THE POST-PANDEMIC ECONOMIC-INTERDEPENDENCE CONUNDRUM OF CPO-BASED INDUSTRY: THE CASE OF SUSTAINABLE KOREAN FOOD AND COSMETIC INDUSTRY

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Abstract

The COVID-19 pandemic worldwide is halting every economic activity—no exception for the industry that related or originated from crude palm oil (CPO). Planting, harvesting, processing, and even industries that require oil palm as the main or supporting raw material have been delayed or choked up due to this pandemic. Many health problems originate from the destruction of nature due to the excessive extraction of natural resources. This over-extraction causes alarming natural degradation. Many things, from pandemics to global warming, pose challenges due to this ancient economic pattern. Furthermore, environmental degradation gave birth directly or indirectly to COVID-19. Many scholars said the CPO planting and harvesting is affecting the natural environment badly. Hence, a new pandemic could be born out of this. Korea, as one of the rising manufacturing economies in Asia, also needs CPO for some of its industries to some extent, like food and cosmetics. Due to the growing demand for K-Pop byproducts, food and cosmetic industries in Korea need to catch up on the market even during and post the pandemic. Thus, with the growing concern of the natural environment in the post-pandemic world, then how it will impact the Korean food and cosmetic industry, which may need a lot of CPO as one of the sources or raw materials for production? In this paper, we argue that the economic interdependence of the global supply chain remains persistent despite adjustments and shifts due to the COVID-19 pandemic. This research was conducted in a descriptive qualitative manner with the economic interdependence paradigm as the main basis for presenting the arguments for this case's analysis.

Keywords: CPO, Korea, Economic Interdependence, Post-Pandemic, COVID-19
1. Introduction

Crude Palm Oil or better known as CPO, is one of the basic raw materials of various industrial products in various countries. In addition, CPO is oil derived from palm oil that grows in many tropical regions of the world. According to the Chairman of the Indonesian Palm Oil Entrepreneurs Association (Gapki), Joko Supriyono, as reported by Jakarta Globe (2019), industrial development and technological innovation continue to make significant progress, especially in the development of palm oil products. Then, Indonesia, for example, obtained 2.46 percent of total foreign exchange to the country's gross domestic product in 2017 from palm oil. Moreover, Indonesia is the world's largest commodity producer with a total production of 42 million metric tons per year.

Thus, since its plantation and production is massive, is the current condition of CPO plantation and production safe enough for the natural environment? According to Colchester et al. (2011), the environmental impacts of large-scale palm oil plantations include tremendous loss of biodiversity, increased greenhouse gas emissions, massive deforestation, depletion of soil nutrients, drought, deserting/deserting, and water pollution from toxic waste. Moreover, based on the argument by Meijaard (2019), palm oil is a highly controversial issue. Many conservationists, scientists, and members of the public consider it one of the greatest threats to tropical biodiversity. Nevertheless, the domino effect of the profit of selling palm oil is many also, especially palm oil producers, governments, and communities that farm palm oil, relying on the planting of this type of palm for high yields and financial benefits. Therefore, there are several different views related to the interaction between sustainable land use and palm oil cultivation. Thus, there are a lot of dilemmas on this green gold.

Not only natural environment problem, but the world in 2020 is also facing another threat, which is the global pandemic of COVID-19. Lidwina (2020) explained that based on the National Bureau of Economic Research (NBER), a recession occurs due to a sharp decline in economic activity; the ups and downs of economic growth in the form of V, U, and W-shape can be classified as the recession. Not only calculates GDP, but it also considers other indicators such as unemployment rate, retail sales, and industrial production.

Moreover, Lidwina (2020) adds that the "COVID-19 pandemic" recession has a negative impact on the world. Economic growth in a number of countries plunged in the second quarter of 2020. In addition, in Asia, Singapore recorded its sharpest decline since April-June 2020, at -12.6 percent. After that, Hong Kong by -9 percent, South Korea -2.9 percent, and Japan -1.7 percent. Economic growth in the United States also contracted 9.5 percent in the second quarter of 2020. Therefore, this pandemic caused the economic recession to plunge very deeply due to restrictions on socioeconomic activity and disease factors for which there is no cure or vaccine. However, some sectors seem immune to this pandemic. One of them is K-pop.

