Progress of Digital Trade & the Current Status of Rule-Making

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Developments in the information, communication and technology (ICT) revolution which began in the 1980s have contributed to the rapid expansion of so-called "digital trade". Although there is no clear definition of digital trade, normally it is thought to address all forms of cross-border transactions which utilize ICT. Cross-border electronic commerce (EC) is certainly included, as well as cross-border movement of electronic information such as data. While the environment which surrounds international trade has seen drastic changes with advancement in digital technology, rule-making for digital trade has lacked uniformity, and its current status is that it has not been able to respond to the rapid changes. This article will provide an overview of the progress in digital trade, and discuss what the current situation looks like for rule-making on digital trade.

Cross-Border EC

Let us first look at cross-border EC. The OECD defines EC as follows:

"An e-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organisations. To be included are orders made over the web, extranet or electronic data interchange. The type is defined by the method of placing the order. To be excluded are orders made by telephone calls, facsimile or manually typed e-mail."

According to the "E-Commerce Market Survey" published by the Ministry of Economy, Trade and Industry, the market size of global cross-border EC was $236 billion in 2014, and it is estimated to be four times that at $994 billion in 2020. The number of users is also expected to increase from around 300 million to exceed 900 million for the same time period. The increase is especially significant in the Asia-Pacific region and it is expected to increase nearly seven times from $71 billion in 2014 to $476 billion in 2020. In addition, the percentage share of the Asia-Pacific region in the global cross-border EC market is estimated to be around 50%. As shown in the *Chart*, according to the 2018 estimation results, Japanese purchases in cross-border business to consumer (B2C) EC totaled $250.4 billion and $26.1 billion from the United States and China respectively, and Japanese cross-border B2C-EC sales to the US and China were $823.8 billion and $1.5345 trillion respectively. Purchase amounts by Japan, the US and China increased by more than 7%, 15%, and 18% respectively.

According to the OECD's definition of EC, while ordering of goods and services is conducted over computer networks, payments and deliveries do not have to be conducted over computer networks to be considered EC. However, services that are provided electronically such as streaming services of music and videos, electronic books and online games can not only be ordered online on computer networks, but the content itself can also be offered electronically across borders, and these are sometimes narrowly defined as cross-border EC. These contents are also termed digital products. Digital products that are transmitted electronically do not go through customs, and thus it is extremely difficult to impose custom duties compared to trade in goods. From the perspective of promoting cross-border EC, the World Trade Organization (WTO) came to a provisional agreement at the second WTO Ministerial Conference in 1998 not to impose tariffs on electronic transmissions. Since then, tariff exemption measures continue to be in place.

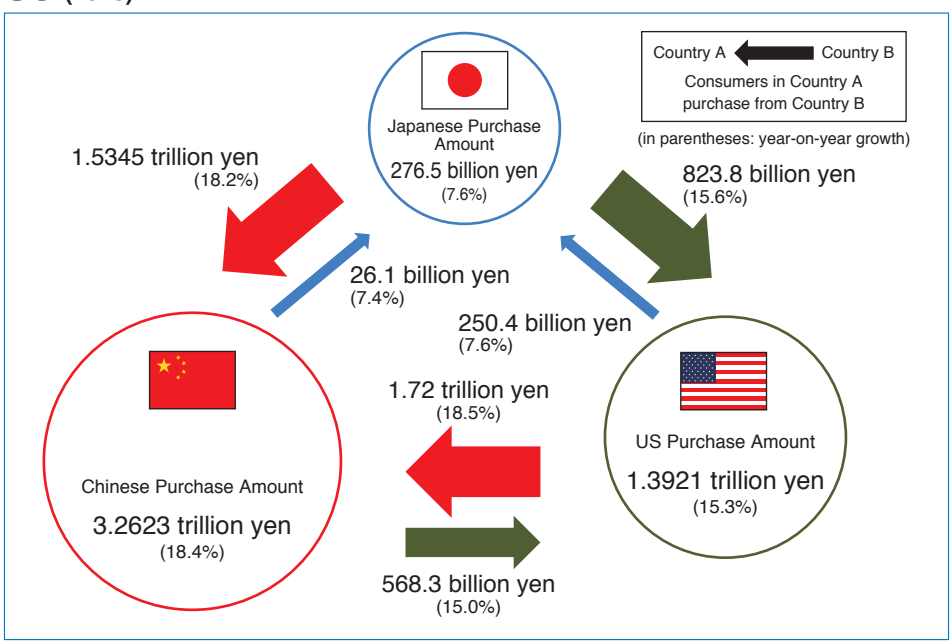
Regarding cross-border EC rules, it was recognized as a new challenge at the WTO Ministerial Conference in 2015, and discussions around rule-making commenced. Later in December 2017, Japan, Australia and Singapore launched the WTO Meeting for the Exploratory Work on Electronic Commerce with the aim of holding discussions on rule-making around the trade dimensions of EC. The meeting has been convening since March 2018, and at the Informal Ministerial Meeting, which convened on Jan. 25, 2019 in Doha, a joint statement was released acknowledging the aim for high-level rule-making amongst as many WTO members as possible, and the intention of beginning negotiations at the WTO, which 78 member nations signed (as of March 2020, 83 member nations are taking part in this meeting).

