



저작자표시-비영리-변경금지 2.0 대한민국

이용자는 아래의 조건을 따르는 경우에 한하여 자유롭게

- 이 저작물을 복제, 배포, 전송, 전시, 공연 및 방송할 수 있습니다.

다음과 같은 조건을 따라야 합니다:



저작자표시. 귀하는 원저작자를 표시하여야 합니다.



비영리. 귀하는 이 저작물을 영리 목적으로 이용할 수 없습니다.



변경금지. 귀하는 이 저작물을 개작, 변형 또는 가공할 수 없습니다.

- 귀하는, 이 저작물의 재이용이나 배포의 경우, 이 저작물에 적용된 이용허락조건을 명확하게 나타내어야 합니다.
- 저작권자로부터 별도의 허가를 받으면 이러한 조건들은 적용되지 않습니다.

저작권법에 따른 이용자의 권리는 위의 내용에 의하여 영향을 받지 않습니다.

이것은 [이용허락규약\(Legal Code\)](#)을 이해하기 쉽게 요약한 것입니다.

[Disclaimer](#)

Master's Thesis of Public Administration

**The Compatibility of
Forming Digital Trade Norms with the
World Trade Organization Norms
- Comparative Study on Digital Trade Agreements
and the World Trade Organization Norms -**

형성 중인 디지털 무역규범과
세계무역기구 규범의 조화
— 디지털 무역협정과 WTO 규범과의 비교 연구 —

2022년 8월

서울대학교 행정대학원
행정학과 글로벌행정전공
이 주 하

**The Compatibility of
Forming Digital Trade Norms with the
World Trade Organization Norms
- Comparative Study on Digital Trade Agreements
and the World Trade Organization Norms -**

Submitting Master's Thesis of Public Administration

March 2022

**Graduate School of Public Administration
Seoul National University
Global Public Administration Major**

Juha LEE

**Confirming the master's thesis written by
Juha LEE**

June 2022

Chair JÖRG MICHAEL DOSTAL (Seal)

Vice Chair CHONGMIN NA (Seal)

Examiner MINGYO KOO (Seal)

Abstract

It is clear that World Trade Organization (WTO)'s experience and practice of free trade for about three decades have worked quite decently and have devoted to widespread free trade norms. In addition, WTO system is crucial in the free trade history because its members account for 98% of world trade and it introduced the dispute settlement system. The number of its members and binding effects of dispute settlement are enough to create the multilateral free trade norms in global economy. The fourth industrial revolution and Covid-19 pandemic, however, have required for new norms in digital economy. As soon as WTO fails to respond to the new area, individual states started to make an effort to form new global standards in global economy second to none.

As a result, considering that the digital trade sector has not ripen yet and states are still in the process of molding the norms, this research expects to see if those trade norms made by the United States (U.S.), China or the third parties can coexist with the existing WTO system. Especially, the U.S., a representative in global norm making, is relatively more tilting toward the free trade tendency focusing on market opening, while China takes more protectionist stance setting a high value on raising its infant digital industry.

Those ideas are reflected into the digital trade agreements from the U.S. and China as well as their domestic policies and domestic laws. First of all, the Trade in Service Agreement (TiSA) that the U.S. concluded and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) that the U.S. designed put an emphasis on autonomy of private sectors and contain

free trade norms of WTO such as non-discrimination principles, improvement of market access, support for fair competition and transparency principles. On the other hand, in terms of China, the Regional Comprehensive Economic Partnership (RCEP) led by China holds the WTO's free trade norms in a soft language or shows the protectionism aspect by leaving out the non-discrimination principles of WTO, which is the basic concept of free trade.

Meanwhile, aside from the U.S. and China-led multilateral trade agreements, the research takes a look into the Digital Economy Partnership Agreement (DEPA), which was concluded by Singapore, New Zealand and Chile in 2020 in order to promote digital trade and set a framework for the digital economy. DEPA is meaningful because it officially broadens the range of digital agreements, and comes up with more comprehensive norms than before, providing the communication window to quickly respond to the uprising issues. However, if it fails to embrace the U.S. or China as its member, the significance of the regime can be underestimated. Moreover, the fact that DEPA excludes the non-discrimination principle from subjects of the dispute settlement procedure weakens the binding effect of itself.

Nevertheless, this confrontation between the U.S. and China in digital trade norm making seems temporary. Because China expects to nurture its infant digital industry enough to have a competitive advantage in the long term, China would change its attitude toward free trade in order to penetrate into foreign markets, resulting in the free trade cooperation in the future. In other words, in the end, when digital industry develops enough to open its market and find outer markets, individual states would adjust interests among them and would form a global consensus on free trade norms such as non-discrimination, market access, fair competition and transparency in digital trade. As a result, the existing WTO

system as multilateral free trade norms plays the supporting role for digital free trade norms. If digital trade norms make use of the existing WTO system in order to consolidate its free trade system, it can minimize the cost of building a new system. In particular, regarding that the WTO Dispute Settlement Body (DSB) has implemented a binding effect in the WTO system by inducing member states to follow the WTO norms, digital free trade norms based on the WTO system can maximize the benefits of dispute settlement infrastructure of DSB.

At the same time, the WTO system also needs to take more flexible attitude in line with the new global norms. Especially regarding the dispute settlement, it is difficult to apply the existing the like product judgement of non-discrimination principle and individual states have made the exceptions in the digital trade agreements, showing that they do not want to bring disputes on non-discriminatory treatments to the dispute settlement regime. Therefore, WTO also needs to design more elaborate dispute settlement procedure adequate to digital trade and makes efforts such as gradual implementation of the dispute settlement procedure. This adjustment can help WTO reinforce its binding effects, which other agreements are not equipped with.

Keyword: World Trade Organization Norms (WTO Norms), Digital Trade Norms, Digital Trade, Digital Economy, Digital Fence, Digital Economy Partnership Agreement (DEPA)

Student Number : 2020-29542

Table of Contents

Abstract

Table of Contents

List of Tables

List of Figures

Abbreviation

1. Introduction	9
1.1. Study Background and Purpose.....	9
1.2. Study Method and Outline.....	11
2. Theoretical and Historical Background	13
2.1. Theoretical Background	13
2.2. Digital Trade and its Rise	17
2.3. Digital Trade under the WTO System.....	22
2.4. Digital Policy Direction of the U.S. and China	25
3. International Agreements in Digital Trade	30
3.1. The U.S. Digital-Centered Approach: Toward Free Trade System.....	30
3.2. China’s Trade-Centered Approach: Toward Protectionism.....	33
3.3. DEPA as an Advocate for Consistent Cooperation	35
3.4. Comparison of Attitudes of the U.S. and China	37

4. The Relation between Digital Trade Norms and the World Trade Organization Norms	39
4.1. Relation between the Digital Trade Rule Makers	39
4.2. Limitations of DEPA: Members as Small Economies and Binding Effect	42
4.3. The Ongoing Digital Norm-Making and WTO Norms	43
5. Conclusion: Progressive Liberalization in Digital Trade	47
Bibliography.....	49
Abstract in Korean	54

List of Tables

Table 1. Applied Scope of MFN and NT in GATT and GATS	24
---	----

List of Figures

Figure 1. WTO Member Map	15
Figure 2. The Conceptual framework for Digital Trade	19
Figure 3. ICT service exports, 2003-2020(BoP, current US billion \$)	21
Figure 4. Exports of goods and services, 2003-2020(BoP, current US trillion \$).....	21
Figure 5. Geographical Distribution of the Top 100 Global Digital Platforms, by Market Capitalization 2021	26
Figure 6. Overview of China's Digital Economy from 2016 to 2019	41

Abbreviations

AI	Artificial Intelligence
CAICT	China Academy of Information and Communications Technology
Covid-19	Coronavirus disease of 2019
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CSIC	The Center for Strategic & International Studies
DEPA	Digital Economy Partnership Agreement
DIPs	Digital Intermediation Platforms
DSB	Dispute Settlement Body
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
E-commerce	Electronic Commerce
GATS	General Agreement on Trade on Service
GATT	General Agreement on Tariffs and Trade
ICT	Information and Communication Technology
IMF	International Monetary Fund
MFN	Most-favoured Nation Treatment
NT	National treatment
NTE Report	National Trade Estimate Report on Foreign Trade Barriers
OECD	Organisation for Economic Cooperation and Development
RCEP	Regional Comprehensive Economic Partnership
SMEs	Small and Medium-sized Enterprises
TBT	Technical Barriers to Trade
TiSA	Trade in Service Agreement

TPA	Trade Promotion Authority
TRIPs	Trade-Related Aspects of Intellectual Property Rights
TPP	Trans-Pacific Partnership
UNCTAD	United Nations Conference on Trade and Development
U.S.	United States
USICA	United States Innovation and Competition Act
USMCA	United States-Mexico-Canada Agreement
USTR	United States Trade Representative
WTO	World Trade Organization

1. Introduction

1.1. Study Background and Purpose

Digital trade refers to transactions by means of information technology and internet; digital technology facilitates global banking system and contract system by e-signatures, and helps traders easily detect flows of trade and flow of their goods and services (European Commission, 2022). With internet developing, the new type of products, digital goods and services, is born and the fourth industrial revolution, so-called Industry 4.0, has made high tech information communication technology such as Artificial Intelligence(AI), big data and machine learning embedded deeply into the whole industry, labeling ‘hyper-connectivity’ and ‘super-intelligence’.

Meanwhile, thinking that the digital data transfer costs almost nothing and physical device is not necessary all the time, digital trade has dramatically reduced the cost of transactions without regard to physical boundaries and enables to narrow the global imbalance. In other words, digital migration is born to be free so that the digital trade is inclined to be free trade.