K-pop has a long story in merchandising its groups. Ranging from food, cosmetics, music album, and even clothing, K-pop merchandise is generating similar fortune as its music or drama. Lu (2020) stated that BTS, for example, had established a merchandising and endorsement empire on a scale not seen in Western pop music. They draw on a strong presence of social media to attract millions of young and global fans of K-pop. In addition, Paul Han, in Lu (2020), said, "people will buy whatever they touch."
Paul Han is co-founder of Korean new media news Allkpop.com, which has 10 million monthly readers globally.

Then, the popularity gained from Korean popular culture is able to benefit a lot through sponsorships, advertisements, and merchandise from many companies, such as food and cosmetics. There are several K-pop artists who become advertising ambassadors for example; Song Hye-Kyo, who is famous through the drama Descendant of The Sun, became a brand ambassador of Amore Pacific, then Shinee who became the star of snack products from Ottugi, and Super Junior who became the star of product advertisements from Miwon. (Situmorang, 2019 and Koreaboo, 2018). However, the relation of the advertisement and merchandising of K-pop through Korean products could be explained in other research, and this paper will emphasize its focus on the relation of the Korean food and cosmetic industry with CPO after the COVID-19 pandemic.

Consequently, South Korea is one of the vital importers of CPO from Indonesia. According to the Ministry of Industry of the Republic of Indonesia (2017), South Korea imports palm oil amounting to US$ 272,274, and it ranks 27th among other major importers such as China, India, the Netherlands, Pakistan, America, and so on. Although only ranked 27th, based on the press release by the ministry, the palm oil market in South Korea is growing. The needs of palm oil or CPO in South Korea are dominated by the needs of food, biodiesel, soap, and cleaners, as well as other industries. The food and cosmetics industries, especially cleaners, like soap or cleanser, in South Korea require palm oil as raw material, such as Polyglycerol for soap (Liang et al., 2010, Wang et al., 2000, Johnson et al., 2007) and Monoglycerides for food as an emulsifier in food product production (Wang et al., 2000, Johnson et al., 2007).

Especially with the growing popularity of Korean popular culture, many Korean popular culture connoisseurs use Korean food and cosmetics to feel like eating, using, or embracing Korean products. Amore Pacific, Ottugi, and Miwon are some Korean food and cosmetic companies that need and use CPO as their raw production material (Kementerian Perindustrian RI, 2017). Food and cosmetics are also finally widely used as one of the appeals of promotion or inspired products from K-pop act in the form of merchandise (Etsy, 2020; Anggraini, 2020). In Indonesia, the population of Kpop fans is growing large and even bigger in the time of the COVID-19 pandemic. Rakhmat and Tarahita (2020) also argued that EXO and Blackpink viewers accounted for a significant share of Indonesians.

In addition, Indonesia ranked second for K-Pop streaming globally in the Spotify Online Music Streaming Service statistics (Damaledo, 2020). In addition, Indonesian can easily access it on websites for free and video-on-demand streaming services for Korean dramas and movies. Moreover, Adjie (2020) said that the Korean drama audience in Indonesia has jumped as the COVID-19 pandemic allows people to stay more at home, based on Lembaga Ilmu Pengetahuan Indonesia (LIPI) results. The increased demand for Korean content in Indonesia is therefore true as K-pop holds its lifeline against the COVID-19 pandemic.

Consequently, CPO planting is often associated with natural degradation, directly or indirectly, as previously explained. Since the CPO industry requires massive amounts of land that could over-extract natural sources, such as minerals and water, and
decrease wildlife habitat. Alarming natural depletion is triggered by this over-extraction. It is owing to the natural extraction-based economy, an ancient economic pattern, many things from pandemics to global warming, increasing challenges. Additionally, environmental pollution from that kind of economy gave birth to the COVID-19 pandemic explicitly or implicitly.

