Welfare changes in response to changes in trade barriers have been central topics in international trade. However, literature has ignored changes in industry-specific trade barrier. How detrimental are these shocks to global value chains compared to uniform tariffs? Studying trade dispute between Japan and South Korea in 2019 about semiconductor intermediate input, I quantify the impact of export controls over different industries and countries. Since the controlled intermediate inputs are classified more narrowly than even HS6, I use firm-level data scraped from individual intermediate input producers in Japan and semiconductor producers in South Korea. I use a modified Caliendo-Parro (2015) model of multi-sector EK model to accommodate such specific trade data. The quantification and counterfactual analysis results show that Japanese export control could have been better/worse compared to uniform tariff. Also, the complementarities in intermediate input imply that conventional Cobb-Douglas production function may understate the ramifications of export controls over intermediate inputs.