A Hypothetical Supply Chain with the Disruption of Production Shock: From HEM to Hypothetical APL

Topic:
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This paper develops a methodology to predict the economic impact of major catastrophes, such as earthquakes and tsunamis, by means of the hypothetical extraction method and hypothetical average propagation lengths. The methodology is tested by means of a comparison of the pre-disaster regional economy (base scenario) with a series of post-disaster regional economies (scenarios with regional production shocks) to the Japanese inter-regional, inter-industry economy. Then, we can compile nine hypothetical I-O tables with post-disaster cases with the Japanese interregional economy. Besides, we can also analyze nine hypothetical average propagation lengths. Finally, we share our conclusion, considering the policy implications on the relation between the economic recovery after the major catastrophes and our results.
Keywords: catastrophe analysis, hypothetical extraction method, supply chain, hypothetical average propagation length, disaster.