Cross-Border Movement of Data

Next, let us look at cross-border movement of data. Rapid development of ICT enabled subdividing production process (so-called "fragmentation") and its global location (so-called "offshoring"), and the world economy is fast globalizing. In other words, with the global diffusion of ICT, the formation of global value chains (GVC) has progressed. Most recently, progress in data

CHART

Size of cross-border EC between Japan, China & the US (2018)



Source: "FY 2018 Survey on Establishing Evaluation Model for Blockchain (E-Commerce Market Survey)", Ministry of Economy, Trade and Industry

analysis technology and development of artificial intelligence (AI) and robotics have enabled further progress in global competition over data accumulation and digitalization of the production process, as well as further globalization of production and development hubs, and the environment surrounding the global economy is greatly changing.

In such an environment, cross-border movement of data is soaring. According to the *White Paper on Information and Communications in Japan* published by the Ministry of Internal Affairs and Communications in 2017, around 40% of Japanese firms provide data to overseas. Also, according to Jacques Bughin and Susan Lund (https://voxeu.org/article/ascendancy-international-data-flows), the movement of global data increased by around 45 times in the 10 years between 2005 and 2014. Moreover, the amount of movement is estimated to be around nine times that of 2014 by 2021. Cross-border movement of goods is also increasing, but its speed falls far below that of data movement.

Underlying this situation is thought to be not only a reduction in data transmission costs, but also because Big Data that have been digitalized and collected have become more important as an input of production activities. In other words, there has been a movement to improve productivity by digitalizing the production process which utilizes Big Data such as the Internet of Things (IoT), AI, and robotics. This implies that digitalization of economic activities such as movement and utilization of massive amounts of data is having a greater impact on the shape of international division of labor. It is now not too much to say that the global movement of data and its utilization is the key to not only the progress of globalization of the world economy, but also to the growth of the world economy.

Prime Minister Shinzo Abe proposed "Data Free Flow with Trust" at the January 2019 World Economic Forum in Davos. The Japanese government has stated that "liberalization of cross-border transactions" and "restriction on data localization" are important rules for data free flow, while "banning disclosure requests on blueprints for software such as source codes" and "banning of disclosure of encryptions" are important for its credibility.

On rule-making for cross-border data, there is a need to be mindful of the differences in thinking by country or region. For example, European countries are highly concerned about privacy and personal information, and place importance on protection of personal data. With the aim of preventing illegal collection, illegal use and outflow of personal data via the Internet and other means, the

General Data Protection Regulation (GDPR) was enacted by European Union member nations and also Iceland, Norway and Liechtenstein in May 2018. Under the GDPR, firms are required to obtain individual consents to obtain personal information. Japanese businesses will also be subject to the GDPR if subsidiaries or branches are located within the EU, if products and services are offered within the EU, or if they are commissioned to process personal data from the EU. Transfer of personal data outside the bloc is only permitted when the country concerned has in place a data protection rule equivalent to that of the EU, but data transfer to Japan is not restricted.

China is attempting to enclose data, which is the source of competitiveness in the digital economy, with the government playing a central role in collecting and managing it. For this purpose, China enacted its Cyber Security Law in June 2017 with the aim of achieving leadership and security in cyberspace. In particular, personal information and data collected and generated within China is required to be stored in China, and data transfer to outside of China is generally prohibited.

Platform Businesses

The so-called mega platform businesses such as Google, Apple, Facebook, and Amazon (GAFA) or Big Tech (GAFA+Microsoft) have a huge presence in digital trade. Platform firms are businesses that offer systems and various services using IT. Google offers various web services such as email and video distribution with its search engines as the core of its business. Apple also provides a cloud service in addition to online sales of applications and contents. Facebook operates a vast social networking website and obtains advertising revenue. The core business of Amazon is operating an EC website. Microsoft develops and sells software such as Windows. These firms have massive numbers of users and clients throughout the world, and through their operations they acquire and accumulate huge amounts of information, such as transaction information and personal data.

