East Asia Regional Economic Integration Through Digital Economy Front

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Abstract

East Asia is a region because of its economic activity. Current transformation towards a digital economy, East Asia must also transform their synergy to maintain its economic growth. China, which has become a leading economy in the international environment, must address its capability to lead East Asia into a more united region. Therefore, this article will discuss two main topics. First is the current condition of regional economic integration in East Asia regarding digital economy transformation. Second, how China could manifest and lead the region's digital economy development.

Keywords
East Asia, Regional Integration, Digital Economy, RCEP, China

1. Introduction

The Association of Southeast Asian Nations (ASEAN) is the longest regional institution in East Asia, founded in 1967. On the establishment, ASEAN is constructing three communities to realize three pillars: economic community, political-security community, and socio-cultural community. The ASEAN Economic Community (AEC) envisions ASEAN becoming a single market and production base, resulting in a common market arrangement for promoting regional cooperation and integration in East Asia. ASEAN's main principle is the non-interference toward the national sovereignty of its member while creating intergovernmental among ASEAN members. (Dent 2017) The effect of ASEAN towards East Asia integration has led to several progression throughout ASEAN + 3, East Asia Summit, and Asia-Pacific Economic Cooperation, which will be later discussed in the chapter, emanating economic integration inside the region. As a counterpart of ASEAN, the Northeastern Asian states (China, Japan, and South Korea) decided to make an institution called NATC.

NATC (Northeast Asia Trilateral Co-operation) was created as a compeer of ASEAN, which took place in 1998; there are several reasons why NATC was made to conduct a trilateral meeting. The first was to reduce and minimize miscommunication between the three leaders. These circumstances have resulted in many disturbances within the region. Moreover, the second is to increase mutual exchange that, in time, will smoothen the relations among the three states that would progress in regional integration. However, the result of NATC is not going as intended. Although after the trilateral meeting was conducted, there was an increasing volume of mutual exchange however the meeting did not highly influence it. It happened due to the increased amount of exchange outside Northeast Asia. The first reason to minimize miscommunication is also proven to be a failure because the perception gap among the three leaders was never narrowed. Meanwhile, the dispute regarding their perception of their historical events still has not reached the middle ground (Kan 2014) (Dent 2017).

In 1996, after ASEAN played a more significant role in the international political sphere while preparing for Asia-Europe Meeting (ASEM), ASEAN leaders and China, Japan, and South Korea were engaged in an informal meeting. The result of the meeting was the establishment of ASEAN + 3 as an embodiment for East Asia states leaders to discuss regional economic, political, and security issues. ASEAN + 3 has furthered regional integration between Northeast Asia and Southeast Asia because ASEAN + 3 creates a crossover between economics and politics through EAS (East Asia Summit) as a forum discussion by 13 states from China, Japan, and South Korea and all ASEAN members. ASEAN + 3 forum is used to conduct cooperation covering several areas such as economic cooperation, a cooperative program of agriculture, information technology, tourism, and the environment. (Yoshimatsu 2008)

Alongside several institutions constructed to enhance the regional economy, there are other attempts to reconsider the region's scope from only East Asia to the Asia-Pacific scope to integrate their economic activity further. Nevertheless, many of these attempts led to bloc creation, mainly between China and Japan. Trans-Pacific Partnership, a superseded agreement after CPTPP was created to balance the rising of China with Japan, functions to reduce tariffs among their members, thus reducing their dependency on China. However, this partnership outcome is not accomplishing its original purpose as the U.S. has withdrawn as a member of TPP (Hamanaka 2014). Furthermore, another alliance was made in 2017 to counterbalance China's rise in the form of the Quad Alliance among the U.S., India, Japan, and Australia. This alliance is a reestablishment from its original alliance that was established in 2007 to counter China's military and politics in the Indo-Pacific region. (Envall, 2019) All these attempts created a new challenge for East Asia's integration progress among states due to the division created along with the economic agreement.

The competition of China and Japan to become the lead East Asia region has been played in various situations and conditions using FTA to pursue more than just economy but also their political interest to become the leader of the East Asia region. There are multiple discussions about this issue; some argue that China is way ahead of Japan in their race to lead the East Asia region, while some argue that China rising will suppress Japan as the regional leader (Munakata 2003). However, looking at the competition between the two states, their behavior in the competition would further integrate East Asia rather than separate the region.

There are other economic agreements and cooperation which led to the closer economic integration of East Asia. Asia Pacific Economic Cooperation has mitigated economic challenges in Asia-Pacific states by creating a new agricultural and raw material market outside Europe in the 1990s (Elek 2005). However, with the progression of time, APEC does not seem to be fit as leading for East Asia integration but rather as a monitor of regional economic activity (Pascha 2005). Another recently ratified in early 2022 is the Regional Comprehensive Economic Partnership (RCEP), which aims to remove trade barriers among its members consisting of China, Japan, South Korea, all ASEAN Members, Australia, and New Zealand. The economic integration progress of East Asia can be seen. Even Japan, just announcing their policy as Quad Alliance, ratified the RCEP agreement.

The U.S. Indo-Pacific Economic Framework started the recent development of regional integration in Asia-Pacific for Prosperity (IPEF). It was proposed in May 2022, consisting of 14 States in expanding U.S. economic leadership composed of four pillars: supply chains, climate, tax, and anti-corruption (Manak 2022). The framework could be perceived as a countermeasure for RCEP by looking at the designated members of IPEF that exclude China and other states closely related to China.

