

**“PAPER ON BEST PRACTICES
FOR PROMOTING CROSS-BORDER E-TRADE
UNDER FTAs/RTAs IN ASIA”**

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List of abbreviations

No.	Abbreviations	Meaning of Abbreviations
1	ADB	Asian Development Bank
2	AEO	Authorised Economic Operators
3	AI	Artificial Intelligence
4	AMS	ASEAN Member States
6	APEC	Asia-Pacific Economic Cooperation
8	ASYCUDA	Automated System for Customs Data
9	AW	ASYCUDA World
10	B2B	Business-to-Business
11	B2C	Business-to-Consumer
14	COO	Certificate of Origin
15	DEPA	Digital Economy Partnership Agreement
16	ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
17	FTAs	Free Trade Agreements
18	FTAs/RTAs	Free Trade Agreements/Regional Trade Agreements
20	ICT	Information and Communication Technology
21	IoT	Internet of Things
22	MIMOS	Malaysian Institute of Microelectronic Systems
23	MSMEs	Micro, Small, and Medium Enterprises
24	NTP	Networked Trade Platform
25	OECD	Organisation for Economic Co-operation and Development
26	P.D.R.	People's Democratic Republic
27	PoC	Proof of Concept
28	QR	Quick Response
29	R&D	Research and Development
33	TFPI	Trade Facilitation and Paperless Trade Implementation
34	UN	United Nations
36	UNCTAD	United Nations Conference on Trade and Development
37	UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
38	UNNEt	United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific
40	UNRCs	United Nations Regional Commissions
41	WCO	World Customs Organization
42	WTO	World Trade Organization

1. Introduction

1.1. Background of the Paper

In recent years, we have all witnessed how technological changes and digitalization have created a new way of shopping with e-commerce, especially during and even after the COVID-19 pandemic. According to Statista, the e-Commerce market revenue in the ASEAN region is estimated to reach US\$175 billion by the end of 2027. According to East Asia Forum, ASEAN's digital economy is forecast to grow by 6 percent annually, reaching as high as US\$ 1 trillion by 2030.

To capture those potentials and opportunities, ASEAN has come forward with Bandar Seri Begawan Roadmap (BSBR) in 2021. This Roadmap affirms ASEAN's collective commitment to a robust five-year agenda towards the development of an integrated ASEAN Digital Economy, culminating in negotiations for the ASEAN Digital Economy Framework Agreement concluded by 2025.

In order to complete this agenda, it is clear that among AMS countries, CLMV countries will need a transition time to legalize and operationalize several key features such as online consumer protection, electronic authentication and signature, cross-border data transfer and data localization. Although somewhere in CLMV countries, government agencies might be somehow prepared to a certain extent, local enterprises, especially micro, small, and medium enterprises (MSMEs) are not. Our standpoint is that we must together find a way to develop a conclusive e-commerce and digital economy, with no one being left behind.

The Paper will focus on how to facilitate cross-border e-trade through taking best benefits of FTAs/RTAs. The scope of cross-border e-trade in this Paper includes cross-border retailing e-commerce (B2C transactions) and cross-border paperless trade (B2B transactions) which are two key trends and objects of FTAs/RTAs in E-commerce Chapter. The Paper will select some ASEAN+ FTA and DEPA to see commitments in E-commerce Chapter that AMS has been implementing while will collect some best practices of cross-border e-trade, and provide recommendations for AMS to take best use of FTAs/RTAs.

It is noted that the views, findings and recommendations presented in this report are those of this research team only.

1.2. Objectives of the Paper

The overall objective of the Paper is to enhance awareness on what we have on hand from FTAs/RTAs and to suggest some findings to maximise facilitation for cross border e-trade for CLMV from both perspective of government and businesses.

Also, the Paper targets to add some objectives as follows:

- Increasing good awareness on e-commerce commitments under FTAs/RTA from the point of cross-border e-trade;
- Introduce some best practices of modals, platforms to facilitate cross-border e-trade in Asia;

1.3. Methodology of the Paper

Desk research were carried out to gather information and sharing information, expert interviews during international meetings that experts had chance to attend. At the ending phase of this project, a three-day training program was held on 29-31 August 2023 in Da Nang, Viet Nam with the participation of delegates from CLMV and other economies of speakers.

Paper was shared in the training program and further promotion suggestions were collected and absorbed.

2. Developments and Trends of E-trade and Cross-border e-Trade in Asia

2.1. Development of e-Trade and Cross-border e-Trade in Asia

Cross-border e-trade is mentioned in many researches. For example, in “Cross-border E-Trade: The ASEAN Single Window”, it means cross-border data exchange; in “The G20 e-Trade Readiness Index”, the terms refers to cross-border trade that uses the Internet or ICT; in “Promoting Cross-border E-Trade Under the Framework of Regional Trade Agreements (RTAs)/Free Trade Agreements (FTAs): Best Practices in the APEC Region”, it is defined as trade in goods, including their import, export, transit and related services, taking place on the basis of electronic communications, including exchange of trade-related data and documents in electronic form as well as the whole (or at least part of a) cross- border transaction process conducted electronically.

E-trade is a related term to is paperless trade. Paperless trade generally refers to the use of electronic instead of paper-based data and documents to conduct international trade transactions. “Paperless Trade” consists of measures that transform conventional paper-based documentation methods into an electronic format. By moving away from paper and opting for digital systems, governments and other stakeholders can speed up trade and lower transaction costs. It has been a crucial part of government initiatives to improve the efficiency of customs controls and trade administration processes. “Cross-Border Paperless Trade” is defined as trade “taking place on the basis of electronic communications, including exchange of trade-related data and documents in electronic form” (UNESCAP, 2016).

A list of e-trade or paperless trade measures and provisions are developed by *The United Nations Regional Commissions (UNRCs) Global Survey on Trade Facilitation and Paperless Trade Implementation (TFPI)*. According to the TFPI Survey, there are several

paperless trade measures including the establishment of electronic/automated customs system and electronic single window system, electronic submission of trade-related documents including trade licenses, sea/air cargo manifests and customs declarations, and electronic application and issuance of trade licenses and preferential certificate of origin (Table 1).

Meanwhile cross-border paperless trade includes six measures. In order to enable the exchange and mutual recognition of trade-related data and documents among stakeholders within an economy and between economies, measures such as “Laws and regulations for electronic transactions” and “Recognized certification authority issuing digital certificates to traders to conduct electronic transactions” are included. The other four measures aim at the exchange of specific trade-related data and documents across borders needed for achieving a fully integrated paperless transformation.

In order to evaluate the development of e-trade and cross-border e-trade in Asia, it is necessary to look at how these above-mentioned measures are taken in the region.

Table 1: E-trade and Cross-border e-trade measures

Group	Measures
E-trade	Internet connection available to Customs and other trade control agencies
	Automated Customs System
	Electronic submission of Customs declarations
	E-Payment of Customs Duties and Fees
	Electronic application and issuance of import and export permit
	Electronic Submission of Air Cargo Manifests
	Electronic Single Window System
	Electronic Submission of Sea Cargo Manifests
	Electronic application and issuance of Preferential Certificate of Origin
	Electronic Application for Customs Refunds
Cross-border E-trade	Laws and regulations for electronic transactions
	Recognised certification authority
	Electronic exchange of Customs Declaration
	Electronic exchange of Sanitary & Phyto-Sanitary Certificate
	Electronic exchange of Certificate of Origin
	Paperless collection of payment from a documentary letter of credit

Source: *TFPI*

2.1.1 Implementation of E-trade and Cross-border E-trade in Asia

The data presented in this section are based on the results of the fifth UN Global Survey on Trade Facilitation and Paperless Trade Implementation 2023, which included 28 Asian economies: Afghanistan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia;

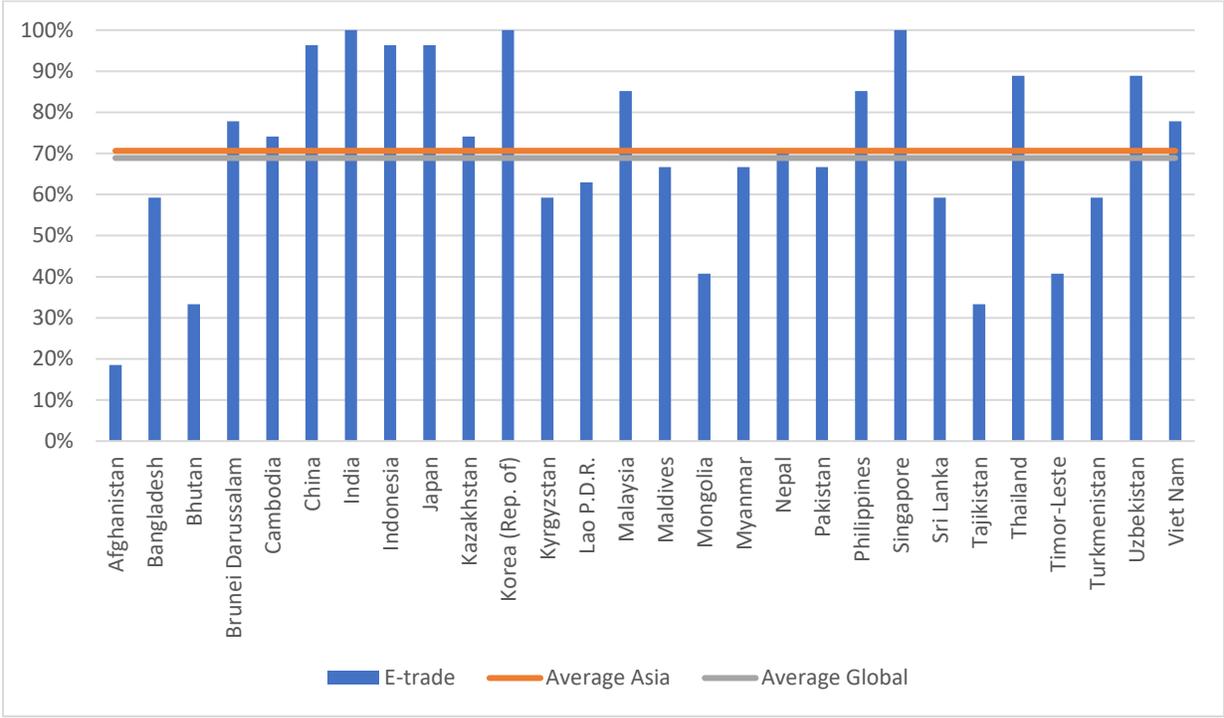
China; India; Indonesia; Japan; Kazakhstan; Korea (Rep. of); Kyrgyzstan; Lao P.D.R.; Malaysia; Maldives; Mongolia; Myanmar; Nepal; Pakistan; Philippines; Singapore; Sri Lanka; Tajikistan; Thailand; Timor-Leste; Turkmenistan; Uzbekistan; Viet Nam.

E-trade implementation rates for the whole region and individual economies are provided Figure 1. The regional average implementation of the e-trade measures stands at 70.64%, a little higher than that of global with 68,88%. Implementation varies greatly across regions ranging from 18.52% (Afghanistan) to 100% (India, South Korea and Singapores).

In terms of specific economies, India, South Korea and Singapores lead the region with the implementation rate of 100% and followed by China, Indonesia and Japan with the implementation rate of 96.30% each. Three economies with the lowest implemation rate include Afghanistan (18.52%), Bhutan (33.33%) and Tajikistan (33.33%).

Among economies, AMS record relatively high level of e-trade implementation, with all AMS except for Laos having the rates which are significantly higher than regional average.

Figure 1: E-trade implementation in individual countries, 2023

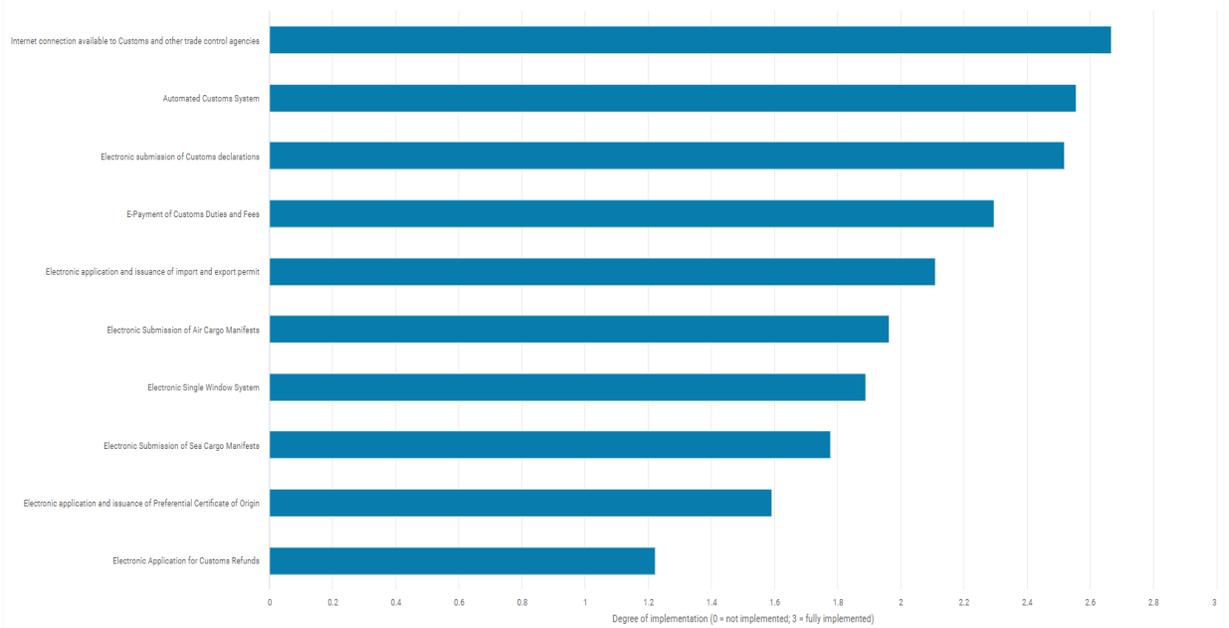


Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 2023

According to UN Global Survey on Digital and Sustainable Trade Facilitation, for each measure, implementation level is recorded as 3 for “fully implemented,” 2 for “partially implemented,” 1 for “on a pilot basis,” or 0 for “not implemented.” Each implementation of

a measure is calculated against its full score (3). The figure 2 highlights the implementation level of e-trade measures taken in Asian region. Internet connection available to Customs and other trade control agencies, Automated Customs System and Electronic submission of Customs declarations are moving toward full implementation. The implementation of E-payment of customs and Electronic application and issuance of import and export permit is partial while the implementation of Electronic Application for Customs Refunds and Electronic application and issuance of Preferential Certificate of Origin is still challenging at a pilot stage.

Figure 2: E-trade measure implementation in Asia, 2023



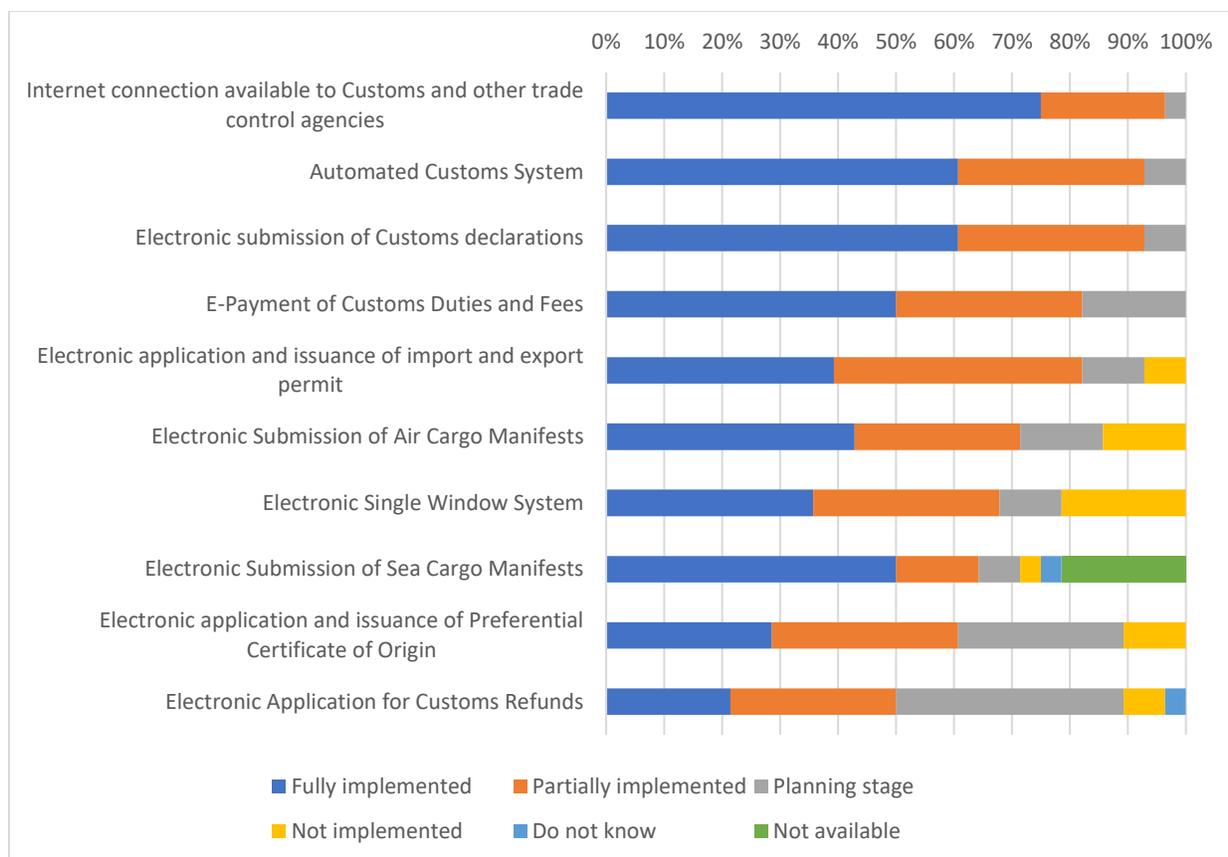
Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 2023

The implementation of automated customs systems, Electronic submission of Customs declarations and Internet connection available to customs and other trade control agencies is generally good. The measures have been implemented by more than 90% of surveyed Asian countries, fully or partially, while fully implementation has been reached by more than 60% of surveyed Asian countries (Figure 3). Similarly, more than 80% of the Asian countries surveyed have implemented E-payment of customs duties and fees and Electronic application and issuance of import and export permit, fully or partially. These results show that most economies have been actively developing ICT infrastructure and services, which are essential for achieving an efficient e-trade system. More than 70% of Asian countries surveyed have at least piloted Electronic Submission of Air Cargo Manifests, Electronic Single Window System, Electronic Submission of Sea

Cargo Manifests, and Electronic application and issuance of Preferential Certificate of Origin.

Electronic Application for Customs Refunds is less engaged by Asian countries as less than 20% of surveyed countries have fully implemented the measure and almost 50% have at least partially implemented. It is still common among many countries for refunds to be processed with paper documents.

