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Fuelling Trade in the Digital Era:

The Global Landscape and Implications for Southeast Asia

Kati Suominen

ICTSD

International Centre for Trade and Sustainable Development

Issue Paper

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The Global Landscape and Implications for Southeast Asia

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Nextrade Group

ICTSD

International Centre for Trade and Sustainable Development

Issue Paper

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LIST OF ABBREVIATIONS

APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
B2B	business-to-business
B2C	business-to-consumer
CBPR	Cross-Border Privacy Rule
ECSG	Electronic Commerce Steering Group
EU	European Union
GDP	gross domestic product
GDPR	General Data Protection Regulation
ICT	information and communications technology
IT	information technology
MATRADE	Malaysia External Trade Development Corporation
SME	small and medium-sized enterprise
TFA	Trade Facilitation Agreement
TPP	Trans-Pacific Partnership
UNCTAD	United Nations Conference on Trade and Development
US	United States
WTO	World Trade Organization

EXECUTIVE SUMMARY

Disruptive technologies are revolutionising the economics of global production and trade, together with the prospects of developing countries in the global economy. E-commerce, 3D printing, online payments, the internet of things, and other technologies riding on the internet are empowering businesses of all sizes.

The digital revolution is transforming the players, patterns, and possibilities of world trade. It is opening opportunities for millions of micro entrepreneurs and small businesses to engage in cross-border trade, grow into multinational sellers, and craft their own global supply chains. It is enabling companies of all sizes to make, move, and market products and services faster and at a lower cost than ever before. It is helping consumers and companies access a vast variety of goods and services—and without intermediation by retail chains and distributors. It is diversifying the make-up of trade, from goods shipped in containers to small parcels sent by post, services sold online, and digital products and designs transported in the cloud. It is accelerating trade transactions worldwide. As such it can play a transformative role in developing countries' trade and growth. It can unlock new efficiencies and gains from trade for companies and consumers, sharpen specialisation, propel exports and internationalisation of small and medium-sized enterprises, and spur productivity and growth.

The purpose of this paper is to propose specific ways in which developing countries can best fuel trade in the digital era. I pay special attention to Southeast Asia, a region where internet connectivity has skyrocketed with the proliferation of smartphones and where e-commerce is already playing a transformative role in fuelling SME development, trade, and economic growth.

This paper argues that further gains from digitisation for trade and growth in Southeast Asia are not automatic. Rather, these gains depend on an adequate infrastructure and on supportive policies at national and international levels. There are several challenges that impede the translation of the new technologies into economic growth in developing countries, such as inadequate broadband connectivity and skills in information and communications technology (ICT); policy and regulatory issues which represent increasing costs for digital companies, such as onerous legal liability regimes and data privacy rules; limited adoption and use by small businesses of digital technologies, such as e-commerce or online payments; the traditional challenges to cross-border trade, such arcane customs procedures and expensive logistics; and national digital infrastructures and regulations that are incomplete and do not interact optimally with those of other economies. All these challenges also manifest themselves to varying degrees in Southeast Asian economies.

Developing countries need to reconsider their enabling environment for trade and tailor it for the digital era. Specifically, they must work on improving information technology (IT) infrastructures, e-commerce logistics, online payments, e-commerce and digital regulations, e-skills, access to finance, and business environments. Trade policymakers need to adjust their toolkit for competitiveness in the digital era, including the design of trade rules, export promotion, trade facilitation, export credit, and trade infrastructures. Furthermore, as many regions such as Southeast Asia that have emphasised regional integration as a means for trade and development, serious attention also needs to be paid to reducing the intra-regional disparities in digitisation. In Southeast Asia, there is a digital chasm between such highly connected economies as Singapore and Malaysia on the one hand, and economies such as Cambodia, Lao, and Myanmar that are still seeking to expand digitisation and internet usage in their economies, on the other.

It is critical for success that trade policymakers intent on catalysing digital trade work closely with IT and finance ministries and regulators, as well as with those in the front line of the challenges and opportunities for trade in the digital era, the private sector. Southeast Asian economies have a successful track record of engaging with and listening to the private sector in both the Association of Southeast Asian Nations (ASEAN) and the Asia-Pacific Economic Cooperation forum (APEC), both of which have their private sector counterparts. Public and private sectors in the region can now take this collaboration one step further, to together ensure digital regulations interoperate, facilitate trade in low-value items, and create innovative programmes and financing instruments to fuel SMEs' adoption and use of digital technologies for improving their trade and competitiveness.

In addition, the region can benefit from better data on the digital economy, to track progress and better motivate and design policies for the digital era. Innovative censuses and surveys can bolster official statistics. Public–private partnerships can leverage the rich real-time data owned by the private sector to assess the state of the regional digital economy.

1. INTRODUCTION

Disruptive technologies are revolutionising the economics of global production and trade, and the prospects of developing countries in the global economy.[1] E-commerce, 3D printing, online payments, the "internet of everything," and other technologies riding on the internet are empowering businesses of all sizes to cut costs, streamline supply chains, and market products and services worldwide with greater ease than ever before. Some one-half of all the value in the global economy will be created digitally by 2025 (Ezell 2013).

The digital revolution is transforming the players, patterns, and possibilities of world trade. It is opening opportunities for millions of micro entrepreneurs and small businesses to engage in cross-border trade, grow into multinational sellers, and craft their own global supply chains. It is enabling companies of all sizes to make, move, and market products and services faster and at a lower cost than ever before. It is helping consumers and companies access a vast variety of goods and services—and without intermediation by retail chains and distributors. It is diversifying the make-up of trade, from goods shipped in containers to small parcels sent by post, services sold online, and digital products and designs transported in the cloud. It is accelerating trade transactions worldwide. With the smartphone revolution poised to bring the internet to 3 billion people in the developing world in the next five years, entirely new opportunities are opening for cross-border sales of digital goods, content, and services.

In the past decades, new technologies such as steam engines, railways, and containers have transformed world trade, powering trade at lower cost. Digitisation is just such a transformative force in twenty-first century trade. The digital revolution not only enables more trade, it creates significant economic benefits for developing countries from faster productivity growth of firms to deeper specialisation of workers, greater consumer welfare, and job creation.

The purpose of this paper is to propose specific ways in which developing countries can best fuel trade in the digital era. I pay special attention to Southeast Asia, a region where e-commerce has been booming and is already playing a transformative role in fuelling SME development, trade, and economic growth, but where it still represents only a sliver of regional economies' retail sectors.

