Organisation for Economic Co-operation and Development

TAD/TC/WP(2018)18/FINAL

Unclassified

English - Or. English

10 July 2019

TRADE AND AGRICULTURE DIRECTORATE
TRADE COMMITTEE

Working Party of the Trade Committee

FOSTERING PARTICIPATION IN DIGITAL TRADE FOR ASEAN MSMES

Programme of work and Budget: This paper is foreseen under the 2017-18 PWB item 3.1.1.1.2. It is funded by a voluntary contribution from Canada and contributes to the Canada-OECD Project for ASEAN SMEs (COPAS).

This report was written by Javier Lopez-Gonzalez. It received useful comments from Julia Nielson and Silvia Sorescu of the Emerging Policy Issues Division; Lorrayne Porciuncula (STI/DEP); Max Bulakowsky (GRS) and Nora'in Ali of the ASEAN secretariat. The paper also benefitted from oral comments received during the ASEAN Coordinating Committee for MSMEs meeting held in Luang Prabang in April 2018.

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JT03449735

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Executive summary

This paper aims to provide policy-makers with a broad overview of some of the issues that digital trade raises for ASEAN countries and its MSMEs:

- The digital transformation presents new opportunities for ASEAN firms to participate and benefit from trade. Indeed, for ASEAN countries, a 10% increase in internet use is associated with a 3.4% increase in trade in goods and a 3.9% increase in trade in services.
- However, evidence suggests that ASEAN SMEs adopt relatively simple digital technologies such as webpages to varying degrees: in Cambodia 41% of firms in the 'Hospitality and Tourism' sector have a webpage. A much lower 13% of firms in manufacturing have a webpage. In Indonesia, 15% of firms in the 'food' sector have a webpage, 4 percentage points less than those operating in the retail sector.
- Adoption of such technologies is important because digitalisation helps MSMEs relax some of the constraints associated with exporting: helping connect supply and demand; reducing the need for intermediaries or relaxing informational constraints related to trading in different markets.
- Indeed, the econometric evidence presented shows that ASEAN SMEs which have a website have a higher propensity to both export and import. But individual country experience is mixed: the data suggest that there might be additional barriers to exploiting digital tools for exporting in CLMV countries which have lower degrees of internet penetration.
- In this digital age, the complexity of the issues that underpin relatively simple digital trade transactions has increased. This means that, to benefit from digital trade, SMEs not only have to consider issues related to accessing digital networks; they also need to consider a range of old issues raising new challenges and new issues with new consequences:
    - In terms of access to digital networks: the cost of fixed broadband access in ASEAN countries varies considerably: from near USD 75 per month in Brunei and Myanmar; to about USD 50 in Malaysia and the Philippines; to a lower USD 25-30 in Cambodia, Indonesia and Singapore. Speed and reliability also differs significantly across countries.
    - In terms of old issues with new consequences:
        - ASEAN countries continue to make progress in issues related to trade facilitation. This helps SMEs become more efficient importers and exporters. In particular, significant progress has been made in areas such as Electronic Data Interchange (EDI), national Single

Windows, and automated risk management, all essential for simplifying documentation requirements, reducing the complexity of document submission and streamlining controls.

- In ASEAN, *de minimis* levels on tariffs, important for digitally ordered trade, range between USD 28 in Viet Nam to USD 296 in Singapore. Differences across ASEAN countries might affect the trade costs faced by SMEs exporting to different regional partners.

- And with new issues posing new challenges:

  - The movement of data across borders is an essential component of new and rapidly growing service supply models. However, in ASEAN the use of 'data localisation' measures is growing. Indonesia and Viet Nam introduced, between 2008 and 2014, several local storage requirements. At the same time, Indonesia, Malaysia, the Philippines, Singapore and Viet Nam have enacted new legislation restricting some transfers of data.

  - In the evolving technological environment, openness to data should help SMEs better face rising competitive pressures and increase the diffusion of technology. Affording the right level of protection and security to citizens while maintaining Internet openness will be important to make the most out of globalisation.

1. Introduction

1. The digital transformation has led to unprecedented reductions in the costs of engaging in international trade, changing both how and what we trade and contributing to growing competitiveness (Lopez-Gonzalez and Jouanjean, 2017).[1] Digitalisation has also changed the scope and speed of the activities undertaken by firms; allowing value to move faster and with greater ease; providing new ecosystems for exchange; and helping firms, especially micro, small and medium-sized enterprises (MSMEs), better connect with each other and with larger firms and consumers across the globe.

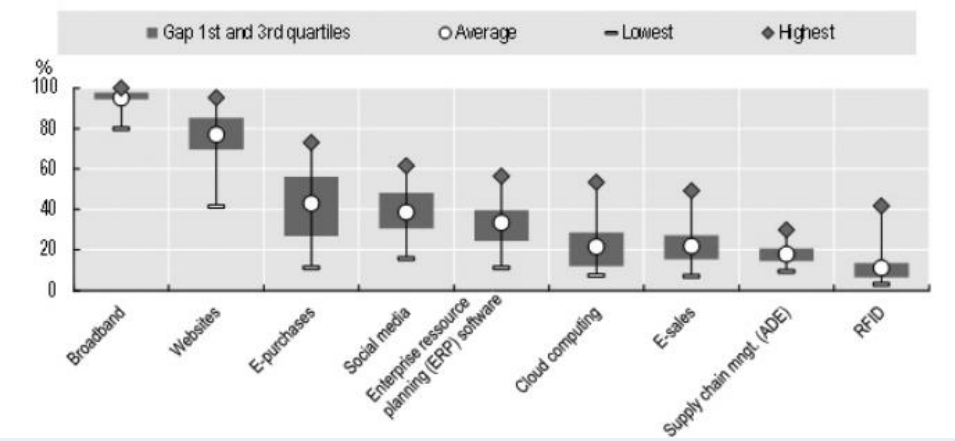
2. For many small firms, making the most of this new digital trade environment involves a combination of factors. Some are internal to the firm, such as the adoption of new technologies or the acquisition of new skills (see Brynjolfsson and McElheran, 2016a and 2016b, Brynjolfsson, 2011 and Drederik et al., 2003), others are external, relating to the trading environment. The focus of this paper is on the latter, notwithstanding the importance of the former where SMEs continue to face important constraints (see Box 1).

3. By using digital platforms or websites to sell goods across borders, MSMEs are increasingly able to internationalise at lower cost. With digital platforms progressively helping reduce other trade-related costs, by facilitating payments and providing warehousing and logistics services, even more opportunities to benefit from trade are arising.

