

# **The Effects of Japan's 2019 Export Control Measures on South Korea's Domestic Production of Hydrogen Fluoride**

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## **Executive Summary**

This research paper seeks to shed light on the impacts of policy intervention on trade in South Korea, exclusively focusing on Japan's 2019 export control measures against South Korea. The research focused on one of the targeted chemicals under export control, hydrogen fluoride (HF), to assess whether import substitution is possible from Japan to Korea's domestically produced HF. By observing the changes in exports of Korea's semiconductors, this research aims to identify the patterns and trends that provide a better understanding of the impacts of Japan's export control measures, especially regarding Korea's domestic production of hydrogen fluoride. Data on HF export values, HF import values from Japan, HF import values from China, and HF import values from other countries than Japan and China were used to interpret the changes in the exports of Korea's memory semiconductor products. The results confirm with the initial findings, which discussed the various uses of HF based on purity levels to distinguish HF produced by Japan and China. The negative and significant variable of the interaction term found from the third sub-sample analysis reveals the presence of a substitution effect. This result suggests that Korea has shifted its supply of HF towards domestically produced HF over Japanese imports due to the 2019 export control.