

Are Supply Chains in CJK Healthy during the Pandemic?: The Case of Automobile Industry

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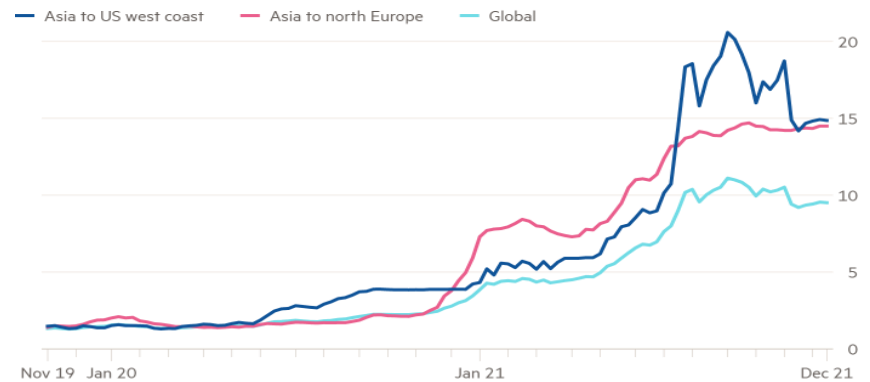
Supply Chains: A Hot Issue of the World Economy

Recent Pictures about Supply Chains in the World Economy



Los Angeles and Long Beach ports, *FT*, January 9th 2022

Freight shipping rates have rocketed during the pandemic
\$'000



Source: Freightos
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Main Problems in Supply Chains: Transportation and Logistics?

- Even though the supply chain disruptions were regarded to be mainly caused by,
 - US-China trade dispute
 - Coronavirus Pandemic
- Congestion in maritime transportation and rising logistics cost (both shipping and long distance trucking) seem to be the main bottlenecks for the return to normalcy of supply chains.
 - Even though these problems are also rooted in the above-mentioned two issues.

No Logistics Problem in CJK, So, Healthy Supply Chains?

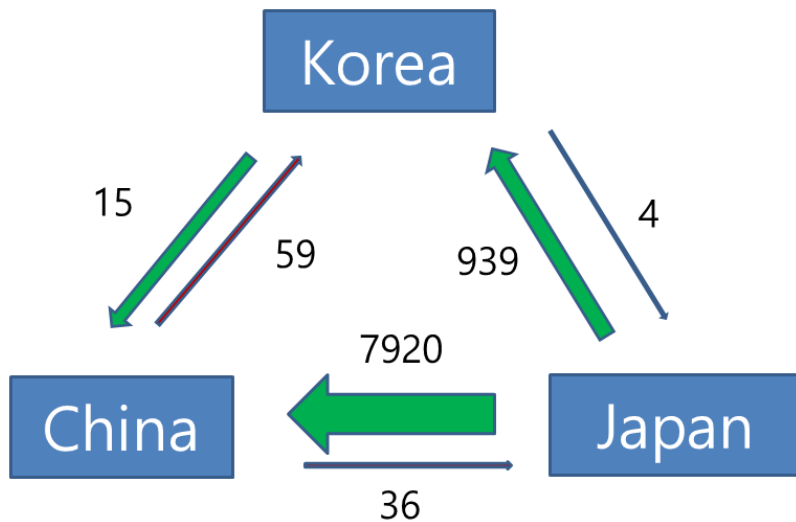
- Fortunately trade between CJK does not seem to be faced with a comparable level of serious logistics problem.
 - In spite of the Coronavirus Pandemic
- Apparently well-functioning supply chains in CJK area especially in major manufacturing sectors can be found through trade data.
 - The case of the automobile industry is a good example.
- However, CJK should be more cautious about some sporadic supply chain disruptions which have been occurred due to political reasons.

