



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Impact of TPP's E-commerce Chapter on APEC's E-commerce

APEC Electronic Commerce Steering Group

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Chapter I: Introduction

1. Background

The introduction of internet and other technological advancements has changed the way business and trade are conducted. In the past, global trade was for big companies with various resources to set up an oversea office, employ foreign representatives and handle with various challenges due to different regulations by foreign market. Today, “cross-border trade is no longer an activity exclusive to global corporate elites” since internet enables firms of any size to reach customers all over the world.

Given the dramatic rise of electronic commerce (e-commerce), it has been regarded as an economic driver by enhancing productivity, innovation and competitiveness and reducing the cost of doing business. The importance of lowering the barriers in e-commerce has been recognized by many members, leading to several negotiations among region which address issues in e-commerce. In recent decades, the Asia Pacific region has witnessed the expansion of e-commerce in various free trade agreements/regional trade agreements (FTAs/RTAs). During the period, there has been a revolution in the approach to e-commerce field reflected in the FTAs/RTAs which go from coverage of only “paperless trading” to the inclusion of E-commerce Chapter. Most recently, the Trans-Pacific Partnership agreement (TPP) concluded among 12 APEC members was seen as the most ambitious agreement thriving to address both traditional and new emerging issues in e-commerce to facilitate the growth of the sector. Though the withdrawal of the leading participant member, the US, is posing a question on the possibility of the enforcement of the agreement, the TPP is believed to affect the future negotiations in the Asia-Pacific which potentially offer the participant members with various opportunities of market accession, enhancement of competitive advantage, improvement of investor confidence, etc.

However, FTAs/RTAs like the TPP also present difficulties facing its participant members. While some of member members are more advanced in level of development and legal framework which make them more advantageous to tap the benefits of the TPP, developing member members are at very diverse stages of economic development and their common feature is that their domestic enterprises are far less competitive and they need supportive technology policy which may go against the TPP’s commitments. The requirement to strengthen their legal systems in accordance with the TPP provisions is quite a challenging job.

Therefore, it is critical necessary to have insights on the details of the trade pact to better examine what are the benefits and implications for Asia-Pacific economies.

2. Research Objectives and Research Questions

The research aims to examine the impact of the latest RTAs (the TPP's E-commerce Chapter) in APEC's e-commerce growth in order to provide suggestion on how the TPP member members can utilize benefits of the TPP in APEC in cross border e-commerce adoption.

To meet the above-mentioned objective, there is a set of questions to be addressed as follows:

1. What are the highlights of the Trans-Pacific Partnership E-commerce Chapter? What are new compared to the previous agreements concerning e-commerce?
2. How will legal regulations covering e-commerce field in the TPP member members and APEC region change due to the implementation of TPP?
3. What will be the impacts on digital trade in the TPP region? How will the TPP agreement affect ongoing and future trade talks?
4. What will be the policy implications for the TPP member states and the APEC region to fully utilize TPP's benefits

3. Methodology

Fieldwork researches were conducted in six members including Australia, Canada, Malaysia, New Zealand, Singapore, and the United States from April to June 2017. During the fieldwork trips, project team had several fruitful discussions and in-depth interviews with these members' governmental officials working in e-commerce field. Through the discussions and interviews, project team has collected adequate and efficient information and data concerning 6 members' e-commerce development experiences, their perspectives on the TPP concerning e-commerce chapter, the readiness of the whole members for the future implementation of the TPP and their plans to make the most of the TPP if the agreement ultimately takes effect.

Desk study has also been conducted to collect and systemize available information and data to serve the research design in particular and the research purpose in general. Information collected from various sources such as government, organizations, reference materials available on internet and in libraries, etc. includes:

1. Previous studies on the TPP's E-commerce Chapter and its impacts on the TPP members;

2. Summary of FTAs, RTAs concerning e-commerce;
3. Information on current e-commerce legal framework in Asia Pacific region;
4. Information on e-commerce development overview in Asia Pacific region;
5. Information on e-commerce supporting programs implemented by governments of the TPP member states.

4. Structure of Research

This report is composed of eight chapters. Chapter I describes the background of the research, identifies the research objectives, research questions, and introduces research methodology. Chapter II focuses on literature reviews which discuss the provisions in E-commerce Chapter in the TPP agreement. Chapter III analyzes the overview of E-commerce in APEC region with a focus on B2C e-commerce performance, Internet and smartphone penetration, and Micro, Small and Medium enterprises in the region. Chapter IV reviews the previous FTAs and RTAs in Asia – Pacific region to provide an overall picture of the e-commerce coverage in these agreements. Chapter V attempts to discuss significant issues in E-commerce Chapter in the TPP agreement and figure out new features of the agreement. Chapter VI explores current E-commerce legal frameworks in the APEC region with a review of some TPP's member states' regulations and regional frameworks such as the APEC Privacy Framework and Cross-border Privacy Rules, Privacy Recognition for Processors. Chapter VII studies the impacts of the TPP agreement on the APEC region's e-commerce as well as non-members. Chapter VIII wraps up the research report with some policy implications that are applicable for both members in the TPP bloc and members interested in a future membership.

Chapter II: Literature Review

Literature shows that much work has been devoted to the TPP. There are numerous studies examining the overall impacts of TPP and its impacts on some specific sectors. There are also various summaries on the e-commerce chapter introduced by member members' governments. However, these documents mostly focus on indicating the main provisions in the TPP text without going into deep analysis.

Moreover, there have been little studies on how TPP affects e-commerce sector in the region. Among them, Elms and Nguyen (2017) have reviewed provisions concerning digital trade in the TPP agreement focusing on the seven TPP member members: Australia; Brunei Darussalam; Japan; Malaysia; New Zealand; Singapore; and Viet Nam. The study aims at exploring the motivations of such members that are in different level of digital trade development and have different existing domestic policies in place to join the TPP agreement with several new rules. The study found that the objectives for TPP membership include (i) investment attraction, (ii) business environment improvement, (iii) regulation modernization, (iv) competitive advantage gain, (v) regional integration facilitation.

In his study, Hamanaka (2017a) uses the case study of E-commerce Chapter in order to examine whether TPP includes all critical rule-making outcomes obtained prior to TPP and whether TPP introduced new rules. The study found that although it is regarded as a 21st century FTA, TPP delivers unremarkable rulemaking outcomes since the agreement does not incorporate several significant e-commerce provisions in earlier FTAs. Therefore, many members other than the US are working on the possibility to move with TPP 11. The study implies that TPP is a "comfortable agreement" that lacks of requirements for drastic policy reform.

However, in another study, Hamanaka (2017b) also indicates other important findings including (i) some rule-making outcomes that TPP was able to introduce in area relating the prohibition of imposing performance requirement in e-commerce business; and (ii) TPP's achievements in institution and capacity building that are almost comparable to earlier FTAs signed by some parties in the region.

Branstetter (2016) also assesses the digital trade provisions in the TPP. He indicates that the TPP attempts to provide an open and level playing field for online trade and to prohibit participating members from restricting cross-border information flows. The study argues that the TPP expresses the interests of US-based digital service providers but it also expands the chances for trade growth and new digital products and services development. Assessing the likely impact of the TPP Agreement, the U.S. International Trade Commission (USITC 2016) also points out that TPP provisions on digital trade and internet- based commerce are

extensive than any previous FTAs signed by the US and it can be a model for future US and global trade agreement. Provision on e-commerce will likely positively affect a great variety of US businesses, from “large multinational corporations to small and medium enterprises (SMEs), and across a broad range of US economic sectors”. In particular, export of computer services are predicted to rise in the long term since US companies will be offered with market access, national treatment and regulatory transparency thanks to e-commerce chapter’s provisions.

By reviewing the TPP’s main provisions in E-commerce Chapter, World Economic Forum’s White Paper (2016) demonstrates the implications of the TPP for other regions. They argue that it is still too early to predict if it can level the playing field and serve as an effective mechanism to limit governments both within and outside the TPP to impose rules go against what was agreed in the e-commerce chapter. However, to the extent that the TPP provisions will shape a basis for the future agreements, they still have impacts on the likely system appearing in the near future for e-commerce. For the time being, the TPP significantly contributes to the establishment of a benchmark for e-commerce rules, thus, they can be regarded as baseline for future negotiations.

In spite of above-mentioned efforts in analyzing the TPP’s e-commerce provisions, there are still great needs for further exploration on what the commitments mean to the member members, how they affect their domestic policy frameworks and what impacts that they may have on e-commerce sector and the economy as a whole. More researches in such areas are very important since the influences of TPP commitments on the future trade agreement are predictable regardless of whether it enters into force or not.

Chapter III: E-commerce Overview in the APEC Region

1. B2C E-commerce Turnover

Electronic commerce (e-commerce) has the potential to provide an extraordinary stimulus to the growth and trade of the Asia-Pacific region. In 2016, worldwide B2C e-commerce sale was estimated to reach 1.9 trillion USD and the sales of Asia-Pacific was estimated to be 1 trillion USD.¹ B2C e-commerce sales seemed to be a larger share of total retail sales in Asia-Pacific than all other regions, at 12.1% as estimated (eMarketer 2016). Online services have the largest share of the total digital market in 2015 (APEC Policy Support Unit 2017).

Cross-border e-commerce is one of the fastest growing segment of global trade, growing from practically zero two decades ago, to an estimated value of US\$ 1.92 trillion globally by the end of 2016 (Statista 2012). According to a report from the global consulting firm Ali Research and Accenture (2015), the Asia-Pacific region also had the biggest volume of sales in 2016, followed by Western Europe and North America. Cross-border B2C e-commerce sales in the Asia-Pacific region reached 144 billion USD, accounting for 35.9% of worldwide cross-border B2C e-commerce sales.

The report by Ali Research Accenture also states that the global B2C cross-border e-commerce market will balloon to \$1 trillion in 2020 from just \$230 billion in 2014. It is forecasted that online shopping directly from overseas retailers will highly increase which can become one of the most popular forms of shopping. It is expected to see the compound annual growth of 27.4 per cent over the next five years, double the rate of worldwide B2C shopping as a whole. By 2020, more than 900 million people around the world will be international online shoppers with their purchases accounting for nearly 30 per cent of all global B2C transactions.