This paper argues that gains from digitisation for trade and growth are not automatic in developing economies. Rather, these gains depend on an adequate infrastructure and on supportive policies at national and international levels. There are several challenges that impede the translation of the new technologies into economic growth in developing countries, even in regions such as Southeast Asia that have made impressive inroads to leveraging digitisation for growth. These include inadequate broadband connectivity and ICT skills; policy and regulatory issues, which represent increasing costs for digital companies, such as onerous legal liability regimes and data privacy rules; limited adoption and use by small businesses of digital technologies, such as e-commerce or online payments; the traditional challenges to cross-border trade, such as arcane customs procedures and expensive logistics; and national digital infrastructures and regulations that do not interoperate optimally with each other.

Much work still lies ahead in all these areas. In essence, Southeast Asia, just like other developing regions, needs to reconsider the enabling environment for trade and tailor it for the digital era, working on IT infrastructures, e-commerce logistics, online payments, e-commerce and digital regulations, e-skills, access to finance, including from online sources,

1 Parts of this paper draw on the author's book, Kati Suominen, *Making Trade Great Again: How Disruptive Technologies Open Opportunities for All* (Stanford: Stanford University Press, forthcoming).

and business environments. None of these elements is sufficient on its own; rather, all are necessary for the digital economy to function.

For trade policymakers, these considerations herald changes to their entire toolkit: the design of trade rules, export promotion, trade facilitation, export credit, and trade infrastructures. In addition, in all these areas, trade policymakers intent on catalysing digital trade need to work closely with IT and finance ministries and regulators, as well as those on the front line of the challenges and opportunities for trade in the digital era, the private sector.

The next section discusses the changes in international trade in light of the digital revolution. Section 3 highlights opportunities and challenges experienced by companies when they engage in e-commerce. Section 4 makes policy recommendations for Southeast Asian economies to unlock trade and digitisation for growth and development. Section 5 offers a conclusion.

2. TRADE IN THE DIGITAL ERA

Southeast Asia has had a remarkable run in world trade in the past two decades. Trade has grown from 70 percent of regional gross domestic product (GDP) in 1990 to 93 percent in 2015 (excluding the very high trade exposure of Singapore), and companies in the region have become integrated into regional and global supply chains in industries ranging from electronics to oil and gas. The region's success in trade is in part due to governments' work to lower tariffs, negotiate trade agreements, and lower trade costs.

These advances are also helping the region remain competitive in the digital era. According to eMarketer, e-commerce sales in Southeast Asia have been skyrocketing. In 2016 and 2017, retail sales are estimated to have grown at 64.3 percent and 55.3 percent, respectively, in Indonesia; 21 percent and 22.6 percent in Malaysia; 27.3 percent and 25 percent in the Philippines; 15.2 and 14 percent in Singapore; 20.7 percent and 19.5 percent in Thailand; and 24.3 percent and 22 percent in Vietnam (eMarketer August 2016 estimate). The performance of Southeast Asia in e-commerce has helped make Asia-Pacific is the epicentre of global e-commerce activity, accounting for nearly half of the global total.

This is only the beginning. With the exception of Singapore where e-commerce represents 4.9 percent of retail in 2017, e-commerce remains a small share of these countries' retail sectors, at 2.2 percent or lower—and trailing far behind about 23 percent in China and 17 percent in the UK in 2017. As people and businesses in Southeast Asia get online, the impact of e-commerce and, more broadly, "digital trade" whereby online technologies fuel the delivery of products and services, is poised to grow much further. Some 600 million people in the ASEAN are poised to get online within the next decade, up from 200 million today, and at least 6 percent of all retail sales will, it is estimated, then be through e-commerce (Sangwongwanich 2017). These patterns will transform the players, patterns, and possibilities of regional trade, including in the following ways.

New and thriving players in trade

So far, only small minorities of businesses in most countries have engaged in international trade. For example, export participation rates for firms in East Asia and the Pacific region are 10.4 percent, in Latin America 12.4 percent, and in sub-Saharan Africa 9.8 percent (Enterprise Surveys, World Bank). Most companies have traditionally been "narrow" exporters, selling on average to only two or three markets. While those firms that do export derive a rather significant share of their sales from exports—for example, about 66 percent of the revenues of Southeast Asian exporters stem from exports—the volume of this trade is still small, as is the number of exporters. One implication is that most countries' trade has traditionally been driven by a handful of firms: in most countries, the top 5 percent of exporters, the largest exporters, tend to account for over 80 percent of exports (Exporter Dynamics Database, World Bank). Most new exporters, typically at least 70 percent, do not last longer than a year as exporters.

Digitisation is now breaking these "iron laws" of international trade. Using the internet and e-commerce platforms, companies of all sizes are much more visible to prospective customers around the world, and research shows that they are much more poised to export and import and scale up their sales than ever before. For example, Boston Consulting Group finds that small and medium-sized enterprises (SMEs) that are heavy web users are almost 50 percent likelier to sell products and services outside of their countries (Zwillenberg, Field, and Dean 2014).

In a new survey of over 3,000 developing country companies, I show that while fewer than 20 percent of small businesses that do not buy or sell online export, some 60 percent of small businesses that buy or sell online do (Suominen 2017b). Online sellers are also more diversified: some 63 percent of online sellers export to two or more markets, compared with only a third of offline sellers who export—surveyed companies that neither buy nor sell online typically export to only one foreign market.

Global e-commerce platforms such as eBay and Alibaba that are frequented by millions of buyers worldwide propel small business exports. eBay's transactional data show that in Thailand, 100 percent of companies that sell on eBay also export, as opposed to only 5 percent of traditional brick-and-mortar companies, and sell on average to 46 different markets, as opposed to two to three markets for the median developing country exporter (eBay Inc. 2016). These findings are echoed consistently in several markets, including in Southeast Asia. For example, 100 percent of Thai online sellers export, on average to 46 markets; and in Indonesia, 100 percent of eBay sellers export to 34 markets (eBay Inc. 2016). The average compound annual growth rate of these sellers in 2011 to 2015 was 6 percent in Thailand and 11 percent in Indonesia—well above these countries' economic growth rates (3 and 5.5 percent, respectively) during the period.

eBay's data also suggest that some 80 percent of companies that start exporting survive as exporters after their first year of exporting, well above the one-third for offline exporters. This is precisely because of sellers' export diversification: the buyer (or buyers) in one export market may stop purchasing, but the seller is still left with multiple other markets to sell into. In short, empirical evidence compellingly shows that in developing countries, selling online is strongly associated with exporting, greater export volumes, and export diversification.