Sustaining Automobile Industrial Eco-system in CJK Area

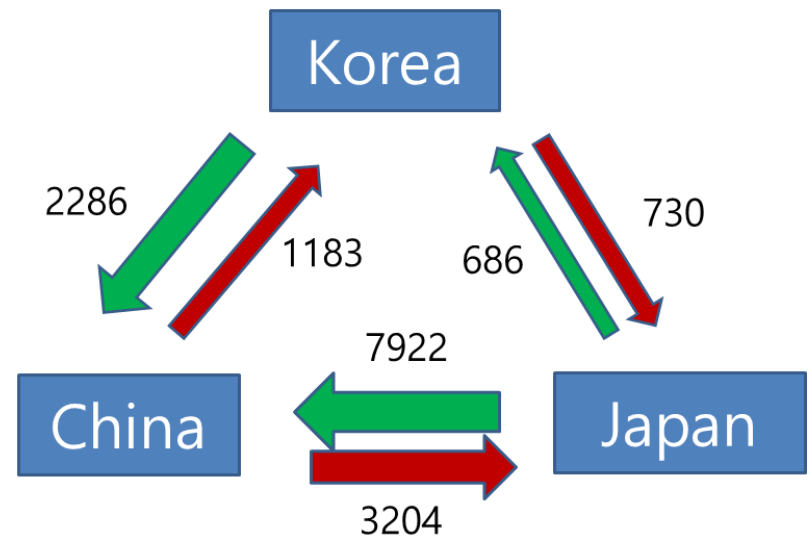
Automobile Industrial Eco-system in CJK before COVID-19

I introduced the well-functioning industrial eco-system for the automobile industry in CJK during the 2020 meeting of the CJK cooperation Dialogue, emphasizing well-developed three-way auto-part trade.

Car Trade in CJK (2018, mil US\$)



Auto-part Trade in CJK (2018, mil US\$)

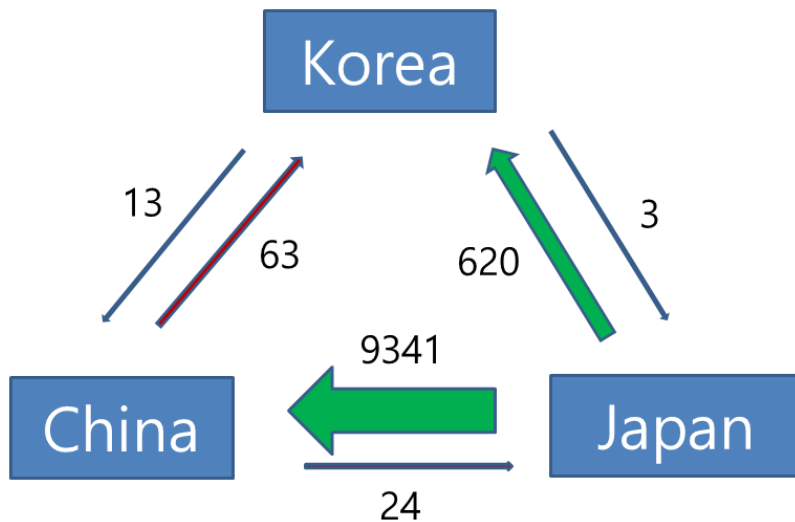


Source: UN, Comtrade

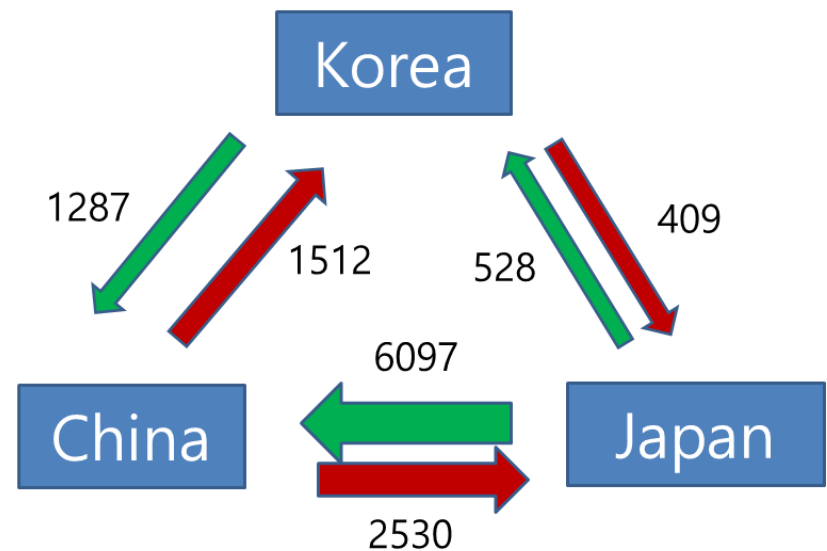
Automobile Industrial Eco-system in CJK during COVID-19

We can find that the industrial eco-system for automobile industry in CJK continued to function in spite of the coronavirus pandemic in 2020, even though the thickness of most arrows has been decreased.