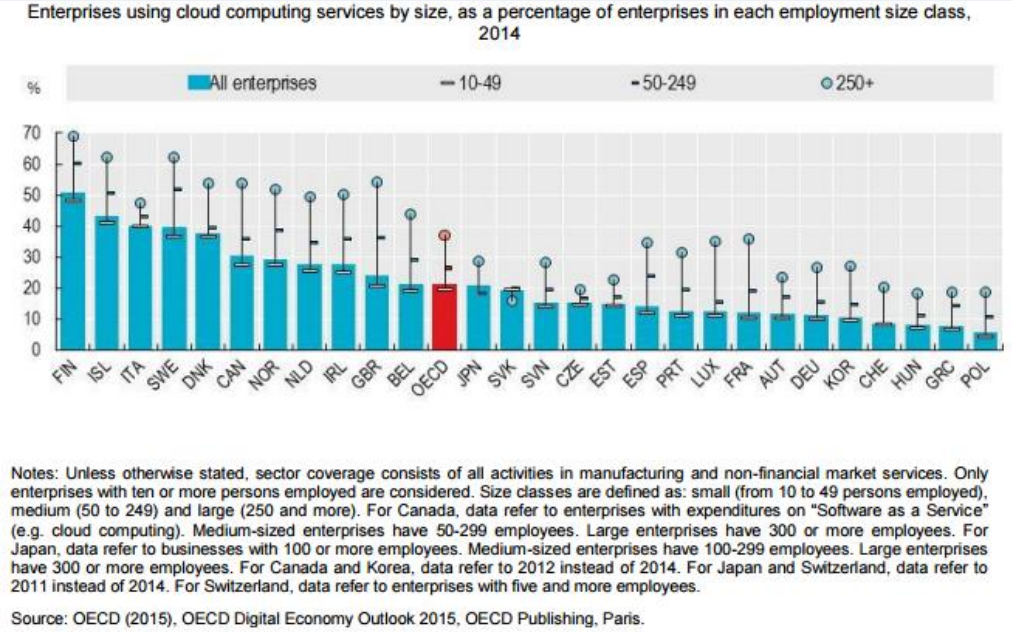
[1] Digital transformation refers to the economic and societal effects of digitisation and digitalisation. Digitisation is the conversion of analogue data and processes into a machine-readable format. Digitalisation is the use of digital technologies and data as well as interconnection that results in new or changes to existing activities.

Box 1. MSMEs lag behind in the digital transition

While digitalisation offers new opportunities for SMEs to reach global markets, the reality is that a large number of SMEs have not been able to reap the benefits of the technological transition. Evidence from OECD countries shows that SMEs are lagging behind in adopting digital technologies. While, in most countries, the divide is narrow for simple connectivity and web presence, the gap broadens when considering participation in e-commerce and, especially, more sophisticated applications. For instance, across OECD countries, enterprise resource planning (ERP) software applications to manage business information flows are popular among large firms (more than 75% adoption rate in 2014) but less used by SMEs (less than 20%).



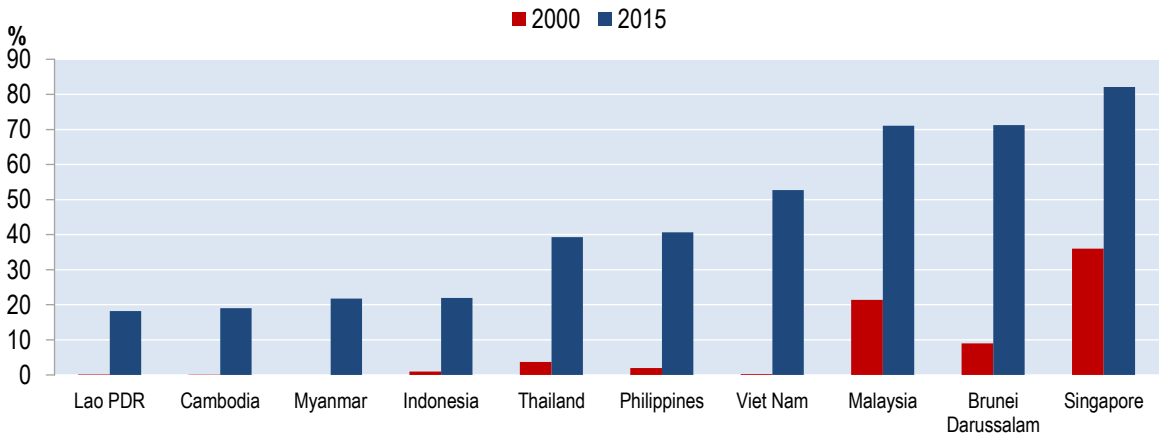
In many countries, a large adoption gap is also observed for cloud computing, i.e. the renting of computer power from an external provider, which can allow smaller firms to use Big Data, while overcoming some of the barriers associated with the high fixed costs of ICT investment.



Source: OECD (2017b), and Box and Lopez-Gonzalez (2017).

4. In ASEAN, the uptake and use of the Internet has been fast-paced: reaching over 80% of the population in Singapore and over 70% in Malaysia and Brunei (Figure 1). Although it remains lower in the new member states (Lao, Cambodia and Myanmar) and Indonesia (just over 20%), growth in use since the year 2000 has been considerable across all countries (Box and Lopez-Gonzalez, 2017) giving rise to a strong potential to develop digital trade.

Figure 1. Percentage of individuals using the Internet (2000-2015)



Source: Adapted from Box and Lopez-Gonzalez (2017).

5. Making the most out of the new opportunities and ensuring that the gains from digital trade are shared more inclusively requires pro-active policies that reflect the new realities of the digital world. Further emphasis on cross-cutting issues important to the development of the digital economy is needed. Progress in this area is underway, in particular with the adoption of the *ASEAN Work Programme on Electronic Commerce 2017-22*. It foresees further work on: hard and soft infrastructure, education and technology competency, consumer protection, modernisation of legal frameworks, security, competition and logistics. But, in addition, new and more holistic approaches to market openness are also needed (Lopez-Gonzalez and Ferencz, 2018). With firms adopting new, and increasingly international, business models, old issues in trade have new consequences, as might be the case with de minimis provisions or trade facilitation. At the same time, new issues, such as e-payments or data transfers, also raise new challenges.

6. This paper provides an overview of some of the issues that digital trade raises for ASEAN countries and its MSMEs. The next section sets the scene, identifying some of the key changes that digitalisation brings to trade in terms of scope, scale and speed. Section 3 then examines what we can learn about the nature of ASEAN engagement in digital trade from available data. Section 4 discusses some of the issues that affect ASEAN firm participation in digital trade. Section 5 concludes with some observations and preliminary policy guidance.

2. Trade in the digital era

7. Digital trade encompasses digitally enabled transactions in goods and services which can be either digitally or physically delivered (see Box 2 and OECD, 2017a). It is therefore not just about more, or new, digitally delivered services, it is also about more traditional or supply-chain trade in goods enabled through growing digital connectivity. As a result of digitalisation, trade in smaller, often lower value physical packages (parcels ordered online) and digitally delivered services (such as internet banking) is growing and new types of bundled goods and services, or services embedded in goods are emerging (Cadestin and Miroudot, 2017 and Lopez-Gonzalez and Jouanjean, 2017).