In the category of B2C e-commerce sales², China and the United States are clearly at the top among 10 leading members B2C e-commerce sales in 2015. In 2015, the Chinese spent \$US 766.5 billion online in total, while the American B2C turnover amounted to \$US 595.1 billion. Among 10 leading members, there are six APEC members including China, USA, Japan, Korea, Canada and Russia (Ecommerce Foundation, 2016).

¹ <https://www.emarketer.com/Article/Worldwide-Retail-Ecommerce-Sales-Will-Reach-1915-trillion-This-Year/1014369>

² B2C e-commerce turnover included taxes, shipment fee but excluded returning fee.

Table 1: Top 10 Members B2C e-commerce Sales 2015

Members	2012	2013	2014	2015	2016 (f)
China				\$766.5bn	
USA				\$595.1bn	
UK				\$174.2bn	\$192.5bn
Japan		\$92.8bn		\$114.4bn	
France				\$71.9bn	
Germany	\$41.0bn			\$66.2bn	
Korea				\$64.8bn	
Canada			\$31.7bn	\$35.7bn	
India				\$25.5bn	
Russia				\$22.8bn	

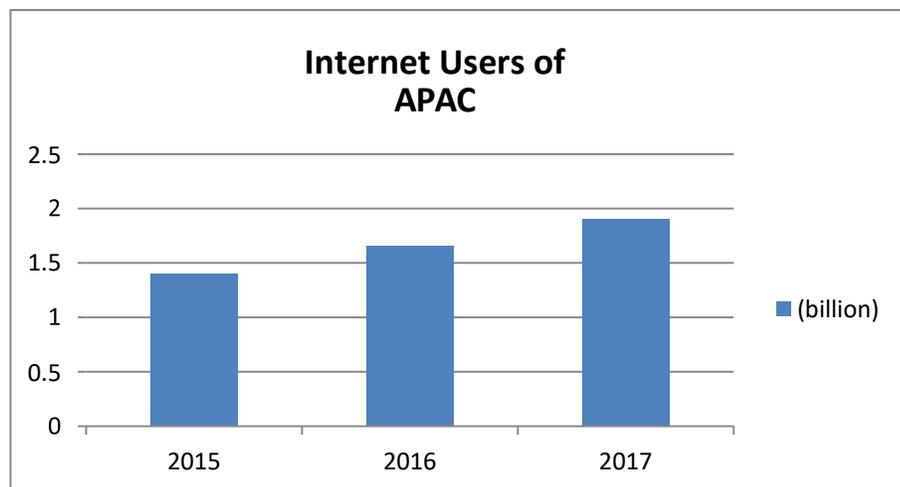
Source: Global B2C E-commerce 2016 executed by Ecommerce Foundation

Given such statistics, e-commerce is indeed becoming a major pillar of Internet and Digital economy which has contributed to the development of trade in the region.

2. Internet Penetration

According to the Study of WeareSocial Jan 2017, there has been remarkable growth in the Asia-Pacific region, with the Internet users increasing 15% in just 12 months, reached at 1.909 billion. The Internet users of APAC now make up 50% of all Internet users in the globe.³

Figure 1: Internet Users of APAC

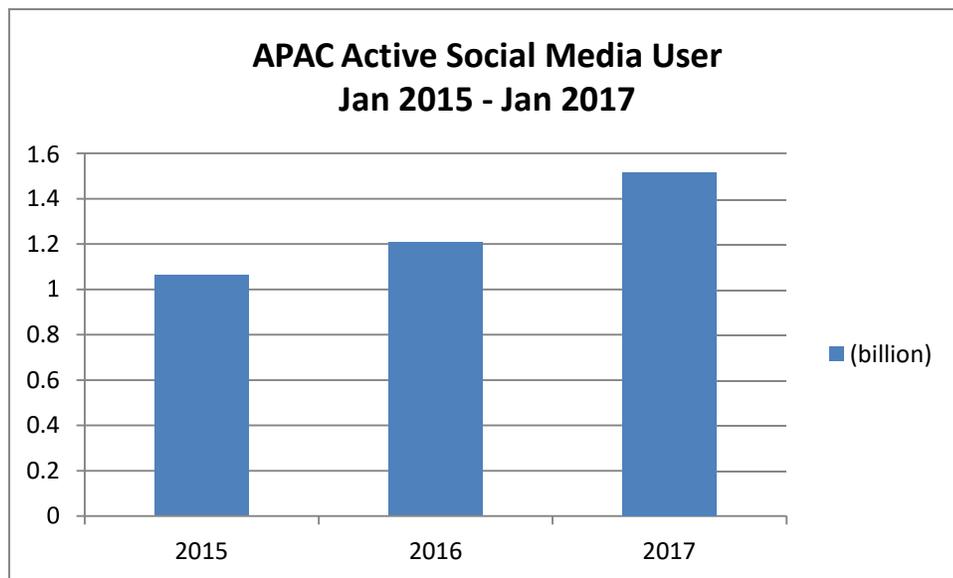


³ <https://wearesocial.com/sg/blog/2017/01/digital-in-2017-global-overview>

Moreover, the number of people purchasing via e-commerce took 1.61 billion by January 2017. This number accounted for 42% global Internet users and 22% of total population of the world.⁴

The active social media users of APAC increased 25% in comparison with 2016, reaching at 1.514 billion and accounting for 54% of the global by January 2017.

Figure 2: APAC active social media user



3. Smart phone Penetration

Smartphones continue to be the mobile device of choice for Internet users in Asia-Pacific region. According to the survey by Internet Society in February 2016, the smartphone ownership peaked at 96% among 15-24 years old and 94% among 45-59 years old, leading among means of surfing Internet. Following smartphone, tablet accounted for 43% while wearable devices took around 10%. The survey also found that 96% of smartphone owners had tablets and 90% of them had a wearable device. It is an interesting finding that owners of wearable devices were more likely to have several mobile devices, with three-quarter owning a tablet together with a smartphone.

According to the report from Wireless Smartphone Strategies (WSS 2016) services, global smartphone users will develop very fast in the period of 2016-2022 with the growth of 58%. Smartphone penetration rate of global population will increase to 44% worldwide in 2017 in compared with 39% in 2016. This rate will further increase up to 59% by 2020.

⁴ <https://wearesocial.com/sg/blog/2017/01/digital-in-2017-global-overview>

Central and Latin America will witness the highest smartphone penetration, followed by Asia Pacific.

4. Micro, Small and Medium Enterprises (MSMEs) with e-commerce in APEC

APEC has been taking the lead in driving regional economic growth through trade and investment liberalization, contributing the regional economic integration and Bogor Goals. Micro, Small and Medium Enterprises (MSMEs) account for over 97% of all businesses by number and generate more than 70% of all jobs in the region. The growth of APEC Economies developed through the years, with their combined real GDP doubling from USD 16 trillion in 1989 to USD 31 trillion in 2016 (APEC 2015). It is affirmed that MSMEs are key to the development of APEC Economies, particularly in the Internet era and fast invasion of e-commerce. In the United States, there are 28% SMEs are selling online. While only 19.6% of Malaysian SMEs are involved in doing business online (Remarkety 2015), in Australia, 29.9% of business with 0-4 person received orders via the Internet while nearly 40% with 5-199 persons received orders via the Internet (Australia Bureau of Statistics 2014-2015). In New Zealand, 44% of businesses with 6-19 employees have internet sales (Ministry of Business, Innovation and Employment, New Zealand 2016).

Cross-border e-commerce can drive MSMEs growth by shrinking the world and exponentially increasing the number of prospective customers. MSMEs should consider take the best use of cross-border e-commerce in their business strategies due to following benefits:

- Enlarge markets and increase the access to goods and services;
- Empower MSMEs and improve their survival rates;
- Diversify and mitigate risks;
- Create positive externalities throughout the value chain.

However, the MSMEs' readiness for doing cross-border e-commerce varies among TPP economies. A study by APEC Business Advisory Council (2015) examines and scores the MSMEs' readiness with a 5-point scale in which 1 means low level of readiness and 5 means high level of readiness (Table 2). Accordingly, MSMEs from Canada, Malaysia and Singapore are relatively more ready and competitive in terms of cross-border e-commerce engagement. Meanwhile, MSMEs from Brunei Darussalam, Chile, Mexico, Peru and Viet Nam comparatively lag behind.

Table 2: MSMEs Readiness to Engage in Cross-border E-commerce

No	Economy	Score	Note
1	Australia	3	MSMEs have capability of doing cross-border e-commerce since they already frequently communicate with the US and UK markets. Education in IT is a potential concern.
2	Brunei Darussalam	2	MSMEs in Brunei Darussalam have high levels of education and business intelligence. However, there is lack of motivation and capacity to participate in cross-border e-commerce activities. Company needs outside talent is limited by quota systems on importing foreign talent. The availability of funding and the lengthy time it takes for government grants to come through are their concern. These barriers prevent any first mover advantage and decrease MSMEs' competitiveness.
3	Canada	4	MSMEs in Canada possess strong business intelligence, technical skills and capabilities. However, their motivations to engage in e-commerce business opportunities are limited by expensive and inefficient logistics. Also, businesses are unaware of the benefits of utilizing digital technologies.
4	Chile	2	Cross-border e-commerce is not popular among MSMEs in Chile. MSMEs need help with improving technology and digitalization in order to make the most of cross-border opportunities. Several giant retailers dominate retail and e-commerce market in Chile. Furthermore, problems in payments and shipping cause an increase in the operating costs, which in turn lead to the decrease in MSMEs' competitiveness.
5	Japan	3	MSMEs in Japan possess sufficient technical skills and capabilities, and are doing good business in domestic e-commerce market. However, relatively low levels of overseas digital marketing and language skills affect cross-border e-commerce. MSMEs are unaware of opportunities and benefits of cross-border e-commerce. In addition, MSMEs are risk averse.
6	Malaysia	4	Many Malaysian MSMEs are ready and capable of engaging in cross-border e-commerce. They are equipped with the requisite technical skills, capability and motivation to go across border. They also enjoy a strong government and private financing environment.