Car Trade in CJK (2020, mil US\$)



Auto-part Trade in CJK (2020, mil US\$)



Source: UN, Comtrade

Automobile Industrial Eco-system in CJK during COVID-19

However, taking into account the decreasing trend of the automobile trade of CJK countries with the world after the coronavirus pandemic, we can say that the automobile industrial eco-system of the CJK area was able to sustain its strength despite the pandemic.

Automobile Trade of CJK (2020, mil US\$)

	Car		Parts	
	Export	Import	Export	Import
Japan	80,962	10,155	27,532	6,324
Korea	35,638	12,061	15,790	4,053
China	9,942	44,923	33,355	25,855

Automobile Trade in CJK (2018, mil US\$)

	Car		Parts	
	Export	Import	Export	Import
Japan	99,132	12,183	36,593	8,634
Korea	38,248	11,201	19,544	3,880
China	8,627	49,610	35,135	29,508

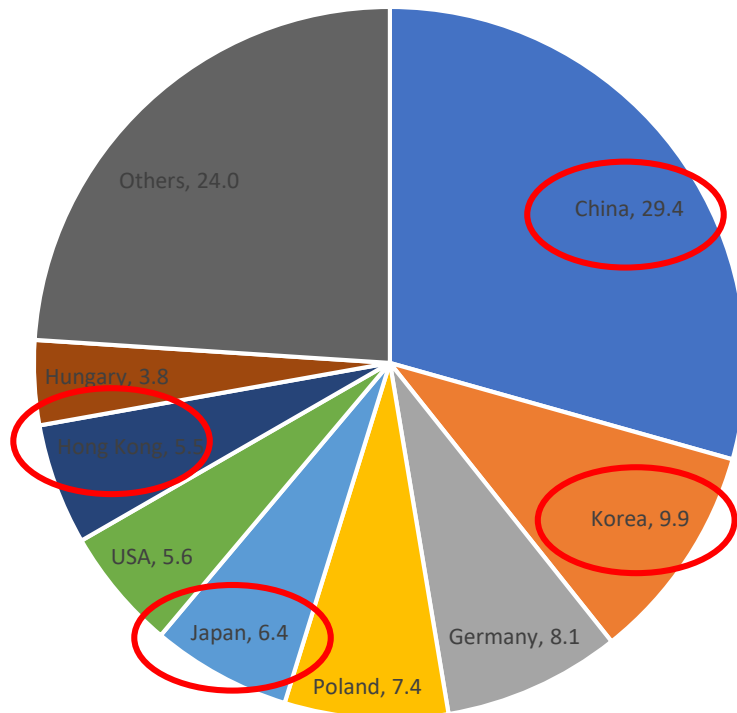
Source: UN, Comtrade

Industrial Eco-system of Batteries in CJK

- When we look more in detail into the tri-lateral trade of batteries, which are now regraded as the crucial part of the next stage automobile industry.
- We can find that CJK countries have been interdependent each other quite deeply for the battery industry also.
 - Even though CJK countries export batteries throughout the world, they import them massively from each other.

CJK Export of Batteries

Battery Exporters, 2020

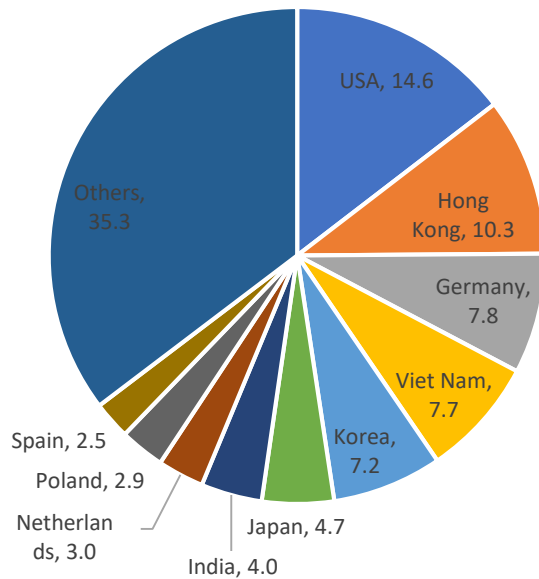


East Asian countries dominate the world battery market as exporters also.