These patterns speak to the transformative impact of e-commerce on the economics of trade. Today, once they have set up shop on major global e-commerce platforms, even small businesses can gain global customers from multiple markets with lower upfront costs than in the offline economy of the past. They can rely on customer reviews to build trust with each new customer, instead of having to engage in lengthy and costly negotiations and multiple iterations to secure a buyer's trust. In other words, the internet and e-commerce have lowered the fixed costs of export entry.

The efficiencies gained online and the engagement in trade fuel firms' productivity. For example, the World Bank finds that the productivity of Vietnamese companies that sell online grows 75 percent faster than that of their peers that use the internet but do not sell online (World Bank 2016). When compared to offline sellers, it appears that a larger share of online sellers are fast-growing companies—45 percent of companies that sell and buy online grow at 10 percent or faster annually, vs. only 33 percent of offline sellers that grow at 10 percent or faster annually (Suominen 2017b). In short, online sellers are likelier to be firms that have entered the virtuous cycle of online sales, exports, and growth.

Greater competitiveness from a wider pool of imports at world prices

In the Boston Consulting Group survey, SMEs that use the internet heavily in their businesses were 63 percent likelier to source products and services from farther afield than were light or medium users of the web—in other words, the web enables them to shop around for the best deal. In Latin America, some 37 percent of online sellers make cross-border online purchases; as many as 75 percent of larger companies with US$21 million or more in revenue report cross-border online purchases (Suominen 2017a). Such wider sourcing increases companies' productivity and competitiveness (Zwillenberg, Field, and Dean 2014). Developing country companies that sell and buy online could also be said to be likelier to integrate in global value chains in that some 80 percent of them tend to be two-way traders, or both export and import, while only 20 percent of offline sellers are two-way traders (Suominen 2017d). And it may be the case that they export *because* they are able to import inputs, supplies, and services that make them more efficient and competitive. The same holds for consumers: trade economists have long shown that by accessing a wider variety of products, consumers score welfare gains.

Trade in low-value items

Helping companies get to market and trade at lower cost, e-commerce has produced an explosion of trade in low-value items—parcels with a single product like running shoes as opposed to container-loads of shoes shipped in

bulk. Proprietary data from the Universal Postal Union show that the tonnage of international parcel shipments grew by a total of 73 percent from 2011 to 2015, or some seven times faster than world trade. The volume of intra-regional parcel flows grew especially fast in the ASEAN region, at 140 percent from 2011 to 2015. In terms of the direction of flows, exports of parcels from the Asia-Pacific Economic Cooperation (APEC) area and the European Union (EU), in particular, have grown rapidly at 160 and 138 percent, respectively, thanks to new Chinese, United States, and European outbound shipments. Meanwhile the volume of inbound parcel flows to ASEAN from extra-regional markets has been increasing at a faster rate than in other major regions, at 80 percent, and outbound extra-regional flows have also been growing, at 40 percent.

Data from industry sources also show that the growth in the *number* of shipments has been steep in all value categories, particularly in shipments below US$100 in value (Suominen 2017c). In ASEAN, they have grown very fast at about 115 percent between 2011 and 2015, surpassing growth rates in APEC, Latin America, and the EU in the value category.

Expansion of trade in services

Growth of trade in services has vastly outpaced the growth of trade in goods in the past few years. For example, United Nations Conference on Trade and Development (UNCTAD) data show that, in 2015, trade in services grew at 5 percent, while trade in manufactured goods grew at 0.3 percent. Traditionally exporters of commodities and lower-end manufactured products, developing countries increased their exports of commercial services from 25 percent to 32 percent of global services exports between 2006 to 2015 (World Trade Organization 2016).

The internet has played a role in these developments. The cloud has opened up new opportunities for business-to-consumer (B2C) and business-to-business (B2B) educational, financial, logistics, business, and other services delivered online. For example, in India, software company Freshdesk has grown from two employees in 2010 to 900 today by helping 100,000 companies such as Cisco, Honda, and 3M worldwide to offer a better customer experience (Freshdesk 2017). Many B2C companies that started out to service domestic markets only have grown to service other regional markets as well. For example, Jakarta-based HappyFresh that started as Indonesian online grocery platform has expanded rapidly to Indonesia, Malaysia, and Thailand (HappyFresh 2017).

The internet enables "born digital" companies that have lower upfront costs to launch and expand across markets more easily than has been the case, say, in traditional manufacturing. Turnkey internet tools and apps are enabling companies to instantly translate their websites and social media presence, target their services to new markets, understand where consumers are searching for their products, and build local followers. By leveraging cloud-based tools, entrepreneurs can quickly build a global footprint, run anything from an e-commerce site to an online delivery service, a virtual marketplace for used vehicles to a video-streaming platform, and analyse millions of site views without investing in their own IT infrastructures.

Two-sided online markets in countless industries, such as groceries, healthcare, hospitality, and finance, enable buyers and sellers of goods and services to find each other faster. They can also create employment opportunities for solo entrepreneurs. For example, platforms such as Freelancer and Upwork are expanding opportunities for web designers, coders, search engine optimisers, designers, translators, marketers, accountants, and thousands of other types of professionals from developing countries such as the Philippines, China, India, Pakistan, Bangladesh, Kenya, and Argentina to engage in "trade in tasks," or sell their labour and service to clients worldwide. Annually, some 40 million users on these two platforms alone look either for jobs or for talent.

The online jobs market is growing and diversifying rapidly. Platforms such as Toptal bring seasoned, highly skilled freelancers to global corporate clients such as J. P. Morgan. Demand Media is a platform for creative types, including writers,

filmmakers, producers, photographers and more. Southeast Asian countries have created their own specialised work platforms. For example, Raket.ph is a search engine and platform for Filipino freelancers; Malaysian platform WOBB matches young professionals to their dream jobs with leading Malaysia-based companies and multinationals with Malaysian offices; and Jakarta-based GetCRAFT.com is a one-stop platform connecting companies to a network of 2,000 vetted journalists and content creators to create original high-quality written content for companies' marketing efforts. Freelancers in its network have helped, for example, Facebook to identify the right videographers to promote a new campaign for women, #Shemeansbusiness; run a native phone teaser and review articles promoting Samsung phone; and created an online campaign for travel booking site WeGo and Tourism Australia to promote Indonesian tourism to Australia (Getcraft 2017). McKinsey estimates that 540 million people, a tenth of the world's workforce, will be employed through online work platforms by 2025 (Manyika et al. 2015).

Expansion of the role of women in trade

Data suggest that e-commerce, online work platforms, and online payments are especially empowering for women. They help women to work and build companies in cultures where they are expected to stay at home and where they lack men's professional networks and resources (World Bank 2016). For example, a 2015 survey of Pacific Island exporters showed that firms that are active online have a greater concentration of female executives under 45 years of age (DiCaprio and Suominen 2015). This is no accident: e-commerce is enabling these women to run their businesses, handling household obligations all the while, and to reach a much vaster market than they could offline.

