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## **Rare Earth Problem as Seen from Lessons of Energy Embargo**

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China's rare earth export restrictions have expanded their global impacts. An allegation that China has restricted rare earth exports to Japan in protest to Japan's handling of the Senkaku Islands problem has not only shaken Japan but also attracted global attention. While China's rare earth exports to Japan have yet to be normalized, media reports state that export restrictions are spreading to cover Europe and the United States.

Various rare earth metals play indispensable roles in hybrid car manufacturing and many other promising and strategically important industries and technology areas that require advanced technologies. Under an unbalanced market structure, the world depends on China for over 90% of rare earth supply. Therefore, China's rare earth export restrictions naturally have a strategic importance beyond economic effects not only for Japan but also for the entire world. The Office of the U.S. Trade Representative has grown interested in the Chinese rare earth export restrictions and reportedly launched investigations into the export curbs (Nikkei Shimbun, October 22).

China has reportedly explained that the export restrictions have been motivated not by political intentions but by the need for the conservation of resources and the environment. The explanation may have to be carefully considered, but Japan, Europe and the United States seemed to have never been satisfied with such explanation. Regrettably, I do not have sufficient knowledge about rare earths themselves. Therefore, I would like to provide a viewpoint for analyzing the rare earth problem by reviewing energy export restrictions or embargoes that have shaken the world.

As a matter of fact, the world's most influential energy export curb in history was the 1973 Arab oil embargo. In response to the fourth Middle East War's outbreak, Arab oil exporting countries invoked the oil embargo in a bid to influence the Middle East policies of major industrial nations dependent on oil imports. They divided oil importing countries into three groups – (1) friendly countries (left outside the oil embargo), (2) hostile countries (subject to the total embargo) and (3) neutral countries (subject to gradual supply reductions), imposing the oil embargo while inserting a wedge between industrial nations to obstruct their cooperation. Japan and other industrial nations did not have sufficient oil reserves then and succumbed to the pressures of Arab oil exporters, accepting political compromise in order to secure vitally important oil supply. For example, then Chief Cabinet Secretary Susumu Nikaido issued a statement on November 22, 1973, offering to revise Japan's Middle East policy in favor of Arabs. Under the influences of the Middle East War and oil embargo, and fears of a tightening oil supply/demand balance, oil exporting countries raised crude oil prices substantially. Their power began to peak then.

In this way, the Arab oil embargo indicated that a country could effectively utilize key resources as a diplomatic card. But we must pay attention to the fact that the use of important resources for an embargo prompted countries subject to the embargo (or countries that took the embargo risk seriously) to take countermeasures. Oil price spikes in the 1970s encouraged industrial countries to introduce alternative energy sources. The spikes became a clue to bring about growth of natural gas, nuclear energy and renewable energies to date. A race to develop oil outside Arab countries and the Middle East spread throughout the world, leading to the expansion of non-OPEC oil output symbolized by North Sea and Alaska oil development. Furthermore, industrial nations recognized the significance of oil reserves and enhanced their emergency response capacity to improve their relevant systems. They also recognized the importance of a framework for their international cooperation in responding to and countering oil producers' export embargo or oil supply interruption. They then created the International Energy Agency.

Effects of these countermeasures dramatically changed supply/demand conditions in the international oil market. The oil supply/demand balance began to ease in the first half of the 1980s, leading to crude oil price plunges in 1986. Demand for Middle East or OPEC crude oil declined sharply, forcing OPEC's oil market share to plunge from more than 50% in the 1970s to less than 30% temporarily. The market share decline was coupled with the price plunge to seriously affect oil producing economies. Therefore, we may conclude that an embargo, though producing some effects over a short time, could invite countermeasures to be taken to reduce its effects over a long time and eventually bring about negative effects to embargo implementers.

But we must take note of the possibility that an embargo or its threat can continue to serve as an effective diplomatic card for a short term that could be at least one year or two rather than several days or months. This is because most of the above-noted countermeasures characteristically begin to produce effects after some time lapse. This means that quicker countermeasures are important for resolving problems.

Based on the Arab oil embargo and oil consuming countries' countermeasures, factors that determine the effects of restrictions or embargoes on supply of key resources are cited below:

- (1) Global supply/demand conditions for embargoed resources (a tight or soft supply/demand balance)
- (2) Fungibility of international markets for embargoed resources/goods
- (3) Presence/absence or availability of alternatives to embargoed resources/goods
- (4) Strength of embargo implementers' wills (unity of a group for a group embargo)
- (5) Strength of collaboration/cooperation between embargo targets for an embargo on multiple countries

Once an embargo or a political supply cut is (or is alleged to have been) taken as a powerful action, the embargo implementer itself may be considered as a clear and present serious threat. This phenomenon actually happened upon the Arab oil embargo case and Russia's suspension of gas supply to Ukraine and Europe in early 2009. Such threat can become a driver of countermeasures.

The rare earth supply reduction by China could prompt mainly Japan, the United States and Europe to pursue efforts involving the above first, second, third and fifth factors. The problem is that countermeasures are costly and may take some time before producing effects. However,

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policymakers may feel that countermeasures should be taken urgently if they are required for economic security. The key countermeasure may be to secure the diversity and flexibility of supply.

I now remember a deeply implicative statement in a 1913 parliamentary speech by Winston Churchill, then first lord of the Admiralty (later prime minister) in Britain. “Safety and certainty in oil lie in variety and variety alone.”

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