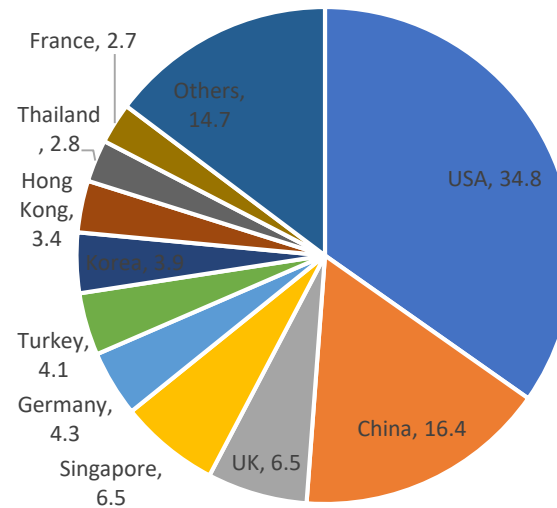
Source: UN Comtrade

CJK Export of Batteries

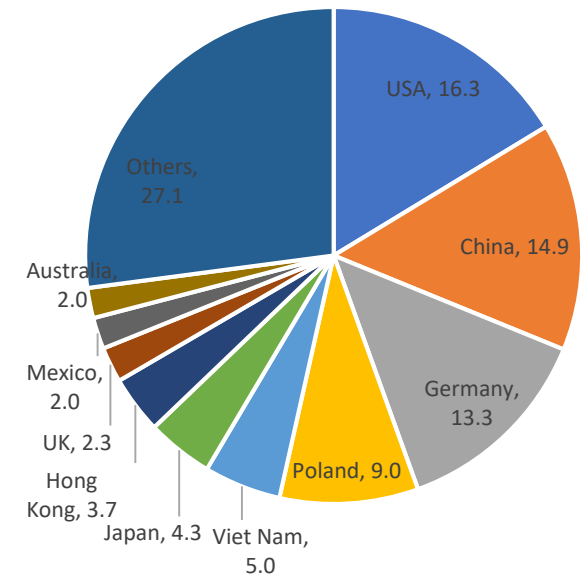
China's Battery Export, 2020



Japan's Battery Export, 2020



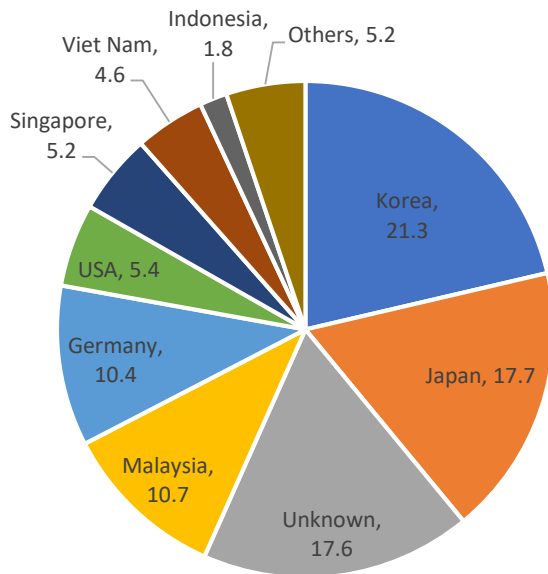
Korea's Battery Export, 2020



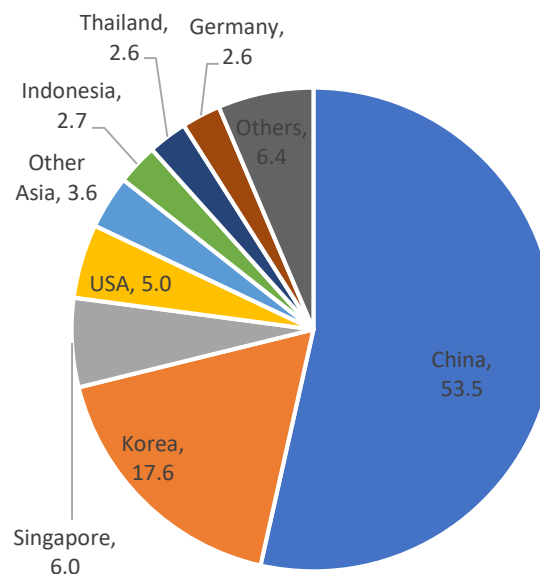