Women are also creatively leveraging tools at their disposal: a large share of women in Southeast Asia who are online sellers are "Facebook sellers" or "Instagram sellers"—they do not necessarily have their own online store or online transaction capabilities, but actively market through social media, and once conditions are right (such as when they have funds to set up their own portals or are certain that their payments systems interoperate with those of their customer base), develop their own online sales capabilities.

Online work platforms open opportunities especially for women to access relatively well-paying and flexible jobs: there are proportionately many more women employed on Upwork (44 percent of the total) than there are in the offline non-agricultural labour market (25 percent) (World Bank 2016). Women also benefit from the digitisation of payments, as holding cash makes them susceptible to theft (Pénicaud and Katakam 2013).

Expansion in product variety in trade

Product variety in trade has grown in the past few decades with trade liberalisation, industrialisation, innovation, and the growth of intra-industry trade in differentiated products such as Samsung and Apple smartphones. Southeast Asian exports have diversified quite dramatically as the region has received foreign investment, industrialised, and developed—for example, while still based on crude petroleum, rice, coffee, and basic apparel in 2006, the Vietnamese export basket has dramatically diversified in the past decade to include computers, broadcast equipment, integrated circuits, and telephones.

With the internet opening new markets for companies and spreading before consumers and companies a smorgasbord of new variants of products and services, and with 3D printing and other technologies offering more opportunities for customising products and services, the product variety in trade is bound to expand much further. Trade economists have long shown that access to a wider import variety increases companies' productivity and consumer welfare (Broda and Weinstein 2006). It is not a stretch to say that the gains from trade can increasingly stem from the expansion in variety—cross-border exchange of similar yet differentiated products that meet different consumer preferences.

Online content as a tradable

As smartphones proliferate and as 4G and 5G systems accelerate download speeds around the world, content of all kind—movies, videos, music and audio recordings, broadcast, radio, book publishing, video games, and so on—is also becoming more tradable. Major entertainment firms are tapping the opportunities for cross-border trade in content. For example, plateauing in the United States, the streaming company Netflix is locking in global viewers, with its international users growing at three times the rate of domestic ones. Video is a particular growth sector in cross-border transactions. Cisco estimates that by 2020, every second nearly a million minutes of video content will cross the global IP network, with half coming from YouTube. Most YouTube downloads in English-speaking countries are already cross-border—of content produced and uploaded overseas.[2]

Cross-border data flows as key input and new revenue stream

The rapid expansion of data and predictive analytics is ameliorating risks for companies engaging in trade. Smart uses of data can give developing country companies a significant edge in world markets. For example, in its plantation business in Malaysia, Indonesia, and Liberia, Malaysian conglomerate Sime Darby Berhad uses mobile devices carried by thousands of field workers to capture production data, logistics, productivity, and field conditions, and ensure quality, worker safety, and environmental compliance (Tan 2015).

Even the smallest companies can leverage data today by renting pay-per-use data services from companies such as Amazon or Salesforce, instead of having to buy expensive hardware and software systems and in-house data analysts. For example, the online transportation network Grab, serving Singapore, Malaysia, Indonesia, Thailand, Vietnam, and the Philippines, is able to use real time data streams of its 1.5 million bookings in Southeast Asia to predict future demand patterns and correct operational problems immediately. This has translated into 30–40 percent savings in manpower and operations, improved customer service and lowered the cost to customers (Amazon Web Services 2017).

McKinsey predicts that companies that make the most of business analytics could increase operating margins by up to 60 percent (Manyika et al. 2011). The savings companies make from better data and analytics help them invest in new activities. Online companies can also create a new revenue stream by productising and monetising some of their data. For example, telecom operators are helping retailers and restaurant chains to create hyper-localised marketing campaigns.

2 OECD computations based on an ad hoc data tabulation by Google, June 2014.

3. NEW CHALLENGES

Policymakers in Southeast Asia have long recognised that the region's trade competitiveness requires a good enabling environment, such as fluid logistics and transport systems, open markets, and availability of trade finance. In the digital era where transactions are made online, the regional companies need further elements to thrive—such as internet connectivity, well-functioning online payments, work forces with technological skills, regulations conducive to digital trade, digital entrepreneurship, and so on. Many challenges remain in these areas.

Old woes of trade…

E-commerce has not magically made the woes of world trade disappear. When physical goods sold online are shipped across borders, companies continue to confront the traditional hurdles impeding cross-border trade, such as market access barriers, complex customs procedures, and high shipping and trade compliance costs. For example, a third of Filipino and Singaporean companies find foreign market access barriers a significant hurdle to e-commerce transactions (Suominen 2017b). Challenges associated with cross-border logistics and customs procedures are regarded as the second worst impediment by Singaporean and Filipino firms (Suominen 2017b). A third of firms in Lao PDR cite customs and trade regulations as a major constraint to trade (Enterprise Surveys, World Bank).

…mixing with new regulatory frictions

At the same time, these traditional trade policy issues are only part of the regulatory landscape in the digital trade. Companies around the world are concerned about the evolving landscape of data privacy rules that limit access to customer data and its transfer; incomplete intellectual property frameworks that fail to appropriately protect creators, users, and service providers; and increased interest by governments to use internet intermediaries, such as social media or e-commerce platforms, to police the legality of user reviews and crack down on copyright violations by their users.

These issues are not only vexing large developed country companies; they are also affecting small and large businesses in Southeast Asia. In a survey of companies in the Philippines and Singapore, I find that on a scale from 1 (very poor) to 10 (excellent), companies rate both domestic and cross-border digital regulations on average as 6 out of 10, or rather poor at advancing their e-commerce, and below the ratings given by Indian or Brazilian companies (Suominen 2017b). Filipino small businesses struggle especially with IP protection laws, consumer protection laws, and copyright issues in their domestic e-commerce.

There are also regulatory uncertainties. Some Southeast Asian countries have more complete rulebooks, while others are still crafting their regulations. A report by the US-ASEAN business Council suggest that Southeast Asian countries have made considerable progress in developing regulations in electronic transactions and cybercrime, but work is still underway to put in place legislation and regulation to protect data privacy and consumers, which are among the pillars of the digital economy (Deloitte and US-ASEAN Business Council 2016). How these rules evolve will have a bearing on Southeast Asia's trade, in two ways.