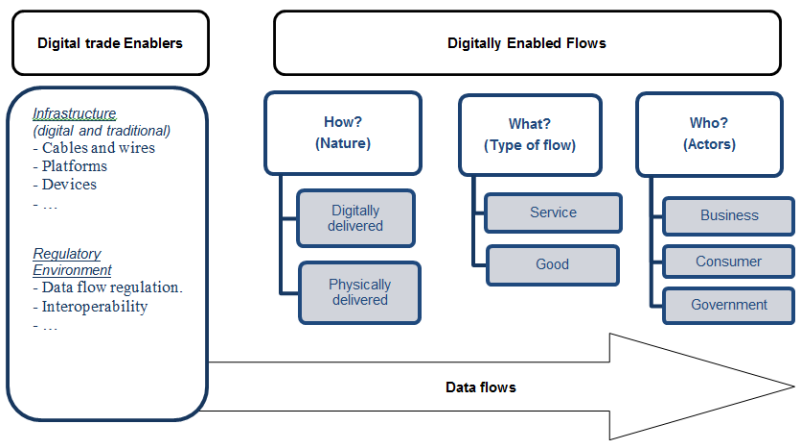
8. The multifaceted impact of digitalisation on trade drives many of these changes. Digitalisation not only affects how products are produced, but also how these are traded and consumed. It also changes how companies interact with customers, with other companies and with governments. In this age of hyperconnectivity, production, design, delivery and consumption are geographically dispersed but inextricably linked through trade and constantly connected through digital networks.

Box 2. Digital Trade

Digital trade transactions, be they in relation to goods or services, have been part of the landscape for many years and often raise the same, or similar, issues as non-digital transactions. This is because digital trade is not just about digitally delivered services, but also about more traditional – including supply-chain – trade enabled through growing digital connectivity. What is new in digital trade is the scale of transactions and the emergence of new (and disruptive) players transforming production processes and industries, including many that were previously little affected by globalisation.

While there is no single recognised and accepted definition of digital trade, there is a growing consensus that it encompasses digitally enabled transactions in trade in goods and services, whether digitally or physically delivered. This characterisation, based on the OECD's (OECD, 2011) and the WTO's (WT/L/274, dated 30 September 1998) definition of an electronic commerce transaction, lends itself to decomposing the digital trading environment into a number of distinct categories of transactions each of which raising different questions for trade and investment policy as well as measurement.

Whilst all digital trade is enabled digitally, not all digital trade is digitally delivered. Digital trade also involves digitally enabled but physically delivered goods and services (such as a purchase of a good on an on-line marketplace or the booking of a hotel through a matching service).



Source: Lopez-Gonzalez and Jouanjean (2017).

2.1. Digitalisation increases the scale of trade…

9. Digitalisation enables reaching larger numbers of digitally connected customers across the globe and facilitates outsourcing of non-core activities: this enables easier scaling of production. For example, digital inputs, such as cloud computing services, can help firms access IT services with little upfront investment and scale up (or down) IT functions in response to changes in demand – an issue which might be especially important for MSMEs seeking to internationalise. Modern firms use "Skype, WhatsApp or Viber for communications, Google and Dropbox for file sharing, LinkedIn for finding talent, PayPal for transactions and eBay, Tokopedia, Amazon and increasingly Facebook, for sales" (Box and Lopez-Gonzalez, 2017).

10. Better and faster access to critical knowledge and information can also help smaller firms overcome informational disadvantages, notably with respect to larger firms, and compete on a more even footing. By helping firms better connect, the Internet and

data flows allow firms to improve their product offering and customise products to customer needs. Digital technologies also help firms connect with other firms to fulfil contracts and link to global value chains (GVCs).

11. Firms selling digitised services, which tend to have high fixed costs of production but near zero, or marginal, costs of distribution, are able to more easily cater for growing demand, relative to those engaged in traditional trade where physical production and delivery constraints remain. In addition, many services which were provided through local presence (Mode 3) can now, in principle, be provided cross-border (Mode 1), introducing further savings from not having to establish subsidiaries across different countries of operation.

2.2. … and changes its scope and speed

12. Digitalisation is also changing the scope of the activities that firms undertake. Digital retailers, traditionally associated with connecting supply and demand internationally through matching services, are now providing additional complementary warehousing, logistic, e-payment, credit and insurance services. They are in effect creating a new eco-system for trade which is especially useful to MSMEs.

13. These changes are taking place at unprecedented speed. With growing interconnectedness and greater demand for just-in-time delivery, trade needs to be faster and more reliable than ever before. For services, this means being able to deliver more rapidly and 'on demand', often 24/7, so that consumers can have instant access to the services they need when they need them (giving firms a greater customer base).

14. For goods trade, digitalisation is helping trade facilitation become more efficient, helping goods move faster across borders, meeting new demands for "just in time" delivery and short-cycle inventory management. Greater information sharing through digital connections is enabling more efficient coordination of activities along global value chains, helping businesses and consumers track packages and facilitating border crossings. Increasingly, firms are directly connected with customs authorities through pre-arrival notices. Electronic payment systems of duties and fees with cargo declarations and/or processing systems are also increasingly integrated and border procedures automated. This is contributing to greater efficiency of customs procedures and processes (see WTO-OECD, 2017).

15. However, while greater speed means that the gains from trade become more apparent more quickly, it also means that structural change will also be more rapid, with important implications for policies that deal with managing change.

3. Evidence from ASEAN countries

16. While intuitively it is clear that digitalisation is important for trade, and trade is important for the diffusion of digital technologies, measuring the nature of the links and therefore the scale of the policy challenge at hand is difficult. For example, even if traditional trade statistics for goods record many digitally-enabled trade transactions, they do not differentiate goods transactions according to whether they have been digitally enabled or not. In services, measurement of cross-border transactions has always been more difficult but for digital trade, the challenge is compounded by the need to identify those services which are digitally enabled and those which are digitally delivered. Moreover, the rise of 3D printing is set to raise similar challenges in capturing digital delivery for goods (OECD, 2017a) and available e-commerce statistics seldom separate out cross-border transactions.

17. Although efforts are underway to better capture digital trade in official trade statistics (See OECD-WTO, 2019), it will take some time before robust measures are identified. In the meantime, analysis of digital trade has to proceed with caution and using existing statistics to shed light on particular aspects of trade in the digital era.

3.1. Trade in ICT goods and services is important

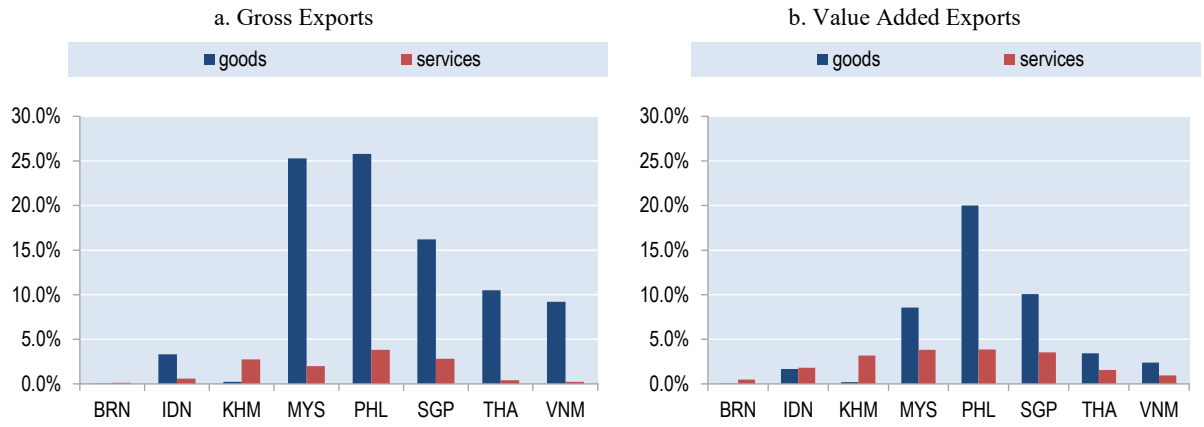
18. ICT goods and services are an important element of the enabling digital trade environment: they provide the physical devices and the computer and telecoms services that firms use to engage in the digital economy. In ASEAN countries, ICT goods represent a sizable part of gross exports: in 2013 over 25% of the gross exports of Malaysia and the Philippines were ICT goods, in Singapore these represented just above 15% and in Thailand and Viet Nam around 10% (Figure 2a).[2] But the importance of ICT goods in overall gross and value added exports of ASEAN countries has been declining (See Annex Figure 1).