7	Mexico	2	The majority of MSMEs are informal and do not apply technology in Mexico. A small emerging group of e-commerce firms only focus on domestic e-commerce. Skilled talent is scarce. Outdated IT content is taught in most of universities. The primary form of education is on the job training. Acknowledging the demand, Mexican government has committed to provide funds for MSMEs capacity building. Few of them are aware of cross-border e-commerce activities. They are also challenged by access to funding.
8	New Zealand	3	Many MSMEs go online and have high levels of education and general interest in e-commerce. However, there is a lack of desire for them to go cross-border. Lack of access to financing and workers migrating to the US and Europe are challenges for them.
9	Peru	2	Some MSMEs are willing to engage cross-border e-commerce; however, most of them are still unaware of the opportunity. Also, the lack of the mindset to adopt new business models, technical capacity needed for setting up e-commerce businesses and capability for digital marketing are hindering them from taking advantage of cross-border e-commerce.
10	Singapore	4	MSMEs in Singapore possess the motivation, skills and capability to adopt cross-border e-commerce. Financing are there for those companies who want to go online. MSMEs have also developed relationships across the region to look internationally for growth.
11	Viet Nam	2	MSMEs are equipped with basic technical skills. Financing availability is a challenge. MSMEs show strong motivation to engage in e-commerce as they extensively use Instagram to sell things online. Basic business intelligence and capabilities to run companies need to be built out through training and building entrepreneur networks.

Source: APEC Business Advisory Council 2015

Chapter IV: Some Free Trade Agreements and Regional Trade Agreements Concerning E-commerce

In order to provide an overall picture of the e-commerce coverage in recent FTAs and RTAs, this part will look into the previous FTAs and RTAs in Asia – Pacific region.⁵

During 2000-2002, regional Preferential Trade Agreements (PTAs) became popular in Asia. In its early days, e-commerce was not covered by PTAs. However, “paperless trading” was included in the first bilateral PTAs. The Agreement on a Closer Economic Partnership concluded by New Zealand and Singapore in 2000 comprises a provision on paperless trading in Customs procedure Chapter, committing to build “an electronic environment that supports electronic business applications between each Customs administration and its trading community”. The provision in the paperless trading chapter is specified in binding term.

In 2002, Agreement between Japan and Singapore for a New-Age Economic Partnership includes a chapter on “Paperless trading” chapter with some binding commitments on (i) cooperating to realize and promote paperless trading between the parties, (ii) exchanging views and information on realizing, promoting and developments in paperless trading, (iii) review how to realize paperless trading in which electronic documents are mutually recognized, and (iv) the establishment of a “Joint Committee on Paperless Trading”.

The Free Trade Agreement between Singapore and Australia (SAFTA) signed in 2003 including a whole e-commerce chapter. The agreement is considered as the first one to focus on e-commerce with provisions applying the general principles of WTO law and the UNICTRAL Model Law on Electronic Commerce, a commitment to transparency and to reduce trade barriers in e-commerce, and provisions covering a broad scope of emerging issues in e-commerce. The parties agreed to (i) continue not to levy customs duties on digital products, (ii) make online availability of all existing publicly available trade administration documents by 2005, (iii) cooperate for enhancing the acceptance of electronic versions of trade administration documents bilaterally and internationally, (iv) maintain electronic authentication legislation, (v) provide protection for e-commerce consumers; (vi) work to mutually recognize electronic signatures; (vii) encourage the inter-operability of digital certificates by business; and adopt measures to protect personal data.⁶

⁵ This chapter draws on a study by Rolf H. Weber(2015)

⁶ Full text is available at <http://dfat.gov.au/trade/agreements/safta/pages/background-of-the-singapore-australia-free-trade-agreement.aspx>

In the next period between 2004 and 2011, Asia-Pacific region adopted a mixed approach towards digital trade regulations in PTAs. Thailand – Australia free trade agreement (2004) and Thailand - New Zealand free trade agreement (2005) include basic Chapters on e-commerce with similar provisions with SAFTA on customs duties, Domestic Regulatory Frameworks, Electronic Authentication and Digital Certificates, Online Consumer Protection, Online Personal Data Protection, Paperless Trading, Cooperation on E-Commerce.

However, the Japan – Philippines Economic Partnership Agreement concluded in 2006 by Japan and the Philippines follows the approach expressed in the agreement signed by Japan and Singapore in the early 2000s. It does not deal with e-commerce but only cover paperless trading.⁷

In the following years, e-commerce chapters were not included in the PTAs signed by members in Asia Pacific, for example, six Economic Partnership Agreements (EPA) between Japan and its partners including ASEAN, Brunei Darussalam, India, Indonesia, Malaysia, and Viet Nam (2007 - 2011). Moreover, some FTAs signed between China and its partners including Korea and Singapore, the issues of e-commerce were not addressed.

During the period, there are some exceptional cases when PTAs encompass chapters on E-commerce. In 2005, Korea and Singapore concluded the Free Trade Agreement (FTA) with provisions defining “digital products” granted with a duty-free moratorium, and non-discriminatory treatment.⁸ In 2006, The Singapore – India Comprehensive Economic Cooperation Agreement comprises a similar e-commerce chapter but with limited scope since it Most Favored Nation (MFN) or National Treatment (NT) was granted for digital products.

Notably, the 2009 ASEAN – Australia – New Zealand Tripartite PTA comprises a relatively extensive Chapter on e-commerce, which touches over several issues including Electronic Authentication and Digital Certificates, Online Consumer Protection, Online Data Protection, Paperless Trading, Co-operation on Electronic Commerce.⁹

From 2014 on, a return to liberalization of e-commerce was witnessed. Some members have shown their change in approach towards e-commerce and accepted extensive e-commerce regulations in PTAs. For example, the Agreement between Japan and Australia for an Economic Partnership (2014), the Agreement between Japan and Mongolia for an

⁷ Full text is available at <http://www.mofa.go.jp/region/asia-paci/philippine/epa0609/main.pdf>

⁸ Full text is available at http://www.asianlii.org/sg/other/treaties/2005/2/KSFTA_Agreement.html

⁹ Full text is available at <http://dfat.gov.au/trade/agreements/aanzfta/official-documents/Pages/chapter-10-electronic-commerce.aspx>

Economic Partnership (2015) incorporates a relatively comprehensive chapter on e-commerce.¹⁰ Apart from the same issues covered by other PTAs, in their agreement, Japan and Mongolia agreed on new issues such as the prohibition to require computing facilities localization, the endeavor to take appropriate and necessary measures to regulate “unsolicited commercial e-mail”, and prohibition on requirements of the transfer of or access to source code.

Also, in 2016, 12 economies in APEC signed the TPP, a very ambitious trade agreement which embraces a broad e-commerce chapter. The e-commerce chapter is designed to maintain and develop an open, global internet which is expected to serve as a model for the future agreement. The chapter covers a range of issues which are both traditional and new and emerging ones including customs duties, location of computing facilities, electronic authentication and electronic signatures, trade discriminatory measures, cross-border data movement, source code, cyber-security, consumer and privacy protections, etc. A deeper analysis of the TPP’s e-commerce chapter will be illustrated in the next Chapter.

In addition, the Regional Comprehensive Economic Partnership (RCEP) negotiations were commenced among sixteen Asian economies which account for almost half of the world population, 31.6% of global output, 28.5% of global trade and a fifth of the global foreign direct investment inflows (ASEAN 2017). With the aim of achieving “a modern, comprehensive, high-quality, and mutually beneficial economic partnership agreement among the ASEAN Member States and ASEAN’s FTA partners”, the RCEP negotiations cover several areas including trade in goods, trade in services, investment, economic and technical cooperation, intellectual property, competition, dispute settlement, e-commerce, SMEs and other issues (ASEAN 2016). The leaders of RCEP participating members stated that the E-commerce Chapter in RCEP “*would promote ecommerce among the Participating Members and foster the wider use of e-commerce globally; and enhance cooperation among Participating Members in developing the ecommerce ecosystem. The E-commerce Chapter would help position RCEP as a modern agreement that benefits and creates opportunities for facilitating e-commerce, especially for SMEs*” (ASEAN 2017).

¹⁰ Full text is available at <http://dfat.gov.au/trade/agreements/jaepa/official-documents/Pages/official-documents.aspx>; http://www.mofa.go.jp/a_o/c_m2/mn/page3e_000298.html

Chapter V: E-commerce Chapter in TPP

1. A brief history of the TPP

Originally, the TPP builds on the Trans-Pacific Strategic Economic Partnership Agreement that aimed to reduce trade barriers among the four members including Brunei Darussalam, Chile, New Zealand and Singapore. In 2008, Australia, Peru, Singapore, Viet Nam and the United States were interested in TPP membership and joined the new round of negotiations. Later, Malaysia, Canada, Mexico and Japan also involved in the negotiations (Aaronson 2015).

In February 2016, after seven years of negotiation, the agreement was signed by 12 economies accounting for 800 million people and 40 per cent of global GDP. The agreement is regarded as “*an ambitious, comprehensive, high standard and balanced agreement that will benefit*” TPP member members’ citizens (TPP Ministerial Statement 2015). It goes beyond the reduction of tariffs for goods as committed in standard trade agreements and includes several commitments aiming at establishing new mechanisms to govern cross-border economic activities with an emphasis on the removal of regulatory barriers.

The TPP comprises of 30 chapters covering full spectrum of trade including market access for goods and services as well as investment and it also addresses new and emerging trade challenges such as e-commerce, the role of state- owned enterprises in international trade and investment.

In January 2017, after the US President Trump took the office, the US announced its withdrawal from the TPP, leaving 11 remaining member members uncertain about the future of the trade agreement.

Despite the US pulling out of the deal, Japan and New Zealand formally ratified the TPP. In May 2017, Trade ministers from the 11 remaining members in the Trans-Pacific Partnership, agreed on the sideline of an Asia-Pacific Economic Cooperation meeting in Hanoi to promote the TPP 11 trade liberalization deal. Without the US, some argued that a TPP-11 deal would still provide greater access to economies such as Australia and Japan, and benefit its members in the long term with a commitment for market liberalization. The remaining 11 members might possibly embrace a new framework taking into account the US's absence. Discussions were also needed on whether trade and investment rules should be revised from the original pact.

