

National economies recover faster when countries are powered by renewable energy, says new research

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National economies recover significantly faster from shocks when countries are powered by renewable energy sources, according to new

research that has profound implications for global energy policy.

Researchers from Trinity College Dublin looked for patterns in data from 133 systemic economic crises that affected 98 countries over a 40-year span. While their analyses show that countries relying on a broader range of energy sources experience longer recovery times, the best predictor of economic recovery was the extent to which a country relied on renewable energy.

Underlining the significance of the finding is the fact that while data came from a widely diverse set of societies and their economies, the extent of reliance on renewable energy consistently accounted for a major proportion of the variability in economic recovery time.

Ireland (and the 2008 economic crash) was among the countries included in the combined analysis. Currently, the Irish goals for integrating renewables into its energy supply chain include a target to produce 80% of its electricity from [renewable sources](#) by 2030.

As such, this work provides strong support for a strengthened national focus on transitioning to a greater reliance on renewable energy.

Ian Donohue, Professor in Environmental Science and Head of Trinity's School of Natural Sciences, is the lead author of the research, which is published in *Ecological Economics*. He said, "Our findings highlight the importance of the intrinsic link between natural resources provided by ecosystems and the stability of the economies that rely on them.

Ultimately, they point to the need for a fundamental reassessment of both national and international energy policy, not only for the sake of our environment, but also to enhance the stability—and sustainability—of our economies."

Professor Robert Costanza, Professor of Ecological Economics at the

Institute for Global Prosperity at University College London, and co-author of the study, said, "Although the mechanisms underpinning our results are unclear, one likely explanation is that renewables accelerate recovery because they are locally-produced and not subject to the high volatility of availability and prices connected with fossil fuels."

Focusing on the situation in Ireland, Professor Donohue said, "This work provides another compelling reason to double down on our efforts to focus on [renewable energy sources](#) such as on- and off-shore wind. Doing so would add a third 'win' to what was already a win-win scenario, as a greater reliance on [renewable energy](#) will reduce our [carbon emissions](#), help protect our precious biodiversity and now, seemingly, also provide a more resilient economy."

More information: Ian Donohue et al, Accelerated economic recovery in countries powered by renewables, *Ecological Economics* (2023). [DOI: 10.1016/j.ecolecon.2023.107916](#)

Provided by Trinity College Dublin

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