Source: UN Comtrade

CJK Import of Batteries

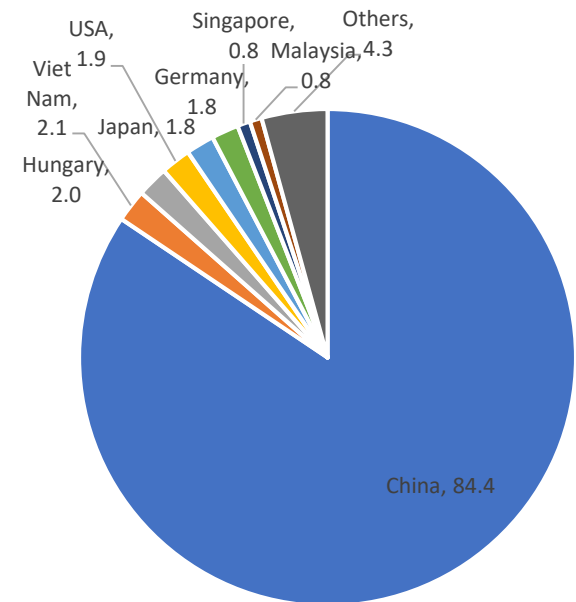
China's Battery Import, 2020



Japan's Battery Import, 2020



Korea's Battery Import, 2020

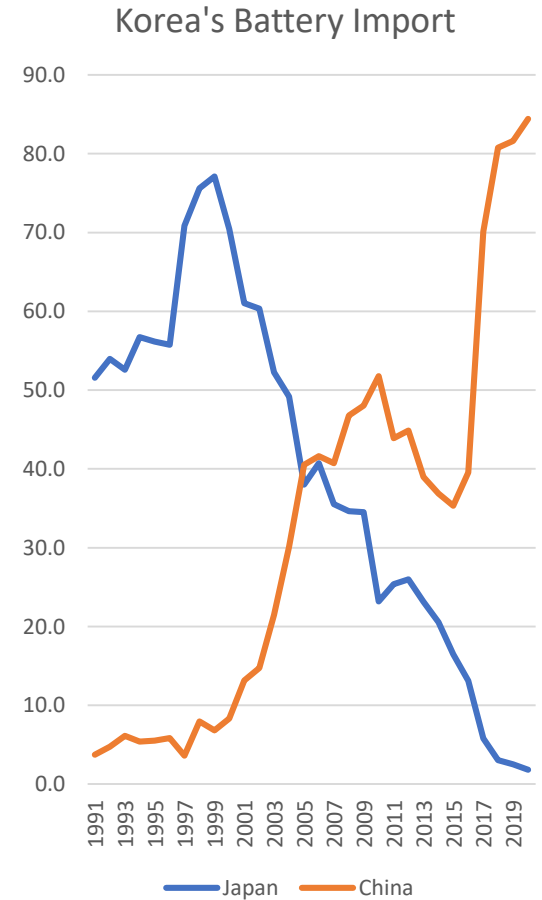
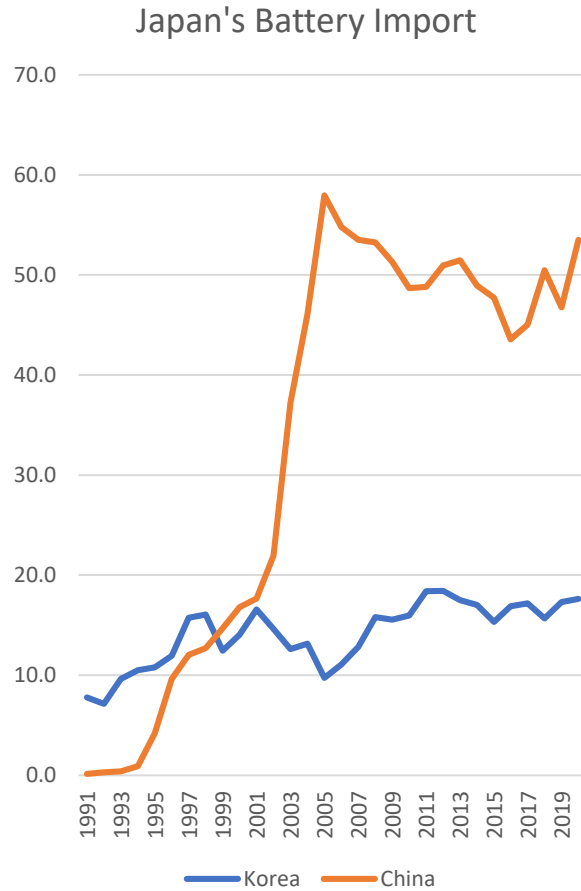
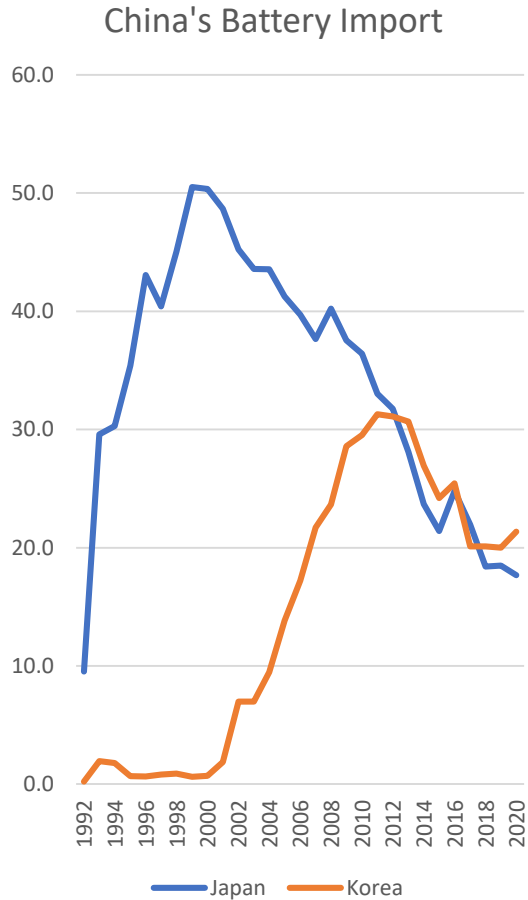