Then, in November 2017, 10 months after the withdrawal of the US, 11 Asia-Pacific members stated that they had made significant progress toward a major trade deal.

Accordingly, they agreed to “Outline of the Agreement” and “List of Suspended Provisions” which incorporates provisions of the TPP, with the exception of a limited set of provisions which will be suspended. In the Suspension list, as a result, no suspension related to the e-commerce chapter is included. Also, the trade pact was renamed as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).¹¹

In addition, members like Indonesia and Thailand also expressed their interest in participating in the TPP in the future potentially leading to a membership expansion.

2. E-commerce Chapter in the TPP

The TPP is the first major trade deal that has brought e-commerce into sharp focus. It has put considerable efforts to set rules that will shape the development of digital economy in the region for years to come. The E-commerce Chapter provides provisions to ensure that trade via electronic means between TPP members is conducted in a very efficient manner and with appropriate consumer protection (APEC 2015). The Chapter covers a range of issues including customs duties, data localization, electronic authentication and electronic signatures, trade discriminatory measures, cross-border data movement, source code, cyber-security, consumer and privacy protections, etc. This section attempts to discuss each issue in turn.

2.1 Customs Duties and Other Discriminatory Measures

The chapter prohibits TPP members to impose customs duties on any digital products or services (Article 14.3). This will help such content products as e-book, software, music, video, games, etc., freely move in the region. However, TPP members’ governments are not prevented from introducing internal taxes, fees or other internal charges on content transmitted electronically provided that introduction is consistent with the Agreement.

The TPP members committed that digital products are treated equally by all parties (Article 14.4). Therefore, they are prohibited from discriminating against digital products. This provision, however, does not apply to broadcasting as well as government subsidies and grants.

2.2 Facilitating Trade (Electronic Authentication and Electronic Signatures, Paperless Trading, Domestic Electronic Transactions Framework)

The Chapter includes a number of provisions addressing electronic authentication and electronic signatures (Article 14.6), domestic electronic transactions Framework (Article 14.5), and paperless trading (Article 14.9) to ensure that trade-related practices via

¹¹ In the latest update, the TPP was renamed as the CPTPP, however, in this report we use original name

electronic means being conducted efficiently and fairly.

The Article 14.6 aims to limit the restrictions on the use of electronic signatures and prohibit the choice of electronic authentication methods. Accordingly, electronic signatures should not be denied just because it is in electronic form. However, the members are given room for preventing or limiting legal recognition of electronic signatures as valid under their laws. As for electronic authentication, the TPP members are not permitted to prohibit parties from deciding their own methods of authentication and prevent them from having an opportunity to demonstrate the compliance with legal requirements before judicial or administrative authorities.

The provision also allows parties to set certain performance standards for authentication methods and requirement for certification by an accredited authority. However, these performance measures and certification requirements can only be applied to “a particular categories of transactions” which are not yet indicated.

Governments are encouraged to use interoperable electronic authentication, but there is no requirement to do so.

The TPP member members are obligated to maintain legal framework for electronic transactions consistent with specific principles of the United Nations concerning electronic commerce.

In addition, to facilitate paperless trading the TPP parties are encouraged the online availability of trade administration documents and electronic submission of those documents (Article 14.9).

2.3 Consumer, Privacy Protections and Tackling Spam

In order to boost confidence of consumers engaged in online commercial activities, the TPP member members have committed to enhance consumer protection through a number of provisions dealing with online consumer protection (Article 14.7), personal information protection (Article 14.8) and unsolicited commercial electronic messages (Article 14.14).

The TPP parties agreed to adopt and maintain transparent and effective laws to protect online consumers from fraud and deceptive commercial activities. The parties also committed to cooperate with each other’s national consumer protection agencies in cross-border electronic commerce in order to enhance consumer welfare.

As for personal information protection, the TPP parties committed to adopt and maintain legal framework to protect personal information of online consumers. The provision requires parties to take into account of principles and guidelines of relevant international bodies in the development of the legal framework. The TPP parties are also required to attempt to “adopt non-discriminatory practices” to protect online consumers from “personal information protection violations occurring within its jurisdiction”.

The article also indicates information on how “individuals can pursue remedies” and “business can comply with any legal requirements” should be published by TPP parties.

As TPP parties may take different approaches to protecting personal information, they are encouraged to cooperate with each other to promote compatibility across their jurisdictions.

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Since Brunei Darussalam and Viet Nam have not yet implemented their legal framework for personal data protection, they are not required to comply with this provision until they have the laws in place.

TPP members also committed to adopt measures to tackle unsolicited commercial electronic messages (spams) such as requiring senders of spams to ensure the recipient can give their consent or can stop receiving those messages, or otherwise requiring senders to adopt measures to minimize spams. The parties shall provide recourse against spam senders who do not comply with above – mentioned measures. The parties also attempt to cooperate regarding the regulation of those messages.

2.4 Access to and Use of the Internet for Electronic Commerce

Article 14.10 stipulates principles on access to and use of the internet for electronic commerce, however, the provision is considered as soft obligation as it calls TPP parties for the recognition of the benefits of online consumers in having ability (i) to access and use services and applications on Internet, “subject to reasonable network management”, (ii) to choose any non-harmful end devices to connect the Internet, and (iii) to “access information on the network management practices” of the supplier of Internet access service.

Article 14.10 (i) is opposed to blocking access to content, however, by providing “subject to reasonable network management”, the article implies that parties may block access to content for some circumstances. Moreover, while focusing on the blocking of content access, TPP does not mention the controversial threats to net neutrality which includes using technical management to block or degrade traffic, and using techniques to directly or

indirectly favor some traffic over other traffic (traffic prioritization) for economic incentives.

2.5 Cross-Border Transfer of Information by Electronic Means

TPP parties committed to allow cross-border transfer of information by electronic means for business purpose, which will help ensure free flow of global information and data that is crucial for the development of the digital economy. TPP parties recognize that the parties may have their own requirements for the transfer of information. They may also take measures to restrict the transfer of information in order to achieve legitimate public policy objectives provided that such measures (i) are not arbitrary, discriminatory or do not constitute a disguised restriction on trade, and (ii) do not impose restrictions on transfers of information greater than are required to achieve the objective.

2.6 Location of Computing Facilities

Data localization rules requiring foreign companies to store data within a member's territory have been hot among discussions (Ezell et al 2013, Bauer et al 2014, Chander and Le 2014, Stone et al 2015, Leviathan Security Group 2015, Albright Stonebridge Group 2015, Bauer et al 2016, Selby 2017). These requirements may cost companies a lot to build their data centers in any foreign market they want to access, potentially causing them to withdraw operations from key markets. TPP addresses this localization barrier by prohibiting its member members from requiring the use or locate computing facilities within their borders as a condition for doing business. Under TPP, companies no longer have to establish costly and unnecessary servers in TPP markets. This will help companies to have confidence when making crucial investment decisions concerning data center placement.

TPP governments are allowed to impose localization requirements for the purpose of security and confidentiality of communication. They also can adopt measures against the commitment in the pursuit of legitimate public policy objectives in the same manner as the cross- border information transfer provision.

2.7 Cybersecurity

In order to exploit to the full the opportunities on the internet, business and consumers need a secure online environment. However, cyber security has been one of the most urgent issues as computer networks become increased target of cyber criminals and the cyber attacks are on the rise. Understanding the importance of cyber security in the development of digital economy, TPP encourages the parties' cooperation on cyber security matters through the use of existing cooperation mechanism in identifying and mitigating malicious intrusions and dissemination of malicious code (Article 14.16).

2.8 Source Code

TPP prohibits its member members from requiring software owners to share software source code as a condition for entering its market (Article 14.17). This commitment applies only to mass-market software or products containing software. Software used for critical infrastructure is not subject to the commitment.

2.9 New Features

In the efforts to establish a legal framework for digital trade in Asia – Pacific that is beneficial to both business and consumers, TPP has brought about some remarkable rule making achievements. The chapter includes, for the first time, new elements that reflect the development of technology and concerns over digital trade in the recent years. New features of the trade deal include:

- ✓ Commitments dealing with concerns over requests for data centers to be located locally and prohibitions on cross-border transfer of information including personal data as well as digital products such as article, music, etc. These two provisions are critical complement to each other. They will ensure the free movement of electronic information among TPP members and enable trade, investment, and economic activity at the global level.
- ✓ Commitment prohibiting forced disclosure of source code of mass-market software when entering a TPP market.
- ✓ Commitments ensuring consumer’s access to open internet while requiring transparent and effective online consumer laws to be adopted and legal framework for privacy protection to be enforced in order to enhance consumer’s confidence in e-commerce. These provisions provide more specific and binding obligations than those in other FTAs such as Thailand – Australia FTA, Australia – Japan EPA, Australia – Korea FTA.
- ✓ Commitments to adopt measures to stop unsolicited commercial electronic messages. In some other FTAs, this issue is covered but is mentioned as non-binding obligation. For example, Australia and Korea FTA indicates that the parties “shall endeavor” to adopt measures to minimize unsolicited commercial e-commerce messages, while in other FTAs including Australia – Japan FTA, ASEAN – Australia – New Zealand FTA, parties agree to “share information, experiences and identifying best practices” in regarding to spam.
- ✓ Commitment on cooperation on cyber-security risk mitigation and cyber-security capacity building. Cooperation on this issue is also mentioned in some FTAs (Australia – Japan FTA, ASEAN – Australia – New Zealand), however, it is generally indicated together other issues in provisions on cooperation.

Chapter IV: Current E-commerce legal framework in APEC region

1. Review of Some TPP's Member Members' Regulations on E-commerce

1.1 Market Access for Digital Goods and Services

Provisions on market access for digital goods and services are not new ones in new generation of FTAs and RTAs but level of commitment in TPP's e-commerce chapter is more considerable with Article 14.3, 14.4, 14.11 and 14.13. Regarding these provision, this paper made a short review to evaluate the readiness of members' domestic regulations, particularly Asian TPP Member.