The first is interoperability of national digital regulations—whereby a small Southeast Asian company wishing to serve other Southeast Asian or global markets could do so without having to adhere to an entirely different set of liability, copyright, licensing, and privacy regulations in other countries' markets. The surveyed Filipino companies indicated that interoperability of their country's digital regulations with those of other countries is their number one regulatory concern in cross-border e-commerce. This is not surprising in that divergences in rules across markets can be especially detrimental to small businesses unable to pay the legal fees and other expenses associated with regulatory compliance in different markets—and thus defeat the very opportunity opened by the internet for small companies to regionalise and globalise.

Estimates suggest gains from some degree of regulatory coherence would be very significant in Asia. For example, the Asia-Pacific region alone could unlock up to US$1 trillion in GDP growth by 2020 through the harmonised adoption of the 700 MHz spectrum band for mobile services (GSMA and Boston Consulting Group 2012). In the ASEAN, the implementation of a digital agenda and strategy, including harmonisation of cybersecurity, data security, and privacy laws across the region and creating a single digital payment platform, could add US$1 trillion to ASEAN GDP over the next 10 years (A.T. Kearney and Axiata 2015), providing a 40 percent boost for the region's output.

In Europe, a region with diverse national digital regimes now seeking to integrate into a common Single Digital Market, it is estimated that common consumer protection and other internet laws could save EU consumers €11.7 billion each year in online shopping, with the gains stemming from access to all goods and services sold online across the EU region (European Commission 2015). If the same rules for e-commerce were applied in all EU Member States, 57 percent of European companies would either start or increase their online sales to other EU economies.

The second reason why the shape of national digital regulations matters to trade is that poorly designed regulations can seriously dent domestic firms' competitiveness in international markets. For example, research shows that strict data privacy and localisation rules tend to increase the cost for companies in the imposing economy, complicate their access to data key to improving their customer service and operations, and discourage investments in innovative companies.

Deloitte has recently estimated that by curbing companies; access to data, the demanding EU General Data Protection Regulation (GDPR) will result in an immediate loss of US$66 billion in sales for European companies (Deloitte 2013). Simulations by Bauer et al. (2014) suggest that these costs snowball in the imposing country: data localisation could lower GDPs by 0.5 percent in Indonesia and 1.7 percent in Vietnam, and cut domestic investments by 2.3 percent in Indonesia and 3.1 percent in Vietnam. What's more, localisation rules can actually heighten security risks given that data is stored in a single location.

Stringent liability regimes would also have a chilling effect on the digital economy and on what Southeast Asia tends to want to nurture, start-up formation. Empirically, unclear and restrictive liability and copyright regulations deter investors. For example, a recent survey of early-stage investors in digital companies found that regulations holding websites liable for user-uploaded content without a license would reduce the pool of interested investors by 81 percent (Le Merle 2016). In the presence of strict regulatory regimes, investors might demand a premium and gravitate to only a handful of companies promising a very high return multiplier, instead of sprinkling investments to a wider set of promising companies and thus nurturing innovation.

Disparities in connectivity

Southeast Asia has experienced a tidal wave of digitisation over the past decade. In 2000, less than 1 percent of people in Cambodia, Indonesia, and Vietnam used the internet; by 2015, some 19 percent of people in Cambodia, 22 percent in Indonesia, and 53 percent in Vietnam were online. Some 72 and 82 percent of people in Malaysia and Singapore, respectively, have access to the internet. Mobile penetration rates have skyrocketed in the region and the use of smartphones is growing, enabling many people without personal computers to connect to the internet. For example, 67 percent of online purchases in Indonesia are made on smartphones, and over one-half of people in the Philippines use smartphones in the early stages of their shopping journeys to research products (Consumer Barometer with Google).

Devices in people's palms are flattening the world in Southeast Asia, opening access for its consumers to a much broader market than their neighbourhood and helping them tap services from online banking to online grocery delivery and customised transport services.

Yet many regional economies and especially their rural regions are still devoid of the broadband connectivity which is essential to the development of a robust online economy. Granted, mobile and smartphone adoption rates have skyrocketed over the past decade around the developing world, spreading mobile broadband around the planet, while fixed broadband connections have increased and broadband tariffs have come down. But there are jarring disparities across and within countries. In Southeast Asia, broadband adoption rates are a mere 1.9 for every 100 people in Indonesia, 0.53 in in Cambodia, 0.52 in Lao PDR, and 0.06 in Myanmar, as opposed to 9 in Thailand, 10 in Malaysia, 26 in Singapore, and 44 per 100 people in Switzerland.

It is then no accident that only some 13 percent of companies in Lao PDR have websites, and Cambodia, Lao PDR and Myanmar are among the worst performers in the world in terms of the robustness of business-to-business and business-to-consumer transactions and in firms' adoption of new technologies (Networked Readiness Index, World Economic Forum). In contrast, Vietnam, Thailand, Indonesia, and Singapore fare much better—for example, Malaysia makes it to 6th place after Japan in B2C transactions. Malaysia and Singapore are among the top 25 in B2B uses of the internet.

The main reason for low uptake is high user fees in these poorly connected economies. Also, mobile broadband use is quite low in some of these nations—6.5 percent for Lao PDR and 14.9 percent for Myanmar. This is at a par with mobile broadband subscription rates in sub-Saharan Africa, preventing the large majority of people in the region from enjoying the online economy. The disparities in digitisation are not a national concern: they are holding back all Southeast Asian companies and economies from the full potential for regional and global trade.

The regional digital divides can have further-reaching consequences for the region's long-term growth. Consider one hypothesis for the income divergence between advanced and developing countries, which has grown eight-fold in the past 200 years, which is that developing economies have trailed far behind developed countries in the adoption and dispersion of new technologies such as steamships and personal computers (Comin 2014). Granted, such divergence seems less likely today—developing countries adopt and diffuse technologies across the populations faster than in the nineteenth century. Many developing countries such as Myanmar have been able to leapfrog, for instance by moving quickly to the smartphone era, which in turn can enable them to skip debit and credit cards and instead jump to using the latest version in mobile payments. However, it is also the case that the pace of innovation is faster today than 100 years ago: by the time developing countries finally start adopting a technology—say, artificial intelligence applications—at scale, advanced economy companies have already adopted it and built a competitive edge.

No-one knows for a fact where the equilibrium lies—whether developing countries will coast to growth by eventually adopting technologies devised in advanced markets, or whether they will fall behind if not adopting these technologies immediately and diffusing them across the population, or nurturing their own innovation economies. Complacency is unlikely a successful strategy.