Figure 3: State of implementation of e-trade measures in Asia, 2023



Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 2023

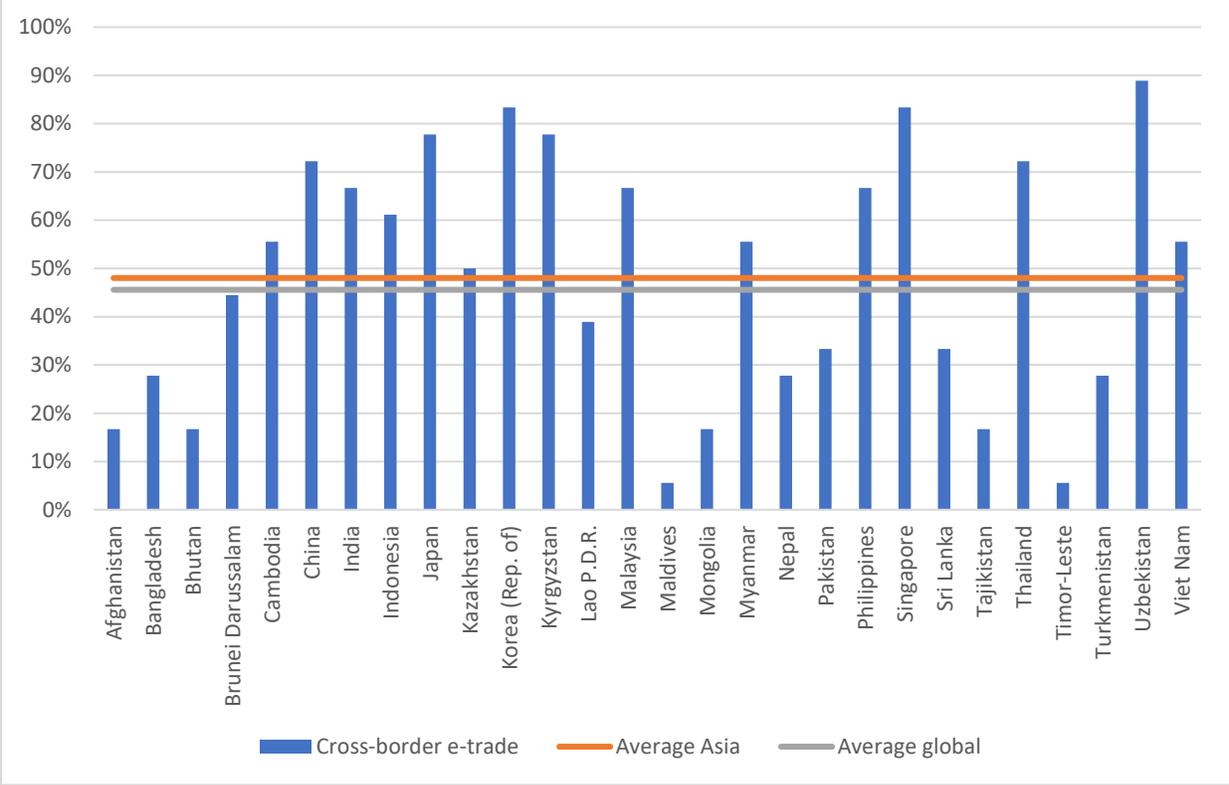
Figure 4 shows cross-border e-trade implementation rates for the whole region and individual economies. The cross-border trade measures record an implementation rate of at 48.02%, slightly higher than that of global with 45.58%. Compared to the implementation rate of e-trade measures, that of cross-border e-trade measures are much lower, indicating much potential room for improvement.

Like e-trade measures, implementation of cross-border e-trade measures significantly vary across in the Asian region. For example, implementation level varies from the lowest 5.56% (Timor-Leste and Maldives) to the highest 88,89% (Uzbekistan). Republic of Korea

and Singapore rank as the second highest overall performers (each with an implementation rate of 83.33%).

Among economies, all AMS except for Laos and Brunei Darussalam have implementation rates exceeding the average Asian. This maybe partly explained by the continued expansion and improvement of the ASEAN Single Window.

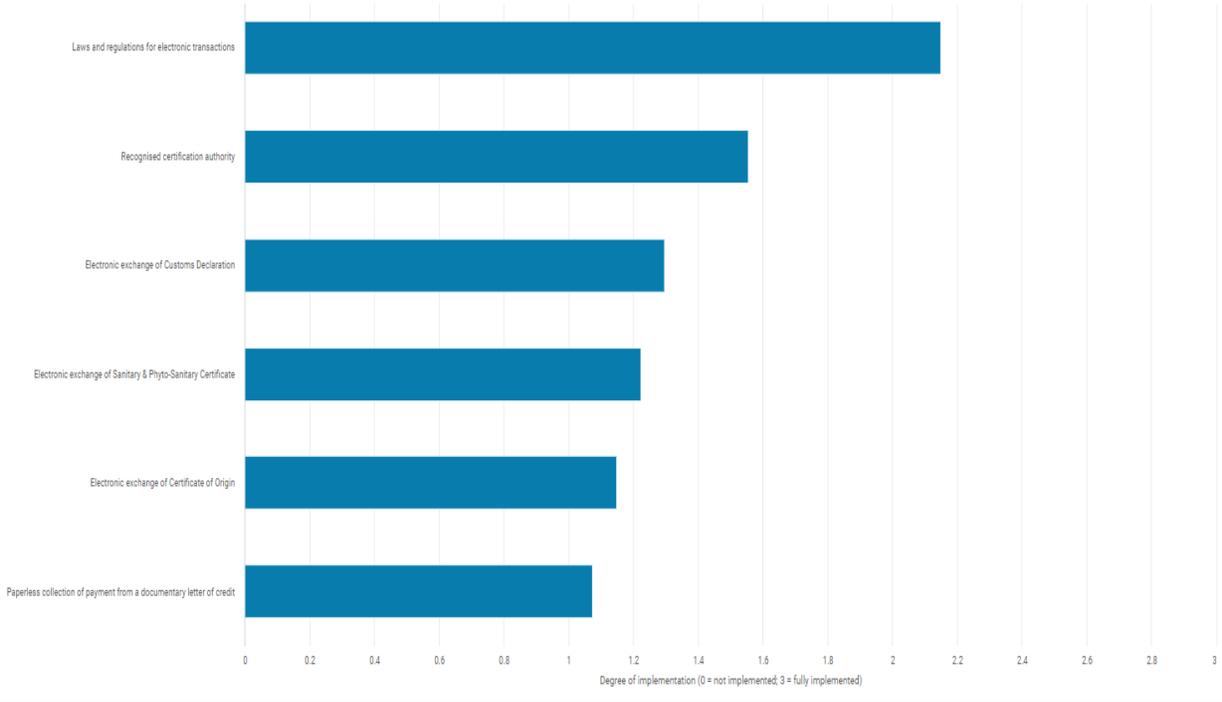
Figure 4: Cross-border e-trade measure implementation in individual countries, 2023



Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 2023

Laws and regulations for electronic transactions are partially implemented, while the 5 remaining measures are still at pilot stage of implementation (Figure 5). The degree of implementation of measures such as electronic exchange of Certificate of Origin and Paperless collection of payment from a documentary letter of credit is comparatively low.

Figure 5: Cross-border e-trade measure implementation in Asia, 2023

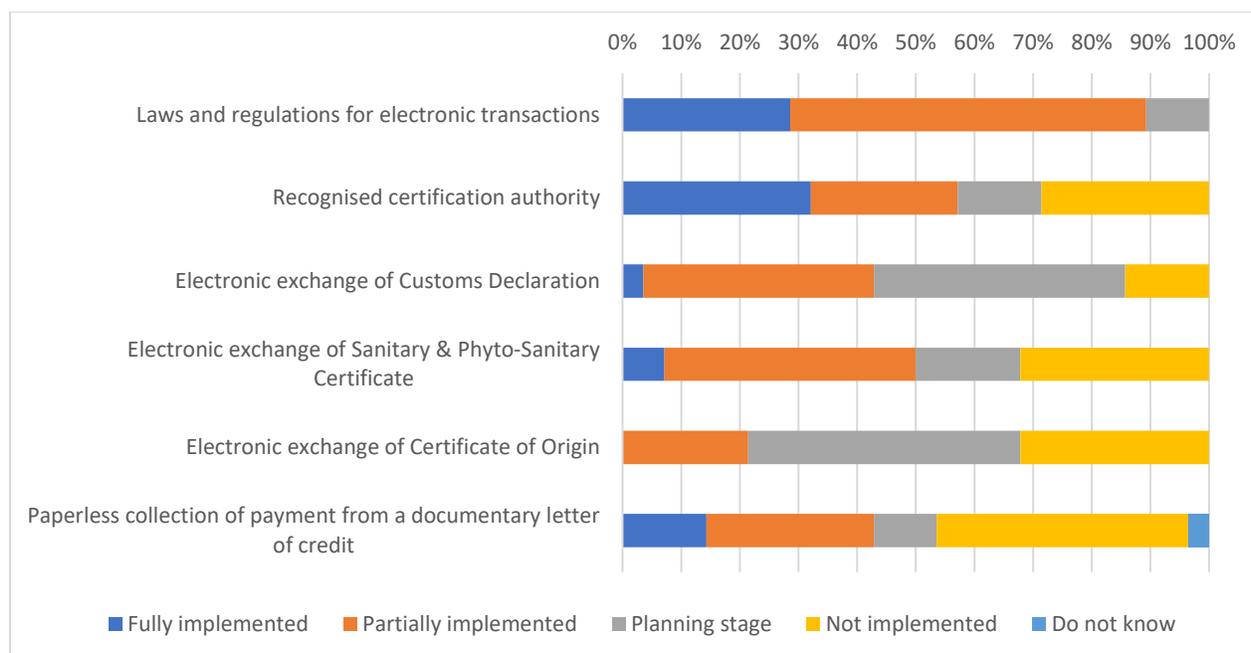


Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 2023

Progress has been made in establishing laws and regulations for electronic transactions. 100% of Asian countries surveyed have taken steps to establish legal and regulatory frameworks for electronic transactions, fully, partially or on planning stage, while full or partial implementation reach almost 90%, allowing legal recognition of electronic data and documents across borders (Figure 6). Next, Recognised certification authority and Electronic exchange of Customs Declaration have quite high implementation levels with respectively 70% of countries and 85% at least on planning stage. However, the implementation levels of other measures in the group are very low.

Measures such as Electronic exchange of Sanitary & Phyto-Sanitary Certificate, Electronic exchange of Certificate of Origin and Paperless collection of payment from a documentary letter of credit are still limited as over a third of surveyed Asian countries do not implement such measures.

Figure 6: State of implementation of cross-border e-trade measures in Asia, 2023



Source: UN Global Survey on Digital and Sustainable Trade Facilitation, 2023

2.1.2 Benefits of E-trade and Cross-border E-trade Measures

E-trade can significantly reduce trade cost and bring major savings and efficiency gains to international trade transactions. The Asia region is home to plenty of successful e-trade systems that contribute to significant economic gains. Many economies in the region have established single window systems that act as a single point of entry for lodging standardized information and documents to fulfill import or export-related regulatory requirements. The implementation of e-trade and electronic single window systems can help improve a country’s international trade-enabling environment, promoting more business activity, in turn fostering economic growth and development.

- Thailand has carried out a number of trade facilitation measures such as procedural reforms and customs modernization as a foundation for the development of Single Window, which lead to the elimination of redundant processes and reduced the number of days for export from 24 days in 2006 to 14 days in 2009 (ADB, 2022).

- Before TradeNet1 was introduced in Singapore, traders had to submit up to 21 different forms to 23 different agencies and it might take them 15-20 days to complete the process. Singapore’s traders now can complete two electronic forms through TradeNet and just need to wait 15 minutes for being granted with all the necessary approvals. According to the IBM Corporation, around US\$1 billion per year is saved for Singapore traders thanks to TradeNet in terms of internal productivity saving.

- In Hong Kong, China, traders similarly experienced delays until Tradelink Electronic Commerce Limited for providing with online trade administration services. Value-added services such as electronic billing and payments, security and message authentication are also provided by Tradelink, contributing to increased competitiveness of the local traders. A research figures out that an automated information transaction system has resulted in annual savings estimatedly at HK\$1.3 billion (UNNEXT, 2009).

- The total savings that the business community can enjoy from the utilization of the uTradeHub, an automated information transaction system in the Republic of Korea, is estimated at around \$1.82 billion. This includes savings from lower transmission costs due to the usage of electronic documents, increased productivity due to the automation of administrative tasks; and improved management, storage, and retrieval of information and documents due to the application of information technology.

- Also in the Republic of Korea, in 2006, the introduction of Single Window that connects various government agencies resulted in the highest usage rate (higher than 97%) among the similar systems in the world. With a Single Window system, South Korea has reduced time to fill out customs declarations by 30% to 40%. In addition, customs clearance just takes two minutes for exports which used to be over a day. For imports, it is less than two hours instead of 2 days like before.

- Recently, during the covid 19, many Asian countries have leveraged their engagement in e-trade in order to mitigate some of the consequences of the pandemic by developing national single windows, implementing SPS e-certificates or accepting Electronic Certificates of Origin. Those measures have contributed to more effective trade facilitation during the pandemic.

Box 1: Benefits of e-trade

There are several benefits of e-trade and cross-border e-trade. A move to e-trade can **cut down** transaction costs significantly. The estimates range between 15 percent and 45 percent in cost savings depending on the stage an economy has **implemented** e-trade trade measures at the border (United Nations 2014; UNCTAD 2020; Duval 2017; WTO 2015). **This translates** to billions of dollars **every year**. Time savings and **a decrease in hardcopies are other benefits**. Several researches have pointed out benefits for countries as follows:

- There will be an **increase in** revenue for both **business** sector (cost savings to be shared among trade participants) **as well as** government (increased revenue from increased trade). As trading **becomes more accessible**, more participants will engage in trade (United Nations 2017);
- Security, transparency, and supply chain efficiency **will all rise** (Ha and Lim 2014). Electronic information will be simpler to process and be more reliable. Paper-based trade is subject to human error, **causing delays and halting** the movement of goods (APEC 2010);
- There will **be a decrease in** delays in border clearance (United Nations 2014; APEC 2010). A **move** to e-trade can **streamline** procedures, **promote** transparency and accountability, and **enhance** governance (United Nations Economic Commission for Europe 2006);
- **Small and medium-sized enterprises will benefit from** cost savings and process simplification as they become more competitive since savings from e-trade are the highest for smaller shipments and perishable goods (OECD 2019c);
- Electronic trade is **more** suited to risk analysis, which helps stop fraud and noncompliance (United Nations Economic Commission for Europe 2006).
- Paperless trade **replaces capital for labor**, enhancing and more effectively utilizing skilled labor for productivity benefits (OECD 2019).
- A transformation to paperless **trade enhances data reliability** enabling more informed decisions (OECD 2019).

2.2. Trends of E-trade and Cross-border E-Trade in Asia

2.2.1 Increased Engagement in E-trade and Cross-border E-trade Measures across Asia Region in Response to COVID-19 Pandemic

According to the WTO forecasts, the reduction in global merchandise trade will be greater than the decrease in GDP, with estimated declines ranging from 12% to 32%, given the uncertainty about the duration and severity of COVID-19 and containment measures. As estimated up to a third of this reduction is attributed to the increase in trade costs brought

on by greater border controls and disruption in transport and logistics (WTO, 2020). Additionally, many measures have been implemented by several countries to reduce the spread of the pandemic, such as channelling traffic through fewer border crossings; performing border health checks; or, reintroducing border controls that had been lifted earlier.

In the challenging context, trade facilitation measures set out in the WTO Trade Facilitation Agreement (TFA) provide a strong foundation for dematerializing a substantial portion of the border process in order to ensure minimum physical interactions between Customs and other border officials and traders. E-trade measures such as digitizing and streamlining border processes increase processing speed while limiting person-to-person interactions.

Technology have been utilized to facilitate procedures that conventionally require physical interaction, such as inspections. Alternative procedures have been implemented by countries to check compliance remotely or electronically in light of COVID-19 lockdowns. For example, India has activated the use of visual technology programmes (video meetings) for personal hearings under the Customs Act, supplemented with document submissions through emails. In the area of TBT, the United Arab Emirates also allows video conferencing instead of onsite visits, for instance for the renewal of accreditation.

Several Asian economies (including Indonesia, Israel, Japan, the Philippines, Chinese Taipei, and the United Arab Emirates) are accepting scanned copies or electronic SPS certificates instead of originals (WTO, 2020). The United Arab Emirates has gone even beyond this by implementing alternative solutions such as electronic health certificates and agreeing to verification procedures of certificates in order to reduce the use of paper health certificates. In addition, a number of economies have already extended the e-trade facilitating measures temporarily implemented at the outbreak of the pandemic.

According to the OECD, many economies across Asia region already have Single Windows for Trade in place together with other digital mechanisms, restricting physical contact. After the outbreak of COVID-19, these countries have boosted their use by providing both border officials and traders with more targeted user manuals.

In order to deal with COVID-19's immediate impacts, the ASEAN members have improved the interoperability of national Single Windows systems and other e-trade systems. All ASEAN members have exchanged the e-ATIGA Form D through the ASEAN Single Window since December 2019. As an immediate subregional e-trade's response, the First Protocol to Amend the ATIGA was signed by ASEAN to carry out the ASEAN-wide Self-Certification (AWSC) Scheme. Since its implementation in September 2020, this AWSC has allowed certified exporters to declare the origin status of their goods themselves on permitted trade-related documents in order to be able to enjoy preferential

tariff treatment under the ATIGA. ASEAN members are accepting electronic signatures on CO Form D. Some members have also made available websites to verify the authenticity of e-COs to facilitate the use of scanned copies of the CO Form D.

With the digital support from ASYCUDA World (AW), customs officials, border agencies and traders are enabled to electronically submit and exchange data and documentation in order to speed up clearance while cutting down the need for in-person interaction. Many Asian economies have also modified how they use the AW system in response to the pandemic. Benefits of ASYCUDA platform are quite numerous as discussed in Box 2.

Officially launched in 2018 in Singapore, Networked Trade Platform (NTP) is part of government's efforts in driving industry-wide digital transformation (Box 3). By connecting to the Networked Trade Platform (NTP), businesses benefit from saving time and costs, and being digitally connected to trading partners and counterparties across the globe seamlessly. For instance, companies using NTP only need to enter information once for it to be received by all parties in the transaction, reducing the time and resources needed to complete trade deals. Indeed, estimates place the annual savings for companies in terms of manhours at SGD600 million. In facing with the covid-19 disease, the NTP have facilitated trade and customs activities.

According to report by ESCAP (2021), in more than 80% of the economies surveyed, digital platforms have been used to support remote working and inspections during the pandemic (Figure 7). Approximately 70% of the economies have put in place appropriate equipment and training programs for remote working. Nearly 80% of the economies have temporarily accepted e-documents instead of paper-based ones as required previously. However, it should also be noted those e-documents are accepted in most economies on a temporary basis, and guidelines for the temporary acceptance of e-documents in future crises have been introduced by less than half of the economies.

Box 2: The use of ASYCUDA World Platform keep Asia's trade and customs authorities stay the course amid covid-19

The Automated System for Customs Data (ASYCUDA) developed by UNCTAD is a computerized customs-management system that covers most foreign trade procedures. The system handles manifest and customs declarations, accounting procedures, and warehousing manifest and suspense procedures. It generates detailed information about foreign trade transactions that can be used for economic analysis and planning. ASYCUDA software can be used on multiple types of hardware in a client/server environment. Transaction and control data are stored in a relational database management system. It takes into account all international codes and standards relevant to customs processing as established by the ISO, WCO and UN. ASYCUDA can be configured to suit national characteristics such as: individual customs regimes; national tariffs; customs regulations and legislation; and after initial configuration remains fully adaptable to any changing customs regimes, regulations and legislation. It also provides for electronic data interchange between traders and customs administrations using UN/EDIFACT rules. The ASYCUDA implementation strategy has been developed to respond to the challenge represented by such a complex reform programme. It aims to deliver the full transfer of know-how to ensure national long-term sustainability.

The impact of ASYCUDA projects can be measured through the increase in customs revenue yield, availability of reliable trade statistics and reduction in average clearance time.

ASYCUDA have adopted in 102 countries and territories worldwide including a plenty of Asian economies.

In response to the Covid-19 pandemic, many Asian economies have modified how they use the AW system in response to the pandemic (ESCAP 2021). Thanks to ASYCUDA's electronic connectivity capabilities, customs and trade-related formalities can be handled remotely without direct contact. In Kazakhstan, the ASYCUDA-based ASTANA-1 system enables the processing of customs transactions and payments without the need for physical interventions. With ASTANA-1, the prompt automatic execution of all government's emergency measures is ensured at the national level, such as measures for medical protection equipment, and the implementation of tax incentives for the import of socially significant goods. Customs control and risk management for COVID-related measures are both fully functional. In Afghanistan, thanks to ASYCUDA programme, 33,370 customs declarations were made by UN agencies and 984 by humanitarian NGOs. In Bangladesh, the second half of 2022 witnessed an 11% increase in customs income compared to the same period in 2021. In Cambodia, customs revenue collected increased by 17% from 2021 to 2022. In Sri Lanka, 1,178 permit requests to trade endangered species were granted by eCITES in 2022. Annual approval rates grew by 19% from 2021 to 2022. The average permit processing time dropped from 120 hours in 2020 to 27 hours in 2022.