19. ICT services exports represent a lower share of overall gross exports in ASEAN countries (Figure 2a): they are highest for the Philippines, with a 4% share and Singapore with around 2.8% of gross exports (and similar figures for value added trade). But, unlike ICT goods, ICT service shares are growing in gross and value added terms (See Annex Figure 1).

20. These trends underscore some characteristics of the evolving environment. ASEAN countries play an important role as suppliers of ICT goods, but reductions in the prices of ICT goods have played a role in declining shares of ICT goods in overall exports. In parallel, ICT services are playing an increasingly important role in ASEAN country exports.

[2] In value added terms (Figure 3b), the shares of ICT goods are smaller than in gross exports, but those of ICT services are higher. This reflects two characteristics of ICT trade in the region. The first is that much of the value added in ICT goods comes from abroad and is composed of services value added (Lopez-Gonzalez, 2016). The second that ICT services tend to be embodied in other goods exports, explaining why the shares are often higher for ASEAN countries.

Figure 2. Gross and value added exports of ICT goods and services (2013)



Note: ICT goods are identified as ISIC rev 3 sectors 30 to 33, ICT services as sector 72 (computer services) and sector 64 (post and telecommunications).
Source: Own calculation using OECD-WTO TiVA 2017 revision.

3.2. Digital connectivity benefits exports of goods and services in ASEAN countries…

21. Digital trade is about more than trade in ICT goods and services, it is about the use of digital technologies to engage in international sales and purchases, irrespective of whether these are digitally or physically delivered (see Box 2).

22. However, the lack of data on digital trade, and the numerous channels through which digitalisation can affect production and trade, means that conducting empirical analysis on digital trade is difficult. Still, analysis can usefully focus on specific aspects at the intersection of digitalisation and trade – such as the trade-enabling role of digitalisation. One approach is to incorporate measures of digital connectivity into a traditional gravity model of trade (following the work of Freund and Weinhold, 2002 and 2004 and more recently Riker, 2014, Benz et al., 2017 and Lopez-Gonzalez and Ferencz, 2018). While this will not identify the stock of the volume of trade that is digitally enabled, it will deliver insights into the extent to which changes in measures of digitalisation are linked with changes in trade.

23. The potential for digital connectivity between two countries can be proxied by the minimum of the share of the population that is using the Internet. This would reflect that, for digitally enabled trade to flourish, both supplying and demanding countries require good connectivity.[3] Intuitively, the measure acts as a mass parameter of potential digital connections, akin to what Freund and Weinhold (2002) refer to as the 'cybermass'.

24. This measure can be plugged into a gravity model to identify how digital connectivity might affect trade, isolating some of the enabling channels of influence. Controlling for individual sector-year supply and demand conditions (using fixed effects),

[3] At the extreme, if country A has 90% of its population using the internet but country B has 0%, it is not by increasing the number of internet users in country A that there will be more digitally enabled trade, the binding condition must be determined by the minimum potential for internet connectivity between the two countries.

Figure 3 identifies a positive correlation between digitalisation, or the potential thereof, and total, goods and services exports. It shows that, for ASEAN countries, a 10% increase in minimum share of the population using the internet, used as a proxy for the potential for bilateral digital connectivity, raises trade, on aggregate, by 3%, but it has a larger impact on services trade where exports increase by nearly 4%.

Figure 3. Digital connecitivity and ASEAN exports

Note: Figure shows percentage increase in exports as a result of a 10% increase in bilateral digital connectivity derived from a gravity model. See Annex Table 1 for full results of gravity model.
Source: Own calculation using OECD-WTO TiVA 2017 revision.

3.3. … and helps ASEAN SMEs internationalise

25. In ASEAN countries, more and more firms are using simple digital tools such as websites to reach customers, but there is wide variation within and between countries (see Annex Figure 2).[4] For example, in Cambodia 41% of firms in the 'Hospitality and Tourism' sector have a webpage with a much lower 13% of firms in the 'manufacturing' sector having a webpage. In Indonesia, 15% of firms in the 'food' sector have a webpage, just 4 percentage points less than those operating in the retail sector.

26. While these figures do not identify what the firms are using their webpage for, and whether they are effectively exploiting domestic or international sales through these, they underline that digitalisation involves firms across all sectors of the economy. They also allow for analysis on how digital tools such as a webpage may be linked to the propensity for firms, notably smaller ones, to engage in export markets.

27. As foreshadowed, digitalisation may offer new pathways for MSMEs to internationalise, which is important because international exposure, whether through imports or exports, is associated with more productive firms paying higher wages and generating more jobs (Wagner, 2012). But it is well known that engaging in international markets is expensive with only the most productive firms being able to afford to do so (Melitz, 2003 and Bernard et al., 2007). Lacking economies of scale, trading costs tend to represent a higher share of MSMEs' exports which is why these firms tend to have lower propensities to export (and import).

[4] Figures derived from the World Bank Enterprise survey.

28. Digitalisation can help MSMEs relax some of the constraints associated with exporting by reducing trade costs: whether by helping connect supply and demand, reducing the need for intermediaries or relaxing informational constraints related to trading in different markets.

29. Using the World Bank Enterprise Survey and drawing on Lopez-Gonzalez (2017), Table 1 identifies the determinants of the propensity for ASEAN SMEs, identified as firms below 100 employees, to engage in exporting activities and the role that having a webpage plays (see also Annex Table 2). While this cross-sectional analysis does not establish causal relations between the variables of interest, the results still highlight meaningful correlations showing that, on aggregate, ASEAN SMEs which have a website have a higher propensity to export.[5]

30. However individual country experience is mixed. For example, the data shows a non-significant relationship between having a website and exporting in CLMV countries, suggesting that there might be additional barriers to exploiting digital tools for exporting. CLMV countries showed the lowest degree of internet penetration which might, in turn, reflect less preparedness to engage in digital trade. At the same time, the results also show that firms with websites in most countries are also better able to import which might reflect the role of information sharing for importing (See Annex Table 2).

[5] It is also worth reiterating that the analysis is unable to identify what firms are using the website for or the direction of causation: whether firms have a website because they export or whether they export because they have a website.

Table 1. Determinants of export propensity in ASEAN countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	ASEAN	**Indonesia**	**LaoPDR**	**Philippines**	**VietNam**	**Cambodia**	**Malaysia**	**Thailand**	**Maynmar**
Age	+	+					-	+	
Employees		+	+	+	+	+	+	+	+
Employees squared		-	-		-				
ISO certification									
Share of foreign intermediates	+	+		+	+	+	+	+	
line of credit									
Share of foreign ownership	+	+	+	+	+		+	+	
Purchases of fixed assets	-								
Webpage	+	+		+			+	+	
Constant	-	-	-	-	-	-	-	-	-
Sector FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	7,915	1,411	184	1,385	793	45	295	407	478

Note: Results from a logistic regression, dependant variable exp=1 when firm is an exporter (see Annex Table 2 for full results). Brunei and Singapore are not in the WBES and are therefore not covered in the analysis.