Access to finance

Together with cross-border logistics and customs procedures, access to finance and trade finance hampers e-commerce and cross-border trade in Southeast Asia, as it does in many other regions. E-commerce presents a new challenge for financial services: micro and small online sellers often need much smaller and faster-disbursing working capital loans than banks are able to issue. The developing world is chock-full of heartbreaking stories of successful entrepreneurs whose product, once online, is in great demand but the entrepreneurs fail to fulfil all orders because they are unable to access working capital from banks to make more units—after all, buyers tend to want to pay only after receiving the final product.

Problems accessing finance are quite universal among smaller businesses: Survey data suggest that in Singapore, access to finance is the number one challenge for small companies to engage in e-commerce (Suominen 2017b). Companies report being particularly interested in online loans, rather than dealing with slow-moving banks, to bridge this gap.

Financing challenges are amplified in cross-border trade. Asian companies seeking to engage in cross-border trade are infamously caught in the global trade finance gap between what is needed and what is made available, now estimated at US$1.6 trillion (DiCaprio et al. 2016). Most of it affects SMEs in developing Asia. Over one-half of SMEs' credit applications are turned down, as opposed to less than a quarter for large companies. The trade finance gap matters: in a recent survey, firms in the Middle East, North Africa, and sub-Saharan Africa stated they would increase employment by 31 percent if the trade finance gap was mended, more than companies in any other part of the world.

On the plus side, the various barriers stopping companies from using e-commerce to engage in trade can also be undone. Every country can unilaterally reform its trade policies, trade capacity-building and export promotion, trade facilitation, export credit, and trade infrastructure, to unlock the power of the internet for trade. Countries also need to work together regionally and multilaterally to fuel cross-border transactions. The next section reviews priority actions.

4. STRATEGIES TO FURTHER TRADE IN THE DIGITAL ERA

The internet is transforming the way people and businesses in Southeast Asia interact, shop, bank, and sell their goods and services. It is changing regional consumption patterns, the landscape of regional companies, and raising the region's economic prospects. However, many challenges remain, including around entrepreneurs' limited capacity to engage in e-commerce, e-commerce logistics, and access to finance and trade. The effort will be worth it: a global survey carried out by the author indicates that if these challenges to e-commerce were overcome, companies would achieve 34 percent greater revenues in the domestic market and 30 percent in international markets. Small businesses would realise the largest gains.

To harness them requires governments to think holistically about the trade policy toolkit, from export promotion to trade facilitation and trade policymaking, and also to work together regionally and at the multilateral level in the areas set out in what follows.

4.1 Getting Digital Regulations Right

Companies require transparent rules, freedom to innovate, a level playing field, and interoperability across economies. The following five elements are among the key ones for countries to fuel cross-border trade in the digital era in Southeast Asia as well as beyond:

- **Legal liability.** Internet intermediaries such as e-commerce sites depend on user reviews of goods and services sold on such sites, and are often worried about being held liable for the content they themselves did not produce or copyright violations their users may make. These concerns tend to magnify in cross-border sales if other countries they service have strict liability rules. To encourage internet intermediaries to grow into regional players, countries should create and modernise "safe harbours" that limit intermediary liability from user-generated content and copyright infringement by users. This is important to get right also because of the link discussed above between liability regimes and start-up financing: restrictive liability regimes deter investors in small online companies (Le Merle 2016).

- **Data privacy and localisation.** As illustrated by Grab in Southeast Asia which realised significant cost savings by being able to access user data across its multi-country user base and analyse these data, free cross-border flows of data are critical for even the smallest companies' competitiveness and customer service. Barring cross-border data transfers, forcing companies to localise servers on their soil or to transfer technology, or mandating a local presence for electronic payment services only deter new investment and undermine companies like Grab that are seeking to provide better customer service at lower cost.

- When working on privacy policies, Southeast Asian economies need to also consider the very steep costs that implementing data privacy and transfer restrictions can have: for example, the majority of United States (US) companies seeking to comply with the EU's May 2018 Europe's General Data Protection Regulation (GDPR) are spending US$1 million to US$10 million just to comply with the regulation, and most companies that are affected by it will incur costs in terms of less access to consumer data. A more flexible model Southeast Asian nations can pursue is APEC's Cross-Border Privacy Rules (CBPR), a code of conduct governing electronic flows of private data in the APEC region. Unlike GDPR which has top-down mandates and uniform application across all firms, CBPR is based on self-assessment with third party verification underpinned by national enforcement authorities—and thus offers a softer and more flexible model than GDPR.

- **Intellectual property.** As products and services digitise, and as millions of micro enterprises and consumers can create or copy content, designs, and 3D-printed products, intellectual property regimes have to be realigned. Governments can update copyright laws to include limitations and exceptions such as fair use, the doctrine that permits limited use of copyrighted material without permission from the rights holders, so as to propel innovations in such areas as cloud computing and artificial intelligence.

- **Consumer protection.** E-commerce platforms and sellers have an inherent interest in building consumer trust and confidence in e-commerce and online services. However, they can be aided by consumer protection laws that also support consumer confidence. Such regulations are ideally fashioned with companies' compliance costs in mind.

- **Interoperable online payments.** Online payments are critical for the scalability of e-commerce and for efficient cross-border trade. The first step is to get consumers and companies to use online payment tools. Many Asian governments have made good progress in driving digital payments and cashlessness in their countries. For example, India has put in place the Digital India programme, with a vision to turn India into a cashless and digital society, and Thailand has launched a government-sponsored e-payment system to fuel e-commerce, that among other things creates a peer-to-peer payments system involving all major Thai banks, called PromptPay. The Thai government is also encouraging electronic payments for goods and services, personal income tax returns, and welfare services. The next step is to ensure interoperability: for Asian companies to scale across borders, payments systems need to interoperate, so that buyers and sellers using different payment methods can transact.

Public-private regional digital dialogues

Critically, the design of digital regulations must include input from those that drive digital trade, the private sector. This helps ensure policymakers understand the properties and benefits of technologies and the costs of various regulatory options. To ensure regulations go right the first time around and interoperate regionally, Southeast Asian economies can pursue regional public-private sector digital dialogues whereby the private sector educates governments about the latest technologies and the ways in which different kinds of regulations may impact the positive economic and social gains these technologies deliver.

4.2 Coordination at Multilateral and Regional Levels

A critical factor in bringing about the 1990s wave of globalisation was good policy, such as deep tariff cuts and removal of restrictions on foreign investment in the emerging post-communist world. The global digital economy has no equivalent. There is as yet no coherent set of disciplines or guidelines for countries to ensure the unfettered flow of trade, as we know trade in the twenty-first century. However, some positive developments are afoot.