China's Baidu, Alibaba and Tencent (BAT) are also mega platform businesses. Baidu operates or provides search engines, Alibaba EC, and Tencent social networking services. However, there is a major difference between BAT and GAFA. BAT grew rapidly with strong protection from the Chinese government. The majority of BAT businesses are domestic, but because the Chinese market is huge, they grew to become mega platform firms. It is worth noting that the percentage China occupies in the world market of B2C-EC exceeds 50%. But at the moment, the role BAT plays in cross-border digital trade is small compared to GAFA since its main business is transactions for the domestic market. However, overseas businesses have begun, including in Japan, and as the Belt and Road Initiative progresses, the international presence of BAT is expected to increase.

Platform businesses have brought great benefits to their users. For example, by using an EC platform, buyers can instantly search for products that are offered around the world, increasing exponentially the variety from which they can choose. In addition, the rating system of transactions is useful in resolving information asymmetry on the quality of products or the reliability of the transaction partners. In particular, information on prices has spread widely, allowing flexibility around price changes, and this has promoted competition among vendors.

For sellers, although competition will become more heated as the usage of EC platforms progresses, it has the merit of an expanding market. When the market expands, producers are able to enjoy benefits of scale economies. When firms export, fixed costs for cultivating overseas markets (for example, information-gathering expenses and costs of cultivating sales channels) are incurred in addition to transportation costs and tariffs, but by using EC platforms, reductions in these fixed costs are expected. Professor Marc J. Melitz of Harvard University has demonstrated through firm-level data that the percentage of firms engaging in exports is small, and due to the existence of trade costs, firms that are exporting are large-scale firms with high productivity. However, digitalization of the economy can increase the productivity of small and medium-sized firms, and EC platforms are thought to promote their exports. In essence, platform businesses can bring down costs to allow a better match between sellers and buyers, thereby benefiting both sides.

On the other hand, there are concerns about platform businesses further increasing in size where their competitive advantage has become fixed and oligopolistic. In particular, the market share of Big Tech in the digital industry is extremely high. According to StatCounter, Google, for example, has around 92% of the global market share for search engines, while Facebook has more than 60% of the global market share in social media. For operating systems, Google, Microsoft and Apple make up almost 100% of the world market share.

In short, there is a possibility that competition is not promoted and that users are at a disadvantage when market power is exercised. For example, it has been pointed out that platform businesses allow customers to use only payment methods they offer and manipulate information by enforcing their contracts that prohibit letting others know of the content of the contract (non-disclosure agreement), so that customers are corralled. It will become vital to operate competition policies properly to ensure fairness and

transparency.

Moreover, digital economies facilitate transactions and transfers of intangible assets such as patents, software, and trademarks. By conducting cross-border transfer of intangible assets to tax havens, multinational corporations, including big platform firms, are attempting to ease tax burdens. In other words, they are shifting profits to tax havens by manipulating intra-firm transaction prices (so-called transfer pricing) when conducting cross-border intra-firm transactions such as for intangible assets. In order to curb excessive tax-burden easing by manipulating transfer prices, the OECD introduced the "arm's length" principle. This principle asks for intra-firm transaction prices with overseas affiliates to be at the same level of pricing as with an independent third-party transaction. The G20 and OECD are also leading work to put together a new rule for international taxation corresponding to the digitalization of the economy by the end of 2020.

Digital Trade Rule-Making

At the G20 Osaka Summit in June 2019, a "Leaders' Special Event on Digital Economy" was convened. Leaders from 27 nations including US President Donald Trump, European Commission President (at that time) Jean-Claude Juncker, and President Xi Jinping of China, with 78 member nations taking part in the WTO Exploratory Work on Electronic Commerce, announced the "Osaka Declaration on Digital Economy" to launch the "Osaka Track" which aims to work on international rule-making around the digital economy, especially around data flows and EC. With regard to the WTO negotiations, an agreement was also reached to achieve substantial progress by the Twelfth Ministerial Meeting to be held in June 2020.

However, India, Indonesia and South Africa which are G20 members are reluctant about international rule-making for digital trade and have not joined the "Osaka Declaration on Digital Economy". There are concerns among the newly developed countries and developing countries that most of the gains from digital trade will be scooped off by the multinational corporations, including the Big Tech, with rules for digital trade being decided by developed countries. Thus, it is thought that agreeing on multilateral digital trade rules at the WTO, which has adopted the consensus method in its decision making, will be extremely difficult. In order to overcome that, just as an enabling clause was introduced for developing countries to the WTO rule on regional trade agreements, there may be a need to set some sort of exception clause for developing countries in digital trade.

