Economic Consequences of a Potential High-Intensity Cross-Strait Conflict: A Supply Chain Analysis Using the Hypothesis Extraction Method

Topic:
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This paper analyzes the economic consequences of a potential high-intensity conflict between mainland China and Taiwan across the Taiwan Strait. We use the newly developed Greater China Inter-Regional Input-Output Tables, which provide detailed information on firm ownership for mainland China at the provincial level and also cover the economies of Hong Kong, Macau, and Taiwan for 42 sectors. This data allows us to devise a systematic analysis framework and apply the revised Hypothesis Extraction Method to simulate the economic effects of the conflict from a supply chain perspective. Unlike traditional models, our approach also accounts for the firmâ€™s response under external shocks and considers various hypothetical scenarios. We analyze three scenarios: (1) Disruption of trade between mainland China and Taiwan, involving both intermediate and final goods in the short run; (2) Interruption of production capacity of Taiwan-owned firms in mainland China in the short run; (3) Replacement of Taiwan-owned firms by mainland China-owned firms, indicating value chain restructuring in the medium or long run. Our results indicate that: (1) Complete trade disruption and production capacity interruption of Taiwan-owned firms could result in about 0.35% and 1.76% GDP loss, respectively; (2) Replacing Taiwan-owned firms in mainland provinces with mainland China-owned firms in the medium or long run could reduce GDP losses, with an extension ratio ranging from 25% to 100%, the GDP loss could decline from 1.3% to 0.83%. (3) A full trade disruption between mainland China and Taiwan could make mainland China-owned firms bear 83% of the total GDP loss; (4) Provinces located in coastal areas or with a high concentration of Taiwan-funded enterprises are likely to face the most severe impacts; (5) The electronic equipment and chemical manufacturing industries are vital to the cross-strait supply chain, they account for 5.48% and 1.76% of the GDP losses in mainland China, and contribute to 25.82% and 46.01% of the total losses for Taiwan, respectively. Our study gives us some useful insights for developing global supply chain strategies and evaluating preparedness, recovery, and reconstruction plans, in case there is a risk of disruptions caused by this or similar future events. We hope that our study can help the policymakers, the businesses, and the public to understand the potential economic consequences of the geopolitical conflicts and to avoid or minimize the negative impacts.