World Trade Organization (WTO) members have been energised by the opportunities opened by e-commerce and digital trade and worked on a policy agenda to address them in the WTO context. Multilaterally, e-commerce and digital trade policy issues are already being addressed in different ways, such as at the Council on Trade in Services, in the Information Technology Agreement, and the Trade in Services Agreement that is under negotiation. Positively, some developing country members have formed the Friends of E-commerce for Development group to further the global trade policy agenda for e-commerce. In addition, large emerging economies such as China and India have rather recently tabled proposals at the WTO in the area of digital trade.

China's proposal prioritises the promotion and facilitation of cross-border trade in goods enabled by the internet, together with services directly supporting this trade, such as payment and logistics services.[3]

Reflecting the new-found energy and enthusiasm inspired by e-commerce, the WTO's 2017 Aid for Trade Review focused on connectivity, and the WTO Ministerial Conference in December 2017 is hoped to pave the way for a broader digital trade agenda at the WTO. There is also, and perhaps even greater, excitement about e-commerce within the international development community. UNCTAD is spearheading a new multi-donor programme involving 20 agencies called eTrade for All, to accelerate e-commerce in developing countries and to facilitate e-commerce policy dialogues between the public and private sector (which is joining forces under the umbrella of the new non-profit Business for eTrade Development), including in its "E-Commerce Week" each April.[4]

However, the most concrete progress on digital trade regulations has been made, and probably will be made, in free trade agreements, many of which now include chapters on e-commerce. The Trans-Pacific Partnership (TPP) addresses e-commerce in a particularly comprehensive manner. For example, TPP requires members to allow cross-border data transfers, bans forced localisation of computing facilities and services, prohibits requirements to transfer technology as a condition of conducting business, and prohibits the imposition of customs duties or taxes on internet traffic. Although the TPP has been abandoned by the US, the hard work of identifying and agreeing to provisions in this area has been advanced among the 11 other participants.

In addition, regional integration schemes have made progress in the area of digital trade, including in Southeast Asia. These are some examples:

- *ASEAN ICT Master Plan*. The ASEAN ICT Masterplan 2020 is about fuelling digital transformation of traditional industries and building a single integrated market for the digital economy. It follows a Masterplan 2015 that was more about digital infrastructures and human capital for digital industries. ASEAN legislation has focused especially on electronic transactions, cybercrime, consumer protection, content regulation, data protection and privacy, domain names, and dispute resolution.

- *APEC's Electronic Commerce Steering Group (ECSG)*. APEC's ECSG promotes the development and use of e-commerce though legal, regulatory, and policy environments in the APEC region that are predictable, transparent, and consistent. The ECSG also explores how ICTs can drive economic growth and social development, and has guided numerous capacity-building projects promoting the development and use of e-commerce and ICTs in the APEC region.

- *APEC's Paperless Trading Subgroup* develops projects on the use of paperless trading in B2B and B2C transactions and promotes the use of electronic documents in international trade. APEC is also implementing APEC's Strategies and Actions toward a Cross-Border Paperless Trading Environment to enable the electronic transmission of trade-related information across the region by 2020.

Conceptually, regionalism can fill two goals: It fuels and facilitates intra-regional digital trade and data flows, and it enables scale economies for digital companies. It is also very timely: After all, regions that are fragmented by barriers to the movement of digital goods and services and that lack common interconnection points, interoperable payment networks, fluid cross-border data flows, or interoperable digital regulations cannot enable companies

3 Communication from the People's Republic of China at the General Council for Trade in Goods, WTO, 4 November 2016.

4 For the concept that became eTrade for All, see Suominen 2017a.

to gain the similar scale as, say, Facebook and Google have gained from being birthed in large, integrated digital markets.

Southeast Asian economies are on the right path working with regional partners: interoperable regulatory and policy frameworks in such areas as privacy, consumer protection, and cybersecurity help lower operating costs for companies across regional markets and also incentivise investment and the creation of start-ups, fuelling the expansion of digital networks and services. They are especially useful for small businesses and start-ups that usually lack the resources to navigate or adapt their operations to complex frameworks between different countries. This work must be continued for the regional economies to reap the trade gains and economies of scale in their immediate neighbourhood.

4.3 Trade Facilitation for Where Trade is Growing—Low Value Items

Year 2017 is a watershed for trade facilitation in Southeast Asia: implementation is starting of both the WTO Trade Facilitation Agreement (TFA) reached in 2013 and UN Economic and Social Commission for the Asia Pacific Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific reached in 2016. Of course, many countries are already well on their way to meeting TFA goals; but much has yet to be done in Cambodia and Myanmar, for example, which in 2015 scored approximately at 30 percent and 50 percent of the UN-led trade facilitation implementation scores, as opposed to Singapore's 90 percent (Joint United Nations Regional Commissions 2015). The simplest way to help the regional online sellers move goods across borders is to implement these two agreements.

While paperless trade and digitisation of customs are extremely important, the paradigm for trade facilitation needs a broader shift to effectively address the boom in e-commerce and the explosive growth of small, low-value parcels in regional trade, often shipped by small businesses and individuals that lack the trade compliance capabilities of traditional traders, larger companies. To facilitate e-commerce, governments can in the first instance make better use of the established mechanisms to fuel trade, for instance, increasing customs clearance times to 24 hours per day, putting in place electronic filing of customs documents via "single windows" for one-stop compliance, and enabling the collection and remitting of value added tax and other taxes for goods above the *de minimis* level away from the border.

They can also get rid of onerous taxes that freeze trade in low-value items. Sales and other taxes are still very high in some Southeast Asian countries. For example, a US$100 dress shipped to Indonesia will have a US$44 mark-up due to value-added and other taxes and customs duties—and even more if shipping costs are factored in — enough "padding" on the original price for the buyer to decide against the purchase (Kinasih 2016).[5] The mark-up is US$39 in Thailand, US$32 in Vietnam, and US$0 in Singapore — which as a result has a very high ratio of 55 percent of cross-border e-commerce to total e-commerce.

Another reason why customs procedures need to be looked at anew in the e-commerce era is customer's insistence they can return the item to the seller if they so wish. Availability of returns is a pillar of the competitiveness of e-commerce retailers; governments also need to put in place simplified, tax- and duty-free customs treatment of items sold online by domestic sellers to foreign buyers and returned unused—a scenario played out countless times every day in sectors like apparel or electronics. Without fluid customs procedures for outbound shipments or for inbound returns, companies may simply choose to "go local" and place facilities across markets, which may not be the most efficient choice. It is estimated that in Indonesia, for example, a brand can reduce shipping time from 5 to 8 days to 1 to 2 days by localising its fulfilment (Kinasih 2016).