On the other hand, industry 4.0 has disrupted the economic field. The Internet of Things (IoT) has merged with many economic activities, leading to a new branch of the economy named the digital economy. It means extensively using information and technology (I.T.) elements for every economic activity, including internal operations of organizations and transactions between various actors. The implied I.T. element of the digital economy does not just stop on the internet and personal computers (P.C.). It has been applied to modern technological products like smartphones and everyday goods like cars and credit cards. The process becomes more efficient and effective by utilizing a vast progressive development of the I.T. element. Thus, many organizations use it for economic activity, particularly to create digital space and media. It spread to the world and centralized economic and social activity. However, the spread of I.T. elements is not equally distributed to every part of the world due to many factors, such as I.T. adaptations and different economic levels. (Malecki & Moriset 2008)

Through progression in digital space for economic activity, many obstacles from traditional economy flows can be reduced and circumvented, like the cost of document material, range of customers, and merchants. Even the high price of worker service is being remapped by digital technology in economic activity (Gaziz, Oteshova, Prodanova, Savina,

& Bokov 2020). Though this matter creates a debate about how technological elements would replace jobs, the need for the human touch is still irreplaceable after many technological progressions. Instead, I.T. elements are used by many political actors to pursue their interests.

This I.T. element has also been implemented in China's policy to create one long economy line called Belt and Route Initiative (BRI) also has its digital counterpart. The Digital Silk Road is another policy from China to build an infrastructure to advance digital networks worldwide. China uses this policy to spread their influences using the digital economy in states China has an agreement to develop its infrastructure. It was also an effort from China to realize their blueprint to develop their digital economy that aims to increase digital economy industry contribution to 10% of their GDP by 2025 (Liu & Leslie 2022). This blueprint is one plan of their primary policy, "Made in China 2025". This policy targets to upgrade their industrial capability and smart manufacturing to ensure advanced development in their ten key industries (ISDP 2018), as followed in Table 1:

Table 1. China Key Industries Development

Advanced Information Technology
Automated Machine Tools and Robotics
Aerospace and Aeronautical Equipment
Ocean Engineering Equipment and High-tech Shipping
Modern Rail Transport Equipment
Energy Saving and New Energy Vehicle
Power Equipment
New Materials
Medicine and Medical Devices
Agricultural Equipment

1.1 Objective

With the development of the digital economy as an instrument for state leaders to achieve their interests, the progress of economic integration would shift from the traditional course of political institutions like E.U. and ASEAN. Therefore, this paper aims to explain the digital economy's impact on regional integration in Northeast and Southeast Asia.

2. Literature Review

To define the digital economy, first, we must understand the digital space itself. The concept of digital space is familiar with the visualization of technological devices (e.g., smartphones, computers, tablets, etc.) where the space is in an unidentified place connected by the internet (Owolabi 2021). Through the development of IoT, digital space is used to transform traditional human activity in the real world into the digital world, including economic activity. The changing platform of economic activity marks the transformation from a conventional to a digital economy by using these I.T. elements to perform everyday economic action (e.g., transactions, promoting, selling, buying, etc.)

While the digitalization of the economy continues to manifest, the use of the digital economy does not simply stop at economic purposes. The use of digital space is extended beyond what was expected from its original purpose; political intrigue is also expanding to digital space (Smith 2017). The digital economy is always explained alongside technology development when the script is written. (Bukht & Heeks 2017) creates a brief segment of digital economy definition in their article from time to time. (Tapscott, 1996) define it as the new economy where technology creates networking among humans and makes a breakthrough in wealth and social development. (Lane 1999) say the digital economy is the evolution of technology and information that will be resulting the flow of information and spark e-commerce and organizational change. (Magheria et al. 1999) stating four foundations of the digital economy, 1) Building out the internet, 2) E-commerce among businesses, 3) Digital delivery of goods and services, and 4) retail sale of tangible goods. (Brynjolfsson & Kahin 2000) explain as an unaware transformation of economy sectors by digitalization through the computer. Whereas (Kling & Lamb 2000) define its goods or services development, production, sale, or provision as dependent upon digital technology. (Mesenbourg 2001) explain the digital economy from three main components, 1) E-business infrastructure by using E-commerce, 2) E-business is a process of business conducted over

