

Worldwide economic effects of changes in international trade due to natural disasters: the case of Japan earthquake and tsunami (2011)

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One year ahead from the natural disaster that affected Japan on March 2011 and the subsequent nuclear crisis, large uncertainty still exists in the quantification of its global economic consequences. Most of the studies account for the local physical damage excluding the cascading effects on world economies. This paper provides the first attempt to estimate worldwide economic impacts generated by the disruptions in the international supply-chain of the automotive sector that followed the Japanese disaster. By combining a multiregional input-output model (MRIO) and the EU funded World Input-Output Database (WIOD), the study quantifies the direct and indirect impacts of the Japanese disaster in terms of output and GDP, broken down by countries and sectors. Results show that the total reduction of output and value added amounted to \$361.6 billion and \$117.1 billion, respectively and the most affected areas were Japan, United States and European Union.