While digital trade rule-making at the WTO has been slow, rule-making is progressing in regional trade agreements. In addition to its promotion of IT industries, the US is home to mega platform firms such as GAFA, and the US is thus aggressively promoting liberalization of digital trade. In order to gain global leadership in digital trade rule-making, the US is actively trying to include clauses on digital trade in Free Trade Agreements. Included in the agreement text for the United States-Mexico-Canada Agreement (USMCA), which was signed in November 2018, was the digital trade chapter (Chapter 19). Rules in this chapter were developed from the electronic commerce chapter (Chapter 14) in the Trans-Pacific Partnership (TPP) Agreement. The Japan-US Digital Trade Agreement which became effective in January 2020 can be described as being based on the rules of USMCA. An overview of the Japan-US Digital Trade Agreement is as shown in the *Table*. In one sentence, the rules promote liberalization of digital trade once smooth digital trade and its reliability is secured.

In the Japan-EU Economic Partnership Agreement (EPA) which came into effect in February 2019, rules such as "banning tariffs on electronic transmissions" and "banning disclosure request on source codes and algorithms" (Chapter 8) are also included. But whether rules on free transactions of data should be included in the agreement will be re-evaluated within three years of its enforcement.

In January 2020, Singapore, New Zealand and Chile came to a substantial agreement on the Digital Economy Partnership Agreement (DEPA), the negotiations on which began in May 2019. DEPA includes rules on use of electronic books in cross-border businesses, protection of personal information, digital IDs, financial technology, AI, transfer of cross-border Big Data, and opportunities on trade and investments for small and medium-sized firms. Singapore also came to an agreement on the scope of negotiations for the Digital Economy Agreement with Australia in October 2019. Similar rules to which Singapore agreed with New Zealand and Chile are thought to be the target of negotiations with Australia.

In addition to developed countries, rule-making on digital trade is also under way in developing countries such as the ASEAN members. The Framework on Digital Data Governance was adopted in December 2018, and then in March 2019, the ASEAN Agreement on Electronic Commerce which consists of 19 articles on EC was signed.

Conclusion

This article has given an overview of the sharp increase in digital trade with the rapid development of ICT, and the situation on the formulation of digital trade rules. There are considerable differences in perspectives on digital trade, in particular on cross-border

TABLE
Key points of the Japan-US Digital Trade Agreement

Prohibition of application of customs duties	Customs duties shall not be applied to digital products distributed electronically between the two countries
Non-discriminatory treatment of digital products	The two countries shall not discriminate against each other's digital products compared with domestic products.
Liberalization of cross-border transfer of information by electronic means	Cross-border transfer of information, including personal information, by electronic means shall not be prohibited or restricted.
Restriction on data localization	The two countries shall not require companies operating in their local territories to use local computer equipment or install such equipment locally as a condition for doing business locally.
Online consumer protection	The two countries shall develop laws and regulations regarding the protection of consumers in relation to online commercial activities.
Personal information protection	A legal framework prescribing the protection of personal information shall be adopted.
Prohibition of forced disclosure of source code	The two countries shall not require companies to transfer software source code and/or algorithms as a condition for importing and/or selling products locally.
Prohibition of forced disclosure of encryption keys	The two countries shall not require manufacturers of information and communication technology products to transfer information on encryption keys as a condition for importing and /or selling products locally.

Source: Prepared based on reference materials released by the Japanese government

movement of data, and even on free transactions and movement perspectives vary widely by country and region. In such a situation, if rules on digital trade become excessive, varying by country and region, it could obstruct digital trade. On the other hand, multilateral rule-making on digital trade led by the WTO, although it has begun, has been slow and we are likely to continue seeing twists and turns.

It is likely true that newly developed countries and developing countries are cautious about the rule-making process being led by developed countries. However, the world has fixed its attention on a small country and newly developed nation, Estonia, which has transformed itself into an electronic nation and offers electronic services such as "e-residency" not only domestically but also to overseas. Singapore is also aggressively digitalizing and is trying to aggressively promote liberalization of not only trade in goods, but also digital trade. Digitalization of the economy and promotion of digital trade can be described as being an effective means for a newly developed country or a small country to leap forward in the global economy.

Regardless of the situation, there is an urgent need for basic minimum multilateral rule-making for digital trade so that all nations can benefit from the digital economy with equal opportunities. Eying multilateral rule-making, the Japanese government is expected to continue demonstrating its leadership, as it did with the WTO Exploratory Work on Electronic Commerce or starting the Osaka Track. JS

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