

## **Impact of the Loss of Rail System Service on a Key Segment of New Jersey's Urban Industrial Corridor: A Simple CGE Analysis**

Topic: CGE and econometric input-output modelling 1

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We identify two core sensitivities of a focused transportation disaster to an economy as rises in fuel price and as declines in industry labor productivity due to enhanced roadway congestion. Via econometric study, we discover that any impacts on the economy of fuel price rises tend to be short-lived, while those of labor productivity can be have either medium- and long-term repercussions. Hence, we focus our analysis on medium- and long-term effects of productivity declines due to service disruptions to the commuter rail network. We shock the system by effecting rises in the effective wage rate for producer services and entertainment services. These industries were identified because key disruption targets are intermediate to their locations and the homes of their workers and customers, who have a high propensity to use commuter rail. We assume that the the average wage rise by industry is proportional to the change in the average commute for workers in these industries and that quantities of other value added items remain constant. We assume unemployment remains constant in the long-run but varies in the short- to medium-run. We test the sensitivity of our results to various assumed elasticities (labor-capital, Armington, etc.)