In regard to free trade mechanism, World Trade Organization (WTO) has established on the belief that free trade promotes the optimal use of global resources and those beliefs are legislated under the WTO system. Although the liberation of digital data is the basic concept of the digital economy, WTO has not reached a uniform agreement so that the recent development of digital trade becomes challenges to WTO. At the same time, while WTO has lingered to establish a new system for it, individual digital economic powers such as the

United States (the U.S.) and China make an effort to diffuse their norms in favor of their domestic technological standards and digital policies.

WTO has set its own legal framework by systematizing free trade norms such as the General Agreement on Tariffs and Trade (GATT) and by increasing its members. Before WTO, trade agreements are fragmented and it was hard to find the predictability in international trades with no individual trade agreements. After WTO system, however, without concluding individual agreements with other members, a whole package of provisions automatically is applied to all the member states and it enables to predict trade practices between traders. This global multilateral trade under WTO system went decently for decades but the digital trade seems to build its own area distinctive from WTO. As a result, individual states decided to set their own standards as global ones. While WTO has played a key role in forming free trade rules in goods and services trade, digital trade is establishing its own realm out of WTO's umbrella, making individual rules.

Here comes the question that this research raises: if digital economy has the free transfer nature beyond physical barriers, isn't it necessary for the cross-border trades related to digital goods and services to be free as well? In this situation, considering that the individual agreements made by leading states such as the U.S. and China draw the blueprint of digital trades outside of WTO, this research explains the features of each stream. When it comes to free trade system, even though the WTO has the package deal on international free trades, it could not fully cover digital trade. With this regard, this research ultimately analyzes the compatibility between the current norm-making process and WTO system.

In particular, this study keeps a close eye on the U.S. and China-led digital trade blocks and the third party block is also taken into account in respect of their rivalry; The U.S. has been a technology leading state since the Second World War

and China, a following super power, has tried to catch up with the U.S. technology and de-Americanize technological standards. To be more specific, the U.S. and China has competed for digital hegemony in order to take an advantageous position first in digital trade by setting domestic digital fences¹ as digital new standards. Considering that the first mover has the lock-in effect by holding its customers in the platform market and brings the cumulative benefits in the technology industry as well as a technology leader holds a dominant position in global rule-making, the competition in the digital industry deserves to be called the digital war, which brings digital hegemony to the winner.

1.2. Study Method and Outline

This study mainly conducts content and legal text analysis. In chapter 2, this research deals with the brief history of global trade before and after the WTO system in order to explain the significance of the WTO system. To begin with, the research covers the basic concept of free trade that WTO has formed for decades. Furthermore, in order to identify the characteristics of digital trade itself, it also covers the brief history of the rise and conceptualization of the digital trade under the WTO system. This process is to ask the question if states have to treat the digital economy as they have done for traditional goods and services trade under the WTO system. In the process, considering that the WTO system does not work well in the digital trade and the U.S. and China try to project their domestic

¹ The term ‘digital fence’ is coined to describe all the barriers to digital trade. Considering the digital regulations are not fully formed yet, this term would be used to describe the various measures of setting the digital barriers such as strategies, policies, national practices or forming global norms.

policies into global norms, this research looks into their domestic policies and laws.

In the following chapter 3, this research identifies how the U.S. and China perceive digital trade and helps understand their approach toward digital trade. Based on the stances of the U.S. and China, the chapter covers multilateral trade regimes mainly led by the U.S. (the Trade in Service Agreement and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership) and China (the Regional Comprehensive Economic Partnership) aside from the WTO system and analyzes from the perspective of WTO. In addition, this research explains the characteristics of the Digital Economy Partnership Agreement concluded by the third parties of Singapore, New Zealand and Chile and finds the distinctiveness from other digital trade agreements.

As a result, this research verifies if this new regime would replace the existing norms or be compatible with WTO norms. After comparing all these approaches, this paper attempts to analyze the possibility of coexistence between the existing WTO norms and the new standards in digital trade.

As long as this research deals with the trade issue, the international economic law can be the theoretical background. Especially, the General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade on Service (GATS), the Agreement on Technical Barriers to Trade (TBT), and the Agreement on Trade Related Intellectual Properties (TRIPs) can be good references and guidelines as the existing global trade norms.

2. Theoretical and Historical Background

2.1. Theoretical Background

Protectionism versus Free Trade System

The international trade has the long-lasting debate on protectionism versus free trade system. Protectionism refers to the policies to impose various restrictions such as tariff and quota on the imports in order to protect domestic industry. The European states of 17th and 18th centuries and the U.S. mainly in 20th century implemented protectionism policies in order to vitalize domestic economy at other states' expenses and to give enough time for domestic industries to have a competitive edge against foreign competitors; for instance, the United Kingdom implemented the Corn Law banning the importation of cheap foreign corns and the U.S. adopted the Smoot-Hawley Tariff Act (1930) imposing about 20 percent of high tariff on the imported goods (Britannica, 2020). Especially the U.S. protectionism policy in the early 20th century has been accused of the Great Depression and the Second World War.

Free Trade Norms

As a result of the Second World War, the states turned their policies toward free trade and the symbolic gesture was signing GATT. Free trade system is to lift discriminations between domestic products and imported products or between imported products (Britannica, 2021). In this regard, GATT 1947 hold three basic principle on free trade; non-discrimination, enhancing market access, fair competition and transparency.

First, non-discriminatory principles are known as the Most-favoured Nation Treatment (MFN) and National Treatment (NT) between the like products. MFN refers to the obligation not to discriminate between the partner and the other states on the like goods trade. To be more specific, according to the General Agreement on Tariffs and Trade (1947), states shall guarantee the “treatment no less favourable” “immediately and unconditionally” among counterparts. On the other hand, NT refers to the obligation not to discriminate between domestic goods providers and those from other states on the like goods trade. To be more specific, either financial or non-financial treatment “no less favourable” on the like goods trade is guaranteed to partners comparing to the domestic providers (WTO, 1947).

Second, providing market access and fair competition and transparency to third states is another principle. Based on this principle, GATT bans setting quota and asks tariff concession plan to its member states for better market access. In addition, for fair competition, GATT prohibits dumping and market-distorting subsidies. As for transparency, GATT requires states to open information but not to request trade secrets of legitimate commercial interests.

Significance of WTO : Multilateral Norms and Dispute Settlement System

GATT 1947 was revised in 1994 and the Marrakesh Agreement Establishing the World Trade Organization replaced GATT in 1995. In the process, the WTO provisions are considered as multilateral norms and WTO has granted binding effects to its provisions by making its members agree with the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU).

In the process of its expansion, the WTO provisions are considered as multilateral norms, because the number of members is quantitatively enough to make global customs and WTO qualitatively broadened its sectors to regulate to diffuse its norms. WTO is the most developed free trade regime with more than 160 member states accounting for 98% of the total international trade (see Figure 1; WTO, 2016). In other words, 98% of world trade actors have accepted WTO regulations and those provisions are currently applied in 98% of the world trade.

Figure 1. WTO Member Map



Source : World Trade Organization (2016)

In addition, WTO expanded its denotation as a form of package law from trade of goods to those of services (GATS), technology (TBT) and intellectual properties (TRIPs) and it helps qualitatively. In order to join WTO, member states

must follow all the package of laws and reservation is hardly acceptable. For example, if a state joins WTO, it must follow GATS on its service trade.

Since WTO has a package deal system, all the agreements has consistent voice on trade. When it comes to service trade, GATS adopted free trade norms of GATT 1947; according to General Agreement on Trade on Service (1994), as for non-discrimination norms MFN and NT are stipulated between the like services and as for promoting market access and fair competition and transparency to third states, tariff concession plan and transparency on traded services are required (WTO, 1994a). In addition to the GATT fair competition norms, GATS regulates *de facto* monopoly suppliers. To be noted, regarding a range of application, GATT adopts the opt-out method(negative list method) by listing the goods which MFN and NT are not applied, while GATS adopts the opt-in method(positive list method) by listing up the liberating service sectors with the opening time schedule.

Thanks to the package deal, WTO has a distinctive aspect of compulsory jurisdiction of dispute settlement from the moment of signing up WTO agreements; Joining WTO means that member states agree to join DSU and to be bound under the jurisdiction regarding the WTO provisions (WTO, 1994b). This is the most advanced system of the international legal system under the international system; since there is no hierarchy, individual state is the only authority who can tie its own hands. This system contributes to the legal framework for peaceful dispute settlement and promotes the transparency of the dispute settlement process and the predictability of the result when individual state violates the provisions. Regardless of the actual fulfillment, this self-complementary system gives binding effects of WTO norms on its members.

The WTO system made by nine rounds of negotiation and the Marrakesh Agreement is like an umbrella of free trade norms with binding effect. It is difficult to say free trade system is superior to protectionism, it is certain that majority of states are willing to accept free trade values by joining WTO(see Figure 1). However, in terms of digital trade, the negotiation on digital trade under WTO has not shown decent progress yet. It means either protectionism or free trade tendency can be applied in digital economy. Based on this theoretical background, this research briefly explains the increasing digital trade and the history of digital trade under the WTO system and analyzes the limitation of WTO norms to regulate digital trade.

2.2. Digital Trade and its Rise

Definition of Digital Trade

What is digital trade? Regardless of the rise of digital market, there is no concerted definition to confine the range and kinds of digital trade. Because digital trade is more intangible and the trading subject is containing technology, it is hard to define the exact objects and its coverage. In addition, by nature, digital transactions are not constrained to the physical regions and time zones, and data transfer is hard to turn into statistics. Though the digital trade is increasing, the discussion on the range of digital trade still remained only within the e-commerce area. But this category fails to describe electronic payment system such as Samsung Pay and Apple Pay and digital contents streaming platform such as Netflix and Youtube because these are neither e-commerce nor traditional goods and service; these new types of trade is technology-embedded and can be based on the data transmission without any vehicles conveying the service across the world.

