# Wider economic impacts of heavy flooding in Germany:  A non-linear programming approach

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Author: Johannes TÃ–BBEN
Co-Authors: Jan OOSTERHAVEN

This paper further develops a new methodology to estimate the wider, indirect impacts of major disasters, and applies it to the 2013 heavy flooding of southern and eastern Germany. We model the attempts of economic actors to continue their usual activities, as closely as possible, by minimizing the information gain between the pre- and post-disaster pattern of economic transactions of the economy at hand. Our findings show that government support of local final demand substantially reduces the indirect losses of the floods, while having a disaster at the top of the business cycle increases them. Moreover, we find that assuming fixed trade origin shares and fixed industry market shares, as in all multi-regional input-output models, leads to implausibly large estimates of the indirect losses.