

# 'Resilience' of US metros measured by online index developed by UB researchers

July 11 2011

---



University at Buffalo researchers examined more than 360 US metro areas to determine which would be most likely to come out of the next recession, natural disaster or other regional "shock" relatively unscathed. Credit: University at Buffalo

Which U.S. metro region is most likely to come out of the next recession, natural disaster or other regional "shock" relatively unscathed? Rochester, Minn. A little more battered might be College Station-Bryan, Texas.

These two regions are ranked first and last, respectively, by a new online tool measuring more than 360 U.S. metros for their "regional resilience," or capacity to weather acute and chronic stresses ranging from gradual economic decline to rapid population gains to earthquakes and floods.

The Resilience Capacity Index (RCI), developed by Kathryn A. Foster, director of the Regional Institute, a research and public policy center of the University at Buffalo, produces a single statistic for each region based on its performance across 12 economic, socio-demographic and community connectivity indicators, ranging from income equality and business environment to voter participation and the population of health-insured.

As a gauge for how well a region is positioned to adapt to stress, the index can help regional leaders identify strengths and weaknesses and target related policy changes toward building their resilience capacity.

"Conceiving of regions as capable of adapting and transforming in response to challenges allows researchers and practitioners to understand the conditions and interventions that may make one place more or less resilient and why," said Foster, also a professor of urban and regional planning with UB's School of Architecture and Planning.

Foster developed the index as part of Building Resilient Regions, a national network of experts on metropolitan regions funded by the John D. and Catherine T. MacArthur Foundation and administered by the University of California, Berkeley. Online at <http://brr.berkeley.edu>, the index features maps revealing geographic patterns in resilience capacity, detailed data profiles for each metro and a "compare metros" tool.

Overall, Northeastern and Midwestern regions tend to be more resilient than those in the South or West, largely because these regions earn high scores for affordability, the size of their health-insured population, rates of homeownership and metropolitan stability, as measured by recent population change.

For instance, the Buffalo Niagara metro region ranks among the nation's top regions for its metropolitan stability and health-insured population.

However, lower rankings on indicators such as income equality, business environment and population without disabilities to some degree offset its assets. This gives the Buffalo Niagara metro region an overall RCI rank of 86, still categorized as high.

Across the three categories of regional capacity, the top-scoring metros are geographically diverse. Raleigh, N.C., with leading technology firms, medical centers and universities, heads the economic category. Ames, Iowa, ranks first for socio-demographic capacity due to its exceptionally high level of educational attainment (Iowa State University is located there). For community connectivity, Bismarck, N.D., scores highest given its critical mass of civic institutions as the state capital.

Metropolitan areas with populations over 1 million vary widely in their resilience capacity. The top-ranking large metropolitan area, Minneapolis-St. Paul, achieves its status with very high socio-demographic capacity and levels of community connection, the latter reflecting the region's No. 1 rank for voter participation. The lowest-ranking large metropolitan area is Miami, Fla., a [region](#) with very low regional affordability and income equality.

Foster points out that a region's RCI score is not necessarily a sentence for success or failure in the face of the next population boom, economic recession or industry shutdown.

"What it does tell us is that some regions are structurally more prepared than others, and thus have greater capacity to bounce back in the wake of stress," she said. "Still, regions with a high capacity for resilience can squander their strengths just as those ranked low can rise to the occasion and perform above expectations."

Additional research efforts, a number of which are highlighted on the Building Resilient Regions site, are under way to measure how regions

actually respond to stress. Future studies will explore which resilience capacity measures matter most for different kinds of stresses as well as the significance of key governance and environmental factors not captured by the RCI.

Provided by University at Buffalo

Citation: 'Resilience' of US metros measured by online index developed by UB researchers (2011, July 11) retrieved 25 April 2024 from <https://phys.org/news/2011-07-resilience-metros-online-index-ub.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.