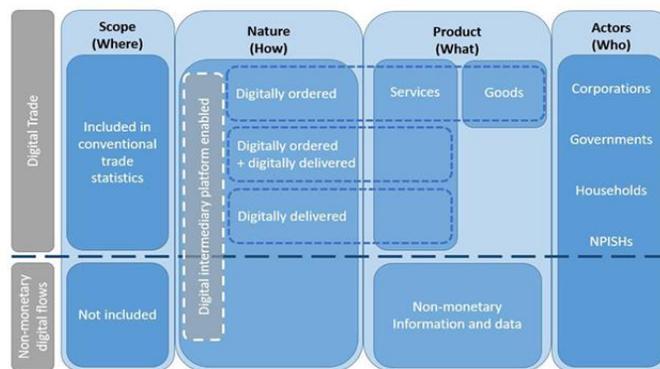
Nonetheless, there has been an effort to define digital trade. In order to clarify the definition of ‘digital trade’ and make the ‘conceptual framework’, the UN Inter-Agency Task Force on International Trade Statistics organized a research group in 2017 and the result came out in the form of a handbook in 2020. According to the Handbook on Measuring Digital Trade(2020), the digital trade is “all trade that is digitally ordered and/or digitally delivered over computer networks” (OECD, WTO and IMF, 2020: 10-17).

From this definition, digital trade is defined by mainly the characteristics of the transaction, not by that of traded goods and services. To be more specific, ‘digitally ordered trade’ includes the goods and services through the internet and e-commerce is a good example. On the other hand, ‘digitally delivered trade’ is all about the service integrated with digital technology but not goods. For instance, ICT-enabled services such as financial service, information technology service, telecommunications, professional legal consulting service, health service and education are considered to be digitally delivered. Interestingly, so-called digital intermediation platforms(DIPs) are placed between ‘digitally ordered trade’ and ‘digitally delivered trade’. DIPs such as Uber and Airbnb play a liaison role in mediating between producers and consumers, without owning the goods and service traded within the platform.

The conceptual framework for digital trade(Figure 2) shows that the digital trade has been included in the traditional trade concepts but now the nature of trade has been changed. That is, if the conventional goods and services are ‘digitally ordered’ or ‘digitally delivered’, it needs sorting out ‘digital trade’ and states have to take a different approach on the relevant trade (OECD, WTO and IMF, 2020: 30-52). This conceptual framework can be the effective index for developing states to

understand the digital trade, whose data-collecting capacity is in the premature stage.

Figure 2. The Conceptual framework for Digital Trade



Source : OECD, WTO and IMF, *Handbook for measuring digital trade* (2020: 33).

Figure 2 shows that WTO explains the digital trade in the traditional point of view of goods and services. However, this framework rather shows that the digital trade is hard to be defined in a word. DIPs definitely contain non-monetary information and data but those are also parts of digital trade because non-monetary information and data transfer happens naturally when DIPs are consumed. This is the reason why the conventional approaches to international digital trade do not fit quite well and individual states try to find ways to project their own standards into this global standard vacuum.

Technical Revolution and Digital Trade on Rise

Since digital trade came on the global table by referring to e-commerce, Industry 4.0., the great reap in the Information and Communication

Technology(ICT) has changed the total digital business landscape. While the Third Industrial Revolution was the simple digitization, the Fourth Industrial Revolution is defined by super-connective technology and reshapes industrial structure and the total environment around human beings. For instance, fin-tech enables people to enjoy the wireless transfer of money and payment abroad, devoting to the decrease in the bank branches and allowing the appearance of online bank. The e-commerce business is also experiencing a dramatic change; e-commerce platforms such as Amazon and Alibaba provide their service to global consumers beyond the retail markets.

The digital economy also faces the new normal after COVID-19 pandemic. The COVID-19 pandemic caused the loss of labor force and individual government used to lock down the infected area in order to control the hopeless spread of infectious disease, reducing productivity. Furthermore, as parts of preventive actions against COVID-19, lots of states transformed its industry from on-site-centered work to remote work. Work from home seems to have an adverse effect on productivity in manufacturing sector and bring about the development of untact industry at the same time.

In addition, it is noteworthy that the increase in digital trade has continued with this recent background. According to the World Bank data, the ICT service exports graph(figure 3; World Bank, 2022b) shows the increasing tendency since 2003. Especially during the COVID-19 pandemic(2020), while world ICT trade maintained the increasing tendency, the traditional goods and service trade could not avoid its downturn(see figure 4; World Bank, 2022a). It means that digital trade is operating separately from the traditional goods and services markets and shows a steadily increasing trend.

Figure 3. ICT service exports, 2003-2020(BoP, current US billion \$)



Source : World Bank data (2022b).

Figure 4. Exports of goods and services, 2003-2020(BoP, current US trillion \$)



Source : World Bank data (2022a).

Though cross-border digital flow has developed as a result of the development of digital technology and industrial structure, the international digital norms cannot catch up. As a result, the digital trade issue became a challenge to the existing international norms, especially for WTO. With this background, aside from

the individual states' strategy, this research finds the efforts that WTO has made regarding digital economy in a view of a total package of plurilateral rules.

2.3. Digital Trade under the WTO System

WTO's approach to Digital Trade

After the Declaration on Global Electronic Commerce under WTO system in May 1998, the digital trade issue has been incorporated into the multilateral economic system but the progress within WTO has been slow to date. The declaration stated that WTO would launch a new work program to address the overall global e-commerce trade issues and apply duty-free moratorium on the electronic transmissions (WTO, 1998a). As the following step, the WTO General Council established the Work Program, which defines electronic commerce as “the production, distribution, marketing, sale or delivery of goods and services by electronic means” (WTO, 1998b) and the Work Program had three divisions: the Council for Trade in Service, the Council for Trade in Goods and the Council for the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs).

The first council examined the applicability of e-commerce trade under GATS, the second under GATT 1994 stated Annex 1 of the WTO agreement, and the third under TRIPs. This means that WTO also struggled with the definition of digital trade and saw the difference from the conventional trade aspects. Due to the overall gloopy consensus of multilateralism under the WTO system, WTO stuck to regulate digital trade under the existing legal framework and the e-commerce trade came under control of the GATS Telecom Annex dealing with rights of telecommunication transport service providers and those users (Gao, 2018b). In addition, the WTO members have agreed to a two-year moratorium on customs

duties on electronic migration such as software and digital contents, which is designed to be renewed on a two-year basis (European Commission, 2022).

The 11th WTO Ministerial Conference in 2017 paved a way to plurilateral negotiations on e-commerce and Eighty six member states are currently joining the official multilateral talks on e-commerce, aiming to promote electronic transactions and free flow of data across borders, build trust between producers and consumers and deal with restriction of data localization and protection issue of data source code (European Commission, 2022).

The Limitation of WTO Norms

Unfortunately, despite all the ambitious trials of WTO, the existing WTO's legal framework is somewhat ill-equipped to define and regulate the digital trade issue. For example, even the definition of the electronic transmission has not been put in a shape yet. Considering its own conceptual framework, WTO reveals limitations in three regards: scopes of regulation targets, applicability of MFN and NT and judgement on like products. First, WTO acknowledges that there are various sorts of products in digital economy other than e-commerce; DIPs, electronic data transfer and so on. The regulation targets under WTO, however, have been confined only to e-commerce. As a result, states need the consensus over other kinds of digital trade out of the WTO system.

Second, the non-discrimination principles have the aspect of self-contradiction, when the digital products have the characteristics of both goods and services. MFN and NT, the non-discrimination norms, are stipulated in both GATT and GATS. As stated in theoretical background section, GATT adopts a negative listing method of goods so that MFN and NT under GATT are general obligations, while GATS adopts a positive listing method of services, allowing unlisted services

to enjoy discriminatory regulations. As a result, when it comes to the digital product with the nature of goods and service at the same time, the digital trade faces a trouble whether MFN and NT is applied or not. For example, Samsung Pay has the nature of both goods and service. In this case, if Samsung Pay is considered as goods and unless it is exempt from the tariff concession list, MFN and NT are automatically applied. On the other hand, if it is considered as service and unless GATS listed as the applicable service, MFN and NT are not applied. This paradox happens when the digital trade has the double-sided nature of goods and service.

Table 1. Applied Scope of MFN and NT in GATT and GATS

	GATT	GATS
MFN	General Obligation	Regulation on Specified Command
NT	General Obligation	Regulation on Specified Command

Lastly, there remains the problem of like product judgement. When Dispute Settlement Body (DSB) judges whether certain global transaction of goods or services violates MFN or NT, the objects of the dispute must be the like products. The like product judgement might be much more difficult than that of goods and service because judges take into account the technology bundled with the goods and services and the method of embodiment of them. For example, Youtube and Netflix are seemingly providing similar streaming service but Youtube is showing advertisements to make profit but Netflix provides its service in return to subscriber's fee. In addition, Youtube is operated by user created contents but Netflix provides its original or delivered contents. Furthermore, their network traffic can be considered for the like product judgement.

Due to these difficulties to apply WTO norms on digital trade, WTO members started to make norms on digital trade out of WTO. As ICT develops from one day to the next and the scope of digital economy rapidly extends, states with high ICT providers started to thirst for new rules. In fact, aside from the multilateral approaches of WTO, bilateral approaches are also poorly carried out. Since the developing level in digital technology is different from states to states, so is liberalization level of digital market. It means that it takes longer time to reach a competent agreement in a multilateral manner. While global players hesitating setting rules over the digital issue, the United States, a traditional powerhouse in the internet and digital business, seems to actively implement their own standards in the scene but the rising challenger, China also starts to take an action. Therefore, this study clarifies why the U.S. and China have a spotlight in digital economy and examines their policies for digital industry.