Source: ASYCUDA website, <https://asycuda.org/en/programme>

Box 3: Singapore’s Networked Trade Platform

The Networked Trade Platform (NTP) is a one-stop information management platform that offers a convenient, secure and seamless way of managing trade documents. It also includes networking features for local businesses to link up with local and foreign partners as well as share data and come up with new insights and services together.

Specifically, the NTP helps businesses to:

- Innovate new services and applications based on market needs. Since the NTP is developed on an open architecture, third-party solution providers or IT developers can easily access toolkits and data to develop innovative solutions on top of this framework.
- Share data across borders securely, giving rise to potentially exciting new insights for the industry.
- Digitisation of documents quickly and securely, helping to cut costs and streamline processes.

Under the auspice of the upgraded China-Singapore Free Trade Agreement, Singapore Customs and GACC had agreed to establish an EODES to allow the electronic exchange of Preferential Certificate of Origin (PCO) and electronic Certificate of Non-Manipulation (CNM) between Singapore and China. This eliminates the need for hardcopy PCO or CNM to be despatched overseas, enabling companies to enjoy savings in cost and time. The PCO and CNM can be electronically transmitted to the General Administration of Customs of the People’s Republic of China (GACC) through the Networked Trade Platform (NTP) from 1 November 2019.

Customs is working on the exchange of eSPS certificates with Australia and New Zealand through the NTP under the Digital Economy Agreement with Australia. The direct exchange between regulators ensures authenticity and facilitates agri-trade between Singapore, Australia and New Zealand. Traders enjoy a more efficient border clearance for their imports/exports as the e-Certificates are transmitted quickly via the NTP.

Source: NTP website, <https://www.ntp.gov.sg/public/introduction-to-ntp---overview>

Figure 7: Digital trade facilitation



Source: Survey on Trade Facilitation in Times of Crisis and Pandemic, ESCAP, 2021

It remains uncertain whether the use of digital or remote processes will continue after the pandemic, based on experiences with their use. A number of economies have already extended the implementation period of some of the notified temporary measures.

Border authorities' tech-savvy response to the pandemic must go beyond a quick fix (ESCAP, 2021). The governments should be involved in turning temporary actions into long-term measures. Indeed, the digital trend should outline the route towards economic resilience for handling a future crisis. We have learned that in order to provide a coordinated crisis response and to maximize the advantages of e-services across the regions, interoperability among trading partners at the regional and worldwide level needs to be further enhanced.

2.2.2 Increased Application of Advanced Technologies in Trade and Cross-border Trade Facilitation

According to the Study Report on Disruptive Technologies (WCO, 2019), a variety of cutting-edge technologies have substantially impacted cross-border trade and customs procedures. These technologies will continue to benefit the work of customs authorities in the future and include developments in blockchain, IoT, big data analytics, AI and machine learning, biometrics, drones, virtual and augmented reality, and 3-D printing.

Most customs administrations are now interested in blockchain technology. In the Asia region, blockchain technology is utilized for the exchange of customs declarations and documents as well as logistics-related information to track and trace goods and transport units throughout global supply chains (WCO and WTO, 2022).

In order to facilitate cross-border trade between Australia and Singapore, a blockchain Proof of Concept (POC) was implemented under the Australia–Singapore Digital Economy Agreement to achieve document interoperability for cross-border e-trade, making cross-border trade simpler between the two countries. The system allows Australia to issue high integrity digital trade documents that can be instantly authenticated, provenance traced, and digitally processed. QR-codes embedded with unique proofs are added into electronic Certificates of Origin (COO), allowing for instant verification for document authenticity and integrity when scanned or machine-read. A major accomplishment of the trial is the acceptance of verifiable COOs by Singapore Customs.

In trade between China and Singapore, both sides' customs authorities are creating an international trade single window blockchain for the exchange of information on clearance, and logistics and cargo status in order to enhance the port business environment and trade facilitation.

In Hong Kong, China, the customs authorities are carrying out a PoC study in applying blockchain to a licence management system.

In Indonesia, the customs authority aims to utilize blockchain and the TradeLens platform to streamline the exchange of goods, automate documentation and increase cooperation and communication (Box 4). The platform links supply chain partners (e.g. cargo owners, carriers, freight forwarders, logistics providers, ports and terminals, customs authorities) to a secure audit trail of millions of shipment events and documents with authorized parties.

In Malaysia, a pilot project for Authorised Economic Operators (AOE) is being carried out in cooperation with the national R&D centre MIMOS, under the Ministry of Science, Technology and Innovation, to create a substitute for the present AEO service provided by the Royal Malaysian Customs Department. The new blockchain service will guarantee a high degree of system compliance while boosting supply chain efficiency for businesses participating in the AEO programme, strengthening their competitiveness.

As for application of IoT, a number of IoT projects have been conducted on using e-seals, QR codes and X-ray scanners. In Hong Kong, China, since 2016, the Single E-lock Scheme (SELS) has linked the Intermodal Transshipment Facilitation Scheme of the Hong Kong Customs and Excise Department with the Speedy Customs Clearance of the mainland customs authority in order to build a "green lane" for facilitating logistics flow through seamless clearance service. Both customs authorities have accredited to use one single e-lock and GPS technology in the SELS under the principle of one single e-lock under "Across the Boundary with One Single E-lock under Separate Monitoring". GPS equipment is used for real-time tracking the movement of vehicle to ensure the security of transshipment cargo in Hong Kong, China.

Box 4: Asian countries joined TradeLens platform to support information sharing and transparency, and spur industry-wide innovation

Source: TradeLens website, <https://www.tradelens.com>

TradeLens is an open and neutral platform jointly developed by Maersk and IBM. It brings together data from the entire global supply chain ecosystem including shippers and cargo owners, 3PLs and freight forwarders, intermodal operators, customs and government authorities, ports and terminals, and several ocean carriers. This data allows TradeLens and its network partners to replace manual and paper-based documents with blockchain-enabled digital solutions. It also allows the network partners to provide their customers with ability to monitor the entire journey for their cargo from origin to destination. Parties involved in TradeLens can interact more efficiently through real-time access to shipping data and shipping documents, including IoT and sensor data ranging from temperature control to container weight.

Other members of TradeLens' group include the customs agencies from various Asian countries. Since 2018, as part of its blockchain pilot program, Saudi Customs, with its IT partner, Tabadul, has overseen the link of TradeLens with FASAH, Saudi Arabia's national platform which connects all government and private entities involved in cross border trade. The pilot has aimed to ensure immutability, traceability, reduced reconciliation, auditability, and compliance.

In middle of 2019, Azerbaijan Customs joined TradeLens. With TradeLens in place, Azerbaijan is able to receive earlier and more complete insight regarding the contents of containers and parties involved in the shipments moving across the TradeLens ecosystem. This enables improved risk assessment of transports in and out of the country, expediting clearance processes, reducing traders' compliance costs, and enhancing overall trade facilitation across the region.

In August 2019, Thailand has also joined TradeLens as an initiative to modernize trade and support Thailand 4.0 Policy. TradeLens is expected to provide Thailand's customs authorities with an automatic and immutable tracking tool, which will lead to a more secure, transparent, efficient and simpler workflow.

In the end of 2019, Jordan Customs also announced the launching of a pilot project for handling information exchanges between the different actors in the supply chain through the TradeLens system.

In 2020, The Indonesia Customs and Excise Department have started the use of TradeLens platform in Indonesia. Customs authorities are able to receive shipping data as soon as containers leave the port of origin. The platform also gives them more time to prepare for receiving shipments, thereby enabling more efficient and thorough fraud and forgery inspections as well as more consistent and transparent revenue collection processes.

Also in 2020, Royal Malaysian Customs Department announced a collaboration to use TradeLens platform in Malaysia to modernise the shipping processes, create greater transparency and enhance customer satisfaction.

At the end of 2021, by joining TradeLens, Pakistan Single Window is supporting Customs in modernizing its import-export documentation through a safe & secure, paperless, digital solution to strengthen its controls against trade-based money laundering.

In Indonesia, in order to strengthen its performance to facilitate the goods flow, the Customs Office of Tanjung Priok has electronically sealed containers to oversee container transfers and used GPS monitor the shipment history in real time.

In Malaysia, smartCargo uses new cargo scanners for monitoring the container. The new equipment consisting of a radiation portal monitor and AI and optical character recognition technology connected to the customs system. The country also has implemented a project for using embedded certificate authority in the authentication of a new tax stamp. When the QR code is scanned, the authenticity of the tax stamp is verified, reducing the risk of counterfeited tax stamps.

In Singapore, e-seals are used to promote the traceability and safety of container movements beyond the checkpoints. The country has an integrated command centre system for analysing X-ray images that are sent from various scanning stations.

In Timor-Leste, ASYCUDAWorld Single Administrative Document has used barcodes commonly for the manifest, goods declaration, payments, container pass, and the release and exit of goods from controlled customs areas.

In the United Arab Emirates, a number of IoT initiatives are carried out, such as X-raying cargo on the move and a container risk tracking platform. The Dubai Customs have implemented marine traffic system which uses IoT to collect data transmitted via an automatic identification system of receiving stations that form a marine traffic network.

3. E-commerce Chapter and related Paperless Trade Provisions in FTAs/RTAs

As mentioned in the Part 1 of this Paper, e-Trade is approached as electronic commerce (e-commerce), which means transactions are conducted fully or partially by electronic means. Under the context of FTA/RTA, the Paper much focuses on cross-border e-trade to stimulate the benefits to the Parties. In this Paper, the expert will specialize in the FTA/RTAs that include ASEAN Member States as Parties and ASEAN FTA.

Hereunder is brief of provisions in three FTAs/RTAs with the participation of full AMS. From the below table, it is found that, ASEAN seem to pay more attention to provisions which help create a supportive infrastructure for cross-border e-trade. Some of new elements such as E-invoicing, Digital Trade Standards, Open Government Data were agreed in AANZFTA upgraded. This shows the determination and positive support of ASEAN to facilitate e-commerce and push cross-border e-trade through FTAs.

Table 2: E-commerce Provisions in ASEAN's FTAs

Provisions	RCEP	ASEAN	AANZFTA (upgraded)
Customs Duties	v	x	v
Non discriminatory treatment of digital products	x	x	x
Online consumer protection	v	v	v
Online personal information Protection	v	v	v
Paperless Trading	v	v	v
Cross-border transfer of information by electronic means	v	v	v
Location of Computing Facilities	v	v	v
Unsolicited Commercial Electronic Messages	v	v	v
Source Code	x	x	x
Electronic Authentication and Electronic Signatures	v	v	v
E-payment	x	v	v
E-logistics	x	v	x
E-invoicing	x	x	v
Digital Trade Standards	x	x	v
Open Government Data	x	x	v

In the next part, the Paper will focus on main groups of provisions which play a key role in facilitating cross-border e-trade in selected FTAs/RTAs. The main groups are listed below:

- Group 1 (Faciliate cross-border e-trade): includes provision on paperless trading, Electronic Authentication and Electronic Signatures, customs duties, ect. which directly faciliate cross-border transaction;
- Group 2 (Create safe environment for cross-border e-trade): includes provisions on Online Consumer Protection, Online Personal Information Protection, etc. which target to create trust and secured environment for both consumers and businesses;
- Group 3 (Cross-border Data): includes provisions on Location of Computing Facilities, Cross-border Transfer of Information by Electronic Means which are key articles to enable data transfer for cross-border e-trade;
- Gorup 4 (supporting elements): includes new provisions such as e-payment, logistics, digital trade standards, etc. which helps cross-border e-trade more efficiently.

3.1. ASEAN Agreement on Electronic Commerce

The ASEAN Agreement on Electronic Commerce is a Free Trade Agreement signed in Ha Noi, Vietnam on January, 2019. The Agreement encompasses 19 Articles, and 6 Sub-Articles, with the primary objectives are to:

- Facilitate cross-border e-commerce transactions in the ASEAN region;
- Create an online environment of trust and confidence in the use of e-commerce; and
- Deepen cooperation among AMS to further develop and intensify the use of e-commerce to drive inclusive growth and narrow development gaps.

Overall, facilitate cross-border e-commerce is of paramount importance in the Agreement, and it is consolidated in the following sub-articles:

3.1.1. Facilitate cross-border e-trade

(i) Paperless Trading

Within this Agreement, all Member States are mandated to expand the use of electronic versions of trade administration documents. Additionally, they are required to facilitate the exchange of electronic documents in accordance with the principles set forth in the ASEAN Agreement on Customs, signed in 2012.

This article demonstrates a strong commitment to transitioning from traditional paper-based trade processes to electronic documentation. By doing so, it promotes increased efficiency and cost savings by significantly reducing the amount of time spent on administrative tasks, which usually include physical handling, transportation, and storage of paper documents. Furthermore, the adaptation of electronic documents also enables faster processing, thereby advancing the overall efficiency of trade in the ASEAN region.

(ii) Electronic Authentication and Electronic Signatures

Under this article, no Member States are allowed to dispute the legal validity of a signature solely on the basis of its electronic form. In general, the content in this sub-article shares commonalities with the ASEAN – Australia – New Zealand Free Trade Agreement (AANZFTA). Additionally, the ASEAN Agreement allows a broader margin for each individual participant to comply with domestic laws and regulations.

This way, all countries can experience a simplified process of document signing, eliminating the need for physical transportation and being presence for signature. An additional margin included in the articles will ensure that all AMS can adapt to their internal legal frameworks while still ensuring the interoperability within the ASEAN region.

3.1.2. Create safe environment for cross-border e-trade

(i) Online Consumer Protection

In order to build consumer trust and confidence in online transaction, this article stipulates that Each Member State must provide an equal level of consumer protection in e-commerce as in any other form of commerce. By acknowledging the significance of adopting and maintaining transparent and effective consumer protection measures, the AMS stresses the commitment to safeguard the rights and interests of online consumers. In turn, it sets foundation for consumer trust and confidence when engaging in online transactions.

The article also encourages the collaboration between authorities in terms of consumer protection, which further foster information exchange, effective enforcement, and harmonization within the ASEAN region. By setting a foundation for robust consumer protection measures, the agreement overall cultivates an environment that promotes secure and fair online transactions.

(ii) Online Personal Information Protection

In this article, all Member States are required to adopt or maintain measures to protect the personal information of e-commerce users. In conjunction with the previous article on Online Consumer Protection, this section also seeks strong commitment from all Parties, which aims to enhance consumer trust and confidence, protect their information from damages, sabotages, and other kinds of unauthorized access. By doing this, consumers are willing to engage in e-commerce activities, especially when they feel that their information is adequately protected. In turn, the agreement boosts the number of online transactions and the overall digital economic growth.

Recognizing the lack of enforcement capacities in some Member States, Member States, the article allows for different timeline for implementation. More specifically, all States agreed that one can enact laws or regulations at their own pace, before being obliged by the provision. This flexibility ensures the capacity of all States once they are ready to abide by the article. Furthermore, the article consolidates the alignment with international standards by highlighting the importance of existing international principles, guidelines, and criteria of relevant international bodies. Consequently, the agreement helps ensure the interoperability of ASEAN Member States with other nations on personal information protection matter.

3.1.3. Cross-border data

(i) Location of Computing Facilities

All Member States respect for national regulations, recognizing that each State may have its own regulatory requirements regarding the use of computing facilities. This provision acknowledges the sovereignty of the State which needs to ensure the security

and confidentiality of communications. All States also agreed on non-requirement for local computing facilities, meaning that any mandatory requirements that compel businesses to establish physical computing facilities must be eliminated.

By strictly removing the obligation to establish local computing facilities, the article aims to enhance a more efficient cross-border operation across the ASEAN region, eliminating any physical hindrances. This, in turn, minimizes operational costs and increases agility is increased in conducting online transactions. It is important to note that this provision also does not apply to financial services and financial services suppliers, acknowledging the unique of financial services and the need for a specific framework in this sector.

(ii) Cross-border Transfer of Information by Electronic Means

The provision highlights the significance of allowing information to flow across border through electronic means, provided that such information is for business purposes. By recognizing the importance of information exchange, AMS demonstrate their commitment to promote digital trade and enhance economic growth across the region. To achieve this, all states agree to work towards eliminating or minimizing any barriers related to cross-border information transfer, ensuring a smooth and seamless flow. Consequently, international enterprises are able to reach a wider customer base, enhancing their market access opportunities.

While encouraging information flows, all Member States acknowledge the need to safeguard the security and confidentiality of information. Specifically, the sub-article recognizes that legitimate public policy objectives might impose certain limitations on the cross-border transfer of information. This ensures that each Member State can still implement necessary measures to protect such essential interests, while maintaining a balance with the facilitation of e-commerce. Understanding the sensitivity of data, all Member States managed to reach a delicate equilibrium between cross-border data flow and data protection.

Finally, the provision also does not apply to financial services and financial services suppliers, acknowledging the unique of financial services and the need for a specific framework in this sector.

3.1.4. Supporting elements for cross-border e-trade

(i) Electronic Payment

Overall, the content pertaining to Electronic Payment is relatively new in the meantime. Therefore, the text within the 2019 ASEAN Agreement exhibits only soft commitment, which does not trigger an obligation to widen the market using electronic payment. All articles under this commitment emphasize the need to comply with each

State's internal regulations, and its level of readiness on capacity and infrastructure. Nevertheless, all States recognize the importance of safe and secure, efficient, and interoperable e-payment systems, thus encouraging the use of these systems to facilitate e-commerce. The establishment of electronic payment in the ASEAN region would provide a foundation for secure and convenient payment options to enterprises in Member States, where participants can engage in digital trade more directly without the need for physical involvement.

(ii) e-Logistics

Similar to the sub-article on electronic payment, the provision on electronic payment is a new addition in the Agreement, prompting caution among all Member States. Accordingly, they agreed on bringing forward softest commitment possible in this regard.

All Member States recognize the importance of efficient cross-border logistics, which encompasses streamlined logistics process such as transportation, custom clearance, and documentation. These elements play a crucial role in reducing cross-border trade barriers and improving the overall supply chain efficiency.

All States also endeavour to lower the cost and improve the speed and reliability of supply chains. Each Member State can reduce the cost by administrative tasks, simplifying customs procedure, promoting the cooperation between stakeholders, etc. Meanwhile, strengthening coordination among logistics providers, customs authorities and other relevant stakeholders could lead to faster delivery time, reduce delays, and increase customer satisfaction. Overall, all States recognize the importance of efficient cross-border logistics.

3.2. Regional Comprehensive Economic Partnership (RCEP)

The Regional Comprehensive Economic Partnership is a free trade agreement that brings together ten member states of Association of Southeast Asian Nations with 6 other states that ASEAN has signed FTAs with including China, South Korea, Japan, India, Australia and New Zealand. The negotiation for RCEP commenced on September 9th 2013, and essentially finished documenting by November 2019 (with the exception of India, who announced its decision to opt out).

Embedded within the RCEP Agreement is a chapter dedicated to "Electronic Commerce", comprising five sections with a total of 17 articles. Overall, RCEP is widely acknowledged as a more advanced compared to the aforementioned 2019 ASEAN Agreement on Electronic Commerce, with the primary objectives are to:

- Promote electronic commerce among the Parties and the wider use of electronic commerce globally;

- Establish an environment of trust and confidence in the utilization of electronic commerce; and
- Enhance cooperation among the Parties regarding development of electronic commerce.

The Agreement sets out the following articles that are vital to facilitate paperless trade in the ASEAN region:

3.2.1. Facilitate cross-border e-trade

(i) Paperless Trading

Overall, the article on Paperless Trading aims to officially recognize the legal validity of electronic documents. It calls upon all States to accept trade administration documents submitted electronically as legally equivalent to the paper counterparts, while ensuring public accessibility to electronic documents. Also, all States must work to implement initiatives that foster the use of paperless trading, taking into consideration the methods agreed by international organization, including World Customs Organization.