Source: Own calculations using World Bank Enterprise Survey.

4. The measures affecting digital trade are changing

31. In the digital trade world, a single transaction, for instance the cross-border purchase of an e-book from a digital marketplace platform rests on a series of factors which support or enable the transaction.

32. The types of measures, or issues, that underpin this simple transaction, once fully traced, involve a range of issues that go beyond the digital delivery of the product. For example, the ability to order the e-book from an online retailer will initially depend on access to digital networks. The supply and costs of access is conditioned by the available physical infrastructure, the regulations that govern its use and the cost of an internet connection – in turn, affected by the degree of competition in the telecommunications services market. The ability to pay for the e-book will depend on the presence of interoperable e-payment methods, and the cost of the e-book on the degree of openness in related retail services. Moreover, the overall demand for the e-book will invariably depend on the cost of the e-reader which, in turn, will be conditioned by issues related to goods such as tariffs, trade facilitation or other technical regulations.

33. This example helps illustrate some of the building blocks that matter for digital trade. It also highlights the complexity of the issues that underpin even a relatively simple digital trade transaction. Some relate to accessing and using digital networks; others are old trade issues which have new consequences; and some are new measures which raise new trade issues.

4.1. Measures affecting access and use of digital networks are key…

34. At the core of any and all digital trade transactions, whether involving goods, services or bundled goods with services lies the physical infrastructure and the regulations that underpin access to, and use of, digital networks. Here some trade considerations are key; for example, access to inputs for the physical infrastructure will depend on the tariffs imposed on these inputs and the costs of access on the degree of liberalisation of telecommunication services. But other issues such as technical interoperability, net neutrality or data flows, related to the logistics of the 'packets' of data being sent, are also key.

35. According to World Bank data, the cost of fixed broadband access in ASEAN countries varies considerably: from around USD 75 per month in Brunei and Myanmar; to around USD 50 in Malaysia and the Philippines; to a lower USD 25-30 in Cambodia, Indonesia and Singapore.[6] But the speed and reliability is likely to differ significantly across countries. Due to data limitations, these figures do not reflect mobile broadband access capabilities and costs which are likely to be important for ASEAN countries. Another useful tool for assessing and prioritising reforms is the OECD Services Trade Restrictiveness Index (STRI) for telecommunications services, but this is currently only available for Indonesia.

[6] In purchasing power of parity dollars

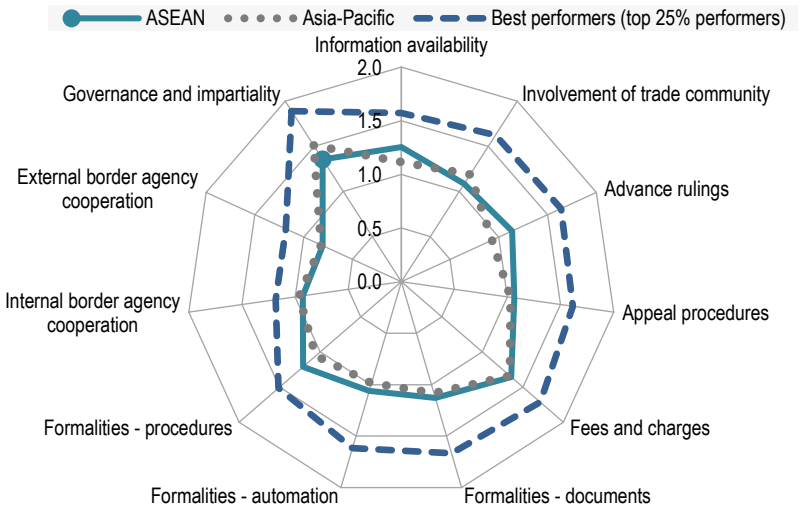
4.2. But old measures raise new issues…

36. Digital trade can also amplify the importance of "old" issues, meaning that traditional trade issues might be given a new meaning when placed in the context of digital trade. For instance, the delivery of low value goods ordered on-line, which are typically sold by MSMES, will still be subject to traditional physical connectivity constraints. As trade costs can represent a sizeable share of the value of small consignments (smaller packages do not benefit from scale-related reductions in trade costs), how fast and at what cost a parcel can clear a border can impact digitally enabled trade in goods. Firms engaged in parcel trade have to consider both traditional cross-border trade facilitation issues (including at the border issues, such as the ability to fill customs clearance documents on-line), as well as issues related to the competitiveness and reliability of the transport and logistics sector in the country of delivery.

37. Simplification and streamlining of border processes and controls as well as automation of procedures are key in expediting the movement of goods, including small parcels or low value shipments (LVS). Other areas such as the transparency of trade-related information and the predictability of administrative procedures at the border are also supportive of a more efficient border process. Elements of such measures are captured by the OECD Trade Facilitation Indicators (TFIs), which show that ASEAN performs comparably to the larger Asia-Pacific region in all trade facilitation areas. Performance across all TFIs areas remains nevertheless below worldwide best practice (Figure 4). However, ASEAN's performance has improved in 2015-17 in the areas of information availability, advance rulings, streamlining of procedures, as well as internal and external border agency co-operation.

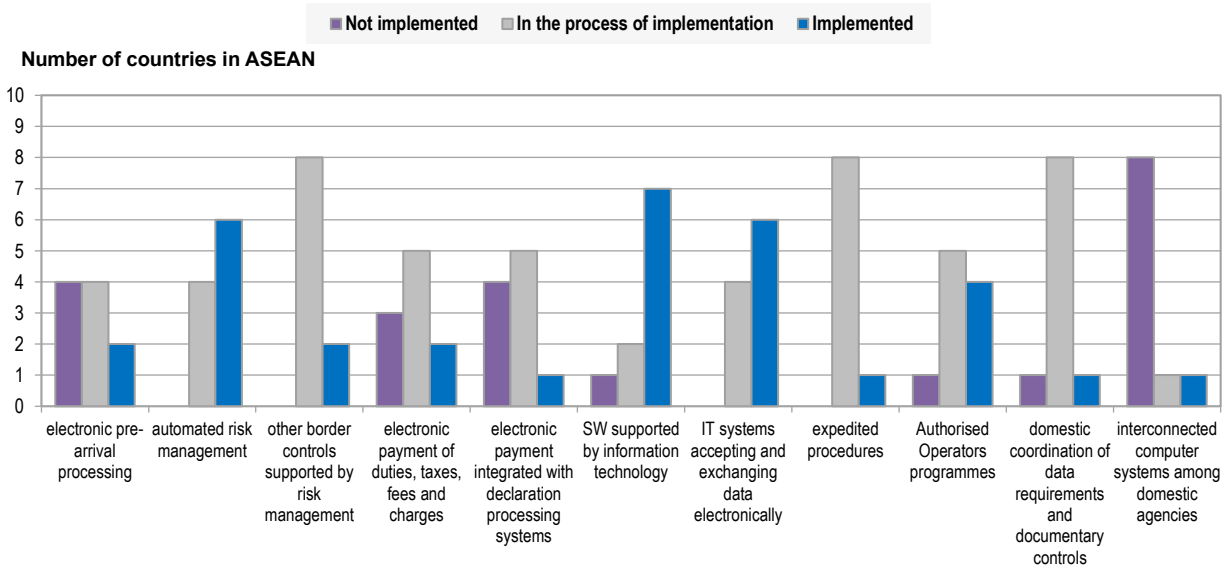
38. Harnessing the power of information technology, ASEAN economies have made significant progress in several areas such as Electronic Data Interchange (EDI), national Single Windows, and automated risk management, all essential for simplifying documentation requirements, reducing the complexity of document submission and streamlining controls (Figure 5). Goods entering through air cargo facilities or of low value appear to benefit from expedited procedures allowing for a rapid release in the majority of ASEAN countries, but such release procedures are yet to be applied to all goods, irrespective of type, weight or value. Systems connectivity could also support further co-ordination among domestic border agencies and increase operational efficiency, but considerable scope for improvement still exists in these areas.