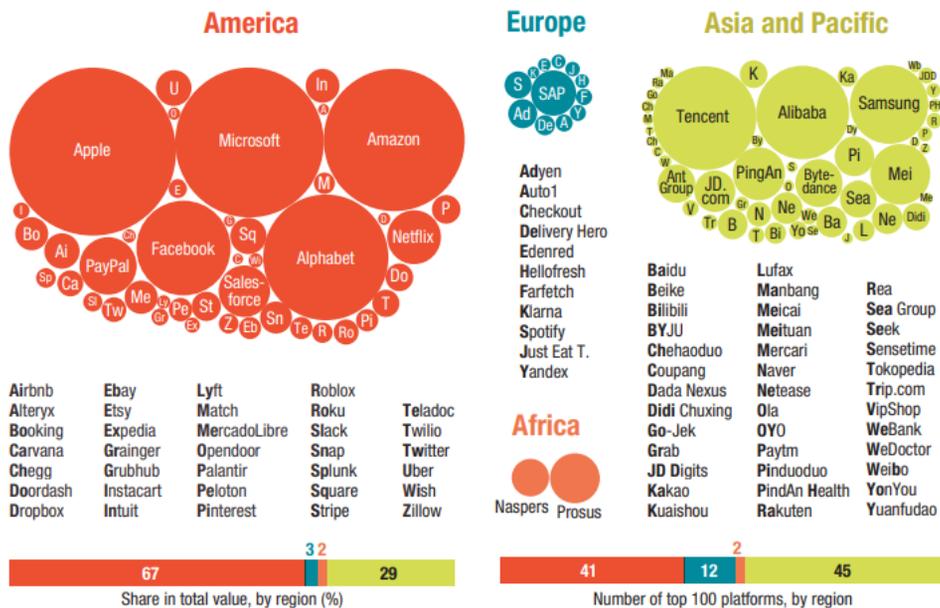
2.4. Digital Policy Direction of the U.S. and China

The Digital Economy of the U.S. and China in the Global Market

According to a white paper by the China Academy of Information and Communications Technology(CAICT), China was named the second largest digital economy worth about \$5.4 trillion in the world second to the United States in 2021; the U.S. digital economy is with a value of \$13.6 trillion in 2021 (China Daily, 2021). In addition, the United Nations Conference on Trade and Development (UNCTAD) also mentions the U.S. and China as the frontrunners in utilizing data industry in its *Digital economic report 2021*; according to UNCTAD(2021), the two parties have 50% of the global large capacity of datacenter system, adopted highest rates of 5G internet, fund 94% of AI unicorns (start-ups) and hold the digital

platforms amounting for 90% of market capitalization.

Figure 5. Geographical Distribution of the Top 100 Global Digital Platforms, by Market Capitalization 2021



Source : UNCTAD (2021: 22)

Note : As a reference, the market capitalization of Apple is \$2.22 trillion, while for Mercado Libre it is \$88.7 billion, \$80.2 billion for Baidu and \$59.7 billion for Sportify.

In particular, the global digital platforms map (Figure 5) shows why the U.S. and China have crucial interests in digital trade. The world's distribution of platform industry map shows that the U.S. and China have large shares in the digital market, whether by the share in total value or the number of top platforms (UNCTAD, 2021: 22). In other word, in a global perspective, the two giants lead the global digital economy and it becomes the incentive to lead global norm-making in the global digital trade.

At the same time, according to the white paper by CAICT, the U.S. digital

economy led 86% of labor productivity, accounting for 8% of its GDP in 2021, while Chinese digital economy accounted for 38.6% of its GDP (Ranking Royal, 2021). In other words, in a domestic point of view, each government has an interest to prosper its digital industry to spur its domestic economy. As a result, the two counterparts naturally become a rival and domestic policies are destined to hold in check one another.

In this context, in order to better understand the background of the digital trade agreements led by the U.S. and China, this research looks into national policies and domestic laws of the U.S. and China respectively. Considering that the legal framework is the result of national policy areas on digital trade, this would help predict their industrial policy direction.

The U.S. Policy on Digital Trade: Market-driven Approach and Solidarity

Since the U.S. recognizes that it is the leading state in the field, the market penetration and maintaining the super gap are its strategy. Thanks to its comparative advantage, the U.S. wants to lead the market-driven digital trade norms, which are likely to lessen the constraints such as unreasonable tariffs on digital goods and discriminatory tax measures on the data transfer and protect intellectual properties (USTR, 2021).² Since free flow of data and information in the digital sector facilitates the digital trade, Washington puts an emphasis on the free migration of data and open access to the internet. Furthermore, the U.S. would hold its view that foreign government must guarantee the freedom of choices of facilities and technologies by private sectors but must not require the localization

² In particular, regarding Chinese digital fences, the U.S. points out six points in its NTE report; restrictions on “(a) technology transfer, (b) ICT policies, (c) encryption, (d) online infringement, (e) Internet regulatory regime, (f) cloud computing services.”

of facilities and data in the global digital trade (USTR, 2021: 2).

In addition, the U.S. National Security Strategy Report encourages its allies, or like-minded states, to take a joint action against digital authoritarianism and to make international regulations for new technologies in its digital priorities (the White House, 2022). For example, the Trade Act of 2021 (2021) aims to take a collective action indirectly against China by setting the digital trade norms with like-minded states. Being in solidarity with its allies, the U.S. would ban the imports of products violating intellectual property rights. Moreover, it is willing to boost the digital trade negotiations with like-minded states, helping respond to digital fences, to dissuade from censorship, to support free transfer of information, and to promote digitally-enabled trade.

The Chinese Policy on Digital Trade: Internet Sovereignty and Digital Silk Road

In a white paper in 2010, China proclaimed ‘Internet Sovereignty’, aiming at giving much power to the government to manage domestic cyberspace, saying “within Chinese territory the Internet is under the jurisdiction of Chinese sovereignty” (Tiezzi, 2014). This makes clear Chinese idea that the government has the right to engage in the digital private sector and to control the domestic internet environment. As a result, this idea contributed to protective domestic market for the digital trade such as restrictive data policies, restraints on transnational data transfer and consistent request of data localization though ‘Made in China 2025’ strategy (McBride and Chatzky, 2019) in 2015 and ‘Internet Plus’ policy (Hristov, 2017).³ Furthermore, under the name of national security and protection to the

³ Along with ‘Made in China 2025’, China implemented the “Internet Plus” policy, so-called Internet convergence policy, expecting to elevate its technology up to the forever growth engine. The “Internet Plus” policy contains (a) AI development, (b) smart city

social order, a series of cyber security laws enable the Chinese authority to review the ICT goods and services sales (Chen, 2021).⁴

At the same time, China had designed ‘Digital Silk Road’, a digital version of the Belt and Road Initiative, in order to form a global governance to help project their policies in global internet infrastructure and e-commerce market at the global scope (Ma, 2021).⁵ Based on Digital Silk Road policy, China makes an effort to extend its reach outside and the idea is applied to bilateral and multilateral digital trade agreements that China has signed, expecting to set global digital trade standards.

Reflecting the individual policies and domestic laws, the U.S. and China make an effort to form new global norms in digital economy, where the existing global standards do not fit perfectly. Therefore, the next chapter compares the attitude of the U.S. and China towards digital trade agreements respectively in order to identify the direction that the leading states want to head to – free trade system or protectionism. In addition, aside from the U.S. and China-led digital economy norms, there is the third agreement signed by other states - Singapore, New Zealand and Chile; the Digital Economy Partnership Agreement(DEPA). As the first agreement focusing solely on digital economy (Taheri, Adams, and Stern, 2021), the next chapter also examines DEPA as the new model of norms and standards in digital trade.

project, and (c) smart healthcare system.³ That is, to China, in order to narrow the technology gap, digital fences are one of tactics to buy the time.

⁴ The Cybersecurity Law(2017), the Data Security Law(2021) and Personal Information Protection Law(2021) are the data and information security law.

⁵ The Belt and Road Initiative was established to draw a blueprint and to fund to states along with the historic Silk Road, aiming to develop the infrastructure and to promote their economic integration.

3. International Agreements in Digital Trade

Henry Gao (2018a), an associate Professor in Singapore Management University, had a comparative research on digital trade policies between the U.S. and China and found that the U.S. digital trade policies focus more on the ‘digital’ nature, while Chinese ones on ‘trade’ perspective. In other words, the former takes digital trade as a matter of the borderless issue but the latter the opposite. It shows that the U.S. is interested in the free migration of digital products but China puts an emphasis on the borderline in digital trade. Based on this idea, this chapter analyzes the international agreements led by the U.S. and China so that it compares the differences in their approaches on digital trade.

3.1. The U.S. Digital-Centered Approach: Toward Free Trade System

Digital-Centered Tendency in Bilateral Agreements

The U.S. has stuck to free trade tendency as the front-runner of the digital trade, aiming at minimizing the restrictions in the technological development in internet fields. The U.S. was the first member nation who brought the digital trade issue on the global table. Clinton’s Framework for Global Electronic Commerce (1997) was the starting point and represents the U.S. idea that the government would provide the stable internet environment and cultivate the legal background in favor of the e-commerce (Clinton and Gore, 1997).⁶ According to the fifth

⁶ According to Clinton and Gore, there are 5 principles for the framework : “i. The private sector should lead ii. Governments should avoid undue restrictions on electronic commerce iii. Where governmental involvement is needed, its aim should be to support

principle, regarding e-commerce, the U.S. puts an emphasis on the free electronic trade in the global trade based on the strong belief that the ‘digital’ flows following internet on a global basis (Clinton and Gore, 1997).

