

The Resilience Dividend in Cedar Rapids

Topic: Using IO to Advance Investments in Efficiency, Resilience, and Sustainability

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Cedar Rapids, Iowa offers a unique case study in planning for increased resilience. In 2008, Cedar Rapids experienced severe flooding. Rather than simply rebuilding, the city of Cedar Rapids is investing in a resilient flood control system, as well as in revitalizing its downtown neighborhood. A Computable General Equilibrium (CGE) model is developed for the regional economy of Cedar Rapids to quantify the net co-benefits of investing in increased resilience, or the “resilience dividend.” The resilience dividend includes benefits to the community even if another disaster does not occur. The CGE model combines a broad range of data sets, including firm-level employment and wages and property tax assessments, as well as the US Census’s™ Public Use Microdata Sample (PUMS) and Input-Output tables. To quantify the resilience dividend from the investments in increased resilience, we build a CGE model of Cedar Rapids at two different time periods: one in 2007, before the flooding, and one in 2015, after the flooding and initial investment in resilience. The two models demonstrate how economies that invest in increased resilience respond relative to those that do not. The CGE approach to quantifying the resilience dividend can capture how the benefits of investing in increased resilience are distributed throughout the economy and, therefore, provide an important first step toward making a business case for investing in resilience.