computer-based working, and 3) E-commerce is the value of goods and services sold from computer-based services. (Economist Intelligence Unit 2010) basing the rank of the country's digital economy on their ICT infrastructure and the ability of their consumers, businesses, and government to use ICT for their benefit. (OECD 2013) said digital economy enables e-commerce to execute the trade of goods and services on the internet. (DBCDE Australia 2013) describe it as a global network of economic and social activities enabled by digital technology, such as the internet and mobile networks. While (European Commission 2013) describes it as an economy based on digital technologies. (British Computer Society 2014) add from the European Commission definition that "digital economy is perceived as conducting business through markets based on internet and world wide web." In another sense (European Parliament 2015) describes it as a complex structure connected with constantly growing and almost endless nodes. (House of Commons 2016) refers to the digital economy as both digital access to goods and services and the use of digital technology to help businesses. (G20 DETF 2016) the definition uses a broad range of digitized knowledge and information, ICT devices, and information networks to grow productivity and optimize the economic structure. (Elmasry et al. 2016) provide digital economy as an action composed of three attributes, 1) redefining the border limit of the business world, 2) optimizing customer experiences, and 3) building foundation capability that can support the economic structure. (Bahl 2016) differentiate the distinction between "being" digital and "doing" digital. (Knickrehm et al., 2016) said digital economy is the total economic output from digital inputs. The digital inputs are listed as digital skills, equipment, and intermediate digital goods and services used in production. (Rouse 2016) has the same opinion that a digital economy is a worldwide network of economic activities enabled by ICT or simply an economy based on digital technology. (Dahlman et al., 2016) define it more specifically as a unification of technological purpose and range of economic and social activities by people over the internet related to technologies. (OUP 2017) straightly describe it as an economy that functions by digital technology, especially e-transaction through the internet. (Deloitte n.d.) describe it as economic activity from a broad network of economic activity with network connectedness and IoT machines as the core for the digital economy. From multiple interpretations of the digital economy, two similar elements construct digital economy; First is the usage of digital devices to conduct economic activity. Second is the internet usability that diminishes traditional economy constraints (e.g., distance, transaction, mobilization).

3. Methods

This paper's applied method/theory will use Regional Dynamics of Economic Integrations by (Kimbugwe et al. 2012), who based their approach on (Baldwin & Seghezza 1998). In his article, he stated that regional economic integration has occurred through a series of separate and often unrelated events that brings two effects. First, increasing growth input factors. Second, accelerate technological development within the economic union.

He states five related events that could trigger the progress of economic integration. First is the creation of imperfect competition and scale economies that will create trade suppression and cost reduction effects. Second, the significance of country size will affect the scope of the integration and public project cooperation. Last, eventuating natural trading partners through the countries' geographical proximity will intensify intraregional trade. Fourth, the cluster of industrial growth from the region will create a spillover effect on countries in the area—lastly, trade barriers and transport costs shrinkage to ease intraregional trade activity.

4. Data Collection

The data used in this article is secondary data using a comprehensive review of the published journal article, academic books, conference papers, documents from government and international organizations, and newspaper articles. The data mining uses a quantitative method to analyze the corresponding significance of the article.

5. Result and Discussion

Throughout changing the platform of the traditional economy, state leaders are also adapting to this matter. Therefore, the transformation of economic policy will also take effect with the development of the digital economy. Within the East Asia region, digital economy policy implementation has been adopted. In southern parts, ASEAN has issued the 'ASEAN Digital Integration Framework' to harness their scale as a region while competing for more in the global economy (ASEAN 2020). The ASEAN digital economy framework is segmented into six components: Connectivity, Digital Literacy and Skills, Privacy and Cybersecurity Regulations, Transformation, Creation, and Collaboration. (Erh 2021) Conducted research on six ASEAN countries' stages, he classified three stages of digitalization in these countries, Basic where there is the use of the internet and computer. However, all economic transaction is still done offline, Intermediate where E-payment use has already been conducted, and E-commerce is presented, but offline financial marketing still takes the majority. Advanced where IoT, A.I., and SaaS have been used, data analytics is high

and economic transaction is mainly conducted online. Therefore, he concluded that the stages of ASEAN countries still vary. (Figure 1)