This U.S. digital-centered approach in digital trade has been witnessed in many bilateral and multilateral agreements by including its e-commerce templates in them. For example, the United States-Mexico-Canada Agreement(USMCA) and the U.S.-Japan Digital Trade Agreement, both enforced in 2020, contain provisions on the self-control of private sector, supporting free data transfer, data security and so on (Fefer, Akhtar and Sutherland, 2021). To be noted, USMCA is equipped with dispute settlement mechanism (at the very mild version with various exceptions), which the U.S.-Japan Digital Trade Agreement is not (Fefer, Akhtar and Sutherland, 2021).

Free Trade Norms in Plurilateral Agreements: TiSA and CPTTP

Above all, the Trade in Service Agreement(TiSA) preaches free trade rule by adopting non-discrimination, market access, fair competition and transparency principles. TiSA is led by the U.S. and signed by like-minded WTO members in dealing with a global service trade: it contains e-commerce provisions and general obligations applicable to the digital trade (USTR, 2022).⁷ In order to support non-

and enforce a predictable, minimalist, consistent and simple legal environment for commerce iv. Governments should recognize the unique qualities of the Internet v. Electronic Commerce over the Internet should be facilitated on a global basis.”

⁷ Details are as follows: (a) Free transfer of information across borders, (b) Support for consumer’s choice to access and use the service and freedom to choose online connecting devices, (c) Refraining from asking the data storing and processing of a hosting state except financial services, (d) ‘Electronic Authentication and Electronic Signatures’, (e) the prohibition of residency and local market presence without negotiation in advance, (f) the prohibition of asking local requirement for contents such as providing favoring condition for the locally produced ones or requiring mandatory condition to use local

discrimination principle, TiSA prohibits member states to ask local affirmative action by providing beneficial trade conditions only for the products made in the hosting state. As for market access, TiSA obliges its members not to force digital product providers to have residency and local establishment without consent ahead. In addition, for fair competition, it prohibits to force other members to use local products or certain technology when digitally transferring. In terms of transparency rule, it imposes restrictions to hosting states not to ask data processing method and not to force technology transfer, sensitive information to data providers.

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership(CPTPP) designed by the Trans-Pacific Partnership(TPP), the U.S.-led mega FTA but to fail to be ratified, adopted the United States Trade Representative(USTR)'s guidance and much more comprehensive disciplines much clearly in line with WTO free trade norms - non-discrimination, market access and fair competition (USTR, 2015).⁸ First of all, it clearly states non-discriminatory treatment among electronically transmitted products from other member states and

products when electronically transmitting and (g) the prohibition of local technology requirement such as forcing technology transfer or forcing to use certain technology.

⁸ According to summary of U.S. objectives of USTR, TPP stipulates as follows: Commitments not to impose customs duties on digital products(e.g., software, music, video, e-books); (b) Non-discriminatory treatment of digital products transmitted electronically and guarantees that these products will not face government-sanctioned discrimination based on the nationality or territory in which the product is produced; (c) Requirements that support a single, global Internet, including ensuring cross-border data flows, consistent with governments' legitimate interest in regulating for purposes of privacy protection; (d) Rules against localization requirements that force businesses to place computer infrastructure in each market in which they seek to operate, rather than allowing them to offer services from network centers that make business sense; (e) Commitments to provide reasonable network access for telecommunications suppliers through interconnection and access to physical facilities; and (f) Provisions promoting choice of technology and competitive alternatives to address the high cost of international mobile roaming.”

the hosting state (MFN and NT). Furthermore, regarding market access, it prohibits custom duties on digital goods and service and enables especially for the telecommunications providers to have access to facilities as well as fair network access. When it comes to fair trade principle, it takes a further step than that of TiSA by putting the commitment to give freedom of technology choice.

In a nutshell, from TiSA to CPTPP, the U.S. seems to make clear its vision to facilitate and support free and liberal trade atmosphere by implementing free trade norms - non-discrimination, market access, fair competition and transparency principles on digital trade. While the TiSA general obligations stipulate prohibitions to government, CPTPP took a step forward by requiring the government to accept those commitments to take more active and positive actions to provide the favorable business environment to the digital goods and service providers.

3. 2. China's Trade-Centered Approach: Toward Protectionism

Apathy to Digital Economy in Bilateral Agreements

As the catch-up in global digital market, China has played a passive role, comparing to its counterpart. While its counterpart jumped into the norm-making process on digital trade since 1997, China did not suggest distinctive norms until it framed the Regional Comprehensive Economic Partnership (RCEP, 2022). China has made four Trade Agreements on digital trade to date; bilateral trade agreements with New Zealand (2008), with South Korea and Australia (2015) and RCEP (2022), the Chinese-led mega FTA.

Looking at the bilateral trade agreements on digital trade, China seems indifferent in making global norms in digital economy since the former three

bilateral agreements are simply based on the WTO provisions with nothing significant. Regarding the FTA with New Zealand, it just embraces the Technical Barriers to Trade (TBT) provisions. In addition, regarding the other FTAs with South Korea and Australia, they have independent e-commerce chapters but at the modest level. All those bilateral agreements were signed before 2016. Regarding that China started to put a political priority on digital economy since 2016 by introducing policies on “internet power” as a goal of the 13th Five-Year Plan (2016-2020) during the Fifth Plenary Session of the 18th Communist Party of China Central Committee (China Daily, 2015), it seems not to have its own political philosophy on digital economy until then.

Protective Intention in Plurilateral Agreements: RCEP

Comparing to the previous FTA with e-commerce provisions, RCEP reflects China’s idea on digital trade, in particular on e-commerce trade by removing some provisions from or adding to TPP, its modeling sample, and by permitting more discretion to the members against free trade in digital economy. Aside from the adoption from TPP, RCEP (2022) leaves out some provisions containing free trade norms - market access as well as non-discrimination principles.

First of all, RCEP removes the non-discriminatory treatment provision on digital products (RCEP 2022; TPP 2016). Considering that TPP is the first multilateral agreement stipulating non-discrimination principles on digital trade, the removal of the provision from RCEP reflects the Chinese intention not to apply MFN and NT within China. In addition, RCEP also leaves out the source code

provision,⁹ which is usually considered as the trade secrets in the digital industry. Therefore, though trade secrets are exceptionally protected under the transparency principle of free trade, RCEP seems to help China set digital fences on digital exporters within its territory by requiring them their source codes; it works in a way of undermining the market access to the Chinese market.

Moreover, regarding ‘promoting cross-border electronic commerce’ section, TPP (2016) holds prohibition of engaging in ‘the location of computing facilities’ and request of the ‘cross-border transfer of information by electronic means’ arbitrary acceptable under the name of public policy and national security. This means that the national intervention in the digital trade can be justified by national interests at any time. Considering the consultations with good faith and the referral to RCEP Joint Committee are applied to this section, not applying the dispute settlement process, the discretion in digital trade are largely acknowledged and this works as a digital fences to counterparts as well (RCEP 2022; TPP 2016).

3.3. DEPA as an Advocate for Consistent Cooperation

DEPA as a New Conversation Platform

The Digital Economy Partnership Agreement(DEPA) is the multilateral agreement on digital trade, concluded by Singapore, New Zealand and Chile (original members of TPP) in June 2020 in order to promote digital trade and to set a framework for the digital economy. According to DEPA (2020), the dozen of

⁹ Trans-Pacific Partnership (2016) stipulates as below in Chapter 14 Electronic Commerce, Article 14.17.1 Source Code Provision:

“No Party shall require the transfer of, or access to, source code of software owned by a person of another Party, as a condition for the import, distribution, sale or use of such software, or of products containing such software, in its territory.”

modules contain comprehensive non-binding principles of cooperation on the new technology fields like AI and Fintech as well as the digital trade norms such as e-commerce promotion, data migration across borders and cyber security.

The Center for Strategic & International Studies (CSIC), the U.S. think tank, mentioned that DEPA would play a role as “a platform for discussion of non-binding principles and best practices” and this regime serves a good test bed by enabling quick reactions on the new issues in the global digital economy (Goodman, 2021). The provisions on the joint committee and contact points in DEPA show its willingness to discuss further issues and development arising from digital economy (DEPA, 2020).

DEPA largely consists of three parts: promoting the business and trade, facilitating the secured data transfer and building the trustworthy system in digital economy. Firstly, the business and trade promotion part is practically similar with other the U.S. and China-led digital economy agreements, stipulating digital identities, paperless process, e-invoicing and fintech (DEPA, 2020). These provisions can promote digital transactions by simplifying the trade process, resulting in facilitating market access. In addition, DEPA (2020) holds Article 3.3 Non-Discriminatory Treatment of Digital Products, which is the basic provision of free trade such as non-discrimination to digital products. These provisions with market access opportunity and non-discrimination idea pave a way to free trade foundation in digital economy.

Secondly, DEPA (2020) hopes to form the safe data flows process by protecting personal data, expanding the range of open source of government data, guarantying safe cross-border data migration, and implementing regulation sandboxes on data innovation on the global scope. Acknowledging digital aspects of digital economy, it grants the exemptions to cross-border data regulations and

privileges to access free government data sources to private sectors. Especially, regulation sandbox can cultivate the environment for firms in their infancy to have fair competition in the industry. This application of regulation sandbox can make easy for protective states to access to DEPA, maintaining the protection on their domestic infant industry. Still, it is certain that DEPA mainly advocates the free trade norms.