- *Customs Duties (Article 14.3)*: Since all TPP members are WTO members, they currently abide by the moratorium on customs duties on electronic transmission which can be constantly extended per two years.

- *Cross-border data transfers by electronic means (Article 14.11) and Location of Computing Facilities (Article 14.13)*: The provision of 14.11 mandates that TPP members allow the cross-border of data to a member or territory without consideration of whether said member or territory maintains an adequate level of protection for the rights and freedoms of individual. Importantly, the cross-border transfer of information must be for the conduct of an investor or service supplier's business.

However, it is recognized that there are different existing approaches to data localization and cross-border data movement among members. Brunei Darussalam and Viet Nam have explicit restrictions on data flows outside of the member. Viet Nam's Decree on Management, Provision and Use of Internet service providers, requires to place at least one local server inside Vietnamese territory (Article 24, Decree 72/2013/ND-CP). Besides, Viet Nam's Decree on Spam mail, requires email advertising service providers to have portal and server located in Viet Nam and to use domain name of .vn (Article 18, Decree 90/2008/ND-CP).

Malaysia's Personal Data Protection Act requires all data about Malaysians to be stored on local servers only. While, Singapore has participated in the Cross -Border Privacy Enforcement Arrangement (CPEA) and is considering Cross-Border Privacy Rules (CBPR) System.

Box 1: Malaysia's regulations on the transfer of personal data to places outside its border

Malaysia - Section 129. Transfer of personal data to places outside Malaysia

(1) A data user shall not transfer any personal data of a data subject to a place outside Malaysia unless to such place as specified by the Minister, upon the recommendation of the Commissioner, by notification published in the Gazette.

(2) For the purposes of subsection (1), the Minister may specify any place outside Malaysia if—

(a) there is in that place in force any law which is substantially similar to this Act, or that serves the same purposes as this Act; or

(b) that place ensures an adequate level of protection in relation to the processing of personal data which is at least equivalent to the level of protection afforded by this Act.⁴⁷

(3) Notwithstanding subsection (1), a data user may transfer any personal data to a place outside Malaysia if—

(a) the data subject has given his consent to the transfer;

(b) the transfer is necessary for the performance of a contract between the data subject and the data user;

(c) the transfer is necessary for the conclusion or performance of a contract between the data user and a third party which— (i) is entered into at the request of the data subject; or (ii) is in the interests of the data subject;

(d) the transfer is for the purpose of any legal proceedings or for the purpose of obtaining legal advice or for establishing, exercising or defending legal rights;

(e) the data user has reasonable grounds for believing that in all circumstances of the case— (i) the transfer is for the avoidance or mitigation of adverse action against the data subject; (ii) it is not practicable to obtain the consent in writing of the data subject to that transfer; and (iii) if it was practicable to obtain such consent, the data subject would have given his consent;

(f) the data user has taken all reasonable precautions and exercised all due diligence to ensure that the personal data will not in that place be processed in any manner which, if that place is Malaysia, would be a contravention of this Act;

(g) the transfer is necessary in order to protect the vital interests of the data subject; or

(h) the transfer is necessary as being in the public interest in circumstances as determined by the Minister.

(4) Where the Commissioner has reasonable grounds for believing that in a place as specified under subsection (1) there is no longer in force any law which is substantially similar to this Act, or that serves the same purposes as this Act—

(a) the Commissioner shall make such recommendations to the Minister who shall, either by cancelling or amending the notification made under subsection (1), cause that place to cease to be a place to which personal data may be transferred under this section; and

(b) the data user shall cease to transfer any personal data of a data subject to such place with effect from the time as specified by the Minister in the notification.

(5) A data user who contravenes subsection (1) commits an offence and shall, on conviction, be liable to a fine not exceeding three hundred thousand ringgit or to imprisonment for a term not exceeding two years or to both.

(6) For the purposes of this section, “adverse action”, in relation to a data subject, means any action that may adversely affect the data subject’s rights, benefits, privileges, obligations or interests.

Apart from these two members, some others have either partial or sector specific regulations on data localization and cross-border data transfer. The Personally Controlled Electronic Health Records Act of Australia does not allow health data to be transferred or processed offshore. However, the provision recognize that each government will have its own regulation requirements for the transfer of information that are required to achieve legitimate public policy objectives, provided those measures (a) are not applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade and (b) do not impose restrictions on transfers of information greater than are required to achieve the objective.. Therefore, it can be understandable that the above Act of Australia will not be affected by this new commitment. In terms of tax, the Commissioner of Inland Revenue requires electronic business and tax records to be stored locally in New Zealand.¹²

Meanwhile, the United States is very proactive in this issue. With the participation of Cross-border privacy rules system (CBPRs) in APEC, the United States, Canada, Mexico and Japan seem ready for these TPP provisions.

1.2 Online Consumer Protection

TPP Parties have agreed to an enhanced range of protections for consumers in the online environment, with specific provisions addressing personal information protection, consumer protection and unsolicited commercial electronic messages. Brunei Darussalam is the only TPP member that has no existing data protection and privacy law. Other members have domestic regulations for consumer privacy. These include commitments to:

- Adopt transparent and effective laws to protect consumers from fraudulent and deceptive conduct and cooperation between national consumer protections;
- Adopt a legal framework to protect the personal information of e-commerce users and publish information on those protections. As TPP Parties may take different approaches to protecting personal information, TPP Parties will work cooperatively to promote compatibility between different regimes;
- Adopt measures to address “Spam” such as requiring senders of spam ensure

¹² See more at <http://www.ird.govt.nz/technical-tax/revenue-alerts/revenue-alert-ra1002.html>

recipients can opt-out of receiving these messages. The TPP parties have further agreed to provide the resource against senders of spam who do not comply with efforts to minimize spam messages.

From the in-person talking with the representative of New Zealand, it is shown that New Zealand already meet these obligations through its broader regulatory framework related such issues. It was happened the same with Australia and Canada.

Detailed review on the legal and regulatory availability of each TPP member will be presented in part number 3 below.

2. Review of Regional Framework with Reference to the TPP E-commerce Chapter's Regulations

2.1 APEC Privacy Framework and Cross-border Privacy Rules, Privacy Recognition for Processors

One of the main attentions of TPP is to improve the cooperation among members and strengthening the enforcement of domestic regulations. E-commerce Chapter also helps to emphasize this attention by ensuring the alignment with what APEC is focusing on. TPP is regarded as one of the strongest Regional Trade Agreement so far with high standards and commitments in many areas, especially for 7 members including: Australia, Brunei Darussalam, Japan, Malaysia, New Zealand, Singapore and Viet Nam, which have been involved in many bilateral and multilateral trade agreements as well as regional and global initiative on many aspects.

In APEC, E-commerce Steering Group (ECSG) was established under the Committee on Trade and Investment (CTI) to help shape and guide APEC's agenda related to e-commerce. One of the most important works that ECSG has been carrying out is to strengthen privacy protection and to promote cross-border privacy rules through two voluntary programs: Cross-border Privacy Rules (CBPRs) System and Privacy Recognition for Processors (PRPs) System. APEC members recognize the importance of effective protection of information and data privacy, while still maintaining information and data flows among economies in the Asia-Pacific region, and among their trading partners.

Regarding privacy, APEC Privacy Framework has been used as a useful reference for policy makers of APEC members to draft domestic privacy regulations. However, APEC Privacy Framework is not legally binding on APEC members. In contrast, TPP is a real international agreement with enforcement provision. It is really the first legally-binding agreement affecting data privacy that has been entered into by APEC members.

2.2 APEC Initiatives on E-commerce

Recognizing very early on the key role that e-commerce would play in linking APEC Economies, in the 1998 Declaration, APEC Leaders commended the APEC Blueprint for Action on Electronic Commerce , which set out the principles for the promotion and development of e-commerce in the region. In Auckland 1999, APEC Leaders once again urged APEC to continue its efforts to create a favorable environment for e-commerce and called for specific implementation strategies in e-commerce. Since then, along with the establishment of ECSG in 1999, many activities have been implemented based on the principles set out in the Blueprint.

Today, the rapid digitalization of the global economy has opened up new growth opportunities for APEC's Micro, Small and Medium Enterprises (MSMEs). Cross-border e-commerce is a powerful enabler for the internationalization of APEC's MSMEs, which no longer need physical, commercial presence to market and sell their products to the world. Recognizing this, in 2014 APEC Leaders endorsed the APEC Cross-border E-commerce Innovation and Development Initiative. At APEC Ministerial Meeting (AMM) 2015, Ministers welcomed the proposal to Promote E-commerce to Globalize MSMEs. And in 2016, Ministers agreed to encourage further work to exchange experience on the implementation of the WTO Agreement on Trade Facilitation and promotion of customs control over cross-border e-commerce for better connectivity, further integration of regional economy and modernize MSMEs. These are instructions that need a response from the APEC Economies.

Noting the foundation and work streams that have begun in this critical area, and recognizing the importance of capturing issues relevant to APEC and today's global trading environment, in 2017 APEC recommends establishment of a framework to guide a comprehensive and coherent response.

The "APEC Framework on Cross-border e-commerce Facilitation" should serve as a complement to ongoing work related to the Roadmap for the Internet and Digital Economy, as well as to the ongoing work related to digital trade under the CTI in APEC. The possible next phase of the Framework will meet new objectives set in the APEC Beyond 2020 vision.

This Framework focus on 5 working pillars as below:

1. Promoting transparent and predictable legal and regulatory approaches and measures that are business friendly and coherent to facilitate cross-border e-commerce in the region;

2. Enhancing capacity building so that APEC Economies can assist MSMEs to increase their cross-border e-commerce participation on global and regional markets;
3. Strengthening cross-border data privacy protection through increased implementation of existing APEC programs;
4. Facilitating cross-border paperless trade in the region
5. Addressing emerging and cross-cutting issues in cross-border e-commerce.

The E-commerce Chapter of TPP sets rules that will shape the development of the digital economy for years to come. Also, digital economy is one of emerging issues and has created a lot of discussion among APEC members. Besides, Internet and Digital Economy Roadmap was endorsed in CSOM in 2017.