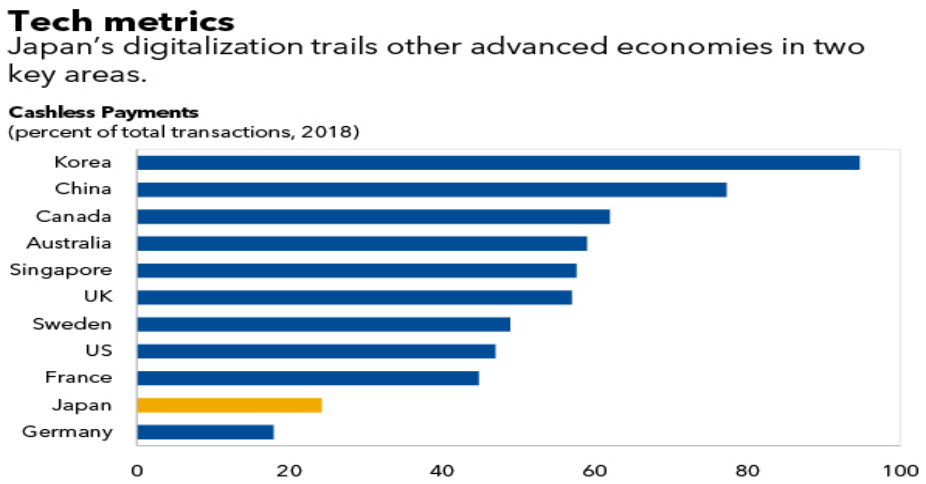

Figure 1. Countries' Digital Payments Used in 2018

The ownership of internet devices is still lowlily influenced by the government in Indonesia and the Philippines. In contrast, Singapore, Malaysia, and Vietnam have smartphone subsidies for low-income or senior citizens. The broadband connectivity subscription is rated high in six countries. However, Vietnam, Thailand, the Philippines, and Indonesia are still developing their digital infrastructure to support better connectivity, while Singapore and Malaysia have advanced connectivity infrastructure. All six countries focus on fostering digital knowledge for their citizens' digital literacy and skills for their young to middle-aged populations. Still, besides Singapore and Thailand, older people are not significantly fostered and educated in this subject. Their privacy and cybersecurity regulations have formed regulations for personal data protection within all countries. However, Vietnam and Indonesia have no privacy laws regarding personal data but still recognize personal privacy from other regulations. The exact condition is also concurring in Indonesia and Malaysia's cybersecurity regulations. Transformation towards digital is highly encouraged by all the governments from the six countries regarding their work environment, digital skills training, infrastructure, and high e-commerce transformation from companies and SMEs. The creation of tech start-ups has become a trend for these countries, and they also adopt policies to ease and encourage the creation of local tech start-ups. In terms of collaboration, the sixth country apart from Singapore does not have a significant pursuit; they only collaborate through ASEAN Agreement which is not legally binding. From the research (Erh 2021) done about six ASEAN countries' digital economy policies, the development of the digital economy in Southeast Asia has developed at a diverse rate. The lack of digital economy collaboration from ASEAN has created a gap in digital economy development among ASEAN nations. While in Northeast Asia, the digital economy's circumstances take a more complicated turn.

The development of the digital economy in Northeast Asia has competed among three big players: China, Japan, and South Korea. Unlike Southeast Asia, without regional economic regulators in Northeast Asia, the competition is strongly concurred to obtain regional leader, where they compete in traditional economy adapting into the digital economy. However, the significant attempts to compete in the digital economy come from China and Japan, whereas South Korea is more focused on digital diplomacy while simultaneously focusing on cybersecurity due to their Korean Peninsula conflict (Melissen & Keulanaar 2017) (Japan Times 2022). Therefore, the competition between China and Japan remained to contend their influence within the region.

Throughout the competition, Japan became the biggest economy in East Asia in the 1970s. It was supported by the Japan-US treaty surrounding Japan's military as one condition for Japan to regain its independence. It led Japan to not focus on its national security sector, resulting in Japan restoring its economy. At first, China was their leading trading partner, and Japan tried to initiate a relationship restoration with China. However, with China having allied with the Soviet Union regarding the communist bloc, the U.S. has pressed Japan to go South to establish diplomatic relations

with newly independent Southeast Asian countries. Therefore, Japan had a high level of economic growth from the 1950s to the 1970s, leading them to achieve financial stability and upgrade its industrial sector (Takashi 2021). After the 1970s, their economy became stagnant and surpassed China's. Figure 1 has determined that in terms of the digital economy, China has surpassed Japan in factors of digitalization which is cashless payments (Sodsriwiboon, Khera & Xu, 2022).

Imperfect Competition and Scale Economies

From the competition, several effects influence regional economic integration in East Asia. (Kimbugwe et al., 2012) has refined a model of dynamic integration from (Baldwin & Seghezza 1998) to foresee how integration is connected through a series of separate and unrelated phenomena yet resulting in similar output. They stated that imperfect competition and scale economy would result in two effects: cost reductions and trade suppression. In the digital economy, China has dominated many sectors in the East Asia region. Their big plan to create linked digital connections worldwide has created a monopolistic or at least a significant influence, especially in the e-commerce sector. Their development in e-commerce transaction value has increased more than 40x from 2005 to 2016, and their transaction using mobile devices in 2016 is 11x more than the U.S. Although, on a start-up company, they have lesser than the U.S. differ 2% in valuation as in Figure 2.

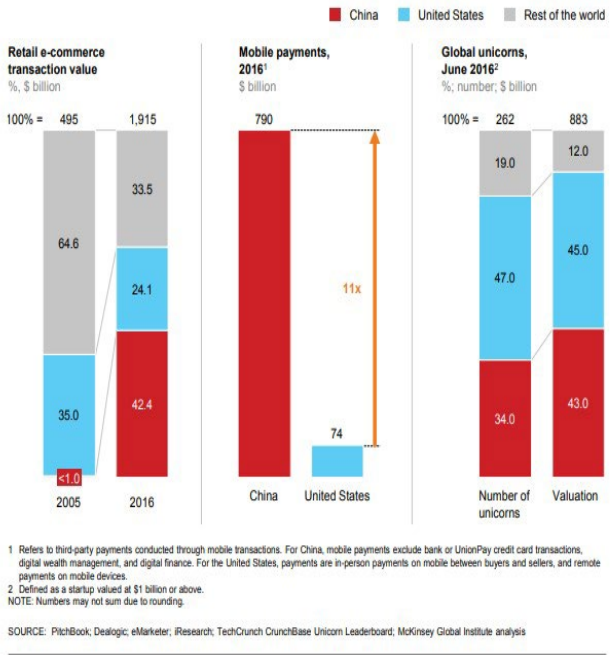

Figure 2. China's Digital Economy in comparison with the U.S. and the world

The amount of China's digital economy value development has significantly risen in the past two decades. Furthermore, China's digital growth occurred not only in e-commerce but also in its ICT trade and services. China has become the top three in every digital industrial production sector. In Figure 3, the large business scale Chinese market commercialized their ICT goods to the point where scale economy is conducted in their digital economy market towards East Asia and beyond (e.g., Xiaomi, Alibaba, Huawei, etc.). High production of ICT goods that has significantly concurred in China is caused by the cost reduction effect, which emits from increased production of goods by demands due to intraregional trade, enabling companies to conduct economies of scale and lower their output costs. RCEP could be seen as the effect of China's imperfect competition and scale economy. Their tariff reduction or elimination commitment could be seen as an effect of increased demands for China's digital goods in RCEP member states. Furthermore, RCEP is used to promote e-commerce and develop e-commerce facilities in their country, thus enhancing the e-commerce environment in Asia-Pacific (RCEP 2022). It became clear that Japan could not chase China in digital diplomacy by looking at their digital market value, which is significantly lesser than China.