By implementing these, all RCEP nations aim to adopt electronic means for cross-border transaction, thereby reducing the hindrances associated with traditional paper-based methods. Additionally, the collaboration within RCEP members can give rise to a supportive international environment, where the electronic trade administration practices are adopted widely.

(ii) Electronic Authentication and Electronic Signature

In general, the content in this article is parallel to the aforementioned 2019 ASEAN Agreement on Electronic Commerce, still allowing a broader margin for low-capacity individual participant. Same as before, no States can deny the legal validity of a signature solely on the grounds of its electronic form, unless provided for under its laws and regulations. Regarding electronic authentication, RCEP explicitly emphasizes the importance of taking into consideration international norms. From that, all States should:

- Permit participants in electronic transactions to determine appropriate electronic authentication technologies and implementation models;
- Not limit the recognition of electronic authentication technologies and implementation model; and
- Permit participants to prove that their electronic transactions comply with its laws and regulations.

Moreover, all Members shall encourage the use of interoperable electronic authentication. Overall, this provision seeks to establish the legal recognition of electronic

signatures, provide flexibilities and opportunities for participants, encourage interoperability while ensuring the advancements in electronic transactions.

(iii) Custom Duties

A notable addition in the RCEP is the inclusion of the content on Custom Duties. Each RCEP country is mandated to refrain from imposing custom duties on electronic transmissions between the Parties. By doing this, the Agreement promotes the unhindered flow of digital goods and services throughout the region, eliminating the imposition of additional burden of taxes. Each State's flexibility is also safeguarded, allowing for potential adjustment in accordance with any further outcomes in the WTO Ministerial Decisions within the framework of the Work Programme on Electronic Commerce. As a consequence, this provision allows for future adaptations and alignments with international standards, rules, and agreements.

3.2.2. Create a safe environment for cross-border e-trade

(i) Online Consumer Protection

Compared to the 2019 ASEAN Agreement, the RCEP exhibit more advanced and detailed provisions, presenting a higher level of commitment among the nations. Beyond the mere protections for consumers to using e-commerce, the RCEP requires each State to adopt or maintain laws or regulations to safeguard consumers against fraudulent and deceptive practices that may inflict harm upon them. Notably, a novel requirement stipulates that all Member States are mandated to publish information pertaining to consumer protection means to e-commerce users, including how consumers can pursue remedies and how business can comply with any legal requirements. This transparency initiative serves to promote informed decision-making among, foster a better understanding of their roles and obligations. Overall, this additional provision contributes to the cultivation of a more accountable and responsible digital marketplace within RCEP nations.

Together with that, other contents outlined aim to bolster consumer confidence and trust, contributing to a positive and sustainable online shopping experience. Especially, by underscoring the importance of cooperation among the respective competent authorities, RCEP countries hope to address most sensitive consumer issues, exchange practices, and strategies. This cooperative approach is of paramount importance given the diverse enforcement capacities among RCEP nations, ensuring that the low-capacity ones are not left behind.

(ii) Online Personal Information Protection

In contrast to the 2019 ASEAN Agreement, the RCEP entails a more stringent commitment with more specific requirements regarding the protection of online personal information. While the 2019 ASEAN Agreement only mandates each State to adopt

measures for safeguarding the personal information of user, the RCEP obliged each State to adopt or maintain a comprehensive legal framework. In formulating this framework, each Party is expected consider international standards, principles, guidelines, and criteria of relevant international organisations or bodies.

Additionally, the RCEP demands each Party to publish information concerning the personal information protection to e-commerce users, including how individuals can pursue remedies and how business can comply with any legal requirements. Similar to the article on Online Consumer Protection, this transparency requirement enhances awareness and empowers individuals and businesses to comprehend their rights and obligations with respect to Online Personal Information.

Another condition that the RCEP put forth to promote transparency and accountability is that all States shall encourage juridical persons to publish their policies and procedures online, including on the Internet. In turn, it contributes to consumer trust in online transactions.

Lastly, the Parties agree to cooperate, to the best of their abilities, to protect personal information transferred between participating nations. The provision recognizes the nature of cross-border e-commerce and the need for collaborative efforts to ensure the privacy and mitigate risks associated with international data transfers.

3.2.3. Cross-border data

(i) Location of Computing Facilities

The article on Location of Computing Facilities bears similarities to the 2019 ASEAN Agreement on Electronic Commerce. Under this article, no Party can require a covered person to use or locate computing facilities within that Party's territory as a condition for conducting business in that Party's territory. However, the Agreement still gives room for inconsistencies with the provisions, if to achieve a legitimate public policy or to protect essential security interests.

Overall, the objective of the article is to facilitate cross-border business operations by reducing any unnecessary barriers while respecting a Party's autonomy to implement measures aligned with their own interests.

(ii) Cross-border Transfer of Information by Electronic Means

With a minor divergence from the 2019 ASEAN Agreement, the RCEP accentuates the regulatory requirement of each Member State concerning the transfer of information by electronic means. This content allows for flexibility in addressing national concerns related to data protection, privacy, or other relevant issues. Consequently, Member States may deviate from the provisions in case of a legitimate public policy or the protection of its essential security interests. Therefore, the article ensures the benefit and flexibility of

each state towards its domestic policies while still enhancing the efficiency and competitiveness of RCEP economies.

Moreover, no state is allowed to impede cross-border transfer of information by electronic means if such activity is for the business purpose. This provision promotes a seamless flow of data across borders, which is essential for conducting international trade and foster a conducive environment for paperless trade. Overall, the article supports the growth of digital trade, accommodates considerations for domestic regulations, and strikes a balance between free data flow and internal regulations within the RCEP region.

3.3. ASEAN – Australia – New Zealand Free Trade Agreement (AANZFTA) (upgraded)

The ASEAN – Australia – New Zealand Free Trade Agreement is a comprehensive and single-undertaking free trade agreement that opens and creates new opportunities for 12 countries, including 10 Member States in ASEAN, Australia and New Zealand. First being negotiated in 2005, the Agreement’s legal text was finalized in 2008 before being signed in Thailand the following year.

However, recognizing dynamic nature of the global landscape, the Agreement is currently undergoing upgrades to ensure its compatibility with its objectives and to deal with the emerging challenges in the future. The upgraded AANZFTA negotiations came into place when trade relations between ASEAN Member States, Australia and New Zealand remained robust despite the global impacts of Covid-19 pandemic and the socio-political tensions in the meantime. The upgrade aims to uphold high and appropriate standards for businesses, leveraging effective contribution to post-pandemic recovery efforts and valuable response to unforeseen global circumstances.

Although the original Agreement included a chapter on Electronic Commerce when signed in 2009, the provisions were relatively unsophisticated and lacked a high-level binding mechanism. But given the powerful development in AI and electronic commerce, the article needed adapt to the evolving digital landscape. Being widely known as the “upgraded version”, the chapter on “Electronic Commerce” is in fact adjusted profoundly, with more exhaustive requirements at a higher level of commitment. The AANZFTA stands as one of the most advanced FTAs in which ASEAN participates. While many provisions in accordance with the RCEP, the AANZFTA has indeed upgraded certain provision to cater the overall benefits of AANZFTA Member States. The primary objectives of the chapter are now align with other FTAs, and are as follows:

- Promotion of electronic commerce among the Parties and the wider use of electronic commerce globally;

- Contribution of an environment characterized by trust and confidence in the use of electronic commerce; and

- Enhancement of cooperation among the Parties regarding the development of electronic commerce.

The Agreement specifies crucial articles that facilitate paperless and cross-border trade in the AANZFTA region:

3.3.1. Facilitate cross-border e-trade

(i) Paperless Trading

Overall, the article on Paperless Trading closely resembles its counterpart in the RCEP, underscoring the commitment of AANZFTA States to embrace paperless trading and digital solutions. Each State must strive towards to accept documents submitted electronically as the legal equivalent of the paper version and make those documents available to the public in electronic form. Furthermore, AANZFTA Members are also encouraged to cooperate in global forum to enhance the acceptance of electronic version of trade administration documents.

(ii) Electronic Authentication and Electronic Signature

This article within the AANZFTA is also in the same vein as in the RCEP. The article establishes a framework for the recognition of electronic authentication and electronic signature. All States involved agree on allowing individual autonomy in conducting electronic transactions while taking into account standards requirements and encouraging the use of interoperable electronic authentication. Overall, the Parties aspire to facilitate secure and reliable electronic transactions within the AANZFTA region.

(iii) Customs Duties

Identical to the RCEP, the AANZFTA also included a provision on Customs Duties compared to the 2019 ASEAN Agreement. It affirms that no custom duties will be levied on electronic transmissions between the Parties. Besides, the Agreement allows for future adjustment depending on any subsequent WTO Ministerial Decisions outcomes.

3.3.2. Create a safe environment for cross-border e-trade

(i) Online Consumer Protection

Bearing similarities to other FTAs, the AANZFTA incorporates provisions mandating States to adopt or maintain law or regulations that protect consumers against fraudulent and misleading practices when using electronic commerce. However, a novel advancement exhibited by the AANZFTA is its emphasis on the promotion of the consumer redress mechanism. The Parties commit to raise awareness of, and access

to, consumer redress mechanisms, including those for cross-border transactions. By allowing access to effective remedies, the Agreement hopes to further bolster trust and confidence of individuals and companies when engaging in paperless transactions.

Another noteworthy aspect is its focus on dispute resolution. Here, all States should share best practices and collaborate on alternative dispute resolution where appropriate, thus enhancing the efficiency and transparency of resolving disputes in the realm of e-commerce.

(ii) Online Personal Information Protection

In summary, the article on Online Personal Information Protection highlights the Parties' dedication to protect online personal information, specifically through the adoption of legal framework, consideration of international standards, and the publish of other information that advocates individuals and businesses.

The AANZFTA put forth another dimension to consider, that is, the promotion of compatibility and interoperability. What means here is that the Agreement recognizes the discrepancies in legal approaches undertaken by States to protect personal information. Nevertheless, all States are encouraged to develop and adopt mechanisms that make these different approaches in different countries work well together. This is important particularly in cross-border transactions, ensuring that information is still being transferred seamlessly and securely between countries. A gap between internal laws and regulation among AANZFTA Member States might pose certain difficulties.

3.3.3. Cross-border data

(i) Location of Computing Facilities and Cross-border Transfer of Information by Electronic Means

Overall, these two provisions are equivalent to both the RCEP and 2019 ASEAN Agreement on Electronic Commerce mentioned above. Under the article on Location of Computing Facilities, using and locating computing facilities in a Party's territory should not be contingent for conducting business in that country. Meanwhile, a Party cannot prevent cross-border transfer of information by electronic means if for business purpose. Inconsistencies might only be permitted if it is necessary to achieve a legitimate public policy objective or to protect the essential security interests.

3.3.4. Other elements to facilitate cross-border e-trade

(i) Electronic Invoicing

Finally, an entirely new article to facilitate paperless trading that the AANZFTA included is on Electronic Invoicing. Complementing the provisions on Electronic Authentication and Electronic Signature, the inclusion of e-Invoicing possesses its

potential to enhance efficiency, accuracy, and reliability in paperless transaction. Knowing this is a new domain, the article only brings out introductory contents at a low level of commitment. The provision encourages Parties to develop measures related to electronic invoicing while taking into consideration international standards. Additionally, Parties are urged to cooperate on initiatives which promote, encourage, support, and facilitate the adoption of e-invoicing.

(ii) Digital Trade Standards

The importance of this article is the recognising the benefits of e-invoicing for cross-border e-trade facilitation. It encourages Parties to build up and implement e-invoicing systems as quickly as possible. Furthermore, Parties should take into account international standards while developing their e-invoicing systems with the aims to have an aligned framework.

(iii) Open Government Data

Parties recognise the importance and benefits of open government data for businesses, especially for MSMEs and also individuals. It is encouraged that open format or machine-readable format which allows open government data to be used, reused, retrieved, distributed should be used to ensure the maximisation of its utilization.

3.4. DEA Singapore and Australia

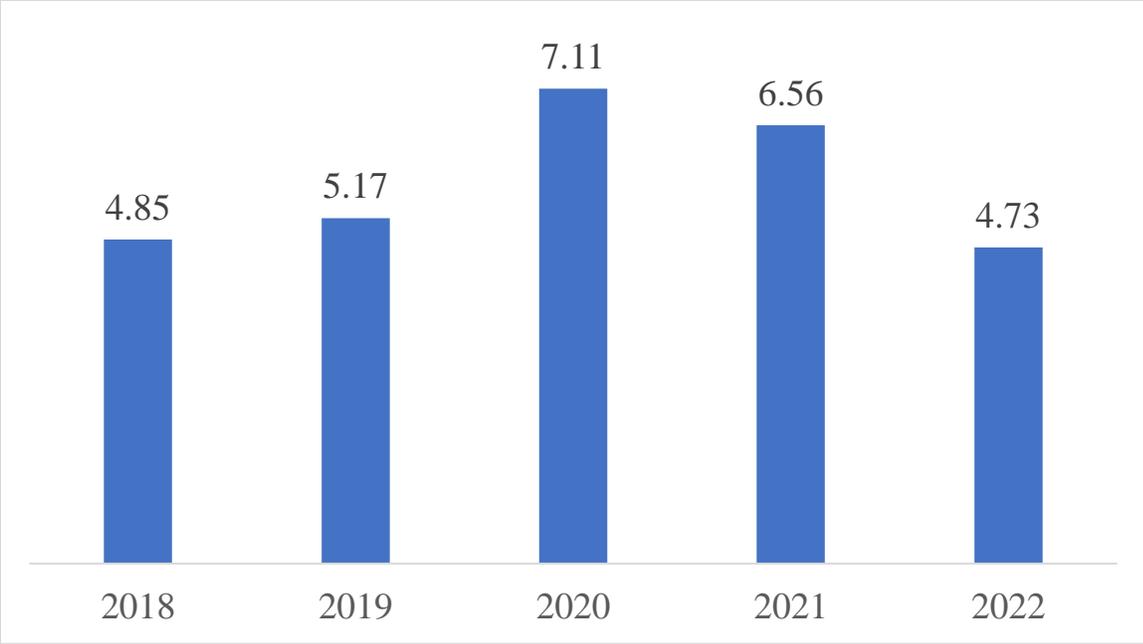
3.4.1. Bilateral trade between Singapore and Australia

According to the United Nations comtrade database on international trade, the turnover of export from Australia to Singapore was 4.73 Billion USD in 2022, decreasing from 6.5 billion USD in 2021.¹ The three biggest commodity groups of export are Pearls, precious stones, metals, coins (2.2 billion USD); Mineral fuels, oils, distillation products (364.9 million USD) and Animal, vegetable fats and oils, cleavage products (281.1 million USD).

The turnover of export from Australia to Singapore (billion US\$)

¹

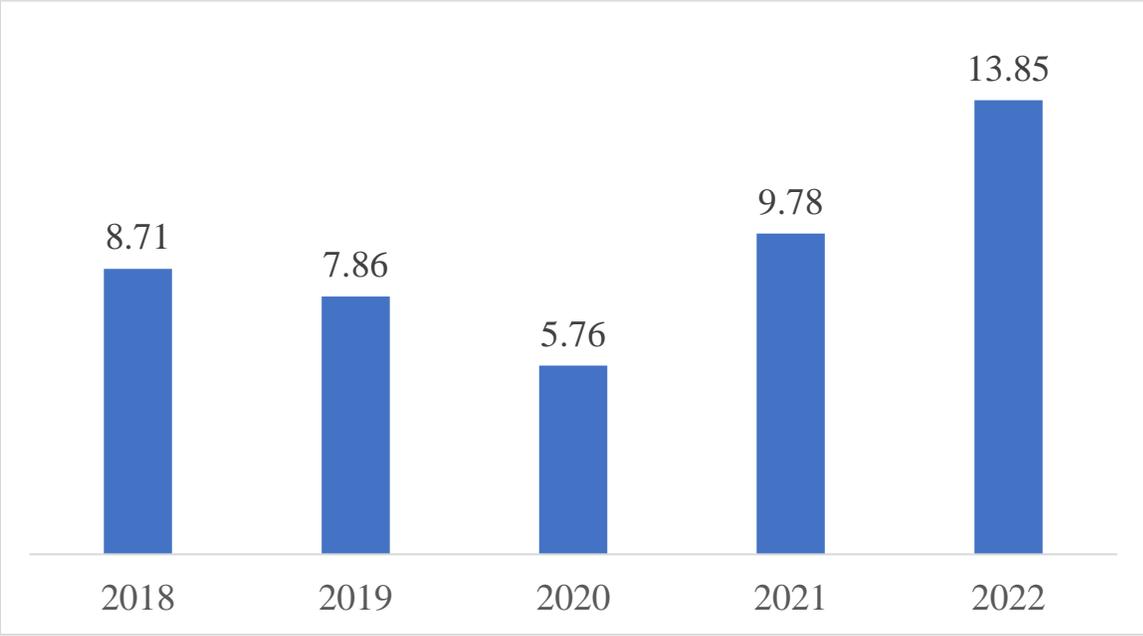
<https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=X&CommodityCodes=TOTAL&Partners=702&Reporters=36&period=2022&AggregateBy=none&BreakdownMode=plus>



Source: *The United Nations comtrade database on international trade*

On the import side, the turnover of import from Singapore to Australia was 13.85 billion USD, increasing from 9.78 billion USD in 2021. The three three biggest commodity groups of import are Mineral fuels, oils, distillation products (10. 71 billion USD); Machinery, nuclear reactors, boilers (635.5 million USD) and Miscellaneous edible preparations (451.1 million USD).

The turnover of import from Singapore to Australia (billion USD)



Source: *The United Nations comtrade database on international trade*

Singapore is Australia's largest two-way trading partner and investor in Southeast Asia. It is also our fifth largest trading partner (46.8 billion USD in 2021-22) and our fifth largest source of foreign direct investment (148 billion USD in 2022).²

3.4.2. Introduction of the DEA

The Australia-Singapore Digital Economy Agreement (DEA) entered into force on 8 December 2020.³

The DEA breaks new ground. It sets new global benchmarks for trade rules, and a range of practical cooperation initiatives, to reduce barriers to digital trade and build an environment in which Australian businesses and consumers are able to participate and benefit from digital trade and the digitalisation of the economy.

The DEA upgrades the digital trade arrangements between Australia and Singapore under the Comprehensive and Progressive Agreement on the Trans-Pacific Partnership and the Singapore-Australia Free Trade Agreement – which are already among some of the most ambitious globally. For example, it: delivers more robust rules that ensure businesses, including in the financial sector, can transfer data across borders and will not be required to build or use data storage centres in either jurisdiction; improves protections for source code; establishes new commitments on compatible e-invoicing and e-payment frameworks; and delivers new benchmarks for improving safety and consumer experiences online.

The DEA also delivers a range of new trade rules, and a comprehensive framework for bilateral cooperation, to help businesses and consumers capitalise on the digital economy. Australia and Singapore have negotiated cutting-edge new rules, and signed a series of MoUs on areas including data innovation, artificial intelligence, e-invoicing, e-certification for agricultural exports and imports, trade facilitation, personal data protection, and digital identity.

3.4.3. E-commerce and paperless trade provisions in the DEA

The DEA includes the following key features:

(i) Cross-border data flows and location of computing facilities

- Allows for the transfer of data between Australia and Singapore for business purposes, including in the financial sector. (Article 23)
- Businesses will not be forced to build data storage centres, use local computing centres, locate computing facilities as a condition of conducting business (Article 24). For Financial

² [https://www.dfat.gov.au/geo/singapore/singapore-country-brief#:~:text=Singapore%20is%20Australia's%20largest%20two,SAFTA\)%20was%20signed%20in%202003.](https://www.dfat.gov.au/geo/singapore/singapore-country-brief#:~:text=Singapore%20is%20Australia's%20largest%20two,SAFTA)%20was%20signed%20in%202003.)