Consequently, APEC Framework on cross-border e-commerce Facilitation and Internet and Digital Economy Roadmap play an important role to facilitate and to promote digital economy in the region. Together with TPP provision, digital economy in APEC can be developed in a favorable environment.

3. Review Legal and Regulatory Readiness with TPP Standards

Almost eleven members of TPP have regulations for e-commerce, including: E- transaction, cybercrime, consumer protection and data and privacy protection. Only Brunei Darussalam has not ratified any legal documents on data protection and privacy regulations. However, they have different levels of regulations over most issues of digital trade. Brunei Darussalam and Viet Nam, the existence of inefficient regulations need further revision to have a comprehensive legal framework when implementing TPP. For example, Brunei Darussalam has no data protection and privacy law while Viet Nam IP regulations are not effective enough. The Law on Network Information Security of Viet Nam came into effect on July 01 2016, thus, it requires more time for issuing guiding documents which support for well implementation.

A review on policies and regulations related to e-commerce among TPP members has been presented in the below table for further reference.

Table 3: Some E-commerce Regulations in TPP Members*

	E-transaction Law	Cybercrime	Consumer Protection	Data Protection and Privacy Regulations
AUS	Electronic Transactions Act1999	- Criminal Code Act No 12 of 1995 as amended in2012 - Crimes Act No 12 of 1914 as	Competition and Consumer Act2010	Privacy Act1988

		<ul style="list-style-type: none"> - amended in 2012; - Mutual Assistance in Criminal Matters Act No 85 of 1987 as amended in 2012; - Telecommunication (Interception and Access) Act No 114 of 1979 as amended in 2012; - Cybercrime Act 2001 		
BD	Electronic Transactions Act (revised in 2008)	<ul style="list-style-type: none"> - Computer Misuse Act (Revised in 2007); - Penal Code (Revised in 2001); - Electronic Transaction Act of 2008 	<ul style="list-style-type: none"> - Consumer Protection (Fair Trading) Order 2011; - Sales of Goods Act 1999; - Unfair Contract Terms Act 1999 	NO
CDA	Personal Information Protection and Electronic Documents Act, S.C. 2000, c. 5	Evidence Act 2010	Anti-Spam Law	<ul style="list-style-type: none"> - Personal Information Protection; - Electronic Documents Act
CHL	Law 20.217	Law 19.223 of 1993	Law 19.496	Law 19.628 of 1999
JPN	Law Concerning Electronic Signatures and Certification Services, Law No. 102 of 2000	Penal Code	<ul style="list-style-type: none"> - Consumer Basic Act, revised in 2004; - Consumer Contract Act in 2001; - Product Liability Act in 1995; - Whistleblower Protection Act in 2004 	- Act on the Protection of Personal Information
MAS	<ol style="list-style-type: none"> 1. Electronic Commerce Act 2006; 2. Digital Signature Act 1997 	<ul style="list-style-type: none"> - Computer Crimes Act 1997 - Criminal Law Act 574 with amendments of 	Consumer Protection Act 1999	Personal Data Protection Act 2010

		2006; - Evidence Act 1950 with amendments of 2006		
MEX	Código Fiscal de la Federación última reforma 14/03/2014 (No ENG)	Código Penal Federal última reforma 03/06/2014 (No ENG)	Ley Federal de Protección al Consumidor, última reforma 13-05-2016 (No ENG)	Ley Federal de Protección de Datos Personales en Posesión de los Particulares 2010 (No ENG)
NZ	Electronic Transactions Act 2002	Crimes Act 1961	- Fair Trading Act (as amended in 2013); - Consumer Guarantees Act	Privacy Act 1993
PE	Law 27269 of 2000 - Law on Digital Signatures and Certification	Ley N° 30096 y 30171 - Ley de Delitos Informáticos (No ENG)	Ley 29571 - Código de Protección y Defensa del Consumidor (No ENG)	Ley N° 29733 - Ley de Protección de Datos Personales (No ENG)
SIN	Electronic Transactions Act 2010 (Cap 88)	- Computer Misuse and; - Cybersecurity Act (Cap 50A) Revised in 2007	Consumer Protection (Fair Trading) Act 2003	Personal Data Protection Act 2012
VN	1. Law on E-Transactions 2005; 2. Decree on E-commerce	Decree no. 55/2001/ND-CP on the Management, Provision and Use of Internet Services	Law on Protection of Consumer Rights 2010	- Law on Network Information Security; - Law on Protection of Consumer Rights 2010; - Decree on E-commerce

*: *excluded the United States*

Source: UNCTAD, *Summary of Adoption of E-commerce Legislation Worldwide (2016)* and collected from field trips

Chapter VII: Impacts of the TPP on APEC's E-commerce Growth

The TPP agreement is important for each TPP member state and the region as a whole. In the Trans-Pacific Partnership Leaders Statement on November 18, 2015, the leaders of 12 economies stated that *“by setting high-standard trade rules that will support 21st -century commerce and providing ambitious liberalization of trade and investment, the TPP will strengthen and broaden the mutually-beneficial linkages between our economies; enhance our regional and global competitiveness; support the creation of jobs and new opportunities for young people; promote economic growth and development in our members; support innovation and help to alleviate poverty; and ensure the greatest benefits for our people”*.²⁵

Many researchers studied impacts of TPP on the TPP member members resulting from several critical breakthroughs from tariff reduction NTBs in the several model sectors and agreed that TPP agreement is beneficial to its members. A study by Petri and Plummer (2016) projects show that by 2030 the TPP will generate a \$492 billion gain for the world's annual income. Viet Nam and Malaysia enjoy large percentage gains since the deal is said to foster domestic reforms and gain access to protected foreign markets. Brunei Darussalam, Peru, Singapore and New Zealand are also projected to gain significantly.

In addition, one of the biggest improvements the TPP makes is the liberalization of goods on nontariff barriers that is especially critical for Japan, Malaysia, Mexico and Viet Nam. For other advanced economies, the liberalization of service NTBs and foreign direct investment (FDI) is also significant, representing for more than half of the gains in Australia, Canada, Singapore and the US.

TPP's E-commerce provisions also make considerable impacts on member members and APEC region as a whole. Major impacts are discussed in this section.

1. Promoting Institutional Reforms

The TPP member members need to update its legal regulations in pursuant to the TPP's commitment. The TPP provisions covering the establishment of domestic legal frameworks that stipulates electronic transactions are consistent with international model frameworks. The TPP provides a valuable opportunity for members like Viet Nam, Malaysia to promote its institutional reform, improving legal system and the business environment in order to enter the TPP's playground. Together with other significant changes in many other fields such as enhancing transparency and the rule of law, implementing new labor and environmental standards, revising the competitive landscape for state-owned enterprises, these institutional reforms will include important steps to foster digital commerce and aim to a digital economy. Making these changes can be challenging, however, researchers have also found that the benefits of implementing comprehensive FTAs are significant. These

²⁵ Full text of the statement is available at https://tpp.mfat.govt.nz/assets/docs/Trans-Pacific_Partnership_Leaders_Statement_18Nov2015.pdf

reforms ahead will have a positive impact on the economies by encouraging technological advancement, innovation and creativity, promoting broader participation in trade, developing digital economy and competition. Fulfilling commitments and boosting reforms will definitely help them create a transparent, competitive environment that increases certainty for firms trading and investing in the TPP region.

Once the TPP takes effect, members like Viet Nam and Malaysia will enjoy a two year grace period before liberalizing digital trade. Eventually these members will bring their legal system in line with those of Japan, Australia and other advanced members in the TPP region.

2. Developing the Digital Trade in the Region

2.1. Impacts of Restriction of Data localization

Data localization and similar rules can raise costs and reduce market access for traders by mandating that businesses locate servers and other digital infrastructure in foreign markets. Restricting data localization would result in increased data processing costs and have a severe economic impact as many sectors of the economy rely on digitally supplied services and products. When data must be confined within a member, it does not only have impact on email system or social networks but also on firms that use internet to produce, deliver, and receive payment for their work. Especially, localization requirements are most damaging to small and medium businesses which are majority in APEC economy. While a big company may have sufficient resources to afford the establishment of data centers in multiple locations, a smaller firm can be prevented from entering a foreign market it cannot make it to build its computing and data services oversea.

While data centers contain expensive hardware and create some temporary construction jobs, they employ relatively few full-time staff to operate the equipment, especially as cloud-based technologies have increased automation in data centers. The short-term benefit of these jobs is outweighed by the substantial cost to build unnecessary data centers, a cost which is ultimately passed on to customers (Castro and McQuinn 2015).

Data localization requirements are now available in Australia, Brunei Darussalam, Canada, Malaysia and Viet Nam, among the TPP members. The requirement to store data on servers physically inside a member fundamentally misunderstands how digital information is stored in the Internet age. It has several damaging effects, and does not help improve data security.

Data localization also imposes cost on the member that adopts this policy. In a study on the cost of data localization, Bauer et al. try to quantify the economic losses resulting from data localization requirements. Employing GTAP 8, the study examines the effect of regulation imposed by 7 members including Brazil, China, European Union, India, Indonesia, Korea and Viet Nam and find it would result in a substantial decrease in GDP in each member. The GDP loss would be 0.2% for Brazil, 1.1% for China, 0.4% for EU, 0.1% for India,

0.5% for Indonesia, 0.4% for Korea and 1.7% for Viet Nam. The loss would be higher if it becomes policy in some members (Bauer et al. 2014).

A study by Bauer et al (2016) aims to analyze the negative impact of data protection measures on 10 downstream sectors (i.e., the users of data or data-related services) and the broader economy in Brazil, China, the European Union, India, Indonesia, Russia, Korea, and Viet Nam. It shows that restrictive data regulations (including full/partial data localization; strict consent for collection, storage and dissemination of personal data; user rights of review of stored information) cause to price increase and productivity decrease across economies.

The study calculates the costs of data regulations for domestic industries by establishing an empirical link between the regulation in data services and domestic downstream economic performance at the industry level. It uses data regulations and industry data intensity as two measures to create a joint indicator for a regression analysis to calculate the economy-wide impact via total factor productivity (TFP) change.