Moreover, several scholars said the planting and harvesting of the CPO badly affect the natural environment. A new pandemic could therefore be born out of this. As one of Asia's increasing manufacturing economies, Korea also needs CPOs for some of its industries, such as food and cosmetics, to some degree. In Korea, food and cosmetic industries need to catch up on the market both during and after the pandemic due to the increasing demand for K-Pop byproducts. Hence, with the increasing concern in the post-pandemic world about the natural environment, how will it affect the Korean food and cosmetic industry, which might need a lot of CPO as one of the sources of production or raw materials? This issue will be our main theme in this paper. Economic interdependence could still play a significant role, as a post-pandemic economy will be full of co-sharing and co-existing on a global scale.

2. Literature Review

In this part of this paper, the authors examined some literature whether they have similar objects or paradigms in order to enrich and to sharpen its analysis. Anzar et al. (2018) explained that the utilization of used oil waste as refining of crude glycerol. Through the chemical process of oil, waste can empower for the purpose of energy resistance and waste processing into energy alternative. This research emphasizes managing energy to support environmental sustainability and support the green industry. This literature is different from our literature because our focus is the palm oil industry and its derivative products post COVID-19 pandemic and alternative concepts to build a green economy.

Then, Pratiwi (2020) discusses the conditions of labor or daily workers in the palm oil industry in South Kalimantan. In this literature, the analysis focuses more on the working conditions of palm oil workers, social security for palm oil workers, and the structure of the support in the industry that is the supplier of economic growth in Indonesia. Also described in this study, Area of plantation and palm oil production in Kalimantan in the range of 2015-2019. The study focused on the condition of palm oil workers, safety standards, and day laborers that were forced to meet production targets demanded by the company. Palm products have derivatives for the manufacture of toothpaste, cosmetics, soaps, and shampoos. Behind the large production and supply to the rest of the world, there are palm oil workers working in conditions far from feasibility standards.

In addition, Colchester et al. (2011) discusses the exploitative phenomenon of the palm oil industry and displacing indigenous lands to become multinational palm oil plantations. The higher the world's palm oil needs, the more aggressive the expansion of palm oil plantations. Therefore, this expansion activity will be able to rob the living space of indigenous peoples in the Southeast Asia region that is rich in local wisdom. Palm oil, on the one hand, supports economic growth for countries in Southeast Asia to meet the needs of world markets. However, on the other hand, displacing small communities and indigenous peoples from their ancestral lands and damaging biodiversity. The difference from this literature is that our research focuses on the palm
oil industry in the post-pandemic and its dynamics on economic activities between countries with more sustainability, namely those that care about environmental justice and environmental sustainability.

Consequently, Arifin and Putri (2019) argue that the palm oil industry in Indonesia is the main commodity and vital component of Indonesia's GDP. Indonesia and then Malaysia produced about 80 percent of global palm oil production. Indonesia's exploitative palm oil industry marked by numerous cases of forest and land fires makes the European Union, an export destination for Indonesia rejecting Indonesia's palm oil production. The European Union suspects' palm oil production in Indonesia is damaging the environment. Indonesia then attempted through diplomatic means to establish negotiations to prevent the decline of palm oil production. Cross-border economic interdependence is proven to make each country influence each other and relate to each other's interests. The difference with our research is, our paper highlights the dynamics of palm oil needs between Korea and Indonesia as supplying CPO.

Then, Rifin (2013) argued that Indonesia's palm oil is more elastic in China and India as a result of competition between palm oil and its replacement and between Indonesia and Malaysia's palm oil in China and India. In addition, Indonesian and Malaysian palm oils complement each other in China. Furthermore, Hameed et al. (2016) clarified that the demand for palm oil imports in some Asian countries (India, China, Japan, Bangladesh, Korea, and Pakistan) by using Autoregressive Distributed Lag (ARDL) technique shows whether palm oil and alternative oil prices and the government revenue of the importing countries are critical indicators of palm oil demand around the six models. Some factors, such as the mandate for biofuels, economic policies, and the exchange rate, have also proved to be vital points as well.

Therefore, from the explanation above, there is no study yet that highlight the dynamics of palm oil needs between Korea and CPO producer, especially Indonesia, in the post-pandemic situation. Moreover, the economic interdependence conundrum of CPO-based production is also not emphasized enough from the above literature.