Figure 4. ASEAN's trade facilitation performance: OECD TFIs, 2017



Note: "Best performers" denotes the average of the top quartile for each of the trade facilitation areas covered, across all countries within the database.
Source: OECD Trade Facilitation Indicators (2017), http://www.oecd.org/trade/facilitation/indicators.htm.

Figure 5. ASEAN's trade facilitation performance: key elements in automating and streamlining border processes



Source: Own calculations using OECD Trade Facilitation Indicators (2017), http://www.oecd.org/trade/facilitation/indicators.htm.

In addition, trade costs might also depend on the de minimis thresholds that apply. These stipulate a value threshold under which no tariffs or taxes are collected. Although not new, the rise in parcels crossing borders and MSMEs trading smaller volumes across borders means that de minimis could raise new issues. If digitally ordered parcels are above this threshold then these might be delayed at the border for inspection since they

will not be subject to expedited procedures, this might increase delivery time. The de minimis level might also matter when considering border handling costs as well as collection of customs revenue. In ASEAN, de minimis provisions vary widely ranging between USD 28 in Viet Nam to USD 296 in Singapore (Table 2).

Table 2. De minimis provisions in ASEAN countries in April 2016

Member State	Amount	Types of Taxes Exempted	Commodity	Modes of Transport
Brunei Darussalam	BND 400 *(USD 295)*	Import duty	All dutiable goods	Air (courier service)
Cambodia	USD 50	Duty and tax	All	All
Indonesia	USD 50	Import duty and taxes	All	Air express and postal
Lao PDR	USD 50 (of goods value)	Import duty and tax	All	All
Malaysia	RM 500 *(USD 128)*	Import duty	Except tobacco, cigarette and liquor	Air (courier service) and postal
Myanmar	USD 500	Duty and tax	All	All
The Philippines	PHP 10,000 *(200 USD)*	Duty and tax	Except tobacco goods, wines and spirits	All
Singapore	SGD 400 *(296 USD)*	Goods and services tax	Exclude liquor and tobacco	Air and Post
Thailand	THB 1,500 *(40 USD)*	Import duty and VAT	Except prohibited and restricted goods	All
Viet Nam	VND 1,000,000 *(28 USD)*	Import duty and taxes	All	All

Note: Myanmar Customs implemented the USD50 de minimis on 1 April 2017. However, this is only applicable to express consignment cargo. Goods valued at USD 500 and below (except restricted goods) are not subject to import licensing.
Source: Box and Lopez-Gonzalez (2017) originally from ASEAN Secretariat.

4.3. And new measures pose new challenges…

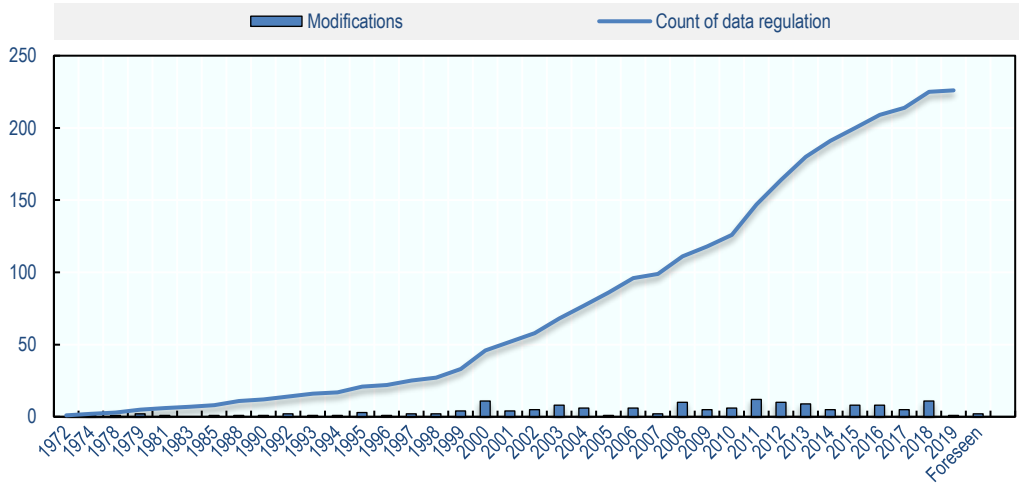
39. The movement of data across borders is an essential component of new and rapidly growing service supply models. But data is also used as an input into production across all business activities within the firm, facilitating the allocation of resources and increasing competitiveness. Data connects firms and consumers across countries and enables management of global production networks.

40. But the ubiquitous exchange of data across borders has amplified concerns about digital security, audit reach and protection of individual privacy, particularly in the context of different regulatory approaches across countries (see Casalini and López-González, 2019). This has given rise to increased 'data-flow regulation' (see Figure 6). Two types of measures are emerging: restrictions on cross-border transfers of data, mainly to protect privacy, and local storage requirements. Both aim to tackle genuine policy concerns but may have economic consequences, now and particularly in the future, for the diffusion of new technologies and adoption of new business models. However, these can also be used to promote domestic industries through import substitution, a goal that is likely to be self-defeating.

41. Ongoing OECD analysis reveals that in ASEAN the use of such measures is growing (see also ITIF, 2017). Indonesia and Viet Nam introduced, between 2008 and 2014, several local storage requirements. At the same time, Indonesia, Malaysia, the Philippines, Singapore and Viet Nam have enacted new legislation restricting some transfers of data.

42. In the evolving technological environment, openness to data should help firms better face rising competitive pressures and increase the diffusion of technology. Affording the right level of protection and security to citizens while maintaining Internet openness will be important to make the most out of globalisation.

Figure 6. Stock of identified data measures



Note: Data protection regulations include different types of regulation relating to data transfers and local storage requirements. Numbers are affected by the way in which regulations are structured, as this varies by country; some countries may have a single regulation covering a wide range of measures; others will have several different regulations covering, for example, restrictions on data flows for different types of data, and local storage requirements.
Source: Casalini and López-González (2019).

43. This can be challenging and countries are seeking guidance on the most effective policy approaches. The OECD has developed useful principles through the OECD Privacy Framework, incorporating Guidelines governing the Protection of Privacy and Transborder Flows of Personal Data (OECD, 2013b). The Asian-Pacific Economic Cooperation (APEC) has also developed some rules aimed at helping firms meet different privacy regulations across jurisdictions (see www.cbprs.org). Greater shared understanding will help countries find balance between ensuring important public policy objectives, such as consumer privacy and digital security, are met and maintaining the benefits from free flows of data.