³ <https://www.dfat.gov.au/trade/services-and-digital-trade/australia-and-singapore-digital-economy-agreement>

services, regulatory authorities have immediate, direct, complete and ongoing access to information processed or stored on computing facilities that the covered financial person uses or locates outside the Party's territory (Article 25)

(iii) Digital trade facilitation

- New commitments on e-invoicing and e-payment frameworks, to ensure these are implemented in a way that is compatible and based on international frameworks (Article 10, 11)
- Also includes rules to enhance compatibility of electronic transactions frameworks, including recognition of e-authentication and signatures, to work towards a single window for paperless trading and to expedite express shipments. (Article 9)
- Access to or disclosure of software source code will not be required to be transferred between two countries as a condition for the import, distribution, sale or use of software – this rule covers both mass-market software and bespoke/custom software. (Article 28)
- Collaboration on the development of key standards to support digital trade (Article 30)

(iv) Paperless trading

- Promotes paperless trading by making e-versions of trade administration documents available and legal equivalent to paper document (Article 12.2)
- Establish or maintain a single window enabling traders to submit trade administration documents and data requirements for importation, exportation or transit of goods through a single entry point to the participating authorities or agencies (Article 12.3)
- Establish or maintain a seamless, trusted and secure interface with the other Party's single window to facilitate the exchange of data relating to trade administration documents (Article 12.4)
- Develop data exchange systems to support the exchange of: (a) data relating to the trade administration documents referred to in paragraph 4 between the competent authorities of each Party; and (b) electronic records used in commercial trading activities between enterprises within each Party's respective territory.

(v) Business and consumer trust in digital trade

- Improved enforcement and compliance provisions on online consumer protection, personal information protection, and discouraging unsolicited commercial electronic messages (article 15, 17, 19)
- A new commitment to cooperate in creating and promoting a safe online environment to protect citizens, especially children and vulnerable members of the community, from harmful online experiences. (Article 18)

- Adopt or maintain consumer protection laws to proscribe misleading and deceptive commercial activities that cause harm or potential harm to consumers engaged in online commercial activities. (Article 14.3)
- Promote cooperation between their respective national consumer protection agencies or other relevant bodies on activities related to cross-border electronic commerce in order to enhance consumer welfare. (Article 14.4)
- Adopt or maintain a legal framework that provides for the protection of the personal information of persons who conduct or engage in electronic transactions. (article 17.2)
- Recognise that the APEC Cross-Border Privacy Rules (“CBPR”) System is a valid mechanism to facilitate cross-border information transfers while protecting personal information, endeavour to jointly promote the CBPR System (Article 17.9)

(vi) Open Government Data (Article 27)

- A new commitment to improve the accessibility of publicly available, anonymised government information, for the purpose of economic, social and research benefit;
- Sharing and analysing data can improve government’s ability to make better-informed policy decisions on complex issues, for example in health, education, welfare, and the environment.
- Academics and research institutions will also be able to use government data more effectively and at lower cost.
- Across a variety of sectors, access to government data allows for the development of new and customised products and services demanded by business, government and the community.

(vii) FinTech and RegTech (Article 32)

- Collaboration between FinTech and RegTech enterprises and industry bodies to explore business opportunities for Australian and Singaporean enterprises, and to develop standards for open banking.

(viii) Submarine data cables

- Commitments to facilitate submarine cable installation, maintenance and repair, and the prevention of cable disruptions.

(ix) Express shipments

- Adopt or maintain expedited customs procedures for air express shipments: allow a single submission of information covering all goods contained in an express shipment; provide for express shipments to be released within six hours of submission of the necessary customs documents (Article 13.2)

- Provide for a de minimis shipment value or dutiable amount for which customs duties will not be collected, aside from restricted or controlled goods, such as goods subject to import licensing or similar requirements. (Article 13.4)

(x) Artificial Intelligence (Article 31)

- Collaborate on and promote the development and adoption of frameworks that support the trusted, safe, and responsible use of AI technologies (“AI Governance Frameworks”), through relevant regional and international fora;

- Take into consideration internationally-recognised principles or guidelines when developing such AI Governance Frameworks.

3.4.4. MoUs between Australia and Singapore to facilitate the DEA

The DEA is supported by nine Memoranda of Understanding (MoUs) which facilitate practical cooperation initiatives on:

(i) Data innovation

The Australian Government and the Government of the Republic of Singapore will cooperate on joint projects using combined cross-border datasets to produce new insights, demonstrating the value of sharing trusted, anonymised data across borders.⁴

(ii) Artificial intelligence (AI)

The Australian Government and the Government of the Republic of Singapore will cooperate on Artificial Intelligence (AI) capabilities, including new AI technologies, talent development and ethical standards to support the positive commercial application of AI in the digital economy.⁵

(iii) E-invoicing

The Australian Taxation Office and the Infocomm Media Development Authority of Singapore will cooperate to expand e-invoicing interoperability in the region, based on the Peppol international framework. This MoU will make it easier for Australian small business to send and receive invoices between Australian and Singapore businesses and with other businesses in the region.⁶

(iv) E-certification for agricultural exports and imports

The Department of Agriculture, Water and the Environment and the Singapore Food Agency and National Parks Board of Singapore will cooperate on electronic certification

⁴ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-data-innovation.pdf>

⁵ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-artificial-intelligence.pdf>

⁶ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-cooperation-for-electronic-invoicing.pdf>

of agricultural goods trade, which is a significant Australian export to and through Singapore.⁷

(v) Trade facilitation

The Australian Border Force, the Infocomm Media Development Authority and Singapore Customs will establish a cooperative relationship to develop compatible paperless trading systems for goods traded between Australia and Singapore.⁸

(vi) Personal data protection

The Office of the Australian Information Commissioner and the Personal Data Protection Commission of Singapore share a common mission to protect personal information and uphold individuals' privacy rights as data flows across borders. This MoU sets out the intentions of both organisations to cooperate through sharing experience, expertise, intelligence and information on best practice in relation to the protection of personal information.⁹

(vii) Digital identity

The Digital Transformation Agency and the Smart Nation and Digital Government Office will cooperate to develop policy frameworks to support mutual recognition of digital identity systems, which can support more efficient government interactions by businesses operating across borders.¹⁰

(viii) Fintech

The Australian Treasury and the Monetary Authority of Singapore will strengthen bilateral and multilateral cooperation on financial technology and support FinTech firms looking to expand in each other's markets.¹¹

(ix) Unsolicited Communications

The Australian Communications and Media Authority and the Info-communications Media Development Authority of Singapore will enhance cooperation in relation to combatting unsolicited telemarketing, spam and scams.¹²

3.5. DEPA Singapore-Chile-New Zealand

3.5.1. Trilatera trade between Singapore-Chile-New Zealand

⁷ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-electronic-certification-cooperation.pdf>

⁸ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-trade-facilitation.pdf>

⁹ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-cooperation-in-personal-data-protection.pdf>

¹⁰ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-cooperation-in-the-field-of-digital-identity.pdf>

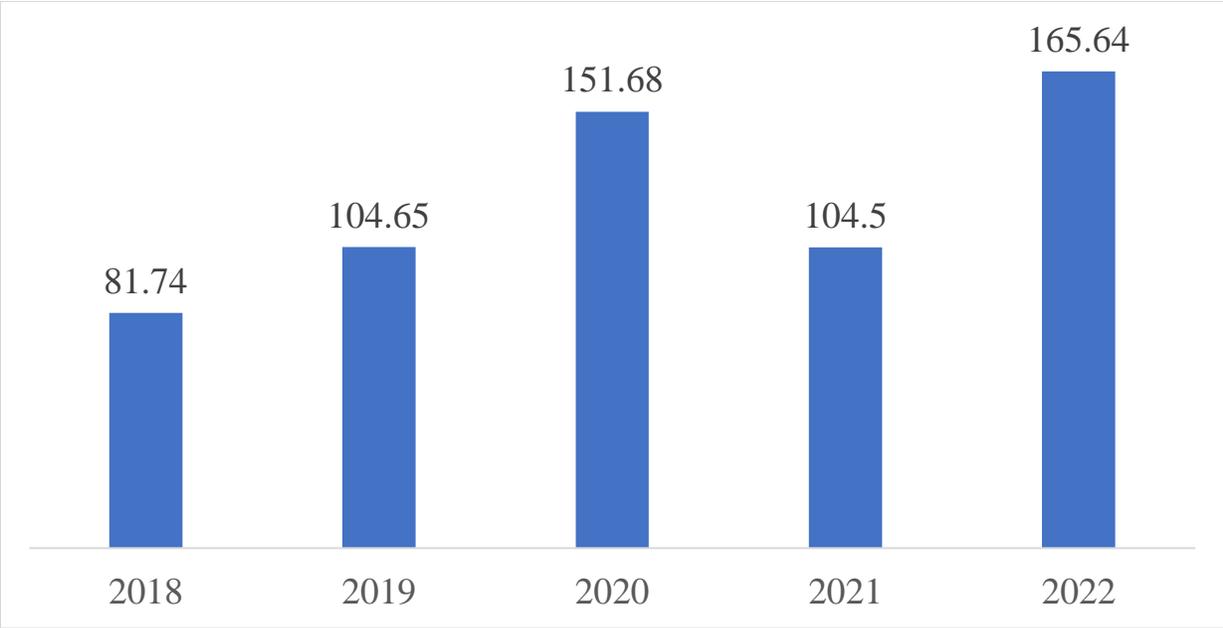
¹¹ <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-fintech-bridge.pdf>

¹² <https://www.dfat.gov.au/sites/default/files/australia-singapore-mou-on-unsolicited-communications.pdf>

3.5.1.1. *Bilateral trade between Singapore and Chile*

According to the United Nations comtrade database on international trade, the turnover of export from Singapore to Chile was 165.64 million USD in 2022, increasing from 104.5 million USD in 2021.¹³ The three biggest commodity groups of export are Machinery, nuclear reactors, boilers (76.45 million USD); Electrical, electronic equipment (15.63 million USD) and Miscellaneous edible preparations (12.94 million USD).

The turnover of export from Singapore to Chile (million USD)



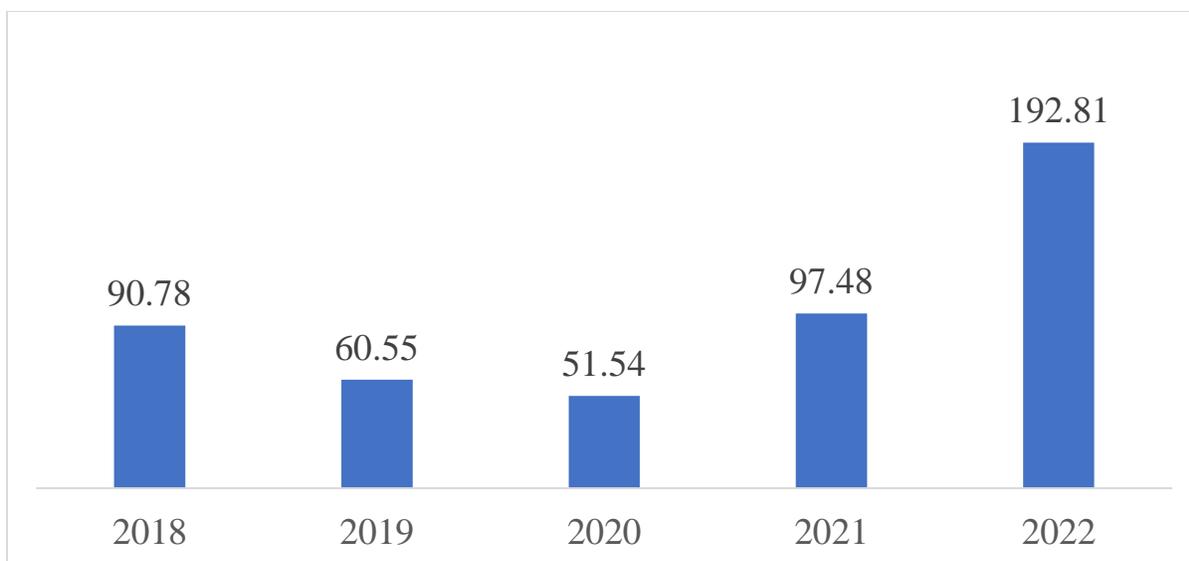
Source: The United Nations comtrade database on international trade

On the import side, the turnover of import from Chile to Singapore was 192.81 million USD, increasing from 97.48 million USD in 2021. The three biggest commodity groups of import are Mineral fuels, oils, distillation products (62.7 million USD); Fish, crustaceans, molluscs, aquatics invertebrates (40.13 million USD) and Pearls, precious stones, metals, coins (21.15 million USD).

The turnover of import from Chile to Singapore (million USD)

¹³

<https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=X&CommodityCodes=TOTAL&Partners=702&Reporters=36&period=2022&AggregateBy=none&BreakdownMode=plus>



Source: The United Nations comtrade database on international trade

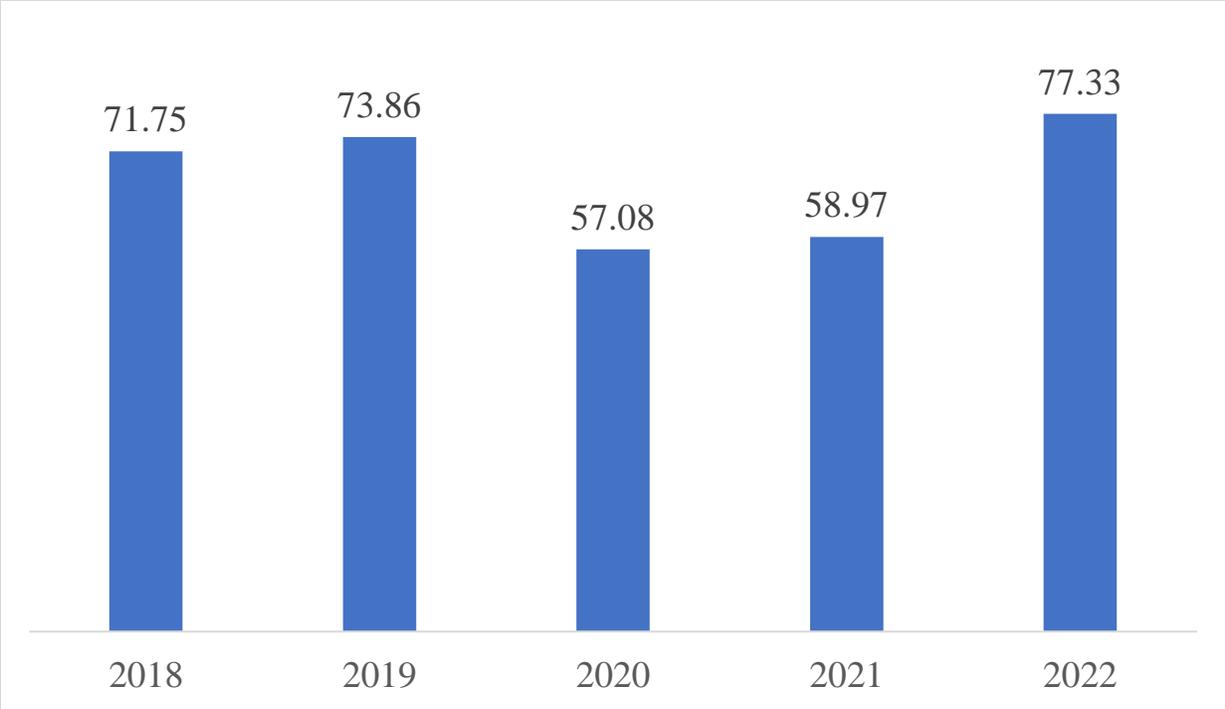
3.5.1.2. *Bilateral trade between Chile and New Zealand*

According to the United Nations comtrade database on international trade, the turnover of export from Chile to New Zealand was 77.33 million USD in 2022, increasing from 58.97 million USD in 2021.¹⁴ The three biggest commodity groups of export are Wood and articles of wood, wood charcoal (31.56 million USD); Edible fruits, nuts, peel of citrus fruit, melons (17.14 million USD) and Pulp of wood, fibrous cellulosic material, waste (15.11 million USD).

The turnover of export from Chile to New Zealand (million USD)

¹⁴

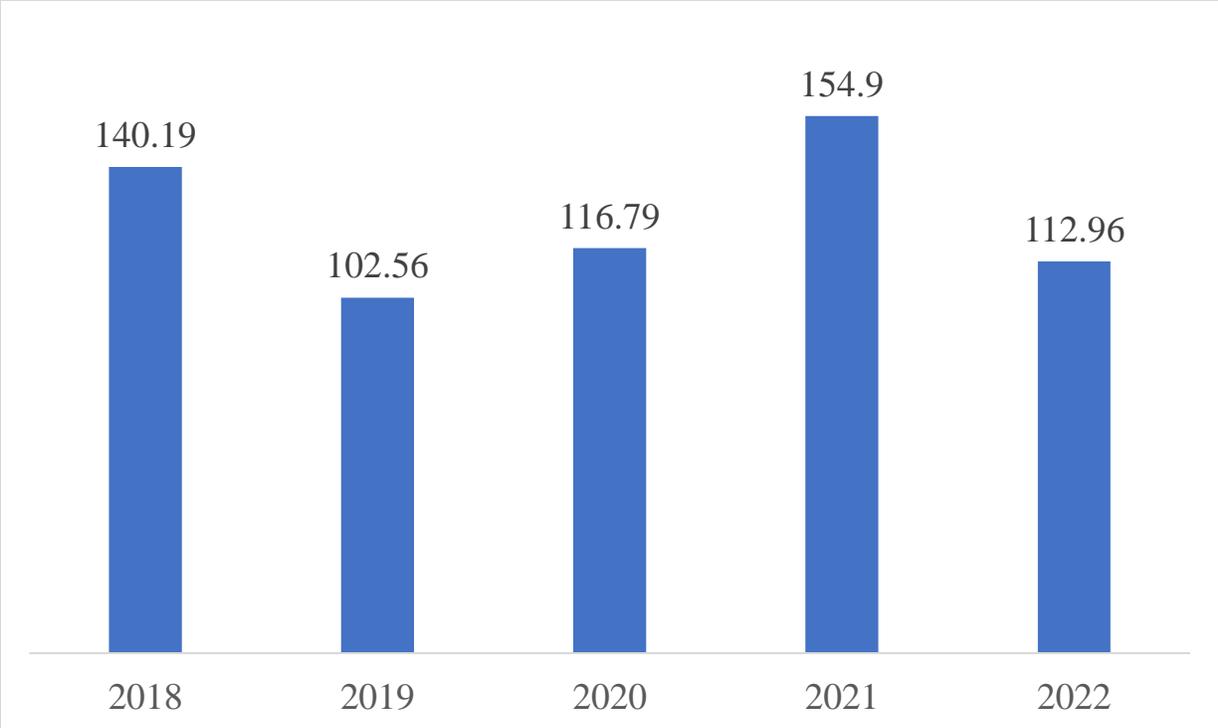
<https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=X&CommodityCodes=TOTAL&Partners=702&Reporters=36&period=2022&AggregateBy=none&BreakdownMode=plus>



Source: The United Nations comtrade database on international trade

On the import side, the turnover of import from New Zealand to Chile was 112.96 million USD, decreasing from 154.9 million USD in 2021. The three three biggest commodity groups of import are Dairy products, eggs, honey, edible products (46.31 million USD); Machinery, nuclear reactors, boilers (30.08 million USD) and Oil seed, oleagic fruits, grain, seed, fruits (6.91 million USD).

The turnover of import from New Zealand to Chile (million USD)



Source: *The United Nations comtrade database on international trade*

3.5.2. Introduction of the DEPA

The Digital Economy Partnership Agreement between Singapore, Chile and New Zealand (DEPA) was signed in an entirely online virtual signing ceremony by New Zealand, Chile and Singapore on Friday 12 June 2020 New Zealand and has entered into force for New Zealand and Singapore on 7 January 2021. ¹⁵

The DEPA is a first of its kind agreement that establishes new approaches and collaborations in digital trade issues, promotes interoperability between different regimes and addresses the new issues brought about by digitalisation.

The DEPA have considered all aspects of the digital economy that might support trade in the digital era. Parties have also looked at a range of emerging digital economy issues and subject areas. The intention is that this agreement will complement the WTO negotiations on e-commerce and build on the digital economy work underway within APEC, the OECD and other international forums. The DEPA generate new ideas and approaches that can be used by members in the WTO negotiations, and by other countries negotiating free trade agreements or engaging in international digital economy or digital trade work.

