

The Future of Global Supply Chains: Opportunities and Challenges



Wonho Yeon

Ph.D., Associate Research Fellow, Chinese Economy and Trade Team
Korea Institute for International Economic Policy

From “Efficiency” to “Statbility”

During the COVID-19 epidemic, the economic nationalism in the international trade arena sparked by the fight for technical hegemony between the U.S. and China has deepened. China barred the export of masks during the early stages of the COVID-19 outbreak, and after the development of the COVID-19 vaccine, the U.S. restricted the vaccine's export. Given the international division of labor for vital items, we learned that nationalism is very likely to be triggered in times of crisis. Also, people have begun to consider the risks that this brings. In other words, in times of crisis, the market principle of maximization of economic profit is very likely to be disrupted, and the national interest of security is quite likely to take precedence.

The growing strategic rivalry between the U.S. and China has prompted us to take this issue more seriously. There is concern that an economic

aggression using the supply chain could be used for strategic purposes not only in times of crisis, but also in normal times. This is partly due to an increase in the number of untrustworthy participants in global supply chains. The recognition of supply chain vulnerabilities, particularly supply chain dependence on certain untrustworthy countries, and the resulting national security issues, provides a fundamental foundation for the recent emphasis on building a stable supply chain.

"We shouldn't have to rely on a foreign country — especially one that doesn't share our interests or our values — in order to protect and provide our people during a national emergency." President Biden said in February 2021, signing an executive order reviewing the supply chains of four vital products in the U.S.: semiconductors, advanced batteries, key minerals and materials, and pharmaceuticals and their ingredients. This clearly suggests a paradigm shift for the global supply chains. The existing global supply chain structure is about to be restructured based on maximizing stability rather than efficiency. Major countries are aggressively reorganizing their supply chains in order to stabilize them, such as luring or cultivating production facilities for critical commodities within their own countries and bolstering collaboration with allies.

Opportunities and Challenges

In the short term, the supply chain restructuring will provide Korea with an opportunity to enter new markets and expand existing international markets. Major nations have embraced boosting local production capacity as their primary approach for supply chain diversification, but developing manufacturing technologies and building production facilities takes time, especially in high-tech sectors. As a result, in the case of semiconductors and advanced batteries, where Korea already has a global edge, it is an opportunity to leverage each country's supply chain diversification strategy and dominate the future demand markets. To capitalize on this, the response to the paradigm shift must be as swift and aggressive as possible.

However, if the U.S.-China dispute worsens, Korea will confront some long-term economic and security challenges that are described and projected as "intensifying rivalry in industrial policy" and the formation of a "value-oriented economic bloc."

First, because the nature of the U.S.-China war is structural competition for technical superiority, the conflict is projected to last for a significant time. Mounting U.S. pressure is projected to make China invest more in sophisticated technology R&D skills and accelerate its competitiveness in new industries. In exchange, the West, which does not trust China, would see its

efforts as a danger and strengthen their industrial policies to outperform it, resulting in an era of unrestricted competition in high-tech industries. The EU's announcement of the European Chips Act on February 8, 2022 described this situation as a “race” and announced that “it is time EU join the race.” Thus, in the mid-to-long term, it may be difficult to retain a comparative advantage in high-tech industries where Korea now has a competitive advantage if Korea does not respond properly to changes.

Second, Korea will face a value-oriented economic bloc. To keep China in check, the U.S. has recently employed its value-based alliance while emphasizing human rights and democracy. Supply chain reform and cooperation have been a major topic of debate at the recent Korea-U.S. summit, U.S.-Japan summit, G7 summit, and the U.S.-EU Trade and Technology Committee meeting (US-EU TTC). Even further, the U.S. is likely to reorganize its supply chain this year by formally establishing the Indo-Pacific Economic Framework (IPEF). Since the core of these movements is “Friendshoring,” Korea is expected to receive stronger demands from the U.S. Although this is an opportunity for Korea to capitalize on U.S. policies, at the same time there is a risk this will escalate the dispute with China. Under the National Defense Authorization Act (NDAA 2022) and the America COMPETES Act, the U.S. is attempting to broaden the role of the ROK-U.S. alliance beyond the Korean Peninsula to the entire Indo-Pacific region. This change will also operate as a risk factor, increasing uncertainty for Korean enterprises accessing both the Chinese and U.S. markets.

Key Tasks

In a time of great uncertainty, the government should make diplomatic efforts to foster as favorable a trade environment as possible, while also improving Korea's industrial capabilities and stockpiling its strength. Also, Korea should build its own clear trade and diplomatic principles and respond through consistent application in order to reduce the ambiguity caused by the U.S.-China conflict. The government's key response should be placed on diversifying supply chains and retaining global competitiveness in technical innovation over the long term, rather than on just resolving immediate supply chain disruptions. It is critical for Korea to firmly secure its indispensable position within global supply chains by focusing on aggressive investment for the development and industrial-uses of sophisticated technologies, as well as institutional reform to manage leakage of vital technologies and human capitals. Based on these irreplaceable assets, Korea can urge the U.S. not to seek excessive sanctions against China as well as prevent China's economic reprisal. **KIEP**