Source: UN Comtrade

Batteries in CJK

- CJK countries export batteries all over the world. The number one destination for CJK's export is USA. So, we can understand the US's concern about supply chains in batteries.
- Several European countries such as Germany, UK, and Poland also import batteries from CJK countries. Europe seems also to be committed to build up its own internal supply chains of batteries.
- CJK countries, even with their strong competitiveness in the world market, seem to be interdependent each other (other two countries are two major exporters for each of CJK countries).

Historical Change of CJK's Procurement



Source: UN Comtrade

Batteries in CJK

- China's rise in other partners' markets is impressive, which shows the continuous strengthening trend of its competitiveness. Especially Korea, once absolutely dependent on Japan, has been rapidly changing its import destination into China.
- Korea's rise as exporter in this region is also notable, as in each of both partners market share has been rising continuously and gradually.
- Japan seems to be losing its market share in both partners, while its export in other part of the world maintains.

SUGGESTIONS

Strengthening Tri-lateral Ties

- CJK countries which have developed a strong automobile industrial eco-system including batteries would have mutual interest to strengthen existing cooperative division of labor in the issues such as technological exchanges, material procurement, and environmental protection.

Less Specialization, More Diversification

- CJK countries might need to avoid the situation “all eggs in one basket”, in order to lessen too serious shocks in their industrial eco-system, by trying to establish supplementary supply chains in other part of the world in addition to well performing east Asian supply chains.
- CJK countries should try to understand concerns raised by Americans and Europeans about the concentration of production of batteries. It is necessary for CJK countries to diversify their production locations.

Avoiding Trade Barriers

- Even though we have well-organized industrial ecosystem in the automobile industry in CJK area, we have been sometimes faced with trade barriers which reduce the functionality of this industrial ecosystem.
 - Several automakers in CJK countries experienced sporadic stops of car production due to the semiconductor shortage.
 - Related to this, Korea experienced a serious shortage problem of urea-solution which is crucial for trucking operation due to sudden stop of China's export.
- So, CJK countries should avoid any kind of new trade barriers in this industry.

Further Cooperation

- Batteries are expected to be used more widely in future industries such as IT and machinery. CJK countries should enhance cooperative efforts in these battery using industries.
- Furthermore, as the world has to reduce its dependence on fossil energy sources in order to fight for climate change, CJK countries should work together to increase the use of batteries for this purpose as well.

Thank You