To compare the severity of data regulation barriers in members, a weighted index established (with a one to six scale and six being the worst) shows that Russia (4.82) and China (3.88) score the highest due to their explicit data localization measures. Not far behind is the European Union (3.18) because of the indirect impact that restrictive data regulations have on data flows. Indonesia (2.42), India (2.36), and Viet Nam (2.19) score indicate medium severity due to a mix of data localization and other measures.

The regressions show that data localization and barriers to data flows decreased TFP, such that a one standard deviation change in the joint indicator decreased TFP by 3.9 per cent. Finally, it shows that the lost TFP in downstream sectors, especially in the services sector, causes to GDP reduce by 0.10 per cent in Brazil, 0.55 per cent for China, 0.48 per cent in the European Union, and 0.58 per cent in Korea.

In another study by Levianthan Security Group (2015), the author aims to explore the security impacts of forced localization laws by focusing on the direct costs to local companies. The study finds that local companies would be required to pay 30-60% more for their computing needs than if they could go outside the member's borders. This is really devastating for SMEs and they cannot afford the cost.

Therefore, the TPP with provisions preventing members from imposing localization rules on investors and service suppliers and allowing protections for the movement of information, subject to consumer information safeguards helps make cross-border commerce possible.

2.2. Impacts of Enabling Free Flow of Data

It is true that almost every sector of the economy depends on digital technology. Companies all over the world are taking advantages of data. Their business operations rely on cross-border data flows to connect their smart-technology products with the Internet, so they can

make use of data analytics to process, analyze, and store information and data from all over the world (Levianthan Security Group2015).

According to a survey in 2014 by BSA | The Software Alliance, data analytics are important to two thirds of US, European Companies with 50 or fewer employees. Moving data across the international borders has a part of normal business operations which help them gain competitive advantage. A variety of “traditional” industries as described in the Box 2 use data collected from their sites all over the world to make business decisions.

Box 2: Main industries rely on cross-border data

Rio Tinto (Mining)

Rio Tinto is a leading mining and metals company whose operations are in over 40 countries across six continents. To facilitate its mining operations more efficient, the company created its “Mine of the Future” program to determine size, location and quality of by aggregating the data collected in real time from both the trucks and the drills in use in its mines all around the world. This information is processed at its Processing Excellence Centre (PEC) in Australia, which helps save millions of dollars across its international organization by erasing logistics inefficiencies. Around five terabytes of the data is currently stored by PEC for analysis.

The data analysis enables Rio Tinto promote safer mining in its all locations which in turn, leads to cost benefits being transferred to manufacturers and consumers. It is necessary for Rio Tinto to share its data among its locations in several countries. Therefore, regulations restricting cross-border data flow would harm its operation.

Unilever (Manufacturer)

Unilever, the world’s second-largest consumer products producer, has over 400 product lines made or sold in over 190countries.

It has presence in Southeast Asia, including Indonesia, Malaysia, and Viet Nam, where data protection regulations are imposed. Unilever started plans to build a global enterprise data warehouse, connecting data warehouses built in the previous time, drawing data that the company collected from all over the globe in real time. These global data warehouses help Unilever reduce costs and improve business performance, which means cheaper products for consumers.

Tesco (Retail)

Tesco is one of the world's largest retailers with stores in several members in Asia, Europe, and North America. Tesco has been taking advantage of cross-border data flow to improve their operation and bring more benefits to customers. Tesco uses real-time data and analytics to determine when it needs to reorder products ensure products are available on its shelves. The company is able to use data from its electronic shelves to change the price nationwide instantly. The company also uses data from million loyalty cards it issues to customers to learn about customers behavior so that it can make appropriate decisions concerning supply chain and sales and services, such as offering coupons to target customers. For example, if a customer buys diapers, the company may offer that customer a beer voucher, assuming the new father may have less time for drinks outside.

Tesco has also used data to cut operating costs. Tesco uses weather forecasts updated for each location several times each day in order to keep around eighteen million food items at proper temperatures to prevent them from spoiling. By using intelligent technology to keep appropriate refrigerator's temperature, Tesco is successful in cutting its energy cost for refrigeration by 20 per cent across hundreds of its stores in the United Kingdom and Ireland. In 2012, its data-driven analyses reduced food waste by \$9.4 million in

Source: Castro and Mcquinn 2015

Free flow of data across the members' territories facilitates this decision-making process and provide added value to consumers. Enabling free flow of data across international borders encourages the increase in the productivity, enhance innovation, and competitiveness of all companies. As a 2016 report for the World Economic Forum indicates, "beyond economic impact, the free flow of data is, itself, a significant driver of innovation. It allows the sharing of ideas and information and the dissemination of knowledge as well as collaboration and cross-pollination among individuals and companies."

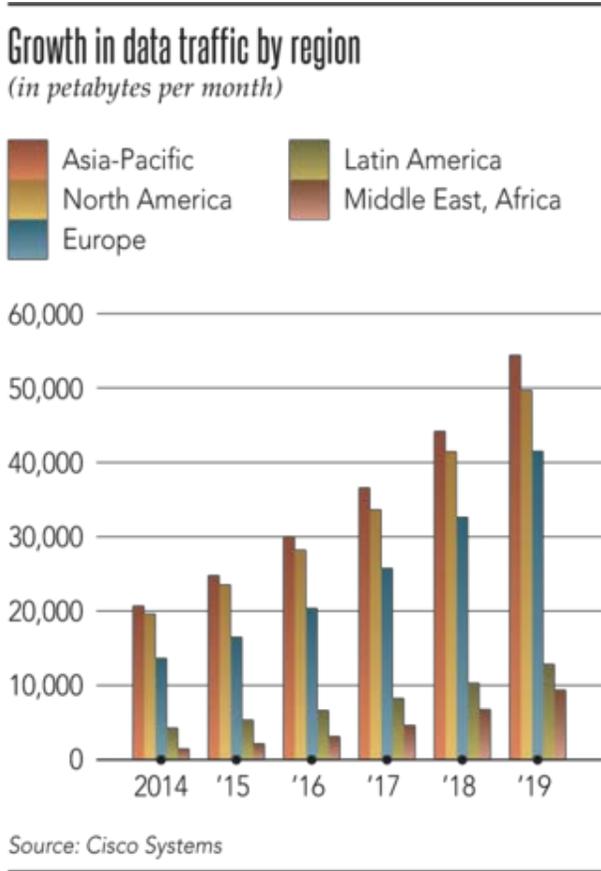
And not only big companies with its networks built across members but SMEs which depend on Internet-based services to sell and buy products and services across the globe are beneficial from TPP' s commitments on protecting free data flows. Internet and enabling free flow of data will enable SMEs to reach clients and vendors and to leverage their management operations using cloud computing.

In addition, the TPP provisions on free data flows would also be important to TPP

members’ citizens, many of whom own mobile phones and other devices using software applications which work based on the transfer and processing of data remotely, including across borders.

A calculation in a recent study by the McKinsey Global Institute indicates that global cross-border internet traffic has soared 500-fold since 2000 and will be expand another 8- fold by 2025. According to statistics by Cisco Systems (2015), data traffic to and from Asia is surging at a faster pace than that to and from North America. Therefore, enabling free flow of data as a result of TPP commitments will further boost data traffic across the region and offer it opportunities to use data to create new kinds of value.

Figure 3: Growth in data traffic by region



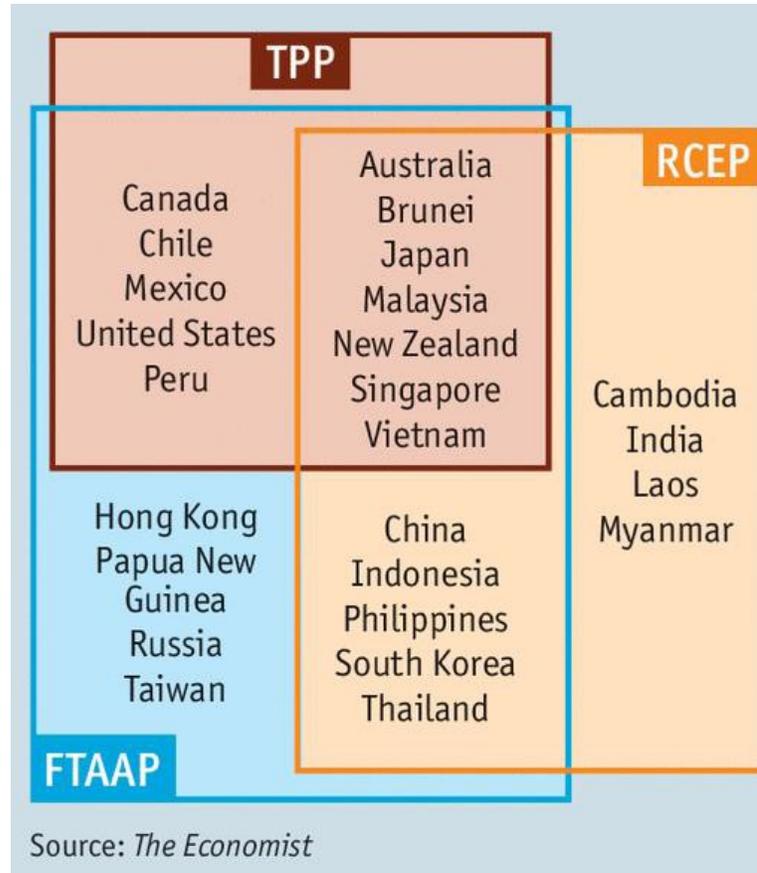
Source: Cisco Systems 2015

3. Advancing Broader Trade Initiative

In recent years, the Asia-Pacific has increasingly become the main engine of global growth, and there has been a rapid growth in number of RTAs/FTAs in the region. Recognizing that the economic integration efforts in the region have reached a critical stage, APEC Leaders agreed to examine the long-term prospect of a Free Trade Area of the Asia-Pacific (FTAAP) in 2006 (APEC 2014). In the 18th APEC Economic Leaders' Meeting, APEC Leaders acknowledged the TPP as potentially one of a number of “ongoing regional undertakings” on which to build to eventually achieve an FTAAP: *“We will take concrete steps toward realization of a Free Trade Area of the Asia-Pacific (FTAAP), which is a major instrument to further APEC's regional economic integration agenda. A FTAAP should be pursued as a comprehensive free trade agreement by developing and building on ongoing regional undertakings, such as ASEAN+3, ASEAN+6, and the Trans-Pacific Partnership, among others. To this end, APEC will make an important and meaningful contribution as an incubator of an FTAAP by providing leadership and intellectual input into the process of its development, and by playing a critical role in defining, shaping, and addressing the "next generation" trade and investment issues that the FTAAP should contain. APEC should contribute to the pursuit of an FTAAP by continuing and further developing its work on sectoral initiatives in such areas as investment; services; e-commerce; rules of origin; standards and conformance; trade facilitation; and environmental goods and services.”* (APEC2010)