¹⁵ <https://www.mfat.govt.nz/assets/Trade-agreements/DEPA/DEPA-Signing-Text-11-June-2020-GMT-v3.pdf>

The DEPA will help establish new rules and practices for digital trade, and promote ongoing discussion on issues like digital inclusion, inclusive trade and support for small and medium enterprises (SMEs) in the digital economy. The agreement covers broad areas, from e-invoicing to artificial intelligence, and will continue to evolve as new digital opportunities and issues emerge.

3.5.3. E-commerce and paperless trade provisions in the DEPA

The DEPA includes the following key features:

(i) Business and Trade Facilitation

The DEPA promotes the adoption and use of technology to facilitate trade:

- Promotes paperless trading by making e-versions of trade administration documents available and equivalent to paper documents in most situations. DEPA recognises that technologies are evolving and that data exchange systems may take the place of trade administration documents in the future. (Article 2.2.3)
- Requires the legal frameworks that govern electronic transactions within DEPA partners to be consistent with internationally developed model frameworks. DEPA partners should not impose customs duties on electronic transmissions (Article 2.3)
- Sets up faster customs procedures for express shipments, while maintaining appropriate customs control and selection (Article 2.6)
- Supports the growth of e-payments. DEPA recognises that payment technology is evolving so promotes transparency and a level playing field. At the same time, trust and security of payment systems is important so DEPA allows regulation in special circumstances or to respond to a balance of payments crisis. DEPA promotes the use of e-invoicing across borders in the DEPA region. With e-invoicing, businesses no longer need to generate paper-based or PDF invoices that have to be printed, posted or emailed, and buyers no longer need to manually enter these into their accounting system (Article 2.7)

(ii) Treatment of Digital Products and Related Issues

This module affirms DEPA Parties levels of commitments relating to the Treatment of Digital Products and Related Issues.

- Non-discriminatory treatment of digital products (Article 3.3)
- Technical regulation or conformity assessment procedure will not be required for a product using cryptoprophy as a condition of the manufacture, sale, distribution, import or use of the product (Article 3.4)

(iv) Data Issues

The DEPA Parties recognises the economic and social benefits of protecting the personal information in the digital economy and the importance of such protection in enhancing confidence in the digital economy and develop of trade. The DEPA recognises this by:

- Requiring DEPA partners to have in place legal frameworks to protect personal information. DEPA adds to other international discussions on privacy by setting out the principles that underpin strong protection frameworks including transparency, data quality and accountability (Article 4.2)
- Affirming DEPA partners' levels of commitments relating to transmission of information and location of computer facilities. These rules recognise the value of information flows and the development of new technologies and services. (Article 4.3)

(v) Wider Trust Environment

- The DEPA Parties recognise that cyber security is integral to the digital economy. Therefore, the DEPA Parties recognise the important of cooperation to identify and mitigate malicious code that affect of electronic network. Also, The two countries develop workforce in the area of cybersecurity (Article 5.1).
- The DEPA Parties also recognise that a safe and secure online environment supports the digital economy. The two countries shall cooperate to advance collaborative solutions to global issues affecting online safety and security (Article 5.2)

(vi) Business and Consumer Trust

- The Business and Consumer Trust contains provisions relating to: Improved enforcement and compliance provisions on online consumer protection, personal information protection, and discouraging unsolicited commercial electronic messages. These provisions all aim to make it easier for businesses and consumers to take advantage of the opportunities digital trade presents (Article 6.2, 6.3, 6.4).
- The rules relating to Online Consumer Protection ensure consumers have the information to trade with confidence and access to appropriate redress if things go wrong. DEPA Parties will further explore the benefits of alternative dispute resolution or other mechanisms to facilitate the resolution of digital trade issues.

(vii) Digital Identities

Digital identity (e.g. national business numbers) is a new issue for trade agreements. There is no one approach to digital identity but the DEPA Parties recognise that cooperation will increase regional and global connectivity. The DEPA states that:

- Recognise that digital identities are an important component of the digital economy;

- Enable DEPA Parties to work together on digital identity issues. Future work could include the exchange of knowledge and expertise relating to digital identity policies and regulations, technical implementation and security standards and user adoption. (Article 7.1)

(viii) Emerging Trends and Technologies

DEPA covers some emerging trends and technologies, but acknowledges that there is more to know before international trade rules can be developed among DEPA partners. Areas where DEPA Parties will look to deepen their cooperation relating to the digital economy are:

- Fintech, including by involving fintech businesses (Article 8.1)
- Artificial intelligence, including by working together to promote the adoption of ethical and governance frameworks (Article 8.2)
- Government Procurement, including by considering impact of greater digitisation of procurement processes (Article 8.3)
- Competition policy (Article 8.4)

(ix) Innovation and the Digital Economy

This DEPA recognises the importance of technological innovation, creativity, and technology as a means to achieve social and economic welfare.

The DEPA includes:

- Recognises the importance of a rich and accessible public domain (Article 9.2)
- Looks to the future of data innovation and sets a framework for future work on data-sharing projects (Article 9.3)
- Promotes open government data, including by providing that DEPA Parties strive towards open data when information is made available to the public (Article 9.5)

(x) Small and Medium Enterprises Cooperation

DEPA is a vehicle for cooperating with our partners on digital economy issues. It sets up a framework for cooperation, enabling us to test ideas and promote our businesses, particularly our SMES, with DEPA partners.

The digital economy means SMEs can connect with their target market quickly and easily. We want to make sure that SMEs have easy access to information about regulations that concern their business when operating in DEPA partners. We also want to make links between SMEs. There will be a Digital SME Dialogue held after entry into force to promote the benefits of DEPA.

The DEPA encourages SMEs joining digital economy by exchange information and best practices in leveraging on digital tools and technology to improve SMEs access to capital and credit/ encourage participation by SMEs in platforms that could help SMEs link with international suppliers, buyers and other potential business partners. (Article 10.2) The Parties shall convene a Digital SME Dialogue promote the benefits of this Agreement for SMEs (Article 10.4).

(xi) Transparency

Access to information is especially important in digital trade when an increasing number of smaller firms are trading in more countries with more complex transactions. The DEPA Transparency module promotes openness of by ensuring laws and regulations relating to the digital economy be promptly published and made available (Article 13.2).

(xii) Dispute Settlement

The DEPA provide efficient, fair, and transparent processes for resolving disputes between governments. The procedural detail will be further discussed among DEPA Parties, including the different types of procedures for consultation, mediation and arbitration (Article 14.2).

4. Best Practices of Cross-border e-Trade

4.1. ASEAN Single Window Initiative

Conventionally, international trade transactions require the submission of voluminous documents to various government agencies. Moreover, it is common practice in such transactions for hard copies of documents are sent from the exporting countries to the importing countries. These requirements significantly impede trade and slow down the path to successful regional economic integration, which is the goal that ASEAN has declared in its 2025 ASEAN Economic Community Blueprint. Automating and centralizing the procedure is the apparent solution, enabling traders to submit paperwork at the national level through a single portal for simultaneous processing by all border agencies. These national portals, referred to as National Single Windows (NSWs) could then be linked to exchange documents electronically, leading to more time and effort saving.

4.1.1 Organizational Structure

To AMS in the implementation of the ASW, the ASEAN Single Window Steering Committee (ASWSC) was established. The ASWSC oversees the overall coordination and required synchronisation of actions at the national level and regional level policy to promote effective implementation and operation of the ASW, and considers the needs of

future development of the ASW. The ASWSC would also provide guidance to the issues at the TWG and the LWG, particularly on policy-related issues, when required.¹⁶

The ASWSC is supported by two subsidiary bodies, namely:

- The Working Group on Technical Matters for the ASW (TWG), focusing on developing business process, and work flow; harmonising and standardising related trade, customs data and documentation; and adopting information and communication technology for trade facilitation.

- The Working Group on Legal Regulatory for the ASW (LWG), established to assist in the construction of the legal framework for the establishment, operation and expansion, of the ASW. This is the ad-hoc meeting which is required as necessary.

Besides, Member States also started developing a private sector consultation work program in 2011 in order to inform businesses of ASW plans and to seek private sectors' contribution in ASW development. This work program was agreed to involve private sector roundtables, the creation of outreach material, distribution of email news on NSWs and ASW, organization of a significant ASW/NSW Symposium bringing together private sectors and government representatives at the regional level, among other things. The ASW/NSW Symposium first took place in September 2012. The Symposium is an opportunity for the private sector to get updated on ASW and NSW efforts and to suggest how to improve and expand the system in the future. The Symposium also aims to discuss stakeholders' expectation on ASW as well as key areas where they can benefit from the regional architecture.

4.1.2 Legal and Technical Environment

ASW provides the legal framework and secure IT architecture that will allow trade, transport, and commercial data to be exchanged electronically among government agencies or the trading community (APEC, 2017).

To create the appropriate legal environment for the ASW, while the pilot architecture implementation was ongoing at the technical level, the LWG had made substantial progress in drafting a regional LFA that would govern the cross-border exchange of electronic data. To complement the LFA, several Member States had also conducted national-level legal gap analyses to ensure that their legal environment supports the submission, exchange, archiving, equivalence, and use as evidence of electronic documentation in a single window environment.

Member States continued working towards a legal framework for the live environment. The Protocol on the Legal Framework to Implement the ASEAN Single Window (PLF)

¹⁶ <https://asean.org/our-communities/economic-community/asean-single-window/>

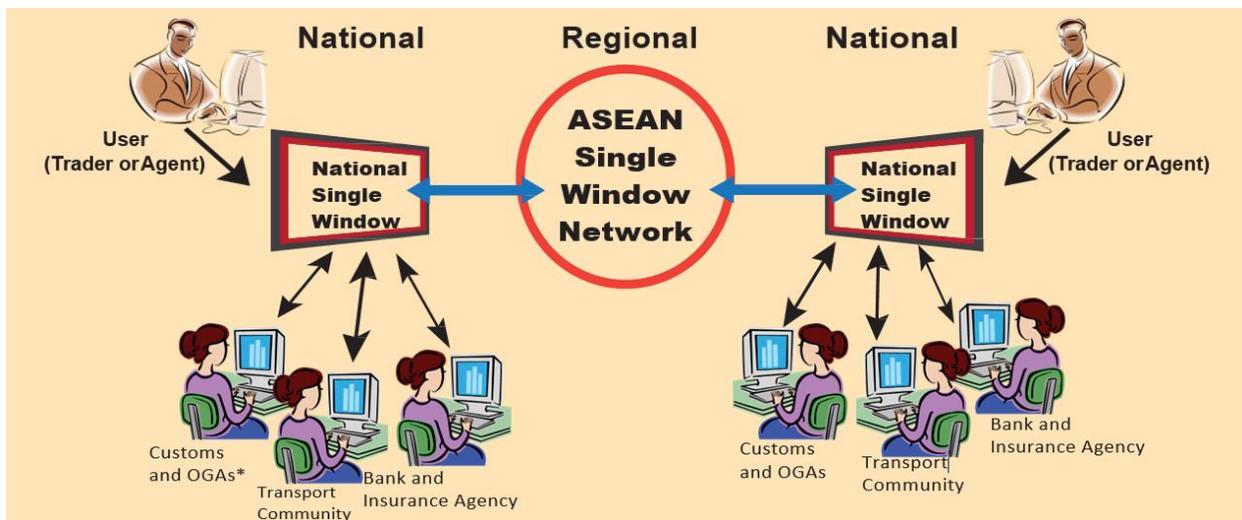
was developed and signed in September 2015 by the Finance Ministers. The Protocol on the Legal Framework to Implement the ASEAN Single Window creates a sound legal basis for the regional exchange of trade documents and includes provisions such as data protection, confidentiality, and acceptance of electronic signatures.

From the technical aspects, the ASW Agreement urges Member States to “make use of information and communication technology that are in line with relevant internationally accepted standards”. The ASW Protocol signed in 2006 provided a technical framework to establish and implement the ASW and NSWs, which included a technical guide with relevant internationally accepted standards, procedures, documents, technical details, etc.

ASEAN has created a flexible yet secure system for exchange of documents among the NSWs that guarantees and tracks delivery of message and ensures their authenticity, significantly speeding up the trade process while significantly reducing opportunities for fraud and abuse.

As for regional standards for document exchange, ASEAN has agreed to electronic document structures that enable interoperability of documents in NSW systems throughout the region.

Figure 8: ASW and NSWs



Source: <http://asw.asean.org>

4.1.3 Potential Benefits from the Cross-Border Exchange of Data

The ASW benefits both government and private sector in several ways as mentioned below (APEC, 2017).

Expected benefits to governments from the cross-border exchange of data include:

- Improved compliance: Electronic exchange of cross-border data and information ensures operational transparency and better compliance with guidelines, specifications, and laws. As a result, electronic exchange of data and information reduces opportunities for fraud and misrepresentation.

- Risk management: The number of cargo clearance transactions increases while a variety of documents from multiple government bodies must be cross checked by border officials before cargo clearance. In addition, border control organizations also require timely submission of documentation in order to efficiently enforce regulations and manage risk. Pre-arrival information acquired through the ASW will allow border control officials to be able to begin risk management on electronically processed information ahead of the arrival of goods and without seeing the physical goods. The interoperability of the ASW and NSWs supports risk management and other intelligence systems to better target inspection resources among government agencies.

- Track-and-trace of declaration support documents: The ASW will assist NSWs in enhancing document track and trace capability of documents during submission of entry declaration.

- Validation at point of origin: With the ASW in place, regulatory agencies can exchange electronic certificates to expedite clearance and guarantee certificate authenticity.

- Real-time updates of regional code sets: The regional services component of the ASW architecture ensures synchronized control, standardized reference tables, and operational efficiency among participating governments in a distributed working environment.

- Harmonized regional procedures. The ASW promotes harmonization of regional procedures and encourages Member States to conduct business process re-engineering to simplify procedures at the national level.

Expected benefits to business from the cross-border data exchange include:

- Efficient supply chain management: Supply chain management covers all movement of cross-border goods from point of origin to point of consumption, based on efficient design criteria, information security control, and seamless connectivity between government and traders in cargo clearance. ASW offers traders with competitive infrastructure, leveraging global logistics, synchronized operation, user-friendly data visibility to maintain operational transparency, and improved compliance in accordance with the guidelines, specifications, and regulations which have been set forth. Electronic cross-border data exchange through ASW supplements data submission and processing

through an NSW and potentially provides the missing link to efficient supply chain management.

- Pre-arrival clearance: For compliant traders submitting via the NSW necessary electronic entry declaration and supporting documents, including cross-border data sent through the ASW, to Customs authorities prior to goods arriving at the port of destination, the customs clearance and release process might be sped up.

- Customs transit regime: Electronic cross-border data exchange through the ASW could facilitate a customs transit regime for ASEAN traders to offer seamless overland connectivity and ensure goods movement across the borders.

- Replacement of paper submission of cross-border documents: The ASW environment would deter border control authorities from considering paper submission of cross-border documents. Thanks to the ASW architecture an automated system could ensure the expedition of cargo clearance processing in place of paper submission that leads to significant delay. Electronic exchange of data reduces the reliance on paper documents and speed up customs clearance. Nearly 500,000 trade transactions are being facilitated annually.

- Convergence of commercial documents, freight papers, and other cross-border data: Data transmitted through the ASW would enable traders through the NSW, to cross-reference commercial documents, freight papers, and other cross-border data with customs declaration to improve compliance and avoid double encoding errors. On the other hand, this cross-border data would enable government authorities to cross-check various documents to assist risk management activities.

- Track-and-trace: Thanks to the ASW, traders are able to track and trace the current position of their container in the ASEAN region using a specified tracking number.

- Unique reference key: Thanks to a unique reference key, traders are able to utilize a transactional "dashboard" that combines all documentary requirements, whether from cross-border data using ASW or domestic data using the NSW. The implementation of such a dashboard through NSWs would facilitate traders to attach supporting documents to a customs declaration.

- Trader-driven process to automatically fill in declarations/supporting documents from previous cross-border messages transmitted: A trader-driven process through the NSW that generates customs declarations from cross-border messages received earlier (including through ASW), such as commercial documents, freight papers, and permits and licenses would encourage data reuse, improve traders' compliance, enhance consistency in use of data elements, and make available a tool for expediting cargo clearance process.

- Savings on storage and insurance fees: The improvement of operational predictability and transparency brought about by electronic cross-border data exchange through ASW would encourage merchants to push for just-in-time delivery of goods. It would possibly result in storage and insurance cost savings. In other words, electronic exchange of data reduces traders' costs.

4.1.4 Achievements of the ASW to date

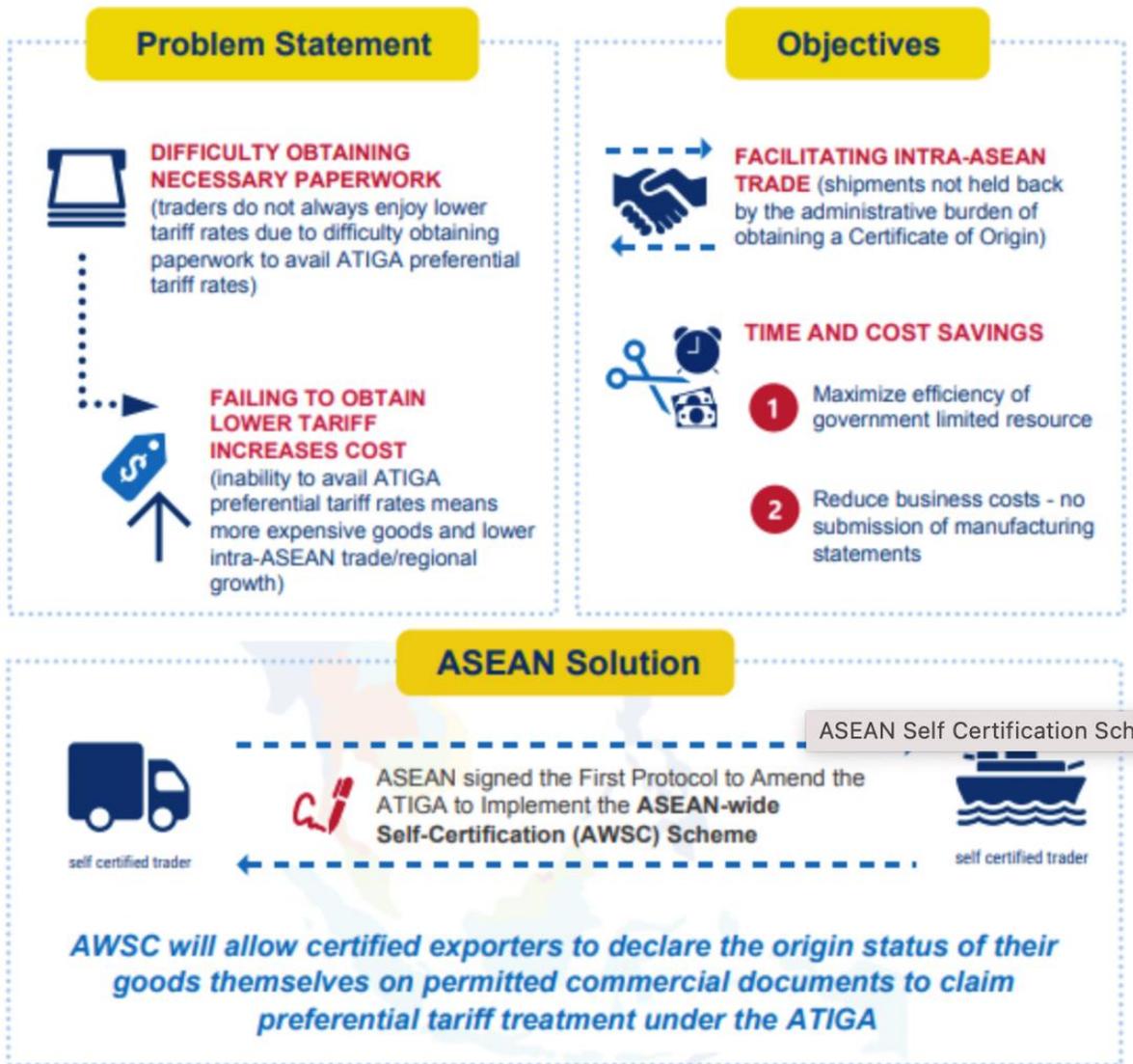
Since January 2018, the ATIGA e-Form D has been the first e-documents exchanged through the ASW. At the end of 2019, all ten AMS (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam) have joined the ASW Live Operation which allowed the granting of preferential tariff treatment based on the ASEAN Trade in Goods Agreement electronic Certificate of Origin (ATIGA e-Form D) exchanged through the ASW. The ASW live operation has provided traders with choices to utilizing e-ATIGA Form D, while the hard-copy of Form D is no longer required, in order to be granted with the preferential tariff duty. Proactive and intensive communication among traders and the respective government agencies, such as Customs and Certificate Issuing Agency (CIA), should be enhanced and deepened.