3. Research Methods

This paper will use the qualitative descriptive as the method to conduct its analysis. Lambert and Lambert (2012) argued that the purpose of qualitative descriptive research is a thorough recap, on a regular basis, of particular events encountered by individuals or groups of individuals. Furthermore, qualitative descriptive studies appear to draw from naturalistic science, which purports to be dedicated to researching something in its natural state to the degree that is practicable within the context of the research arena. Hence, it suits this issue well as we need to present the issue as real as it is.

In order to deepen the analysis of this paper, we would like to examine this issue through the scope of economic interdependence. We believe economic interdependence is significant in the post-pandemic world where uncertainties become more real, and conflicts are likely to happen in order to protect the national interest of one country. There are usually three key perspectives for the study of the relationship between Tanious's (2019) interpretation of interdependence and conflict:

• Practical prospect: Foreign conflict improves economic interdependence.

• The effect of economic interdependence depends on the essence and substance of the relationship between the two countries. In the international system, relations and the balance of power.

In this paper, we will use point number 1 in order to guide our analysis of this issue. From there, we could see that economic interdependence bridging countries need in order to co-sharing and to co-exist. Moreover, it could be explained as "economic interdependence generally refers to the dollar value of economic transactions between regions or nations, either in absolute terms or relative to their total transactions," as Richard Cooper's argument in Tanious (2019). Thus, in the field of international relations, "economic interdependence" has two meanings, as Mansfield and Pollins stated in Tanious' (2019) explanation:

• "A community of countries is considered to be interdependent if the economic conditions in one country depend on those found in the other"
• "Countries are considered to be interdependent if it would be expensive for them to split or forego their relationship."

Therefore, from the explanation above, we could extract a brief conclusion that the first point has meant that competitive advantage is real in the global economy. Not all countries could produce the whole thing. Hence the economic interconnectedness becomes blunt at this point since the global production network is inter-mingling with each other. Then, the second point means interdependence to specific causes and cases, for example, oil, water, or other certain natural resources. Thus in this issue, in the post-pandemic, we can foresee that Korea, as the manufacturer of products that originate from CPO, still needs CPO supply yet will ask for more sustainable CPO than before as the COVID-19 pandemic increase environmental concern. Moreover, interdependence may limit conflict among nations as co-sharing and co-existing becoming keywords in international relations.

4. Results and Discussion

The co-sharing and co-existing on a global scale will be the post-pandemic future not only with nature or mother-earth but also with other nations. Coordinating Ministry of Economy of Indonesia (2020) stated that the post-Covid-19 economic reset that promotes survival and green economic platforms as an alternative to economic recovery is widely discussed and reviewed by academics, practitioners, and officials in various countries. The palm oil industry sector accounts for 1.6% of Indonesia's total GDP. Palm oil, as an important commodity of the world, which can be processed into margarine, cosmetics, soap, and other needs, becomes the sector highlighted to prioritize the aspects of sustainability and environmentally friendly.

Furthermore, Ibrahim on Nugroho (2020), a stock market practitioner, as reported by Kontan, said that despite the slowdown in orders due to the COVID-19 pandemic, South Korea, Japan, and India are considerable CPO importers. This means that in accordance with previous Economic Interdependence principles, South Korea relies on
CPO provider countries or manufacturers such as Indonesia and Malaysia. Then, before the COVID-19 pandemic, South Korea was already moving towards a country that would only produce sustainable CPO as an industrial raw material that needed CPO.

It is mentioned from market insight conducted by the Ministry of Industry of the Republic of Indonesia (2017) that South Korea is very concerned about the sustainability of nature from imported CPO products. South Korea will only use or import CPO products that already hold RSPO Certificates (Roundtable Sustainable Palm Oil). Therefore, it is perfectly reasonable that if in the post-pandemic situation, South Korea tightens the products they import to conform to the values of good natural sustainability in order to maintain the sustainability of nature even if pragmatically and economically South Korea requires such products to maintain production of its industries, including food and cosmetics. Moreover, to prove the economic interdependence paradigm, thus in this issue, as told earlier, since there are no other choices to substitute such as Polyglycerol for soap and Monoglycerides for food as an emulsifier in food product production, South Korea will take green-certified CPO as their choice to comply with RSPO Certificates and to keep natural environment intact.