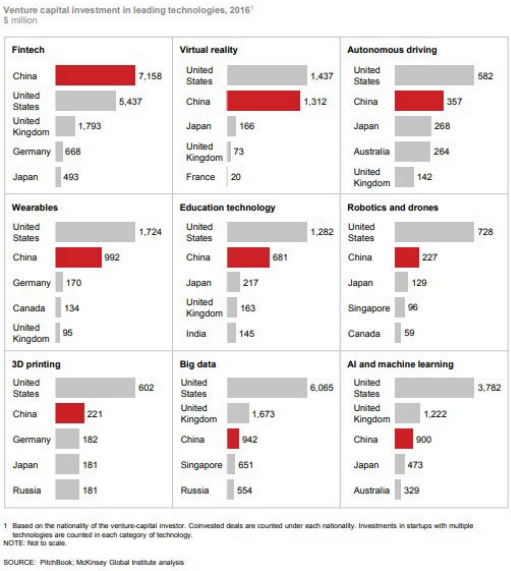

Figure 3 China Digital Investment by Categories in 2018

(Kimbugwe et al., 2012) Also, the second effect of imperfect competition and scale economy is trade suppression. This effect occurs when scale economies reduce non-member state exports to state members due to lower costs within the intraregional. RCEP is creating a commitment among its members to develop a trade agreement that will significantly lower non-state member export to RCEP member states. One successful example of this trade suppression is E.U. intra-regional trade, which reached 67.7% of their total trade in 2020, reducing the cost of output within their region and non-member export to E.U. (UNCTAD 2021) (RCEP 2022).

Country size

(Kimbugwe et al., 2012) also, explain the significance of country size. They emphasize how minor RTA will not support small country welfare due to the inability to supply greater imports. Therefore the more significant the RTA, the probability of a country joining RTA increases the larger area the RTA includes. As with East Asia, the only RTA that's concurring and including CJK is RCEP. However, multiple initiatives have been proposed before RCEP is agreed upon and ratified. CEPEA and EAFTA (ASEAN + 3) have been proposed but do not take place. Due to a discrepancy in pursuit of interest in the development of the RTA, EAFTA, and CEPEA are replaced by RCEP. The EAFTA is only exclusive to East Asia, making it minor involvement in the area. Therefore, their members doubt the benefits it will take. Whereas for EAFTA. The conflict between China and India border makes EAFTA no longer plausible with the addition of Japan that has initiated this RTA. If Japan leads East Asia RTA, China is concerned that it might disrupt their interest.

Another point (Kimbugwe et al. 2012) made is cooperation on the public project within the region. China's initiative to pursue its digital infrastructure connectivity from Digital Silk Road would be the most obvious indicator of this. China's policy to construct digital infrastructure to provide connectivity throughout Africa, the Middle East, Eastern Europe, Latin America, and Southeast Asia must expand its wireless networks and broadband internet coverage. There are currently 16 countries that signed the Digital Silk Road agreement. Still, because MoU is not obligatory for the cooperation of the Digital Silk Road, the investment number is much more likely than what has been reported (Council on Foreign Relations 2021).

The significance of the digital silk road for digital development in East Asia is promising. On the ICT infrastructure project, the silk road has initiated in Southeast Asia countries on 20 undersea fiber optic cable projects, which took place mainly in Indonesia and the Philippines, a 5G connection testbed in Thailand, and a second data center in Indonesia on 2019 (CSIS 2019). The implication of the Digital Silk Road is also highly connecting intraregional finance and e-commerce development. Though China's ICT system expansion is also alongside the silk road, the expansion they bring is developing Digital Silk Road countries' digital economic activities. Malaysia has implemented Digital Free Trade Zone for local businesses exporting their goods by facilitating e-service that connects the local industry with the government and private sector for logistics and e-commerce combined infrastructure. China's biggest

e-commerce, Alibaba, established eHub for e-commerce with Malaysia's state-owned enterprise to conduct cross-border trade without complicated government bureaucratic necessity.

Moreover, cross-border online payment from China companies has become popular as China cooperates with local banks and has even become their customary payment system. Like in Indonesia, a subsidiary of China MNC Tencent, Shopee, has become famous for its Shopee pay feature for the usual payment method. In Malaysia, Alipay, a payment feature from Alibaba, has expanded its service with Malaysia Touch' n Go. Japan's response to China's Digital Silk Road is not aggressively opposing Silk Road development. Still, they prioritize their cybersecurity, continuing their cooperation with the U.S. as an alliance while also securing their supply chains and 5G networks by establishing new regulations to enhance I.T. system procurement (Mochinaga, 2020).

