

# Powering Down Nuclear: A Multidimensional Impact Evaluation of the German Case

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## Abstract

Following the Fukushima nuclear accident, Germany has adopted the 2011 Atomic Energy Act, which plans the phase-out of nuclear power by 2022. It establishes the immediate and permanent shutdown of half of the country's nuclear reactors and the gradual closure of the remaining ones. Using German Socio-Economic Panel (2022) data at the district scale and the Difference-in-Difference approach, this paper aims to evaluate the overlooked local effects of this exogenous policy on socio-economic indicators. Employment and health estimates indicate a trade-off between a positive "direct" effect of the phase-out on energy workers and a negative "induced" effect on the other local economic activities revolving around the nuclear power plants. The dismantling of these plants and the adjustments required to compensate for the change in electricity supply might explain the "direct" impact. A possible channel for the "induced" effect is adaptive behaviours to economic uncertainty, reflecting concerns for the future district's dynamism following the sudden shutdown. I find no evidence for real-estate outcomes. This study aspires to help fill the gap in empirical work assessing the effects of large-scale nuclear shutdowns, a policy considered by other countries, and to contribute to the discussion on the consequences of ambitious energy policies.

**Key Words:** Nuclear Phase-out, Policy Evaluation, Socio-economic Impacts.

**JEL Codes:** Q48, Q52, R23.

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