5 See citation in Kinasih (2016).

The silver bullet to facilitate trade in low-value items and lower the tax burden on small online sellers is to raise *de minimis* levels, or the ceiling below which goods pass duty- and tax-free. Since *de minimis* is often seen as unilateral trade liberalisation, a politically more feasible way to accomplish an increase in *de minimis* levels is to negotiate a plurilateral agreement for *de minimis* in the ASEAN region (Suominen 2017c). Such a negotiated agreement—basically a free trade agreement for low-value items—would fuel every ASEAN members' small business exports and low-value item trade. A study of five ASEAN economies found that that increasing *de minimis* rates to US$200 would deliver net welfare and economic gains of US$109.2 million; the cost-benefit ratio would be a resounding 5.6 (Rae 2012).

Of course, customs are often exasperated by these kinds of recommendations, as they are understandably concerned about potential new security risks posed by the proliferation of small parcels in trade. Yet they are also faced with the impossible task of inspecting all inbound parcels. To both facilitate and secure trade as e-commerce mushrooms, Southeast Asian customs could ferret out suspicious packages through risk targeting using big, anonymised data provided by e-commerce platforms or postal services that have data on parcel traffic and senders and recipients.[6] Further, trade compliance for small businesses could be simplified by creating a "Trusted eTrader" programme whereby small businesses that are consistently compliant and leave auditable digital footprints will over time become Trusted eTraders whose shipments are fast-tracked through customs.

4.4 Export Promotion for Online Sellers

Numerous developing countries have set up export promotion agencies in the past two decades, and they have become important in every country's trade toolkit. Recently, export promotion agencies in several countries have introduced programmes to help companies export online. In one example, Malaysia External Trade Development Corporation's (MATRADE) eTrade Programme helps the country's small businesses to export through getting them on leading international e-marketplaces. Among sectoral drives, in March 2017 MATRADE and Muar Furniture Association joined forces to organise a seminar on e-commerce opportunities for the furniture industry, to encourage more firms to use e-commerce for exporting and reaping new market share (Malaysia External Trade Development Corporation 2017).

Such efforts are most effectively carried out with private sector bodies, given that export promotion agencies seldom have the requisite expertise for technical issues in cross-border e-commerce, such as digital advertising or user engagement in foreign markets. A particularly effective model uses e-commerce platforms to train merchants, with some capital from governments. For example, Alibaba and its majority owned e-commerce platform in Southeast Asia, Lazada, are working with the Thai government to offer e-commerce training to 30,000 Thai SMEs, for them to access domestic and international e-commerce platforms (BusinessWire 2016). Alibaba and Lazada Group will help provide the training. They will also share their experience with the Thai government to develop Thailand's supply chain and logistics systems by sharing expertise with Thailand Post.

To scale these models and replicate them quickly, Southeast Asian governments could partner with the private sector to use innovative financing instruments. One such instrument is social impact bonds, whereby private foundations, social impact investors, and/or e-commerce platforms make the initial investment in training programmes, and get compensated at a premium by the government and public development agencies if the programme meets certain pre-established performance indicators, such as a target number of e-commerce-related jobs created or an amount of new online exports (Suominen 2016b).

6 For a more thorough analysis, see Suominen (2015).

Another useful mechanism to put in place is to simplify SMEs' paperwork by digitising it and creating a one-stop shop for SMEs. The Chilean government's exemplary Digital Agenda 2020 has, among many other things, set up an "entrepreneur's desk", an online platform that pools all paperwork an SME needs to fill in for government agencies (Government of Chile 2017).

4.5 Credit Facilities for Online Sellers — and Equity for Exporters

Access to finance is a key impediment for companies to engage in e-commerce at home and cross-border. There are two broad categories of financing that need to be available for Southeast Asian small companies to thrive in digital trade.

The first is small, fast-disbursing online loans for companies that need working capital or inventory finance to fulfil orders. Government entities, multilateral development banks, and export credit agencies like export–import banks can use their existing credit guarantee programmes to guarantee diversified pools of microloans issued by online lenders to small online merchants. With its smartphone-wielding and unbanked populations, Southeast Asia is prime territory for online lenders. A great many platforms targeting businesses have sprouted, such as UangTeman and Funding Societies in Indonesia, Crowdo in Malaysia, and MoolahSense in Singapore. Indonesia's Taralite specifically targets online lenders.

Working with these types of platforms instead of only with banks is a low-hanging fruit for the region's agencies: working with online lenders enables public sector financiers to diversify their risk and speed up and scale their own, typically slow and arcane underwriting. The result: more microloans to successful online merchants at a lower cost of capital, often in new markets online lenders feared to venture into.

The second broad category of financing critical for small businesses to engage in digital trade is equity finance. Traditionally, companies would expand into international markets only after scaling and maturing in their domestic market. Today, digitisation and the internet are enabling companies to be "born global," with the ability to be active in global markets earlier in their life cycles than ever before. These companies typically want to move fast to seize the demand they perceive in global markets, but cannot access such sums from banks. As such, they need long-term debt or equity financing from venture capital funds, angel investors, and other investors (Suominen 2016a).

Export credit agencies can play a role in helping born-global companies globalise. For example, Export Development Canada has offered an equity programme that targets born-global companies and later-stage SMEs intent on growing through exports, and often helps globalising small companies access venture capital funds. Without subsidising companies, developing country governments can do the same: lower investors' per-deal search and transactions costs for promising globalising companies, and possibly provide co-financing or risk mitigation instruments to incentivise investments in these companies (see Suominen 2016a). They can also work with regional equity crowdfunding platforms like Crowdo.

5. CONCLUSION

Technology-powered trade can generate significant growth gains for developing economies. Improved internet access alone has been found to boost trade and productivity, and ongoing technological changes herald much more fundamental transformations for developing economies, unlocking new efficiencies and gains from trade for companies and consumers, sharpening specialisation, propelling SME internationalisation and exports, and spurring productivity and growth. This is also true for Southeast Asia, a region making great strides in digitisation and e-commerce although also facing many disparities and challenges to harness it for trade and growth across countries and segments of populations.

All regional economies benefit from fuelling digital trade and creating a vibrant regional market for digital technologies and trade. Getting to such a market requires bolstering connectivity in the less connected part of the region and re-gearing regional trade policies and trade facilitation, trade-related capacity-building, export promotion and export credit to better meet the needs of small online sellers and digital businesses, and ensuring regulations and technologies interoperate across borders. Southeast Asian public and private sectors can also work together to fuel the adoption and use of digital technologies, using innovative instruments such as social impact bonds. The region is tremendously dynamic and innovative, and well-positioned for a prosperous twenty-first century—provided policies go right.

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