Moreover, Korea began to improve the economy by prescribing the Green New Deal as a cure for economic recovery after the COVID-19 pandemic. Interconnected economic trends are starting to rise in global issues, namely sustainable economic growth in environmental fairness. Indonesia, as one of the world's largest palm oil producers, if it wants to remain the producer's choice for South Korea, should be to move quickly and prepare to produce palm oil that is environmentally friendly and sustainable.

Kim et al. (2020) explained that Korean President Moon Jae-in in July 2020 launched a new Korean Deal or "K-New Deal." The US$ 135 billion investment in green and digital technology consists of US$96.3 billion from the South Korean Ministry of Finance, US$ 21.2 billion from local governments in South Korea, and US$ 17.3 billion from the private sector. The Korean Green Plan involves US$61.9 billion targeting the creation of 319,000 jobs by 2022 and 659,000 by 2025.

South Korea really wants to present the green economy as the future of the new world after the COVID-19 pandemic through this K-New Deal. The implementation of Korea's green economic plan is to increase solar panels and wind turbines to 42.7 gigawatts by 2025 and install them in 225,000 public places. At the heart of this plan is smart networks and technologies that enable energy utilities. Then in five million apartments will be fitted with smart cables to reduce electricity use and also promote renewable energy and store back-up energy in many regions to make low-carbon energy spread and centralized.

For the car industry, the Korean government set a target of 1.13 million electric cars and 200,000 hydrogen-fueled vehicles by 2025, bringing to life the local car industry such as Hyundai. To support that, the government also prepared 450 hydrogen-refueling units and made electric vehicle charging stations.

The long-term effects of aggressiveness of classical CPO production may be harmful to the survival of humanity's living environment like stated by Colchester et al. (2011). He said that expansion would be able to threaten the living Area of indigenous peoples throughout South East Asia, which is also obscenely wealthy in local wisdom. In addition, Arifin and Putri (2019) clarified that Indonesia's exploitative palm oil industry was characterized by countless incidents of forest fires and land fires. Furthermore, Monbiot (2020) stated that Covid-19 is a wake-up call from the natural
environment to a self-interested society. Then, Kachaner et al. (2020) have said that the COVID-19 pandemic is improving environmental consciousness.

Thus, making environmental safety procedures and environmental friendliness almost certain to be tightened after the COVID-19 pandemic, such as South Korea's K-New Deal of Green Economy. RSPO campaigns that consist only to use sustainable palm oil as an ethical consumer and producer, as well as organically certified palm oil, should be taken to mainstream production. As South Korea cannot provide Polyglycerol and Monoglycerides for the food and cosmetic industry that extracted only from CPO that only tropical countries like Indonesia have the capability to produce, the interdependence of producer and importer may remain still intact. Therefore the palm oil industry should accommodate environmental sustainability, maintain there is no social conflict, and benefit both sides between landowners, producers, and consumers economically.

5. Conclusions and Recommendations.

As explained earlier in the analysis section of this paper, co-sharing and co-existed became a keyword in post-COVID-19 economic life. Indonesia as a producer of palm oil, should take care of the natural place to grow and produce palm oil crops in order to continue to provide palm oil that is environmentally friendly, sustainable, and of high quality. South Korea, as an importer of palm oil, will certainly protect its country and secure its country in accordance with its country's interests. The South Korean government made sure to reset their economy with a more environmentally friendly economy after the pandemic.

Then, considering that South Korea can not supply Polyglycerol and Monoglycerides to the food and cosmetics industry, which is extracted only from CPO, only tropical countries such as Indonesia, which have the capacity to produce, the interdependence of producers and importers can remain intact after the pandemic. The palm oil industry should, therefore, take into account environmental protection; maintain the sustainability of the CPO production is the base for the next co-sharing and co-existing interdependence after the pandemic.

Indonesia should eagerly active to make it's crude palm oil industry sustainable and environmentally friendly in order to grab the opportunity in South Korea's K-New Deal of Green Economy in post-COVID-19 pandemic as South Korea still need Polyglycerol and Monoglycerides for their food and cosmetic industry as K-pop soaring higher. This action needs rigid policies from multiple sectors in Indonesia for keeping the co-sharing and co-existence conundrum of economic interdependence in the global supply chain remain in checked and not disturbed by the downside of classical economic extraction as Indonesia is one of the major players in the crude palm oil industry.
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