The FTAAP will not be built from zero, but will be based on above-mentioned RTAs and FTAs as path ways among which the TPP seems to have “a first-mover advantage” (Schott 2014). According to the Preamble of the TPP, members *“expand their partnership by encouraging the accession of other States or separate customs territories in order to further enhance regional economic integration and create the foundation of a Free Trade Area of the Asia Pacific”*. Also, supporters believe that a successful agreement will lead to the expansion of the TPP until it admits all FTAAP economies (Petri and Abdul-Raheem 2014). This is optimistic since the TPP claims to be open to new members and some FTAAP economies including Korea, the Philippines and Thailand already expressed their interest in the agreement. However, for a key FTAAP member like China, the TPP provisions may not be acceptable due to its high standard commitments. Therefore, connecting the TPP with other FTAAP members that are now TPP non-participants presents challenges and requires more efforts like substantial additional agreements.

Figure 4: Trade Agreements in Asia - Pacific



4. Setting Templates for Future Trade Deals

One of significant points to underscore the importance of the TPP trade deal is that it is believed to form a template for future trade agreements. With progress on a number of issues in e-commerce sector, it has upgraded and modernized the provisions in the trade agreements that were already signed among several of the TPP member states. In the future, when TPP member states consider a trade agreement with other members, they will definitely refer to provisions in the TPP agreement and expect the same level of commitments to be reflected in the potential trade agreement.

In addition, for members with lower level of development in the TPP region, concluding a comprehensive trade agreement like the TPP which includes some of the world's most advanced economies such as Japan, New Zealand, Canada, Australia, etc. and covers several ambitious provisions also make it easier for members to negotiate for other trade agreements (Gerwin 2015).

Also, the TPP agreement seems already to influence the calculus of participants in on-going trade initiatives in the region such as the RCEP and the China-Japan-Korea trilateral talks.

Some of its provisions will possibly be reflected in the Transatlantic Trade and Investment Partnership negotiations between the European Union and the United States (McKinney 2016).

5. TPP and Outsiders

Given the large economic footprint of TPP members, the TPP will have impacts on both TPP members and non-members as well. In terms of adverse impact on outsiders' national incomes, these are estimated to be only 0.2% for Chinese GDP, 0.1% for Indian GDP and less than 0.1% for EUGDP.

In the short and medium term, one of the effects is to increase the list of potential applicants (Solís 2016). In the Trans-Pacific Partnership Leaders Statement (2015), the leaders of TPP economies stated that *“while our focus is on approval and implementation of the results of negotiations with our current partners, we have also seen interest from a number of economies throughout the region. This interest affirms that through TPP we are creating a new and compelling model for trade in one of the world’s fastest growing and most dynamic regions.”*¹⁴ Accordingly, a number of the TPP non-members have expressed their interest in joining the TPP including Korea, Chinese Taipei, Indonesia, Thailand, the Philippines, Colombia, and Costa Rica. Motivations for a TPP membership are (1) to avoid the cost of nonparticipation in terms of trade and investment and the risks of possible disruption of production networks across members due to the TPP requirements; and (2) to promote domestic reforms, increase competitiveness of domestic firms, and drive productivity growth (Schott 2016). Besides, the TPP provisions allow the extension of membership to include not only APEC members but also other economies that are willing to meet the TPP disciplines. Therefore, the readiness to engage in the TPP’s ambitious liberalization commitments is key issue for their accession.

However, the challenge will be to engage emerging economies such as China, India and Brazil. The TPP has been seen as a restraining strategy for the United States toward China, since China is not a partner of the trade deal (Li and Whalley 2016). However, in recent years, China adopted more of a wait-and-see attitude toward the trade agreement.. During the negotiations, China also indicated their unreadiness for the demanding requirements of a potential TPP agreement at that moment, however, they might get ready and willing to join in a few years. Otherwise, China will instead choose to lead the negotiation of the RCEP as well as the FTAAP in order to perform more proactive role in international economy. Whatever position they take, the TPP negotiations inevitably have impacts on them in one way or another.

¹⁴ Full text of the statement is available at Full text of the statement is available at https://tpp.mfat.govt.nz/assets/docs/Trans-Pacific_Partnership_Leaders_Statement_18Nov2015.pdf

Chapter VIII: Policy Implications

The TPP is the first trade agreement ever designed to include binding commitments facilitating digital trade and promoting Internet-based commerce that goes beyond existing arrangement. The future of the TPP (now known as CPTPP) is quite clear now with eleven remaining members in the region announces to go on with a revised version. Therefore, it is the high time for members to prepare for the enforcement of the trade pact. In order to reap important benefits of TPP, it is critical for TPP's member states to work out and implement appropriate policies. Possible policy implications may include the following:

Firstly, reforms in the legal system and market should be accelerated by the TPP members.

When the TPP moves forward, it will undoubtedly create significant changes to digital trade at both domestic and regional level for APEC members. As members with lower level of development in TPP, Viet Nam, Malaysia and other Asian members should continue with their efforts to reform and develop the market, quickly consolidate their legal systems to be in conformity with international standards and practice so that they can catch up with other advanced economies and enjoy the benefits of liberalized e-commerce market in TPP region.

Secondly, supporting programmes focusing on information access and capacity building should be prioritized by the governments of the TPP member states.

Even the most advanced FTA is of little use if the agreement is not taken advantage by a member's traders. Surveys in a number of members indicate FTA benefits are not yet utilized by firms either because they don't understand how FTAs work or because of their limited access to needed information on FTAs. Viet Nam, for example, has fewer than 30 per cent of firms with some knowledge of the emerging TPP, which means that a high priority for Viet Nam's government should be to equip their firms with more information on the TPP (Gerwin 2015).

It is vital for MSMEs to acquire a solid understanding of trade agreements so that they can utilize the opportunities brought by the Agreement. Firms need to understand well topics such as freedom of cross-border data flows, prohibition against data localization, protection of personal information of online consumers, protection of online consumers from fraud and deceit, as well as complaints that can be registered if the MSMEs are facing problems.

In addition, given the context of the TPP, the major challenge confronting local MSMEs is their level of competitiveness which they need to improve to be able to compete with rivals from other the TPP member states and make the use of the access to new markets provided by the TPP.

Therefore, TPP members' governments should develop programs and initiatives to provide easy access to information and boost capacity, competitiveness, prospects for export, productivity, innovation, branding, as well as enhance compliance to international standards among SMEs in order to enable them to compete in the international playfield. The programs should promote information and propaganda to enterprises to inform and advise them about the nature and range of TPP standards, make them realize the opportunities and challenges and get them prepared for the enforcement of the agreement is also important work. The building capacity programs should focus on offering technical advice and assistance with technology implementation and integration. Accordingly, resources should be allocated to the MSMEs in order to get them engage in domestic and cross-border e-commerce sector and to improve their capacity and competitiveness that enable them to utilize opportunities from TPP's commitments. In addition, investment should be prioritized to improve e-commerce infrastructure in these members.

Last but not least, the enlargement of TPP region is expected, therefore future accession of other members in the region should be taken into consideration. As the TPP is one of the paths towards economic integration in the Asia Pacific region, and the members include many important trading partners, therefore, a membership for Korea, Chinese Taipei, Indonesia, Thailand, the Philippines, etc., will help deepen economic and trade relations with the TPP Members which equivalent to signing FTAs with several major members, bring the benefits of access to the TPP market and non-discriminatory treatments against their goods and services. Also, these members can take advantage of the opportunity while pushing for participation in the TPP to draft a comprehensive plan for accelerated domestic industry upgrades to bring their laws and regulations in line with international norms, and to foster feasible conditions for market opening (Chinese Taipei Ministry of Economic Affairs, R.O.C.). Therefore, efforts for participation in the TPP agreement should be implemented and accelerated early so that when the TPP comes into the effect they can exploit the opportunities to the fullest.

In addition, the accession to the TPP is also open to China if they can meet the demanding requirements of the trade deal. As a second biggest economy in the world, China's entrant into the TPP is one of possible approaches suggested for this member. If China wants to join the trade deal, it would be better for them to get involved in the negotiation as soon as possible before other members' taking part in. The negotiation would be more difficult with

more members involved.

The TPP agreement's digital trade seeks to restrict member members from information and digital service flows across national borders. On the other hand, the agreement requires its member states to establish and maintain laws on consumer privacy protection. The absence of a detailed set of uniform standards for data privacy may arise as TPP expands to include other members in the region with diversified data privacy laws. Some members have more detailed and prescriptive law on data privacy than the other. Korea, for example, issuing Data Privacy law in 2011 which is strong and prescriptive, placing limits on private parties can contract may concern over the issue that Korean citizens are possibly at the risk of not receiving protections regulated under Korea law when they have some connection with other member members in TPP in which local privacy laws are less strong while free data flows across national borders are allowed by TPP agreement.

Therefore, the proper balance between commercial freedom and consumer data protection is a critical issue that members need to consider upon their potential accession to TPP. In this regard, they need to consider the approach of special agreements like the EU-US Privacy Shield which also concerns about the same controversy issue of free data flows and data privacy laws. This is to reconcile the requirement for free data flows with the requirement to enforce data privacy laws that are stronger than those in force in other members. While a privacy shield can be useful and effective conflict navigation, in the long run, they can expect for greater harmonization of privacy laws across TPP member members.

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