Natural Trading Partners

(Kimbugwe et al., 2012) then stated the importance of natural trading partners. He implied that close geographic proximity has a role in integration and trade intensity determinants. Therefore countries inside the East Asia region are very likely to form multilateral trade relations and escalate them. As mentioned above, AEC, the ASEAN Economic Community, has implemented its digital framework to increase its economic growth intensity and digital economy front. ASEAN has also launched Bandar Seri Begawan Roadmap, an agenda to accelerate ASEAN countries' economic recovery and digital economy integration (ASEAN 2020). The initial plan for Bandar Seri Begawan Roadmap consists of three phases; 1) Recovery, to recover their economy following the Covid-19 pandemic from 2021 – 2022, 2) Acceleration, to accelerate trade facilitation and digitalization, cross-border digital payments, and intellectual property that will occur from 2022-2024, and 3) Transformation, to fully embrace digital transformation by embedding digital technologies as a necessary component in ASEAN countries economy activities (ASEAN 2021). It is without saying that ASEAN functions to maintain economic and social stability to keep their state from falling apart, and post-pandemic, their commitment to increase regional economic relations is also intensifying, including their digital economic sector.

Whereas from China-Japan-South Korea, the intensity of their trade relation tends to be divergent. In Table 2 and Table 4, the trade value between South Korea and Japan remains stagnant, and during the pandemic has decreased, but in 2021 their trade value has back to average density. At the same time, Japan and South Korea increased their import from China annually despite the pandemic that occurred in early 2020, while Japan and South Korea's export to China also increased in value but did not consistently increase every year in Table 3 and Table 5.

Table 2. Trade Value of South Korea to Japan

South Korea to Japan		
Year	Export Value	Import Value
2013	34,662,290	60,029,355
2014	32,183,788	53,768,313
2015	25,576,507	45,853,834
2016	24,355,036	47,466,592
2017	26,816,141	55,124,725
2018	30,528,580	54,603,749
2019	28,420,213	47,580,853
2020	25,097,651	46,023,036
2021	30,061,806	54,642,165

Source: Republic of Korea Custom Service

Table 3. Trade Value of South Korea to China

South Korea to China		
Year	Export Value	Import Value
2013	145,869,498	83,052,877
2014	145,287,701	90,082,226
2015	137,123,934	90,250,275
2016	124,432,941	86,980,160
2017	142,120,000	97,860,114
2018	162,125,055	106,488,592
2019	136,202,533	107,228,736
2020	132,565,445	108,884,645
2021	162,912,974	138,628,127

Table 4. Trade Value of Japan to South Korea

Japan to South Korea		
Year	Export Value	Import Value
2013	56,882,587	36,131,559
2014	51,828,375	33,578,702
2015	44,048,730	26,828,974
2016	46,221,351	25,027,185
2017	53,206,485	28,060,001
2018	52,470,815	32,131,493
2019	46,249,285	29,586,375
2020	44,587,147	26,557,825
2021	52,673,938	32,125,422
Source: Japan Ministry of Finance		

Table 5. Trade Value of Japan to China

Japan to China		
Year	Export Value	Import Value
2013	129,851,439	182,191,683
2014	127,105,265	182,071,443
2015	109,265,900	160,674,499
2016	113,874,305	156,443,992
2017	132,650,750	164,255,540
2018	143,920,508	173,518,360
2019	134,697,039	169,262,495
2020	141,250,228	163,842,431
2021	164,123,436	185,920,235

Therefore, their geographic proximity supports the diverse yet predominantly increased trade value among China-Japan-South Korea. Albeit in the digital economy, their unity is established through RCEP, following RCEP Legal Text, in chapter 12 that is solely made to determine digital trade and e-commerce among their members. It is implied in their agreement that the general purpose of chapter 12 is to promote e-commerce by creating and providing a legal basis for it by encouraging SMEs to establish and implement e-commerce in their businesses and protecting consumer personal data privacy. However, an interesting point from chapter 12 is the prohibition of data localization, which means the user data of e-commerce or other digital software could not be saved in the countries and must be stored with the software provider (Blanchard & Liang 2022) (RCEP 2022). In a hypothetical case, an e-commerce software from China could access consumer data from Indonesia that use their application because data is not stored in Indonesia's cloud server. This legal basis would create a massive opportunity for China, Japan, and South Korea, which are highly competitive in the digital space. Although, as stated above, South Korea will be more focused on its digital diplomacy rather than a pursuit to compete with China in the digital economy. Thus, China, currently on the front line of the digital economy sector in East Asia, would highly profit from data localization prohibition.

Cluster of growth

The growth sector of a region is also a determining factor from what (Kimbugwe et al. 2012) posit. He refers to (Puga and Venebles 1997) that the relevancy of regional growth clusters is split into two factors; income and industrial specialization, which are both highly dependent on their transactional costs. Defining East Asia's industrial specialization can be vindicated to China's industry because they are known as the biggest exporter of electronic computing components evaluating more than US$700 billion in 2020 (OEC 2021). Simultaneously, Southeast Asia's most significant exports are electronic computing components valuating US$377.56 billion in 2019 (ASEAN 2020), and South Korea, evaluating US$160 Billion in 2020 (Trading Economics 2022). Aside from Japan, their top export is Machinery, with a US$147 billion value in 2021 (Trading Economics 2022). Therefore, it is inevitable that East Asia specializes in the electronic computing industry. Although Japan's most extensive export goods differ from other East Asian countries, their development in the digital economy is better than several countries in East Asia. With East Asia's focus on its electronic component for digital space access and creation, the RCEP agreement chapter to develop the digital economy is a proper way for the East Asia region to boost its economic development.

