

Vikas PD Gawai

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SUMMARY

- Advanced causal inference, observational data analysis, and applied econometrics tools such as difference-in-differences (DID), instrumental variables, and regression discontinuity designs, statistical modeling, data exploration, wrangling, and scraping using advanced statistical tools
- Presenting interdisciplinary research to academic and non-academic audiences, including economics, public policy, sociology, population health, Social Security Administration (SSA), consumer science
- Experience in fieldwork, interacting with stakeholders including state education department, government representatives, teachers, and school children; designed a field experiment to conduct a randomized control trial (RCT)
- Diverse industry experience, including project management, business development, planning, and team leadership (lead a team of over 100 people), ability to communicate effectively, manage clients, lead large teams, and maximize profits (32% on a project)
- **Academic Conference Presentations:** Midwest Economic Association (MEA), Global Health Symposium, Southern Economic Association (SEA), Agriculture and Applied Economics Association (AAEA), Association for Public Policy Analysis & Management (APPAM), Population Association of America (PAA), Departmental seminars at the University of Wisconsin-Madison

EDUCATION

Ph.D. Econometrics and Quantitative Economics- Agricultural and Applied Economics, University of Wisconsin-Madison, WI, USA May 2024 (Expected)
Recipient of several research and diversity awards

MS Econometrics and Quantitative Economics, University of Wisconsin-Madison, WI, USA 2016-18
Recipient of the award under 'Best Research Paper Scholarship'

Bachelor of Technology (B.Tech), Civil Engineering, Mumbai University, MH, India 2004-08

TECHNICAL SKILLS

- **Toolbox:** Stata (advanced), Python (basic), R (basic), MS Office, Github, LaTeX, Enclave (confidential/ restricted data handling), Citrix Workspace (for big data)
- **Data Analysis:** Data visualization, Cleaning, Economic Modelling, Communication, Inference, Econometric Analysis, Spatial Analysis

RESEARCH INTEREST

Economics of Health, Aging, Social Security Insurance, Health Disparity, Public Policy, Technology, Gender Inequality, Human Capital, Agriculture, Causal Inference, Applied Econometrics, Development, Regional Economics

PROFESSIONAL EXPERIENCES

Ph.D. Research & Graduate Research Assistantship, University of Wisconsin-Madison (September 2018- Present)

PUBLICATIONS

- **Early-Life Economic Conditions and Old-Age Mortality: Evidence from Historical County-Level Bank Deposit Data** with *Valentina Duque, Jason Fletcher, Hamid Noghanibehambari, Lauren Schmitz* (**Accepted at Journal of Population Economics, January 2024**) (funded by NIA, Center for Retirement Research Steven H. Sandell Grant Program pursuant to a grant from the U.S. Social Security Administration (BC20-S2), and the Center for Demography of Health and Aging (CDHA))
 - Contribution by discovering the bank deposit data, which is arguably the best available data on the proxy for the economic conditions during the early 20th Century in the US;
 - Worked with interdisciplinary co-authors from sociology, economics, and public policy;
 - Produced geospatial maps and visualization
- **Wage Gap between US and Foreign-Born Land Grant Scientists** with *Prof. Jeremy Foltz* (**revise and resubmit at American Journal of Agricultural Economics (AJAE)**)
 - 100% contributed to the analysis of the paper (about 80% to the writing) estimating the wage gap between foreign-born and US-born academic faculty;
 - Developed a framework to identify and test sources of the wage gap;
 - Used standard methods in labor economics, including Kitagawa-Oaxaca-Blinder decomposition, to identify whether wage discrimination exists; Scrapped data from the *Web of Science* for about 600 data points; Conducted analysis in Stata with the novel survey data;
 - Coding is mostly done in Stata with over 1800 lines of code;
 - Presentation at -AAEA.

SELECTED ONGOING PROJECTS

- **Does High-Speed Internet (Broadband) Affect the Mental Health of Older Adults? (Job Market Paper)**

- Sole-authored paper estimating the causal effect of broadband expansion on older adults' mental health;
- Use restricted individual panel data (Health and Retirement Study (HRS)) and recent advances in DID methods for the staggered rollouts of treatment with dynamic treatment effects;
- Big data of broadband at the census block level (> 8 million) and then collapse it at the Census Tract level;
- Over 47,000 individual-year-level observations were observed for the period of 2010-18.
- Coding is mostly done in Stata with over 2200 lines of code; worked in the restricted data enclave of HRS
- **Results:** Broadband rollout significantly reduces depression symptoms by 5.7% among older adults; comparable with other major life events like job loss, recession, and loss of a spouse.
- Explored novel mechanisms of an increase in social connectedness and a decline in social isolation and loneliness
- **Policy Implications:** A back-of-the-envelope calculation suggests broadband has the potential to reduce a cost of over \$5 Billion due to severe depression and social isolation. Estimates from this paper are crucial for policymakers since there have been recent massive government allocation of over \$65 billion to expand broadband.
- Presentation at- SEA, MEA, APPAM, American University.
- **Popular Media Highlight:** Grow Magazine Cover Story

- **Early Life Exposure to Agriculture Shock (Green Revolution) on Later Life Cognitive Health of Older Adults**
with Lauren Schmitz, Valentina Duque, Jinkook, Lee, Hunter Green (funded by NIA grant)

- First author; we estimate the causal effect of an increase in agriculture productivity in early life on later-life cognition using the potentially largest aging data in the world (over 70,000 respondents);
- Coding is mostly done in Stata with over 3100 lines of code;
- Crosswalked the historical agricultural data (on about 300 districts) with the contemporary health and education data (of over 600 districts);
- Used various applied econometrics tools and produced geospatial maps and visualization that show the spatial and temporal variation in agricultural productivity;
- Presentation at- APPAM.

