

I am a sociologist and a research associate at the NIH-funded [Population Research Institute](#) (PRI) at The Pennsylvania State University. PRI serves as the interdisciplinary, intellectual hub for population science on campus and provides a range of technical and administrative supports that enhance research productivity and impact.

My research focuses on two areas: (1) **poverty, inequality, and population change in the rural United States**; and (2) the **demographic and health impacts of environmental change** around the world. Ongoing and recent projects supported by federal grants include:

Climate Change and Undernutrition among Women and Children

- Funded by: National Institute of Child Health and Human Development (NICHD).
- Data: Demographic and Health Survey (DHS) program, which is funded by the U.S. Agency for International Development (USAID).
- Examines how exposure to extreme temperature and precipitation influences child and adult health across the world.
- **Drought and higher temperatures are associated with lower weight and higher malnutrition among young children.**

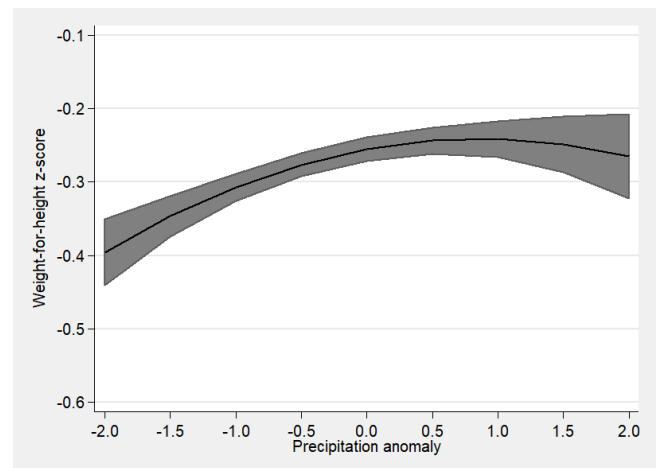


Figure 1: Precipitation deficits are associated with lower child weight in sub-Saharan Africa¹

Economic Restructuring, Demographic Change, & Income Inequality in Rural America

- Funded by: U.S. Department of Agriculture (USDA) Agriculture and Food Research Initiative (AFRI)
- Data: U.S. Decennial Census and American Community Survey (ACS), funded by the Census Bureau
- Examines trends in and determinants of income inequality within rural and urban U.S. counties from 1970 to the present.
- Income inequality has been higher in rural than urban U.S. counties since 1970, but urban inequality has increased rapidly in recent years.¹
- **Aging, population decline, and de-industrialization have increased inequality in rural communities.**²

¹ Thiede, B. C., Butler, J. L., Brown, D. L., & Jensen, L. (2020). Income Inequality across the Rural-Urban Continuum in the United States, 1970–2016. *Rural Sociology*, 85(4), 899-937. [Open access link](#).

² Butler, J., Wildermuth, G. A., Thiede, B. C., & Brown, D. L. (2020). Population Change and Income Inequality in Rural America. *Population Research and Policy Review*, 39(5), 889-911. [Open access link](#).

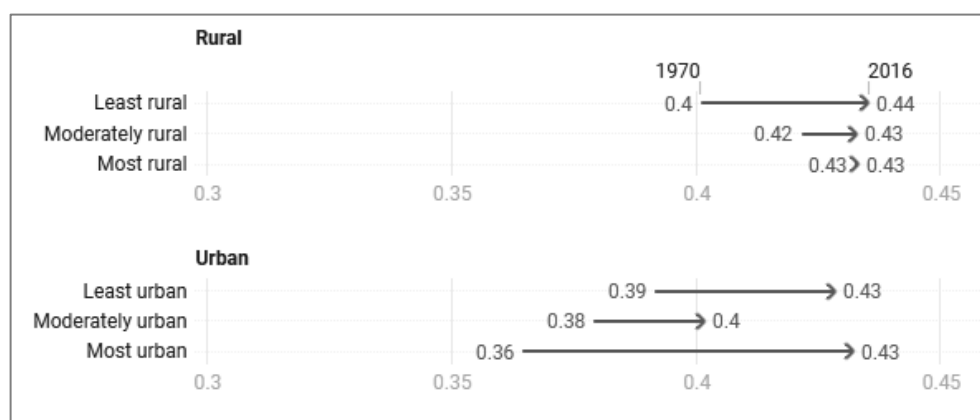


Figure 2: Income inequality has increased more in urban than rural U.S. counties³

Child Poverty Differentials across Immigrant Generations

- Funded by: U.S. Department of Health and Human Services (HHS) through its sponsorship of the Institute for Research on Poverty (IRP) at the University of Wisconsin-Madison
- Data: Current Population Survey (CPS), which is jointly supported by the Bureau of Labor Statistics (BLS) and Census Bureau.
- Examines patterns in child poverty among immigrant and native-born children in the United States and identifies differences in the poverty-reducing effect of safety net programs and family characteristics.
- **Poverty is highest among foreign-born children and native-born children with two foreign-born parents**, in part because of restrictions to safety net programs among non-citizens.⁴

Federal Support for STEM Training

The federal government also plays a crucial role in supporting graduate and doctoral training of young scientists through training grants and other mechanisms.

- **I was supported by an NSF [Integrative Graduate Education and Research Traineeship](https://theconversation.com/income-inequality-is-getting-worse-in-us-urban-areas-132417) (IGERT)** while completing my PhD at Cornell University.⁵
- Federal funding has also supported the training of my graduate students. These students gain substantive expertise in rural sociology and demography and develop a range of statistical and data science skills that equip them to join the STEM workforce.
- The **NSF Doctoral Dissertation Research Improvement grant program** has supported two of my PhD students' theses, which focused on aspects of economic development in the rural United States.
- My federal support from NIH, USDA, HHS, and the Department of Labor has included funds to support over four years of graduate assistantships.

³ Figure derived from a research brief published in *The Conversation*: <https://theconversation.com/income-inequality-is-getting-worse-in-us-urban-areas-132417>.

⁴ Thiede, B. C., & Brooks, M. M. (2018). Child poverty across immigrant generations in the United States, 1993–2016: Evidence using the official and supplemental poverty measures. *Demographic Research*, 39, 1065–1080. [Open access link](#).

⁵ The IGERT program was similar to the ongoing NSF Research Traineeship (NRT) Program.