The exchange of electronic data for granting preferential tariff duty has marked a milestone for the ASW initiative. The operationalisation of the ASW benefits each AMS by streamlining trade procedures and documentations particularly for the government agencies (i.e. customs and other relevant institutions), and by lowering cost and length of time it takes for traders to do business.

As a respond to covid 19, ASEAN signed the First Protocol to Amend the ATIGA to implement the ASEAN-wide Self-Certification (AWSC) Scheme (Figure 9). This AWSC has been carried out since September 2020, allowing certified exporters to declare the origin status of their goods themselves on permitted trade-related documents in order to be able to enjoy preferential tariff treatment under the ATIGA. Electronic signatures on CO Form D are being accepted. Some ASEAN members have also established websites for the authenticity verification of e-COs to facilitate the use of scanned copies of the CO Form D.

Figure 9: Facilitating trade in ASEAN through self-certification of Origin

Facilitating Trade in ASEAN through Self-certification of Origin



Source: Asia Customs and Trade, <https://customstrade.asia/ph-customs-implements-intra-asean-self-certification-scheme/>

ASEAN Customs Declaration Document (ACDD) is a multi-purpose document which is used for supporting the exchange of Export Declaration Information among AMS. The objective of the electronic ACDD is to support Customs in the importing country to carry out their risk management activities. In December 2020, the live exchange of the ASEAN Customs Declaration Document (ACDD) through the ASW was started among Cambodia, Myanmar, and Singapore. Malaysia and Thailand have followed to join the

ACDD live exchange since March 2021. The remaining AMS were expected to join within 2022.

Following these successes, the ASW Live Operation will continue to open up tremendous opportunities for ASEAN within and across the region, including the exchange of more trade-related documents, such as electronic Phytosanitary (e-Phyto) Certificate and electronic Animal Health (e-AH) Certificate), through the ASW in the future. The electronic Phytosanitary (e-Phyto) certificate is targeted to be exchanged in Q3 2022 by Indonesia, Malaysia, and Thailand, while the electronic Animal Health (e-AH) certificate is under the discussion.

AMS are also looking for the possibility to exchange trade-related documents with Dialogue Partners, including Australia, China, Japan, Republic of Korea, the United States, and New Zealand which have expressed interests in cooperation with ASEAN through the ASW environment. AMS are discussing with these partners focusing on the exchange of electronic Certificate of Origin (e-CO), electronic Phytosanitary (e-Phyto) certificate, and Customs Declaration Information.

All in all, the ASW is one of the most appealing regional trade facilitation initiative to the business community, as an electronic platform that integrates National Single Windows (NSW) of all ASEAN Member States (AMS) to allow the exchange of electronic documents and to further facilitate in expediting the cargo clearance process within ASEAN region.

4.3. Vietnam – Korea Electronic Certificate of Origin under VKFTA

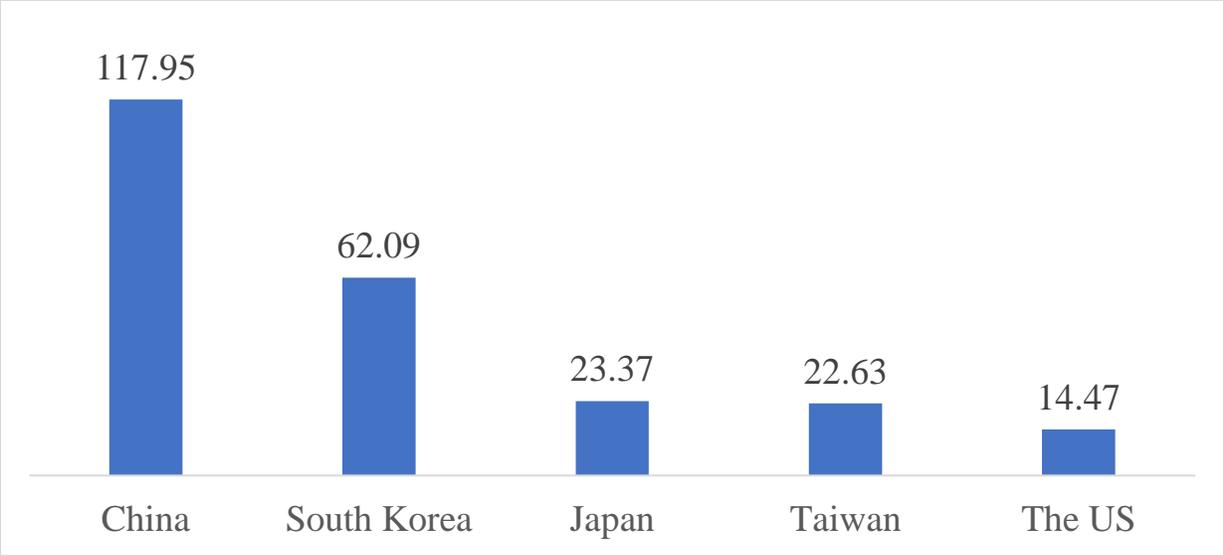
4.3.1. Bilateral trade between Vietnam and South Korea

Vietnam and South Korea are each other's major import and export partners. According to trade statistics of Vietnam Customs, Vietnamese merchandise trade with South Korea was totaled USD 86.38 billion in value terms, accounted for 18.17 % total merchandise trade value.¹⁷

On import side, South Korea took the second rank of the top partners exporting to Vietnam, with turnover reached 62.09 billion USD which moved up 10.5% to the same period of 2021.

Top 5 main importing markets of Vietnam in full year 2022 (billion USD)

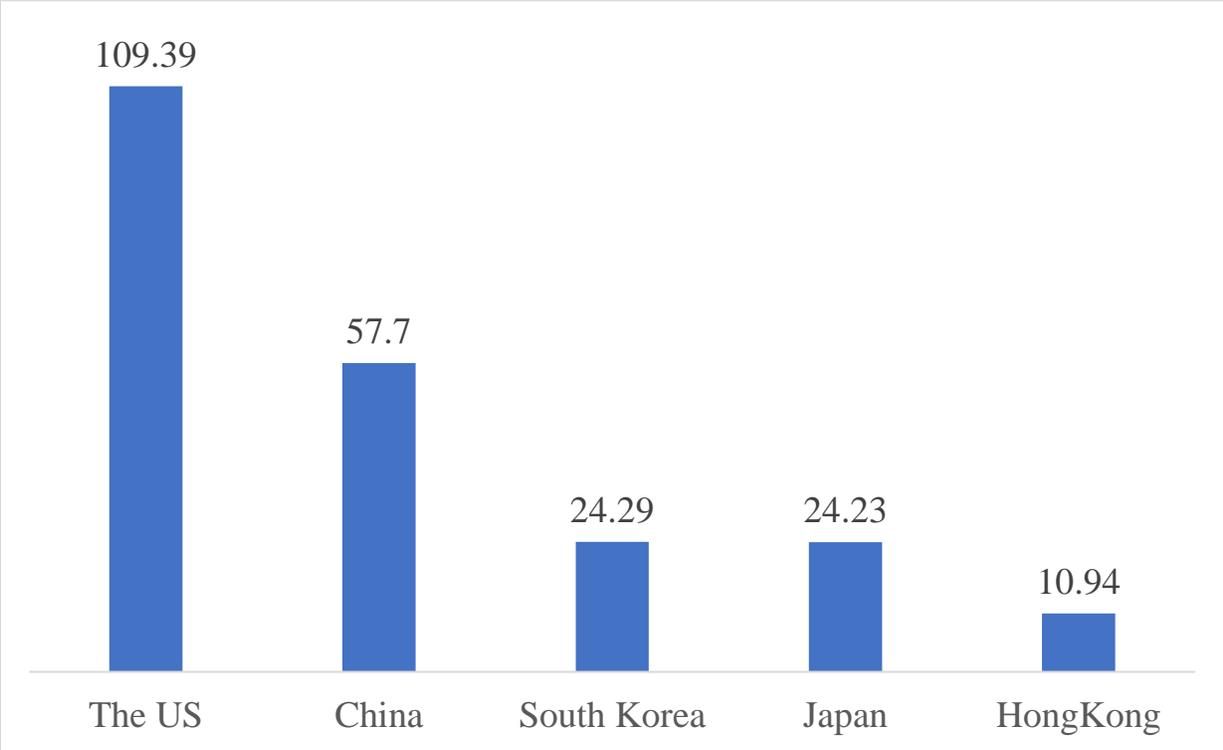
¹⁷ <https://www.customs.gov.vn/index.jsp?pageId=2281&aid=179688&cid=4208>



Source: Vietnam Customs

On the export side, South Korea is the third country which importing to Vietnam. In 2022, the turnover of export from Viet Nam to South Korea reached 24.29 billion USD, increased 10.7% compared to 2021.

Top 5 main exporting markets of Vietnam in full year 2022 (billion USD)



Source: Vietnam Customs

According to 4 biggest commodity groups, Computers, electrical products, spare-parts and components thereof reached 23.2 billion USD in import value and 3.38 billion USD in export value; Machine, equipments, tools and instruments reached 6.24 billion USD in import value; Textile, leather and foot-wears materials and auxiliaries group reached 2.53 billion USD in import value and 3.31 billion USD in export value; Telephones, mobile phones and parts thereof reached 11.49 billion USD in import value and 5.05 billion USD in export value.

4.3.2. Electronic certificate of origin provisions in VKFTA

The Free Trade Agreement between Vietnam and South Korea (VKFTA) was signed on May 5th, 2015 and officially came into effect on December 20th, 2015.

Within the framework of the Vietnam-Korea Free Trade Agreement (VKFTA), goods imported into the territory of a Member are deemed to have origin and are eligible for preferential tariff treatment if the goods it meets one of the following rules of origin.

i) Origin Criteria

A good imported into the territory of a Party shall be deemed to be originating and eligible for preferential tariff treatment if it conforms to the origin requirements under any one of the following: (1) wholly obtained or produced entirely in the territory of the exporting Party; (2) not wholly obtained or produced in the territory of the exporting Party, but meet the requirements of origin, rule-specific items; Regulations for special and aggregate goods; or (3) produced entirely in the territory of the exporting Party exclusively from originating materials.¹⁸

ii) Certificate of origin (C/O)

In order to enjoy preferential tariffs, goods must have a certificate of origin (C/O) in the prescribed form.

- Licensing authority: A Certificate of Origin shall be issued by the issuing authority of the exporting Party. Each Member shall maintain the registration and updating of the list of names and specimen seals of the C/O issuer of that Member.¹⁹

- Exception from C/O: a C/O shall not be required where the customs value of the importation does not exceed 600 U.S. dollars FOB or such higher amount as the importing Party may establish.²⁰

Implementation Documents of Vietnam Government

¹⁸ Article 3.1 VKFTA

¹⁹ Article 3.14.3 and Article 3.15.2 VKFTA

²⁰ Article 3.17 VKFTA

To implement the Free Trade Agreement between Vietnam and South Korea, the Government of Vietnam issued the legal documents as follows:

- Notice No. 257/TB-BCT on printing Certificate of Origin on A4 paper format
- Decree No.149/2017/NĐ-CP on promulgating Vietnam's special preferential import Tariff for implementation of VKFTA in the period 2018 – 2022
- Decree No.131/2016/NĐ-CP dated September 1st 2016 on promulgating Vietnam's special preferential import Tariff for implementation of VKFTA in the period 2016-2018
- Circular No.201/2015/TT-BTC on promulgating Vietnam's special preferential import Tariff for implementation of VKFTA in the period 2015-2018
- MOU between Korea customs service of the republic of korea, and Ministry of Industry and Trade of the socialist republic of viet nam and general department of viet nam customs on electronic origin data exchange system to facilitate the free trade agreement implementation

iii) Certificate of origin in electronic forms

VKFTA is not mention directly to certification of origin in electronic platform. However, Article 13.2 of the VKFTA stipulates that both South Korea and Vietnam endeavor to make electronic versions of its trade administration documents publicly available and endeavor to accept trade administration documents submitted electronically as the legal equivalent of the paper version of those documents. In fact, certification of origin is one kind of trade administrations.

4.3.3. The process of building Electronic Origin Data Exchange Systems (EODES)

4.3.3.1. MOU between Vietnam and South Korea government

Under FTAs or other regional trade agreement, there are various systems of issuing certificate of origin for preferential treatment, including issuance by the authorized bodies, self-issuance by exporters or approved exporters and the importer-based certificate. Each system has its own merits and demerits depending on the circumstance where it is implemented, thus, one system cannot necessarily be better than the other.

On October 21 in Vietnam and on October 31 in South Korea, leaders from the Ministry of Industry and Trade and the General Department of Vietnam Customs together with South Korea's General Department of Customs signed an MoU on an Electronic Origin Data Exchange System (EODES). The MoU will play an important role in supporting the

transmission and reception of Certificates of Origin (CO) data between Vietnam and South Korea.²¹

The EODES literally means exchanging the information of C/O electronically between the Parties. With EODES, customs administration of importing Party would no longer require importers to submit original C/O for the preferential treatment claim since all the C/O-related data have already been transferred from the exporting Party. And it would be also unnecessary to manually verify all the specifics of the C/O or any discrepancies between an import declaration and a C/O. Instead, computer-based data comparison and analysis would save time and ease the burdens of both Parties' customs officials. It is the view of Korea that the system will contribute to preventing unqualified claims for preferential treatment while providing profound solutions to inconvenience of authority-based issuance under the KOREA-Vietnam FTA.

4.3.3.2. Business processes of issuing and sending, cancellation and correction of e-CoO through EODES

According to the MOU on EODEs, there are three process of e-CoO through EODEs systems, as follows:

i) Issuing & Sending Process of CoO through EODES

1. (exporter → issuing authority) Exporter applies for an e-CoO to issuing authority.
2. (issuing authority → ex/customs authority and exporter) The authority reviews satisfaction of origin criteria of the goods and:
 - electronically issue a CoO and transmit e-CoO data to customs authority of exporting country;
 - manually issues a paper CoO, comprises one original and two carbon to exporter (if requested).
3. (exporter → importer)
 - Exporter hands over the original paper CoO through international express mail to importer according to Article 3.14 paragraph 3.(b) under KV FTA.
 - However, under EODES, as e-CoO data transmitted through EODES are to be recognized as original CoO, exporter hands over the original paper CoO to importer not because of preferential tariff treatment but to follow Articles or Rules of 'Record Keeping Requirements' and 'Verification' regulated in FTAs.

²¹Ministry of Industry and Trade of Vietnam, MOU on electronic origin exchange system to facilitate the FTA implementation (2022), (https://moit.gov.vn/upload/2005517/fck/files/MOIT_MOU-EODES_dd196.pdf)

4. (exporting customs authority → importing customs authority) Customs authority of exporting country subsequently transmits the issued e-CoO data to customs authority of importing country through EODES.
5. (importing country → exporting country) Importing country acknowledges (ACK) the receipt status of e-CoO data sent from exporting country.
6. (importer → customs) Importer declares the imports to customs and applies for preferential tariff treatment, without having to submit the original paper CoO separately.
7. (customs → importer) Customs of importing country makes a decision on preferential tariff treatment based on e-CoO received through EODES.
8. (importing customs authority → exporting issuing authority) Customs of importing country subsequently provides feedback on the preferential tariff treatment of e-CoO received through EODES to the issuing authority of exporting country.

ii) Cancellation Process of e-CoO through EODES

If errors or fraud are found on an e-CoO that is transmitted through EODES, the e-CoO needs to be cancelled. This process is described as below:

1. (exporting country → importing country) Issuing authority of exporting country cancels an e-CoO and sends Cancellation Notification (CNF) of the first issued e-CoO data to customs authority of importing country with some reasons.
2. (importing country → exporting country) Customs authority of importing country replies back Acknowledgement (ACK(CNF)) to exporting country.
3. (exporting country → importing country) After receiving ACK (CNF) from importing country through EODES, the first issued e-CoO data has to be scrapped and issuing authority of exporting country does not need to issue any new e-CoO afterwards.
4. (importing customs authority → importer) Customs authority of importing country makes a decision on preferential tariff treatment based on the CNF of the first issued e-CoO data received through EODES.
 - 4.1. Before import declaration and customs clearance, customs authority of importing country makes a decision on non-preferential tariff treatment as the first issued e-CoO data is scrapped.
 - 4.2. After import declaration and customs clearance, customs authority of importing country re-collects the whole preferential tariff treatment that importer has gained. In case of cancellation for origin fraud or other reasons that the issuing authority does not need to issue any new CoO afterwards.

iii) Correction Process of CoO through EODES

If errors are found on an e-CoO that is transmitted through EODES, the e-CoO needs to be corrected. This process is described as below:

1. (exporting country → importing country) Issuing authority of exporting country cancels an e-CoO and sends Cancellation Notification of the first issued e-CoO data to customs authority of importing country with some reasons.
2. (importing country → exporting country) Customs authority of importing country replies back Acknowledgement (ACK(CNF)) to exporting country .
3. (exporting country → importing country) After receiving (ACK(CNF)) from importing country through EODES, issuing authority of exporting country sends a new e-CoO which will replace the first e-CoO cancelled at process II (1&2) above to customs authority of exporting country. At this time, the new e-CoO data should bear a new CoO reference number and a new issuing date and include reference number and issuing date of the first e-CoO cancelled at process II (1&2) above in the Reference Document fields. This new e-CoO data will be subsequently transmitted to customs authority of importing country through EODES.
4. (importer → customs authority) Importer declares the imports to customs authority with the new e-CoO data transmitted through EODES and applies for preferential tariff treatment.
5. (customs authority → importer) Customs authority of importing country makes a decision on preferential tariff treatment based on the new e-CoO data received through EODES.
 - 5.1. Before import declaration and customs clearance, customs authority of importing country makes a decision on preferential tariff treatment based on the new e-CoO data received through EODES.
 - 5.2. After import declaration and customs clearance, customs authority of importing country checks information between the cancelled e-CoO and the new eCoO to decide whether importer needs to rectify the amount of tax he has paid or not in case of correction for erroneous reasons.

4.3.2.3. Update the process of building and connecting EODES

On June 23th 2023, The Ministry of Industry and Trade, the general department of Vietnam Customs of the Socialist Republic of Vietnam an the Korean customs Service of the Republic of Korea signed joint announcement on the technical connection of EODES.

procedures and makes logistics more interactive. We provide a platform that maximizes the efficiency and convenience of administrative procedures by eliminating multiple data entry and human errors in data transcription.

Operation of TradeWaltz

TradeWaltz will endeavour to improve operational efficiency by digitising all trade-related documents and provide new value through the use of trade data. Our mission is to make safe, secure and smooth trade a reality for all of our platform's users. The first step will be a sequential rollout, whereby the platform is adopted for different processes with new functions added and other improvements made where necessary. TradeWaltz now plans to start connecting government agencies, service providers, and other players both in Japan and abroad to promote the digitalisation of trading operations in Asean and beyond.