5. Benefiting from digital trade requires more market openness multilaterally and regionally

44. Many digital infrastructures such as the Internet were born global. They offer new opportunities for scale, particularly for SMEs and businesses in developing economies, but they raise key challenges for domestic and international policy in a world where borders and regulatory differences between countries remain.

45. At the multilateral level, existing WTO rules, which are technologically neutral, apply to digital trade. The General Agreement on Trade in Services (GATS) and its annexes remain of primary importance for enabling services that underpin the digital world (such as telecoms) and digitally enabled services. Where digitally enabled trade in goods is concerned, the GATT and the Trade Facilitation Agreement (TFA) provide important measures. At the same time, the Information Technology Agreement (ITA) has been key in eliminating tariff barriers for certain ICT products. However Brunei Darussalam, Myanmar, Cambodia and Lao PDR, are not signatories to the ITA. This could affect their ability to access competitively priced ICT goods and services to compete in the digital trade markets.

46. Specific discussions on e-commerce were introduced as early as 1998 into the agenda of global trade policy making through the work programme on e-commerce launched by the WTO (WTO, 1998). While progress has been slow, at the 11th Ministerial Conference in Buenos Aires, Members agreed to continue work under the current work programme and "maintain the current practice of not imposing customs duties on electronic transmissions" until the next Ministerial (WTO, 2017a). A group of 78 Members, including Brunei Darussalam, Cambodia, Lao PDR, Malaysia, Myanmar and Singapore also agreed “to commence WTO negotiations on trade-related aspects of electronic commerce” (WTO, 2019).

47. Moreover, regulation of digital trade issues is being increasingly addressed in Regional Trade Agreements (RTAs). More recent RTAs cover broader issues ranging from the prohibition of customs duties on electronic transmissions and non-discriminatory treatment in terms of domestic regulation; electronic authentication; data protection and paperless trade. But there is a wide variance across agreements in terms of depth and breadth of the issues covered with many provisions remaining 'best endeavours' and not subject to dispute settlement.

48. In this context, useful insights can be obtained from international trade principles. In trade agreements, combining the benefits of trade with countries' right to regulate has rested on requirements that: i) standards are transparent; ii) the same standards are applied to everyone in the same way (i.e., that they are non-discriminatory); and iii) that in achieving their legitimate public policy objectives, countries do not use measures that restrict trade more than is necessary to achieve the objective.

49. The ASEAN Economic community (AEC), one of the most ambitious regional integration programmes of its time, is in a position to move forward on digital trade related issues, drawing on the approved ASEAN Work Programme on Electronic Commerce 2017-22 and adopting approaches that promote greater interoperability of standards and shared understandings on issues such as data. At the same time, further emphasis on capacity building might also be placed in view of better understanding: the

policy implications of new technologies; the impact of data regulation on the economy and society; and the role of competition policy and its interactions with trade issues.

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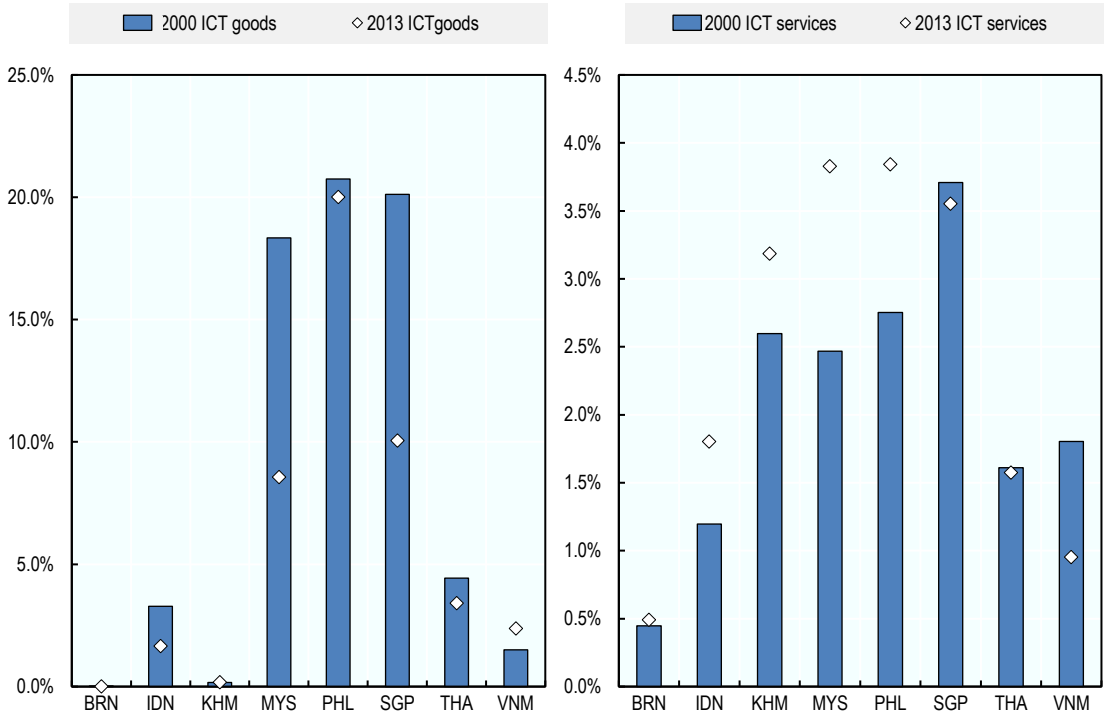
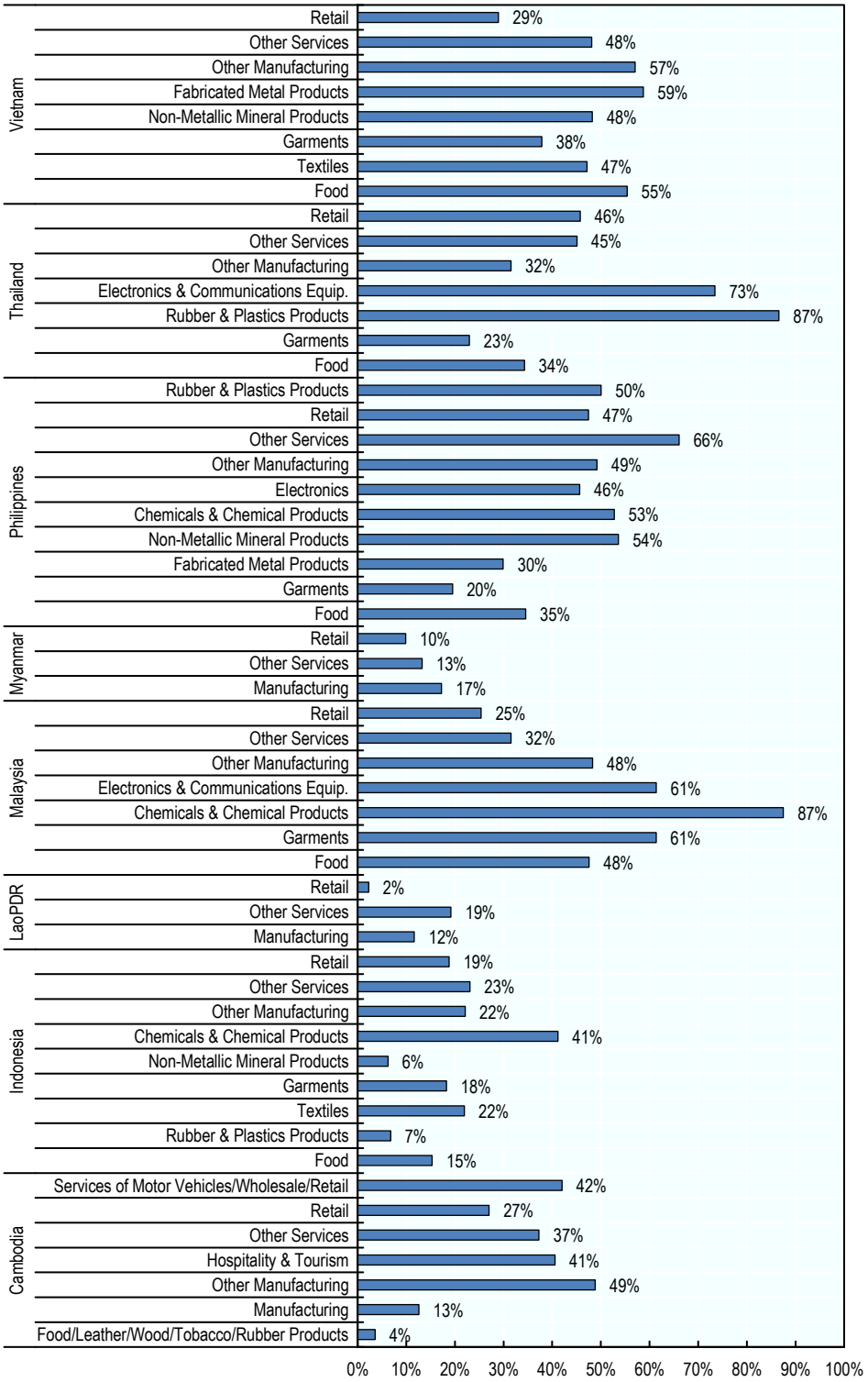
Annex A.

