

# FERTILITY AND EARLY-LIFE MORTALITY: EVIDENCE FROM SMALLPOX VACCINATION IN SWEDEN

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## **Abstract**

The smallpox vaccination method was the paramount medical innovation of the late 18th and early 19th centuries. We exploit the introduction of the smallpox vaccine in Sweden to identify the causal effect of early-life mortality on fertility. Our analysis shows that parishes in counties with higher levels of smallpox mortality prior to the introduction of vaccination experienced greater declines in infant mortality afterwards. Exploiting this finding in an instrumental-variable approach reveals that the decline in infant mortality had a negative effect on the number of children born, whereas we find a small insignificant effect on the number of surviving children and natural population growth. (JEL: J10; J13; I15; N33)

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*The editor in charge of this paper was Dirk Krueger.*

Acknowledgments: We would like to thank the editor of the Journal (Dirk Krueger), four anonymous referees, Marcella Alsan, Marcus Asplund, Davide Cantoni, Tommy Bengtsson, Anette Boom, Gregory Clark, Carl-Johan Dalgaard, Matthias Doepke, Meltem Daysal, Oded Galor, Erich Gundlach, Fane Groes, David Jinkins, Marc Klemp, Andreas Kotsadam, Nils-Petter Lagerlöf, Lars Lønstrup, Christopher Meissner, Nathan Nunn, Per Petterson-Lidbom, Morten Saaby, Battista Severgnini, Carol Shiue, Peter Sköld, Holger Strulik, Uwe Sunde, Michele Tertilt, Mircea Trandafir, David N. Weil, Joachim Voth, and seminar participants at Copenhagen Business School, University of Copenhagen, Ludwig-Maximilians Universität, University of Hamburg, Oslo University, Deakin University, Monash University, the 2015 EEA congress in Mannheim, and the 2016 AEA Meeting in San Francisco for useful comments and suggestions.

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