Trading operations cover a wide range of products and involve numerous procedures, including documentation, consistency confirmations, and other work that can be costly to perform manually. Furthermore, considering multiple parties engaged in a single transaction, developing a system accurately and safely to share information has been a challenge faced by all industries. Based on the results of its discussions among consortium members, NTT DATA began developing the TradeWaltz platform, which uses blockchain technology to connect trade-related information. Provided that this proves to be a practical system, it should make it possible to digitalize and centrally manage all trading operations, cutting workloads by as much as 50%.

Administration, development, and management of the platform is handled by its namesake company TradeWaltz, which was founded in April of this year. The seven enterprises that recently agreed to invest in TradeWaltz will be working closely with one another to further develop the platform into a practical and commercially viable business. The first step will be a sequential rollout, whereby it is adopted gradually for different processes with new functions added and other improvements made where necessary.

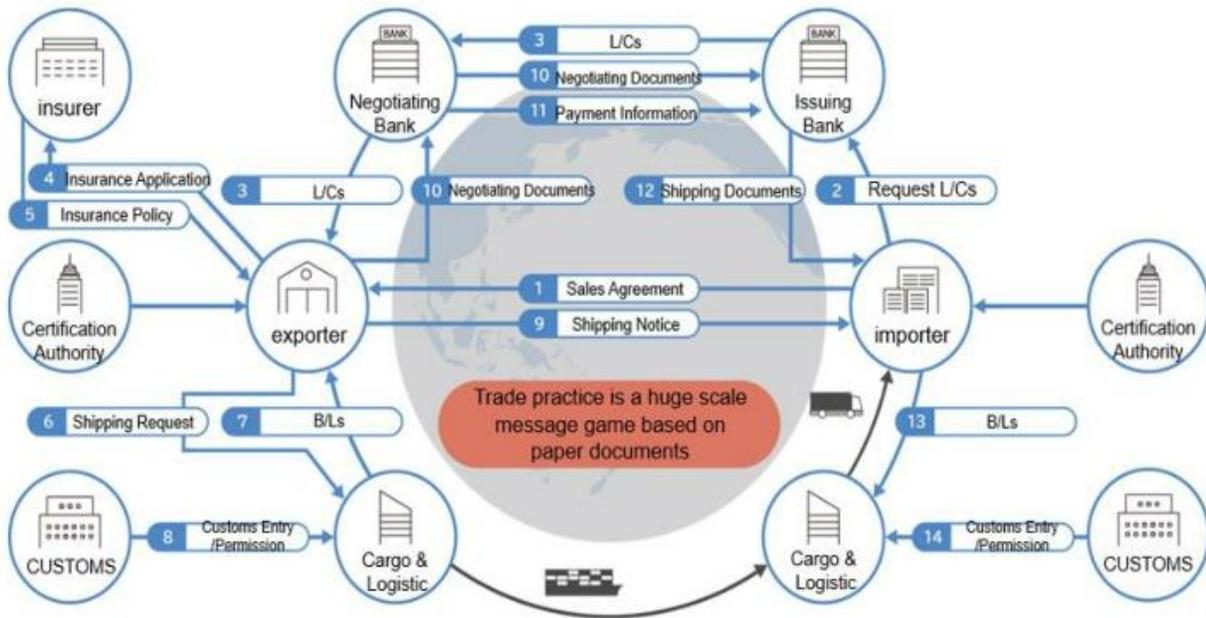


Figure 10: Conventional communications framework before rollout of TradeWaltz

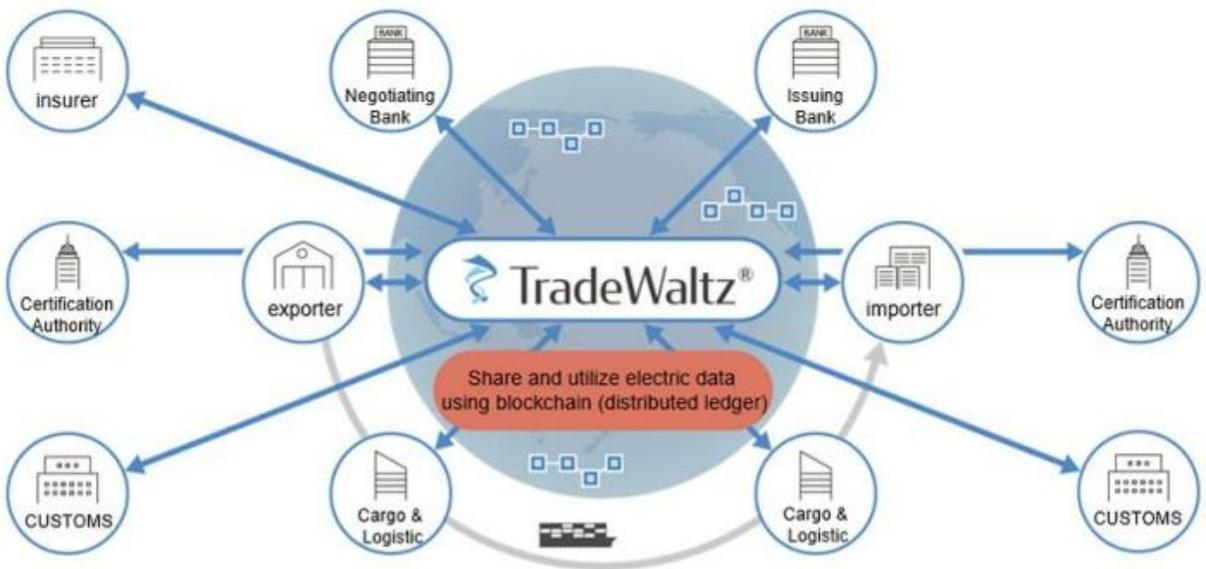


Figure 11: Conventional communications framework before rollout of TradeWaltz

Results

Tradewaltz has been making great efforts to establish an optimized and sophisticated trading ecosystem not only in Japan but also in many different economies around the world.

In 2018, NTT Data was selected as a participant in a NEDO 1 project to develop a platform for a new industrial that helps to leverage Internet of Things. During the project, Tradewaltz built a system for sharing trade data and conducted a PoC at three major ports in Japan (namely Tokyo, Shimizu and Hakata), that export containers to Asia. The PoC resulted in increased productivity and reduced export lead time for all participants in trade operations (including those that had not digitized their data).

Furthermore, in 2018, NTT DATA also conducted a PoC to digitalize trade procedures between Japan and Thailand in cooperation with the local service providers and Japanese companies and banks operating in Thailand. Through seamless coordination with existing Thai trade procedure services, we demonstrated benefits to users and eliminated systems-related issues.

In 2019, the trial deployment with JSCCIB of Thailand has been developed. From July to October 2019, NTT DATA conducted a joint trial deployment with Thailand's Joint Standing Committee on Commerce, Industry and Banking (JSCCIB). JSCCIB is striving to build a trade platform in Thailand and the trial using our platform was conducted as part of their National Digital Trade Platform (NDTP) project. The NDTP project has been approved by the Thai government and aims to build a B2B trade platform that can be used by various participants. NTT DATA will continue to cooperate on the project.

In 2019, NTT DATA conducted a trial operation of TradeWaltz®. NTT DATA provided the trial version of TradeWaltz® free of charge to the consortium members and verified it using both test and production data from October 2019 to March 2020. Through this trial operation, NTT DATA confirmed that document data can be shared smoothly among relevant parties, evaluated functionality and operability, and identified items for further improvement.

4.4.2. National Digital Trade Platform (NDTP) – Thailand

On November 2, 2019, the Joint Standing Committee of Commerce, Industry and Banking (JSCCIB) of Thailand announced that it has successfully a trial of trade platform incorporating NTT DATA's blockchain technology. NTT DATA, which is developing a digital trade solution in Japan, collaborated with JSCCIB in studying the feasibility and benefits of a cross-industry trade platform under Thailand's National Digital Trade Platform (NDTP) project.

The National Digital Trade Platform project is a private-sector initiative led by JSCCIB in Thailand to build a B2B trade platform for international trade. The cabinet of Thailand established the project and assigned the Office of the Public Sector Development Commission to work with related agencies and JSCCIB. The prime minister of Thailand also has called on all sectors to help develop the digital platform as

part of the national agenda, targeting to connect it with the National Single Window for trade facilitation.

In the context of ASEAN's digitalization efforts are increasing dramatically, and as a Chairman of ASEAN 2019, the NDTP has been developed and expected to be a domestic and cross-border B2B platform that will display decent connectivity across the Thai trade ecosystem. The NTDP is expected would support Thailand exporting sector that accounts for more than 70% of GDP¹³ and can synergize with other projects.

Objectives

One of the main objectives of the NTDP is that it helps to streamline export and import processes, reduce document handling costs, and eliminate procedures on a blockchain-based platform. The NDTP also serves as a one-stop information exchange platform to enable exporters and importers to interact more efficiently with private and public sector players in the trade ecosystem. The platform enables digital sharing of all trade documents such as purchase orders, invoices, shipping instructions, sea waybills, CO, export permits, and insurance policies.

The primary goal of the NDTP is to link the trading platforms with the National Single Window and other platforms developed by neighboring countries to boost trade in the ASSEAN region. The Thai National Shipping Council (TNSC), which forms part of the private sector umbrella organization Joint Standing Committee on Commerce, Industry and Banking (JSCCIB), is leading the NDTP effort. TNSC ran a proof of concept for the NTDP in 2019 and is also working toward an interoperability pilot with the Japanese national trade platform. The TNSC is also discussing furthering interoperability with Singapore's national trade platform. TNSC aspires to connect the NDTP and Thai government's national single window, leveraging the ETDA's digital ID that exporters and importers can use when interacting with the various public and private sector players in the trade ecosystem.²³

²³ <https://www.allianceforetradedevelopment.org/post/single-windows-as-platforms-of-msme-trade-services-singapore-and-thailand>

<p><u>Faster</u> Automatic process helps reduce time of information input and information exchange</p>	<p><u>Cost Reduction</u> Elimination of document handling and many duplicate rekeys helps save redundant costs</p>
<p><u>Online Process</u> No paper, No messenger. All steps can be done on computer or mobile device.</p>	<p><u>Efficiency</u> Process documents without redundant procedures, which are time consuming and prone to human errors</p>
<p><u>Transparency</u> Standardized document. Once recorded, transactions cannot be changed or altered; hence creating trust and transparency</p>	<p><u>Shared Infrastructure</u> One time system development which can be used among stakeholders and in conjunction with other value-added services in future</p>

Operation

The government of Thailand, with the Customs Bureau of the Ministry of Finance playing the central role establishing the Thailand National Single Window (the operation officially started in 2011). The purposes are to improve the cost efficiency, customer services, reliability, and security of logistics services. As of 2019, 38 government agencies and enterprises were involved as core organizations in the operation of this National Single Window. There are more than 10,000 users and around 6.5 million to 7.5 million transactions occurred monthly¹⁵. Just as in other ASEAN member states, electronic exchange of certificates of origin (ATIGA e-Form D) are possible via the application of the National Single Window. Thus, Thailand plans to develop a trade platform that incorporates blockchain technology and is linked with the single window (see the diagram below).

The NDPT will be acted as a central platform for international digital trade. Especially B2B trade that is integrated in the linking of trade information between them. Thus, to reduce cost of import-export (paperless) including facilitating SMEs to access capital. The development of the NDTP will require amendments from several laws, such as the Electronic Transactions ACT to enable the exchange and transfer of electronic data, the Personal Data Protection Act, etc. In the past, NDTP has been connected to the data linking service system of government agencies and businesses

(G2G, G2B and B2B) for import and export that supports international data links or National Single Window (NSW) of the Customs Department, including foreign digital trading platforms such as digital platforms from South Korea, Japan, and Singapore.

In the first phase of NDTP, the operation will begin in the areas related to 4 types of documents, namely: Purchase order; Billing Invoices/Invoices to solve the problem of forgery of documents and duplicate credit request; Shipping Instructions and; Sea waybill.

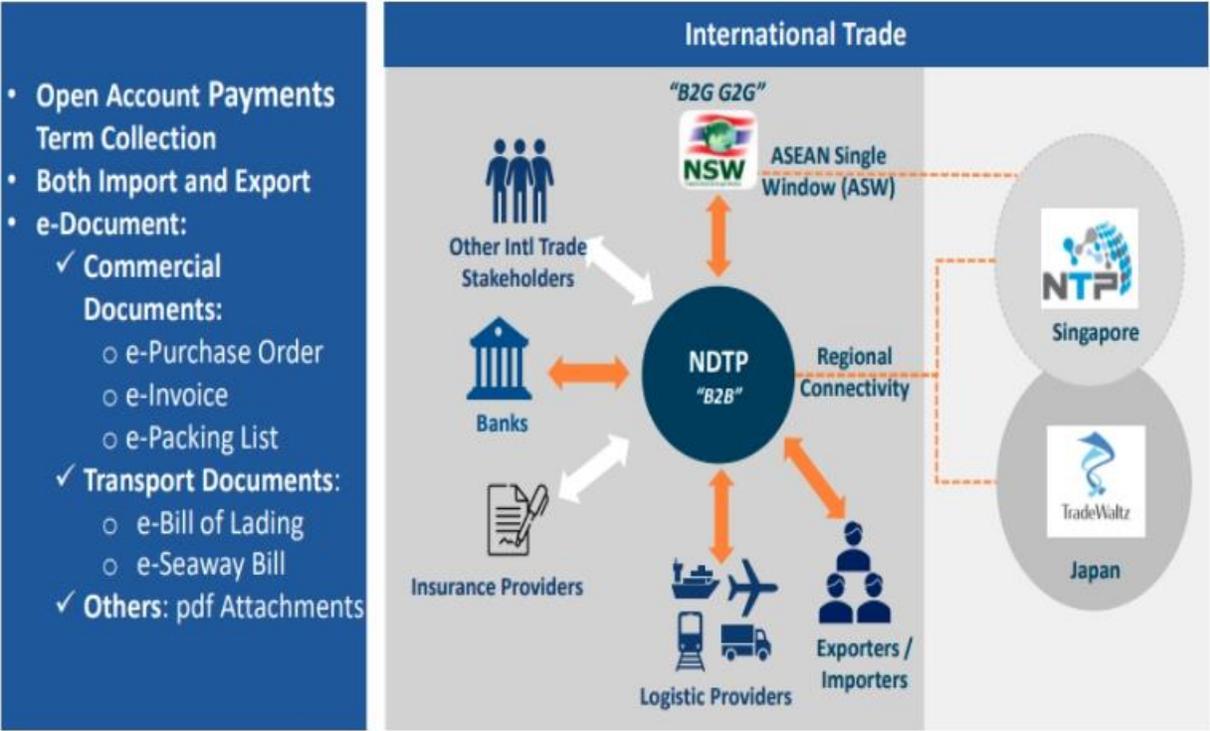


Figure 12: Phase 1 of the NDTP

Results

The NDTP project was launched after the government called for the collaboration from all Thai sectors to develop a digital platform. There were around 24 companies from different sectors such as banks, exporters, insurers and freight forwarders participated in the trial for exchanging trade documents, for example export permits, purchase orders, invoices, insurance policies and invoices using AI and block chain. The trial results of the NDTP illustrated that the platform indeed reduced the document processing time by around 60% and prevented fraud as well as double financing. According to the working group under the standing committee of the project, the NTP connected all parties and enabled the exchange of trade-related data and document digitally. The time and cost of export and import will be reduced dramatically, as

well as the risk of financial fraud will be mitigated, and the process of logistic and insurance arrangement will be streamlined through the platform.

5. Recommendations and Move forwards

A decade of fresh opportunities has dawned for 589 million people in Southeast Asia (SEA). The digital economy in the region is resurging, paving the way for a bright future in which the internet economy is expected to exceed \$1 trillion in gross merchandise value (GMV) by 2030.²⁴ Moreover, ASEAN Agreement on E-commerce has come into effect and then Regional Comprehensive Economic Partnership Agreement (RCEP) very soon. All these agreements aim to facilitate cross-border e-commerce and cross-border paperless trade among Parties. Consequently, it is really in time and essential to develop platforms for cross-border paperless trade to expand and increase market opportunities in the region.

As mentioned above, we have seen some kinds of cross-border paperless trading platforms for both onshore and offshore of ASEAN. These platforms can be approached and designed differently but they target to easing trading procedure and cutting cost and time for all stakeholders. However, it is a fact that, calling for the participation of businesses and related stakeholders is the most difficult task that we have to face up with. To achieve this, some following recommendations may be considered.

(i) Enhance Policy Communication among Public and Private sector to consolidate domestic legislation

Both digital and analog outreach tactics should be considered by governments. The results of the interviews show that using social media to engage with MSMEs who are familiar with digitalisation is a good idea. However, in order to reach the bulk of ASEAN MSMEs, which continue to rely on their existing commercial partners for business information and Governments would have to employ established methods to reach out to local business circles. The purpose of creating public and private communications is to have a better understanding of the businesses' needs as well as their challenges in export-import activities. According to, you can have a practical and helpful design of policies and platform which really help businesses.

(ii) Standards and Interoperability of digital platforms for cross-border e-trade

Standardization is a critical component in ensuring smooth e-commerce information flows. Various standards for product description and classification, tracking, packaging, transportation, safety, and monitoring of physical flows of items

²⁴ e-Conomy SEA 2021, Google, Temasek, Bain &Comapay, 2021

have been developed to support various aspects of ecommerce. There are certain general guidelines to follow. Basic data formats and paradigms of data exchange and communication are defined by standards (e.g., EDI, XML, RDF). These standards are frequently used as foundational levels in data management and data sharing protocols. There are also business functions to consider. The story of data standard is just an example to show out roles and importance of standards and interoperability in developing such kind of cross-border paperless trade.

In the term of interoperability, Parties or ASEAN Member States always encourage the interoperability policy and regulation frameworks facilitating cross-border paperless trade as the most efficient way to start the journey of together. Both standards and interoperability are the key factors to create a mutual recognition among countries to push up cross-border paperless trade. Take an example in the area electronic signature and electronic authentication, it is undeniable that standard is the key for partners to accept the validity of each side.

(iii) Trust and Recognition among related Stakeholders and Beneficiaries

Following with standard and interoperability, it is time for us to enhance the trust and mutual recognition with the aim to create a networking of stakeholders to expand markets for businesses. Taking best use of FTAs as Parties, a networking of stakeholders should be developed to support each other. This networking's activities will be based on principles created by provisions and commitments in FTAs and also, mutual benefits upon our concensus in FTAs.

Way Forward

The second Part has shown out the South East Asia has been as one if the most dynamic digital region. In this context, it is important for policymakers in the region to find ways to be better engaged in cross-border e-commerce, especially for the promotion of export. Some countries in the region tried to develop their own cross-border e-commerce platforms but it is essential to collaborate among themselves to maximise benefits that regional platform network can create to the users. Besides, regional countries may think about the opportunities to collaborate with the global existing platforms to expand the network and to create more added values.

Moreover, consolidating legal and regulatory framework for cross-border e-commerce will definitely facilitate cross-border paperless trading in the region. We have been seeing more and more new generation of free trade agreements/regional trade agreements established and coming into effect, which draw a new picture on global and regional digital pictures. As multilateral trade rules and commercial treaties between countries will substantially shape the rules of cross-border paperless trade in the future, countries in the region should actively participate in the discussions and

negotiations. It is important for countries in the region to review their readiness to adopt supra-national rules and regulations related to cross-border e-commerce. For instance, with regard to the compatibility of e-transaction laws, a prerequisite for conducting commercial transactions online is the recognition of the legal equivalence between paper-based and electronic forms of exchange, which is the goal of e-transaction laws.

At the national level, given the multi-sectoral nature of e-commerce, comprehensive policies on cross-border e-commerce are rather fragmented. Take China as an example, China has been at the forefront of comprehensive policymaking on cross-border e-commerce. Since 2012, the Government has promulgated 13 regulations and rules and one e-commerce law. Lessons learned from China are that regulation on e-commerce, especially cross-border e-commerce, should be a long process. Learning by doing is a good practice as countries promulgate cross-border e-commerce policies and regulations. The experience of China also shows the complexity of cross-border e-commerce policymaking. Countries may consider implementing pilot projects to manage the possible risk of introducing cross-border e-commerce regulations. Sandbox is also a popular tool for countries to consider at the starting point.

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