Annex Figure 1. Value added exports of ICT goods and services (2013)



Note: ICT goods are identified as ISIC rev 3 sectors 30 to 33, ICT services as sector 72 (computer services) and sector 64 (post and telecommunications).
Source: Own calculation using OECD-WTO TiVA 2017 revision

Annex Figure 2. Use of website by firms across ASEAN countries and sectors



Source: Own calculation using Wolrd Bank Enterprise Survey.

Annex Table 1. Determinants of exports in ASEAN countries

	Total Exports	Goods Exports	Services Exports
Log of combined GDP	0.969***	1.143***	0.614***
	(422.71)	(250.22)	(117.79)
Log of distance	-1.353***	-1.459***	-1.158***
	(-189.98)	(-118.91)	(-74.85)
Contiguity	-0.00026	0.0689*	-0.114**
	(-0.01)	(1.86)	(-2.46)
Colony	0.210***	0.142***	0.290***
	(7.02)	(2.85)	(4.45)
Common language	0.490***	0.0698***	0.784***
	(35.97)	(3.1)	(27.09)
Free trade agreement	0.607***	0.633***	0.506***
	(48.17)	(29.34)	(19.03)
Minimum internet use	0.331***	0.350***	0.401***
	(122.89)	(70.89)	(65.72)
Constant	5.31E-06	3.99E-05	0.00438
	0	0	(0.02)
prod-year FE	YES	YES	YES
par- year FE	YES	YES	YES
Observations	176503	54575	38802
R-sq	0.673	0.63	0.548

Note: t statistics in parentheses, * p<.1, ** p<.05, *** p<.01
Source: Own calculations using CEPII-BACI data and ITU data on internet use.

Annex Table 2. Determinants of SME export propensity in ASEAN countries

	(1) ASEAN	(2) Indonesia	(3) LaoPDR	(4) Philippines	(5) VietNam	(6) Cambodia	(7) Malaysia	(8) Thailand	(9) Maynmar
age	0.00732***	0.0132**	-0.000969	-0.00495	0.00388	0.0492	-0.0174*	0.0140***	0.00158
	(0.000999)	(0.00559)	(0.00566)	(0.00399)	(0.00402)	(0.0554)	(0.00968)	(0.00520)	(0.0137)
employees	7.81e-06	0.0278***	0.0364***	0.0126*	0.0356***	0.105*	0.0243***	0.0310	0.0318**
	(4.10e-05)	(0.00754)	(0.00923)	(0.00659)	(0.00709)	(0.0580)	(0.00932)	(0.0204)	(0.0152)
Employees squared	-8.06e-11	-0.000177***	-0.000247***	-5.77e-05	-0.000276***	-0.000834	3.07e-06	-0.000171	-0.000118
	(2.52e-10)	(6.51e-05)	(8.84e-05)	(6.19e-05)	(6.11e-05)	(0.000582)	(0.000117)	(0.000185)	(0.000159)
ISO certification	0.0159	0.0454	0.0851	-0.0277	0.0328		-0.00776	0.0609	-0.0920
	(0.0141)	(0.0810)	(0.0563)	(0.0336)	(0.0951)		(0.0355)	(0.0827)	(0.0943)
Share of foreign intermediates	0.00697***	0.00665**	-0.00337	0.00758***	0.00468*	-0.0117	0.00911*	0.00661*	0.00276
	(0.00255)	(0.00297)	(0.00318)	(0.00207)	(0.00284)	(0.0130)	(0.00546)	(0.00382)	(0.00591)
line of credit	0.0137	0.0528	-0.250	0.0159	0.00685	-0.242	0.0408	0.0347	0.449
	(0.0118)	(0.0565)	(0.246)	(0.0175)	(0.0399)	(0.198)	(0.142)	(0.0324)	(0.273)
Share of foreign ownership	0.0133***	0.0158***	0.0101**	0.0106***	0.00603***		0.0251***	0.0439***	
	(0.000740)	(0.00315)	(0.00401)	(0.00189)	(0.00132)		(0.00898)	(0.00844)	
Purchases of fixed assets	-0.0165**	-0.0138	-0.107	-0.0144	0.0335	0.300	-0.0890	-0.0421	0.00849
	(0.00836)	(0.0499)	(0.188)	(0.0188)	(0.109)	(0.194)	(0.0682)	(0.0656)	(0.0692)
Webpage	0.669***	0.592***	-0.0381	0.451***	0.214		0.333***	0.712**	0.215
	(0.0683)	(0.155)	(0.540)	(0.133)	(0.137)		(0.102)	(0.303)	(0.198)
Constant	-1.611***	-2.540***	-1.454***	-1.801***	-1.610***	-4.310***	-1.341***	-2.282***	-2.279***
	(0.309)	(0.144)	(0.213)	(0.145)	(0.159)	(0.657)	(0.209)	(0.296)	(0.281)
Sector FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	7,915	1,411	184	1,385	793	45	295	407	478

Robust standard errors in parenthesis *** p<0.01, ** p<0.05, * p<0.1