Lastly, the building trust part of DEPA (2020) includes ethical AI Governance Frameworks, cyber security, the cooperation with small and medium-sized enterprises (SMEs) and digital inclusivity. The credibility that DEPA makes serves the base of further cooperation and discussion in the digital economy by enlarging the shadow of futures among its members.

3. 4. Comparison of Attitudes of the U.S. and China

In short, while the U.S. regards digital trade as the new sector of international trade by emphasizing the ‘digital’ aspects of transactions, China considers digital trade as another traditional sector of international trade, which states can have much control. As a result, the U.S. actively addresses digital trade by shaping new global norms but China takes rather passive actions by copying existing WTO norms or allowing a wide range of discretion of the hosting government especially under the name of national security. In fact, the U.S. embraces the provision of free trade such as non-discrimination on digital products, market access and fair competition in the digital economy as well as implementation of dispute regulation procedures. On the other hand, while expanding partnership with emerging markets, China seems to remove or avoid those free trade norms in an indirect way. More specifically, based on the 13th

Five-Year Plan (2016-2020), China seems to save the time to nurture domestic digital infant companies.

In line with TiSA and TPP, the U.S. came back to the Work Program on Electronic Commerce under the WTO, submitting sixteen examples of ‘positive contributions of a flourishing digital economy’ (UNCTAD, 2021: 143-167). By taking sixteen examples, the U.S. urges member states to cooperate in adoption of the global standards and common regulations under the name of global conformity of WTO. Those global standards and regulations on digital trade are meant to be the draft that the U.S. draws in the global digital transactions in line with the WTO free trade norms.

Aside from the U.S. and China-led digital economy norms, the DEPA is establishing the bridge among states in digital economy by serving communication channel. Interestingly, DEPA makes a room for protectionist states to sign the agreement by giving an opportunity to take care of SMEs. It can turn out the buffer zone between the two streams. With this background, the next chapter examines if forming digital trade norms can be parallel with the existing WTO multilateral norms.

4. The Relation between Digital Trade Norms and the World Trade Organization Norms

The U.S. and China take the first and second place in digital trade value respectively and it turned out their incentive to lead the order of digital economy. The real challenge, however, is how to convert the digital trade norms reflected in the bilateral and plurilateral ‘agreements’ into multilateral ‘norms’. In order to predict the norm diffusion process, this chapter explains the relation between the U.S. and China in digital economy and limitation of DEPA as a new standard. With this background, this study expects the compatibility between forming digital trade norms and existing multilateral trade norms - WTO norms

4.1. Relation between the Digital Trade Rule Makers

The Collision of Interests: Market Opening versus Market Protection

The U.S. makes an effort to open foreign market by guarantying free flows of cross-border data in order to maximize economic profits but China takes a conservative action by controlling its domestic market and setting bars against foreign competitors. Some critics argue that the internet sovereignty of China is based on the basic philosophy of constraint to market access from foreign internet and digital technology providers and to help Chinese business ones to graduate from the dependency on foreign technology (Doshi, Bruyere, Picarsic, and Ferguson, 2021).

Considering that the U.S. and China confront each other at this moment, in the short term, their national interests are conflicted; free trade system versus

protectionism. Protectionist policies set digital fences by setting discriminatory hurdles as well as curbing the trust building in the global digital market. It can result in the fracturing in digital trade rather than uniformity. As analyzed in the U.S. NTE report, in the short term, the U.S. regards that China is not willing to lift such chronic digital fences, and the U.S. also plans to countervail through a total package bill (USTR, 2021). As for China, in order to nurture its infant industry in digital economy, it seems to maintain its protectionist attitude for the time being.

To be concrete, against Chinese digital fences such as forced technology transfer and piracy on the U.S. intellectual properties, the Trump Administration started a Section 301 investigation on China in August 2017, which resulted in tariffs war between the warring parties and they paused by signing a “Phase One” Trade Agreement in January 2020 (Fefer, Akhtar and Sutherland, 2021). After going through this process, in order to counter Chinese unfair trade strategies, the U.S. decided to enact the total package bill against China - the United States Innovation and Competition Act (USICA). In line with the decentralized nature of cyberspace, the U.S. takes a sector-by-sector approach to address the digital market (The United States Congress, 2021).¹⁰

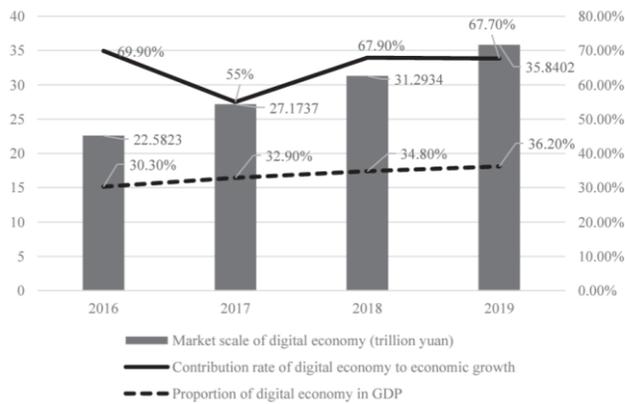
Shared Future : Developed Economies in favor of Open Market

In the long term, the U.S. and China can have the same interests to open foreign markets in order to catch much more opportunities. The U.S., as a market hunter in digital trade, seems to maintain its stance to open the digital economy and to promote free competition market in digital economy. Under the condition that the U.S. maintains its stance as an advocate for free trade, they seem to be on the

¹⁰ Among the detailed bills within USICA, (a) the USA Telecom Act, (b) the Strategic Competition Act of 2021, and (c) the Trade Act of 2021 are related.

same side, when China’s growth in digital economy becomes on a par with that of the U.S.

Figure 6. Overview of China’s Digital Economy from 2016 to 2019



Source : CAICT (Li and Zhang, 2022: 4)

Note : Arranged by Boning Li and Su Zhang according to the “New Picture of Global Digital Economy (2020)” and the “White Paper on the Development of China’s Digital Economy(2020),” released by CAICT

Though China is currently second to the U.S. in digital economy, its ratio to GDP as well as its market scale are gradually increasing (see Figure 6; Li and Zhang, 2022). Thanks to protective trade policies, China is successfully cultivating its domestic market and sharpening the industrial competitiveness in digital economy. As a result, when China has enough market competitiveness to compete the United States in digital economy, it also needs a wider market so that it is highly likely to seek free trade norms in digital trade.

At the same time, the Biden Administration plans to negotiate “Phase Two” with China, holding the communication channel open (Fefer, Akhtar and

Sutherland, 2021: 38-39).¹¹ As a result, in the communication process, interests between the U.S. and China can be adjusted. Thinking that communication is an action to open the closed mind, at least, the two parties are likely to look for middle point between the extremes - if it takes a while.

4.2. Limitations of DEPA: Members as Small Economies and Binding Effect

DEPA definitely carries the banner of digital trade regime in favor of free trade norms and is forming global standards only specialized in digital economy. Nonetheless, though DEPA serves as a communication regime, small number of member states and binding effects are left as its stumbling block. Though the U.S. and China-led digital economic regimes have been inactive, the U.S. and China individually still play a role as a technological powerhouse in Industry 4.0. In this regard, if DEPA accepts both the U.S. and China as its member states, it would devote to norm making - practice or customs - in the global digital economy. And if DEPA accepts just one of them as a member, the counterpart would make another similar regime as a countermeasure, resulting in fractionalizing the digital trade blocks. Otherwise, if it fails to accept anyone of them, DEPA can only remain the regional regime so that it would take longer time to be accepted as global norms.

In addition, like many digital trade agreements, DEPA could not solve the binding effect issue. The binding effect issue is related to the dispute settlement provisions. Under DEPA (2020), according to the Annex 14, the dispute settlement

¹¹ “Phase Two” is supposed to be discussed but not initiated yet. The Biden Administration undertook the mission from its predecessor and is expected to have commitments to market access and ban on unfair technology transfer.

system is no applied to non-discriminatory treatment.¹² Considering that the non-discriminatory treatment is the most contentious issue and in the world trade, the exemption of dispute settlement mechanism on the non-discriminatory treatment makes member states skeptical about the binding effect of DEPA and would work as a loophole in the long run.

Despite of those limitations, DEPA strikes a balance between free trade norms and protectionism norms in digital trade. It broadens the applicable scopes, covers the future development in digital industry such as digital inclusivity and SMEs as well as establishes a new regime only for digital trade. Regarding that both the U.S. and China were considering joining this agreements, it also seems compatible with the U.S. and China-led digital norms in digital economy.

4.3. The Ongoing Digital Norm-Making and WTO Norms

Compatibility of Digital Trade Norms and WTO norms

Digital norms are mixed across protectionism norms and free trade norms. And WTO agreements include mainly free trade norms such as non-discrimination principles, support for market access, and promotion to fair competition and transparency in various industry sectors - goods, services, technology and intellectual properties across its agreements. As an industry develops, the economy seeks ways to protect industry unicorns at the very beginning for the time being

¹² Article 14A.1: Scope of Module 14 (Dispute Settlement) says that “Module 14 (Dispute Settlement), including Annex 14-B (Mediation Mechanism) and Annex 14-C (Arbitration Mechanism), shall not apply to: (a) Article 3.3 Non-Discriminatory Treatment of Digital Products (b) Article 3.4 Information and Communication Technology Products that Use Cryptography (c) Article 4.3 Cross-Border Transfer of Information by Electronic Means and (d) Article 4.4 Location of Computing Facilities.”

and gradually opens its market. Once it turns into free trade phase, it also wants to enforce free trade regime to the others and WTO serves to the incentive to enforce as well as the total package of free trade norms. This becomes the reason why the burgeoning trade norms cohabit with the WTO system.