Trade Barriers and Transport Costs

Lastly, (Kimbugwe et al. 2012) emphasized trade barriers and transport costs of goods between countries. Both factors determine the selling price of imported goods for the consumers. (Davies 1993) has discussed what trade barriers implicate in East Asian countries. He mentioned that the high customs tariff rate in East and Southeast Asia countries had created a tariff barrier for investors and companies to expand their business. It led to the creation of GATT in 1994 to limit customs tariffs and lighten the weight of companies and investors to operate in other countries. Then the AFTA initiative to implement tariff reduction among ASEAN members which implemented in 2008. China-Japan-South Korea Free Trade Agreement has been discussed from 2002 until 2019, but it has not been in its final state. However, during the China-Japan-South Korea Free Trade Agreement meeting, they met a consensus to participate in RCEP to establish a high-level free trade area (China Ministry of Commerce 2019).

On the other hand, transport costs also benefit from the RCEP agreement, where the movement of goods among countries would be more efficient due to increased production. Hence, the logistics and shipping industry will get more opportunities and increase RCEP members' overall intraregional trade. Thus, the digital economy is accelerated due to the ease of digital infrastructure construction, goods movement, and prices brought into non-advanced RCEP countries in digital technology. The development of East Asia's economic integration would intensify through China's Digital Silk Road plan.

6. Conclusion

East Asia regional integration has been an issue for more than a decade. Multiple attempts have been tried to bring unity to East Asia, yet it remains futile, and some event even brings regress to the integration process. Nevertheless, East Asia is highly functioning as a region in economic terms; with the development of industry 4.0, creating a digital economy through digitalization and ICT development has created a new space for East Asia countries to face. For a long, Japan and China have competed in the economic sector. However, with the arrival of the digital economy, China has won in its digital economy development. The concurrent China policy, and their expansion of digital infrastructure throughout the world, will bring East Asia to the creation of RTA. RCEP could be perceived as one result of this. With the existence of RCEP, digital economy development in East Asia is reassuring for the region's prospects. China leads in the digital economy, which has created circumstances for RCEP to be ratified by Asia-Pacific countries. The imperfect competition and scale economies of China have to bring cost reduction and trade suppression for e-commerce and digital market goods, which RCEP covers in their agreements. Digital Silk Road -their master plan to enhance digital connectivity- creates development in e-commerce implementation in countries like Indonesia and Malaysia. Due to the high production of digital goods and the close geographic position of China, Japan, and South Korea, the three countries have intensified their trade relations. With China's focus on digital development, East Asian countries are experiencing a spillover effect where most of them are manufacturing electronic computing components and adopting them as their main exports. Lastly, due to their trade intensity, the reduction towards removal of custom duties on trade inside RCEP members has occurred this year.

References

ASEAN. "ASEAN Digital Integration Framework." *ASEAN.* Available: https://asean.org/wp-content/uploads/2020/12/Adopted-ASEAN-Digital-Integration-Framework.pdf, December.2020.

ASEAN. "Asean Statistical Yearbook 2020." *Association of Southeast Asia Nations.* Available: https://www.aseanstats.org/wp-content/uploads/2020/12/ASYB_2020.pdf, December.2020.

ASEAN. "THE BANDAR SERI BEGAWAN ROADMAP: AN ASEAN DIGITAL TRANSFORMATION AGENDA TO ACCELERATE ASEAN'S ECONOMIC RECOVERY AND DIGITAL ECONOMY INTEGRATION." *ASEAN.* Available: https://asean.org/wp-content/uploads/2021/10/Bandar-Seri-Begawan-Roadmap-on-ASEAN-Digital-Transformation-Agenda_Endorsed.pdf, 21 October.2021.

Baldwin, Richard E. and Elena Seghezza. "Regional Integration and Growth in Developing Nations." *Journal of Economic Integration, Vol. 13, No. 3*: 367-399, 1998.

Blanchard, Jean-Marc F. and Wei Liang. *Reassessing RCEP's Implications for Digital Trade and E-Commerce*. Available: https://thediplomat.com/2022/05/reassessing-rceps-implications-for-digital-trade-and-e-commerce/, 4 May.2022.

Bukht, Rumana and Richard Heeks. "Defining, Conceptualising and Measuring the Digital Economy." *Manchester Centre for Development Informatics Working Paper 68*: 1-21.2017

China Ministry of Commerce. "The 15th Round of Negotiations of China-Japan-ROK FTA Held in Tokyo." *China FTA Network.* Available: http://fta.mofcom.gov.cn/enarticle/chinarihen/chinarihennews/201904/40325_1.html, 17 April.2019.

Council on Foreign Relations. *Assessing China's Digital Silk Road Initiative*. Available: https://www.cfr.org/china-digital-silk-road/, 2021.

CSIS. *China's Digital Silk Road and Southeast Asia*. Available: https://www.csis.org/analysis/chinas-digital-silk-road-and-southeast-asia, 15 February.2019.

Davies, Keri. "Trade barriers in East and South East Asia: the implications for retailers." *The International Review of Retail, Distribution and Consumer Research 3(4)*: 345-365, 1993

Dent, Christopher M. "East Asian Integation: Towards an Asian Economic Community." *ADBI Working Paper Series 665*: 1-40, February 2017

Elek, Andrew. "Back to Canberra: Founding APEC." Pacific Economic Cooperation Council. *The Evolution of PECC: The First 25 Years*. Singapore: PECC International Secretariat. 65-86, 2005

Envall, David. *The Quadrilateral Security Dialogue: Towards an Indo-Pacific Order?* Nanyang: S. Rajaratnam School of International Studies, 2019.

