combat Cybercrime was adopted during the 31st ASEAN Summit in Manila, Philippines. This is the first formal declaration that specifically addresses the issue of cybercrime in ASEAN countries. Subsequently, during the 34th ASEAN Summit in Bangkok ASEAN members agreed to work together more effectively to enhance regional cybersecurity cooperation (“ASEAN Declaration to Prevent and Combat Cybercrime” 2017).} However, as concerns regarding cybersecurity not only involve legal but also technical aspects, the existence of legal frameworks will not by itself alleviate the challenges posed by malicious cyberattacks. It is necessary to invest in training for cybersecurity professionals, and educate MSMEs and consumers generally, on the risks posed by malicious cyber activities.

### 5.2.5. Emerging taxation issues

Taxation issues in the digital economy emerge in the context of cross-border transactions. On the one hand, MSMEs can be affected by the uncertainty regarding the taxation of export and import of goods acquired via e-commerce. According to ESCAP, the current *de minimis* thresholds in countries in Asia and the Pacific varies. Twelve countries have *de minimis* thresholds below 100 USD while seventeen countries have *de minimis* thresholds below 200 USD (UNESCAP 2019, 37).

On the other hand, the digital economy can challenge taxation policies on a deeper level. Some companies (including MSMEs and platforms) can offer goods or services to an international market, sometimes without the need of having a representative or an office in such a market. Among others, this raises concerns regarding the collection of Value Added Tax (VAT), and it is unclear who has the right to tax a company (either the country where a company is located or the country where consumption occurs). There are also open questions as to how much should be taxed (OECD 2020a). These issues are currently being discussed in international forums (i.e. G20, OECD) in order to find a way forward. The OECD has recently released blueprints (in the context of the OECD/G20 inclusive framework on Base Erosion and Profit Shifting –BEPS–) which addressed the tax challenges raised by the digital economy.\footnote{https://www.oecd.org/tax/beps/oecd-g20-inclusive-framework-on-beps-invites-public-input-on-the-reports-on-pillar-one-and-pillar-two-blueprints.htm}
6. Conclusions

The impact of Covid-19 on countries in the Asia and the Pacific has hit MSMEs the hardest. Given that MSMEs employ a large proportion of the workforce, these negative effects fundamentally threaten the role of MSMEs as the backbone of national economies (ADB 2020, 15). They have also shown the importance of policies to encourage MSMEs to take advantage of the digital economy. But ‘digital’ should be understood broadly, as inherently, there are no constraints about what can be considered able to be digitalized. Key policies which are of central importance for MSMEs survival, but also to foster their integration in the digital economy include:

- **Providing MSMEs with access to finance in a timely manner**, which can be eased by the use of fintech. Fintech provides an alternative to traditional financing, facilitating MSMEs to access loans that otherwise will require credit histories and collateral. Fintech also facilitates new forms of payments such as e-wallets and QR scanning that are widely used among consumers, particularly the younger population. Governments, aware of the risks of the use of data in fintech products as well as other risks, such as cybersecurity, have been implementing regulatory sandboxes to try out new products in controlled environments and with a specific number of users. This approach is a balanced one, promoting innovation in the financial industry and benefiting MSMEs.

- **Integrating MSMEs in digital platforms**. By joining a platform, MSMEs may be less intimidated to go online. This will benefit least equipped MSME groups, for instance those in very traditional industries with very little or no experience in digitalization. If these MSMEs forgo digitalization, they can face an existential risk in the digital economy. For them, intensive courses must be offered to encourage both entrepreneurs and employees to adopt digitalization. This training should also include an explanation of the risk that digitalization brings in terms of cybersecurity and data protection.

- **Modernizing government services, so that they can also adopt digitalization**. As seen in many examples, the availability of one-stop-shop government platforms can facilitate the business environment for MSMEs, both while doing business at home as well as when the time to export comes.

- **Ensuring that data flows are not inhibited unnecessarily**. The exchange of data between companies (for instance, data sharing or data portability) should be encouraged in order to unlock the value of this data and promote competition and innovation. Digitalization is about using data to optimize the business processes, to create value, to innovate. As such, it is important to adopt data utilization frameworks and revisit data privacy laws. Particularly regarding the latter, governments should ensure that the main objectives and rationale of data privacy law are conducive to a thriving digital business environment while safeguarding the rights of data subjects. When undertaking this balancing exercise, it should be ensured that the application of data privacy laws does not overreach and become overly burdensome for MSMEs, and does not discourage lawful data utilization. Cross-border data flows should also not be unnecessarily discouraged. There are also regulatory linkages between data, competition and consumer protection that need to be reassessed. These links are mostly tested in the context of the platform economy.

- **Closing the ICT infrastructure gap, particularly affecting rural areas**. In many countries broadband is part of universal service frameworks. In others, access to the internet is considered a fundamental right. According to ITU, increased access to networks cannot be postponed. This
will require public spending but also clever regulation, particularly considering that developing countries may lack the financial capacity to make large investment (ITU 2020a, 18).

- **Training human capital for the digital economy.** While immediate training in relevant skills for digital literacy can be offered in the short term (for instance, by coding boot camps or by specialized training on how to operate online shops), countries also need to think about reskilling the workforce to be able to thrive in the digital economy, particularly as digitalization will alter the nature of jobs rapidly and new technological needs will require a new set of skills. Policy responses range from ensuring that school curricula is up to date with the demands of technology and a rapidly changing market to ensuring life-long learning opportunities for workers who need to reskill or change professions (OECD 2019a, 232-33).

As explained in the first section of this background paper, there is a case for encouraging targeting policy responses by dividing MSMEs in subsets: digital native MSMEs and traditional MSMEs. This background paper has found that there are a myriad of existing examples that could help traditional MSMEs go online (for instance, by joining a platform, or by taking advantage of trade facilitation efforts, among others). However, digital native MSMEs could be facing challenges in new areas, such as data protection, data usage, cybersecurity and anticompetitive conducts, for which policy responses are only starting to emerge. Fostering policy initiatives in these emerging areas is key in order to avoid that the efforts that several countries have already undertaken with regard to digitalization are not weakened. For instance, the lack of policies regarding data protection, cybersecurity or consumer protection, can undermine trust, either from MSMEs on the benefits of digitalization, or from consumers, on the cost and benefits of engaging in digital transactions.
Annex I – Percentage of firms using e-mail to interact with clients and suppliers
(for selected countries with available data from 2015-2020)

Annex II – Percentage of firms having their own website
(for selected countries with available data from 2015-2020)

Annex III – Connectivity in UNESCAP countries (2017-2018)

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