In a short run, it seems to need more time to fine-tune the gap between the WTO norms and real practice by states but can coexist. For instance, though there still exist the heterogeneous characteristics of certain digital products, GATT can be applied to digital products considered as good or GATS to services. However, for the grey area where the digital products has both goods and services characteristics at the same time, global practices and customs are expected to be accumulated enough to be a hard law and bilateral and plurilateral agreements led by the U.S. and China and global mega free trade agreements such as DEPA would be in charge of.

Interestingly, the free trade principles of non-discriminatory treatment of digital trade, market access, and fair competition are curbed in Chinese market under the Chinese internet sovereignty policy, while the U.S. and DEPA are actively implementing them to promote digital trade such as free transfer of data. If so, are the China-led digital trade norms not willing to come back under WTO umbrella? Regarding this question, DEPA gives a hint; entering DEPA system means that China already acknowledges that free trade principles in digital transaction are also important parts of digital trade and is also ready to apply them in their domestic market. However, thinking that the non-discriminatory treatment of DEPA is the exceptions to the dispute settlement regime, MFN and NT of WTO need much time to make it as global norms.

Regime Transformation with Binding Effect

In a long run, when China cultivates its domestic digital industry strong enough in the end, it is expected to change its stance same with the U.S., a free trade advocate and WTO's dispute settlement system can help diffuse the free trade norms. In other words, though China currently wants to delay its full opening of domestic market access to other countries in order to give much time for domestic digital business to develop, once it becomes confident enough in technological development in digital economy, it also has the incentive to aggressively penetrate foreign markets. In that situation, China has no choice but to accept and to spread norms of free trade principle and becomes one of beneficiaries of free trade rules.

In the process, in order to introduce the binding effect of free trade norms, WTO's dispute settlement system becomes a good text book for it. But though the U.S. introduced dispute settlement procedure in digital economy and DEPA elaborated the provisions, an actual permanent dispute settling body is missing. This is because establishing a permanent system entails great expense and efforts. As a result, the fund from states and leadership are need but it is not certain that the U.S. and China are willing to put up with. In this situation, the WTO can be an alternative to serve the existing infrastructure and embrace the digital trade norms.

However, WTO also needs to change in line with the new trend in the global trade. As stated earlier, due to the nature of digital products mixed up with goods and services, the like product judgment is extremely difficult issue especially in digital economy. Furthermore, states are reluctant to implement the compulsory dispute settlement mechanism in digital trade especially for non-discriminatory treatment. In this regard, WTO needs to have more flexible attitude. For example, WTO can create a package agreement on digital trade and elaborate dispute settlement procedure especially for digital trade. In addition, setting up the time schedule to implement the dispute settlement mechanism gradually can help the

business to adapt and to introduce the binding effect of the WTO agreement on digital trade at the end. Unless WTO accepts the change ahead of states' actions, states strongly resist against this WTO gravity.

5. Conclusion: Progressive Liberalization in Digital Trade

Technology development is considered as the future resources and permanent growth engine so that the U.S. and China confront sharply on the digital trade issue, related to the fourth revolution. Trade norm making in digital economy is still under progress and the legal framework has been fragmented outside of WTO. Though WTO agreements serve as multilateral norms in trade, WTO fails to catch up with the expansion of digital trade and to reflect the nature of digital products into its own legal framework. Nevertheless, the relation between the new digital trade norms and WTO system can help predict the future of digital norms diffusion. Can WTO survive in this new type of trade trend? Can the WTO norms be compatible with new standards?

Digital trade seems to be liberalized by gradual as both the U.S. and China, digital economic powers, develop at the same technological level. The interests between them do not coincide at the moment so that global norms in digital trade do not show a certain clear trend. The U.S. is the leading states in free trade and makes an effort to open global markets based on its primary competitive edge even in digital economy as well as to actively react against foreign digital fences with domestic policies. For example, though the Trade Act of 2021 is the domestic law of the U.S., it encourages like-minded states to take a group action against protectionism states in digital trade in order to life all trade barriers such as tariffs and quotas. And the U.S. also promotes free digital trade through trade agreements such as USMCA, TiSA and CPTPP and actively negotiates under the WTO umbrella.

On the other hand, China actively develops its domestic digital industry

and perks its internal market up and concluded passive or perfunctory agreements in digital free trade in order to protect its domestic digital economy. For instance, the ‘Made in China 2025’ strategy and a series of cyber security laws give a large margin to the authority to intervene in the market and China projected its intention in RCEP to curb the free trade in digital economy by removing non-discrimination provisions. Meanwhile, though DEPA mostly leans on the free trade, it holds the concern about infant industry protection as well and shows a strong will to have further negotiation process on digital trade development. To sum up, forming digital trade norms still has a long way to go.

Nevertheless, in a long run, if the market becomes ripe in the U.S. and China, and their interests are adjusted enough, the free trade norms in digital trade seem relatable. Even when those digital trade norms are incorporated into the WTO system, which consist of multilateral free trade norms, it minimalizes the cost of norm making and maximizes the benefits of free trade. Though the WTO system might be obviously passed from one to the other in digital trade, it is certainly true that those experiences and practices have worked for about three decades in global trade except for digital sectors and have contributed to the global free trade. In particular, the DSB of WTO has served as an effective role in domestic implementation of global free trade norms and it would work in digital trade as well.

Bibliography

- Brilliant, Myron. 2022. "It's time for a digital trade agreement." *Fortune*. March 30. Accessed April 12, 2022. <https://fortune.com/2022/03/30/time-digital-trade-agreement-biden-exports-policy-internet-tech-data-rules-policy-eu-usa-myron-brilliant/>
- Britannica, T. Editors of Encyclopaedia. 2020. "Protectionism." *Encyclopedia Britannica*. May 15. Accessed April 27, 2022. <https://www.britannica.com/topic/protectionism>
- Britannica, T. Editors of Encyclopaedia. 2021. "Free Trade." *Encyclopedia Britannica*. December 22. Accessed April 27, 2022. <https://www.britannica.com/topic/free-trade>
- Chen, Abby. 2021. "A Close Reading of China's Data Security Law, in Effect Sept. 1, 2021." *China Briefing*. July 14. Accessed March 16, 2022. <https://www.china-briefing.com/news/a-close-reading-of-chinas-data-security-law-in-effect-sept-1-2021/>
- China Daily*. 2015. "网络强国(wangluo qianguo): Internet power." *China Daily*. November 6. Accessed May 23, 2022. https://www.chinadaily.com.cn/opinion/2015-11/06/content_22384150.htm
- China Daily*. 2021. "World's Top 10 Countries in Digital Economy." *China Daily*. September 2. Accessed May 23, 2022. https://www.chinadaily.com.cn/a/202109/02/WS61300145a310efa1bd66cb0e_1.html
- Clinton, William J. and Albert Gore, Jr. 1997. "The framework for global electronic commerce; Read the Framework." *The White House*. July 1. Accessed February 7, 2022. <https://clintonwhitehouse4.archives.gov/WH/New/Commerce/read.html>
- Digital Economy Partnership Agreement (DEPA). 2020. Accessed February 12, 2022.

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

- Doshi, Rush, Emily de La Bruyere, Nathan Picarsic, and John Ferguson. 2021. “China As A “Cyber Great Power”: Beijing’s Two Voices In Telecommunications.” *Brookings*. April 5. Accessed March 12, 2022.
<https://www.brookings.edu/research/china-as-a-cyber-great-power-beijings-two-voices-in-telecommunications/>
- European Commission. 2022. “Digital Trade.” Accessed April 27, 2022.
https://policy.trade.ec.europa.eu/help-exporters-and-importers/accessing-markets/goods-and-services/digital-trade_en
- Fefer, Rachel F, Shayerah Akhtar and Michael D. Sutherland. 2021. *Digital Trade and U.S. Trade Policy*. Washington, DC: Congressional Research Service. December 9. Accessed February 27, 2022. <https://sgp.fas.org/crs/misc/R44565.pdf>
- Gao, Henry. 2018a. “Digital or Trade? The Contrasting Approaches of China and US to Digital Trade.” *Journal of International Economic Law* 21(1): 297-321.
- Gao, Henry. 2018b. “Regulation of Digital Trade in US Free Trade Agreements: From Trade Regulation to Digital Regulation.” *Legal Issues of Economic Integration* 45(1): 47-70.
- Goodman, Matthew P. 2021. “DEPA and the Path Back to TPP.” *Center for Strategic & International Studies*. July 15. Accessed May 2, 2022.
<https://www.csis.org/analysis/depa-and-path-back-tpp>
- Hristov, Kalin. 2017. “Internet plus policy: A study on how China can achieve economic growth through the internet of things.” *Journal of Science and Technology Policy Management* 8(3): 375-386.
- Jun, Xie. 2021. “China applies to join DEPA in boost for global digital trade.” *Global Times*. October 31. Accessed March 12, 2022.
<https://www.globaltimes.cn/page/202110/1237750.shtml>.
- Li, Boning, and Su Zhang. 2022. “Research on the development path of China’s digital

- trade under the background of the digital economy.” *Journal of Internet and Digital Economics* 2(1): 1-14. Accessed March 12, 2022.
<https://www.emerald.com/insight/content/doi/10.1108/JIDE-10-2021-0010/full/pdf?title=research-on-the-development-path-of-chinas-digital-trade-under-the-background-of-the-digital-economy>
- Ma, Winston. 2021. *The Digital War*. Chichester: Wiley.
- McBride, James and Andrew Chatzky. 2019. “Is ‘Made in China 2025’ a Threat to Global Trade?,” *Council on Foreign Relations*. May 13, 2019, Accessed April 8, 2022.
<https://www.cfr.org/backgrounder/made-china-2025-threat-global-trade>
- Office of the United States Trade Representative (USTR). 2015. “Trans-Pacific Partnership: Summary of U.S. Objectives.” Accessed February 27, 2022.
<https://ustr.gov/tpp/Summary-of-US-objectives>
- Office of the United States Trade Representative (USTR). 2021. *2021 National Trade Estimate Report on Foreign Trade Barriers*. Washington, DC: USTR.
- Office of the United States Trade Representative (USTR). 2022. “Trade in Service Agreement.” Accessed February 27, 2022. <https://ustr.gov/TiSA>
- Organisation for Economic Co-operation and Development (OECD), World Trade Organization (WTO) and International Monetary Fund (IMF). 2020. *Handbook on Measuring Digital Trade*. OECD(1) Accessed March 13, 2022.
<https://www.oecd.org/sdd/its/Handbook-on-Measuring-Digital-TradeVersion-1.pdf>
- Ranking Royal*. 2021. “Top 10 Countries in Digital Economy 2022.” *Ranking Royal*. Accessed May 27, 2022. <https://rankingroyals.com/top-10-countries-in-digital-economy-2021/>
- Regional Comprehensive Economic Partnership (RCEP). 2022. Accessed February 12, 2022. <https://rcepsec.org/legal-text/>
- Taheri, Rachele, Olivia Adams, and Pauline Stern. 2021. “DEPA: The World's First Digital-Only Trade Agreement.” *Asia Pacific Foundation of Canada*. October 7.