Erh, Joey. "Assessing Digital Economy Policies in Six Southeast Asian Countries." *ISEAS Yusof Ishak Institute Perspective Issue 2021 No.50*: 1-19, 21 April.2021.

Gaziz, Sagituly, et al. "Digital Economy and Its Role in the Process of Economic Development." *Journal of Security and Sustainability Issues Vol.9 No.4*: 1225-1235, 2020.

Goldfarb, Avi and Catherine Tucker. "Digital Economics." *Journal of Economic Literature 57(1)*: 3-43, 2019

Hamanaka, Shintaro. "Trans-Pacific Partnership Versus Regional Comprehensive Economic Partnership: Control of Membeship and Agenda Setting." *ADB Working Paper Series on Regional Economic Integration no.146*: 1-20.December 2014.

ISDP. "Made in China 2025 Backgrounder." *Institute for Security & Development Policy.* Available: https://isdp.eu/content/uploads/2018/06/Made-in-China-Backgrounder.pdf, June 2018.

Japan Times. *Japan, U.S., South Korea vow to closely cooperate to counter North Korea*. Available: https://www.japantimes.co.jp/news/2022/07/09/national/politics-diplomacy/south-korea-us-japan-foreign-ministers/, 9 July.2022.

Kan, Kimura. "Northeast Asian Trilateral Cooperation in the Globalizing World: How to Re-establish the Mutual Importance." *Journal of International Cooperation Studies, Vol.21, No.2 & 3*: 41-61, 2014.

Kimbugwe, Kato, et al. "Regional Integration Theory." Kimbugwe, Kato, et al. *Economic Development Through Regional Trade*. London: Palgrave Macmillan. 76-98, 2012.

Liu, Brian and Raquel Leslie. *China Sharpens Its Vision for the Digital Economy*. Available: https://www.lawfareblog.com/china-sharpens-its-vision-digital-economy#:~:text=China's%20State%20Council%20published%20a,product%20(GDP)%20by%202025, 21 January.2022.

Malecki, Edward J. and Bruno Moriset. *The Digital Economy: Business organization, production processes, and regional developments*. New York: Routledge, 2008.

Manak, Inu. *Unpacking the IPEF: Biden's First Big Trade Play*. Available: https://www.cfr.org/article/unpacking-ipef-bidens-first-big-trade-play, 8 June.2022.

Melissen, Jan and Emillie de Keulanaar. "Critical Digital Diplomacy as a Global Challenge: The South Korean Experience." *South Korean Digital Diplomacy*: 1-9, 2017.

Mochinaga, Dai. "The Expansion of China's Digital Silk Road and Japan's Response." *Asia Policy, 27 (1)*: 41-60, 2020.

OEC. *China Profiles*. Available: https://oec.world/en/profile/country/chn, 2021.

Owolabi, Yussuf Kehinde. "Digital Space 101: The Essential Guide." *Rotary e-Club of Greater Nigeria*. New York: Rotary e-Club of Greater Nigeria, 1-15. 2021.

Pascha, Werner. "The Role of APEC in East Asian Regional Integration- A European Perspective." *The Journal of East Asian Affairs 19(2)* : 109-134, 2005.

RCEP. "CHAPTER 12 ELECTRONIC COMMERCE." *RCEP Secretariat.* Available: https://rcepsec.org/wp-content/uploads/2020/11/Chapter-12.pdf, 2022.

RCEP. "CHAPTER 2 TRADE IN GOODS." *RCEP Secretariat.* Available: https://rcepsec.org/wp-content/uploads/2020/11/Chapter-2.pdf, 2022.

Smith, Trevor Garrison. *Politicing Digital Space: Theory, the Internet and Renewing Democracy*. London: University of Westminister Press, 2017.

Sodsriwiboon, Piyaporn, Purva Khera and Rui Xu. *International Monetary Fund*. Available: https://www.imf.org/en/News/Articles/2022/05/31/CF-Japan-Digitalization-Can-Add-Momentum-for-Economic-Rebound, 1 June.2022.

Takashi, Shiraishi. "Japan International Cooperation Agency." *Japanese Modernization Lecture Series Chapter 6: From "Japan and Asia" to "Japan in Asia".* Available: https://www.jica.go.jp/dsp-chair/english/chair/modernization/ku57pq00002mpdct-att/modernization_chapter_06.pdf, 2021.

Munakata Naoko."The Impact of the Rise of China and Regional Economic Integration in Asia - A Japanese Perspective." *Brookings Edu.* Available: https://www.brookings.edu/wp-content/uploads/2016/06/munakata20031204-1.pdf, 4 December.2003.

Trading Economics. *Japan Exports By Category*. Available: https://tradingeconomics.com/japan/exports-by-category.2022.

Trading Economics. *South Korea Exports Category*. Available: https://tradingeconomics.com/south-korea/exports-by-category, 9 July.2022.

UNCTAD. *Trade structure by partner*. Available: https://hbs.unctad.org/trade-structure-by-partner/, 2021.

Volkova, Yekaterina. "Digital economy: essence, approaches, elements, transformation." *VUZF Review, 7(1)*: 161-168, 2022.

Yoshimatsu, Hidetaka. *The Political Economy of Regionalism in East Asia Integrative Explanation for Dynamics and Challenges*. New York: Palgrave MacMillan, 2008.

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