- Accessed May 2, 2022. <https://www.asiapacific.ca/publication/depa-worlds-first-digital-only-trade-agreement>
- Tiezzi, Shannon. 2014. "China's 'Sovereign Internet'." *The Diplomat*. June 24. Accessed April 8, 2022. <https://thediplomat.com/2014/06/chinas-sovereign-internet/>
- Trans-Pacific Partnership (TPP). 2016. Accessed February 12, 2022. <https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text>
- United Nations Conference on Trade and Development (UNCTAD). 2021. *Digital Economic Report 2021*. Accessed March 14, 2022. https://unctad.org/system/files/official-document/der2021_en.pdf
- The United States Congress. 2021. "The United States Innovation and Competition Act of 2021: Section-by-section summary." Accessed March 14, 2022. <https://www.democrats.senate.gov/imo/media/doc/USICA%20Section-by-Section%205.19.21.pdf>
- The White House. 2022. *Interim National Security Strategic Guidance*. Washington, DC: The White House. March. Accessed April 27, 2022. <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>
- World Bank. 2022a. "Exports of goods and services, 2003-2020(BoP, current US\$)." Accessed March 13, 2022. <https://data.worldbank.org/indicator/BX.GSR.GNFS.CD?end=2021&start=2003>
- World Bank. 2022b. "ICT service exports (BoP, current US\$)." Accessed March 13, 2022. <https://data.worldbank.org/indicator/BX.GSR.CCIS.CD?end=2021&start=2003>
- World Trade Organization (WTO). 1947. "The General Agreement on Tariffs and Trade (GATT 1947)." Accessed March 1, 2022. https://www.wto.org/english/docs_e/legal_e/gatt47_01_e.htm
- World Trade Organization (WTO). 1994a. "The General Agreement on Trade in Services (GATS)." Accessed March 1, 2022. https://www.wto.org/english/docs_e/legal_e/gatt47_01_e.htm
- World Trade Organization (WTO). 1994b. "Understanding on Rules and Procedures

Governing the Settlement of Disputes (DSU).” Accessed March 1, 2022.

https://www.wto.org/english/docs_e/legal_e/28-dsu_e.htm

World Trade Organization (WTO). 1998a. “Declaration on Global Electronic Commerce.”

Ministrial Conference. Switzerland, Geneva, 18-20 May. Accessed April 27,

2022. https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-

[DP.aspx?CatalogueIdList=4814,34856,20308&CurrentCatalogueIdIndex=1.](https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?CatalogueIdList=4814,34856,20308&CurrentCatalogueIdIndex=1)

World Trade Organization (WTO). 1998b. “Work Programme on Electronic Commerce.”

General Council. September 25. Accessed April 27, 2022.

[https://www.wto.org/english/tratop_e/ecom_e/wkprog_e.htm.](https://www.wto.org/english/tratop_e/ecom_e/wkprog_e.htm)

World Trade Organization (WTO). 2016. “Members and Observers.” Accessed April 27,

2022. https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm

Abstract in Korean

국문초록

형성 중인 디지털 무역규범과 세계무역기구 규범의 조화 -디지털 무역협정과 WTO 규범과의 비교 연구-

서울대학교 행정대학원
행정학과 글로벌행정전공, 이주하

WTO체제가 지난 30여년간 쌓은 자유무역의 경험과 관행은 국제 무역에서 꽤 잘 적용되어왔고 자유무역규범 확산에 기여한 것은 명백하다. WTO는 다양한 무역분야에서 98%를 차지하는 최다수의 회원국을 보유하면서 자유무역의 다자적 규범을 창설하고, 분쟁해결체계를 도입했다는 점에서 그 중요성이 있다. 그러나 4차 산업혁명에 따른 정보통신기술의 발달과 코로나19 전염병 확산 상황에서의 디지털 무역의 증가는 디지털 분야에서의 새로운 규범의 필요성을 제기하였고, 디지털 분야에서 WTO가 제대로 작동하지 못하면서 개별 국가들은 자국의 이익을 반영한 국제적 표준을 선제적으로 형성하기 위해 노력하게 되었다.

이 연구는 결국 디지털 무역분야가 아직 충분히 발전하지 않았고 여전히 규범을 형성 중이라는 사실에 주목하여, 현재 미국과 중국, 그리고 제3국이 형성 중인 디지털 무역규범이 기존 다자무역 규범인 WTO 규범과 공존할 수 있는지의 문제를 제기한다. 특히, 디지털 무역분야에서 대표적인 규범창설자 역할을 기대하고 있는 미국은 시장개방을 중시하는 자유무역에 치우쳐있는 반면, 중국은 자국 유치산업을 보호하고자 하는 보호무역적인 입장을 보이고 있다.

이는 미국과 중국의 국내 정책과 국내법과 더불어 양자가 진행해온 각각의 자유무역협정에 반영되어 있다. 특히 미국이 밑그림을 그렸던 두 협정인 서비스무역협정(Trade in Service Agreement)과 포괄적점진적 환태평양경제동반자협정(Comprehensive and Progressive Agreement for Trans-Pacific Partnership)은 민간분야의 자율성을 강조하면서 자유무역을 강조하는 WTO의 비차별주의, 시장접근성 강화, 공정경쟁과 투명성 원칙 등을 담고 있다. 반면, 중국의 경우는 반대로 역내 포괄적 경제동반자협정(the Regional Comprehensive Economic Partnership)에서 WTO의 자유무역규범을 원론적인 수준에서 제시하거나, 비차별원칙을 의도적으로 배제함으로써 보호주의적인 관점을 담아냈다.

한편, 미국과 중국 주도의 다자무역협정에서 벗어나, 뉴질랜드, 싱가포르, 칠레 3국은 독자적인 디지털경제동반자협정(DEPA)을 체결하였다. 이 협정은 대상범위는 확대하고 보다 포괄적인 자유무역규범을 제시하면서 다양한 디지털 관련 주제에 신속하게 대응할 수 있는 소통창구를 마련했다는 점에서 의미가 있다. 그러나 그 회원국으로 미국이나 중국을 포섭하지 못한다면 협정의 영향력은 기대 이하가 될 가능성이 있고, 자유무역의 주요 원칙인 비차별원칙이 분쟁해결의 주제에서 제외됨은 그 구속력을 약화시키는 원인이 된다.

그러나 이렇게 대치되는 미국과 중국의 무역정책기조는 단기적일 것으로 보이며, 중국 디지털 유치산업이 충분히 성장하여 시장확대를 노리는 장기에는 중국 역시 디지털 자유무역으로 선회할 가능성이 보이므로 장기적인 자유무역 협력이 기대된다. 즉, 장기적으로 디지털 산업이 충분히 성장하게 된 이후엔 개별국가들이 디지털 무역에서 이익 조정을 통해 비차별, 시장접근성, 공정경쟁, 투명성 등의 자유무역 규범에 대한 공감대를 형성하게 될 것이다. 그 결과 다자간 자유무역 규범이라 할 수 있는 기존의 WTO 체제는 디지털 자유무역 규범의 버팀목 역할을 하게 될 것이다. 특히 WTO 분쟁해결기구가 개별 국가들의 자유무역 규범 이행에 구속력을 부여하는 역할을 담당해왔음을 고려할 때, 디지털 무역규범이 WTO 체제를 활용하여 자유무역규범을 공고히 하는 경우, 새로운 체제를 구축하는 비용은

극소화되고 기존 분쟁해결 인프라를 활용하는 이익은 극대화할 수 있을 것으로 보인다.

한편, WTO 역시 새로운 규범에 맞춰 보다 유연한 태도를 취해야 할 것이다. 특히 분쟁해결제도와 관련하여, 디지털 무역에 기존 비차별원칙의 동종상품에 대한 판단 기준이 적용되기 어렵고 개별 국가들은 비차별적 조치에 대한 디지털 무역 분쟁을 분쟁해결제도하에서 해결하길 원치 않는다. 그러므로 WTO 역시 디지털무역에 관한 한 분쟁해결제도를 보다 정교화하고 점진적으로 적용하는 등의 노력을 통해 구속력을 높여갈 방법을 모색할 필요가 있다.

주요어 : 세계무역기구 규범, 디지털 무역 규범, 디지털 무역, 디지털 경제, 디지털 장벽, 디지털경제동반자협정

학번 : 2020-29542