- **Does Broadband Technology Affect Social Security Applications?-** *(funded from an award from the RDRC, CFS at UW-Madison, in collaboration with SSA)*

- Sole-authored paper estimating the causal effect of broadband expansion on older adults' enrollment in social security insurance (SSI) and social security disability insurance (SSDI)
- Use of advanced econometrics method in DID
- Coding is mostly done in Stata with over 1100 lines of codes;
- **Results:** I found broadband rollout statistically significantly increased the probability of applying for SSI and SSDI over time (dynamic treatment effect); however, there was a small and insignificant positive increase in the likelihood of applications as the average treatment effects (ATE).
- **Policy Implications:** A back-of-the-envelope calculation suggests that broadband expansion added over 2,500 applicants for the SSI benefits 2018. The estimates from this paper highlight the unmeasured benefits of the broadband expansion and have important policy implications on policies related to SSI and SSDI and broadband availability.
- Presentation at- SSA conference.

- **Does giving bicycles to grade-9 girls motivate grade-6 girls to continue schooling?- Spillover effect of a bicycle policy** *(Best Paper award scholarship during Masters of Economics)*

- Used a universe of school administrative data from two states in India on enrollment with over 30,000 schools and over 750,000 girls' enrollment in grade 6
- Used difference-in-differences estimation strategy to find a significant spillover effect of a bicycle policy on girl's enrollment

- **Research Assistant**

- Assisted a project of Profs. Lauren Schmitz and Valentina Duque evaluate early exposure to the Great Depression in the US on later life mortality; data analysis using the restricted HRS data.
- Assisted Andra Ghent (Wisconsin School of Business) in a project that uses the WRDS data to plot time series of Treasuries, corporate debt, common stock, residential real estate, and commercial real estate.

Assistant Manager (Sub-contracts, Business Development, and Planning), L&T, ITDC, VEL, Gammon India Ltd 2008-16

- Worked in various leadership positions in top construction firms in India; supervised about 40 construction workers and 3 supervisors; led a building foundation (deep foundation) project with over 100 manpower, including engineers, supervisors, and workers; led a planning department to achieve a 32% profit on a project; achieved a saving of over 6 million INR under the sub-contract negotiations; developed essential soft skills of in the management

GRANTS AND RESEARCH FUNDING

<i>RDRC - Junior Scholar Research Competition Award- \$5,000</i>	2022-23
<i>Deborah and David Penn Fund - Research Presentation Award- \$500, \$1000</i>	2022-23
<i>UW-Madison CDHA Research Presentation Award- \$1000</i>	2023
<i>UW-Madison Graduate School - Research Presentation Award- \$2,500</i>	2022
<i>UW-Madison CDE Research Presentation Award- \$950</i>	2022
<i>UW-Madison Traisman Agribusiness Graduate Fellowship- \$750</i>	2021
<i>American Society of Health Economics (ASHEcon) Diversity, Equality, Inclusion Scholarship</i>	2021
<i>UW-Madison Student Research Grants Competition Research Travel- \$1,500</i>	2020
<i>National Institutes of Aging (NIA) Grant (P30AG017266) and Grant (R00 AG056599)</i>	2020-
<i>UW Madison Graduate Student Summer Fieldwork Award- \$3,000</i>	2019
<i>UW Madison Best Research Paper Scholarship- \$350</i>	2018
<i>Indian State Government Scholarship for Masters- \$100,000</i>	2016-18

ADDITIONAL ACCOLADE

<i>Summer Diversity Academy Fellow, American University (competitive selection)</i>	2023
<i>Junior Scholar (Center for Financial Security, UW-Madison, with Social Security Administration) (competitive selection)</i>	2022
<i>Affiliated with interdisciplinary departments (Center for Demography of Health and Aging (CDHA), Institute of Research on Poverty (IRP), Retirement and Disability Research Center (RDRC)</i>	Various Years

LEADERSHIP, MENTORSHIP

<i>UW-Madison, Mentor for two undergrad students on a class project under Prof. Foltz</i>	Spring 2022
<i>UW-Madison First Generation (FirstGen), Mentor for one FirstGen undergrad student</i>	2022
<i>UW-Madison, Agriculture and Applied Economics (AAE) Mentor for one FirstGen undergrad student</i>	2022
<i>UW-Madison First Generation (FirstGen), Member</i>	2021–
<i>UW-Madison CDHA NextGen Population, Mentor for 18 students on research development</i>	Summer 2022
<i>UW-Madison Agriculture and Applied Economics (AAE) Faculty Hiring Committee, Student Representative</i>	2022
<i>UW-Madison Agriculture and Applied Economics (AAE) Ph.D. Admission Committee, Student Representative</i>	2021
<i>Taylor-Hibbard Club, Athletic Chair</i>	2020–2022
<i>UW-Madison AAE Economic Development Lab Group, Member</i>	2019–

ACADEMIC SERVICES (for Scientific Journals and Groups)

<i>Journal- Economics of Education Review, Reviewer</i>	2022
<i>American Society for Health Economists (AshEcon), Abstract Reviewer</i>	2022, 23
<i>Agriculture and Applied Economics (AAEA), Abstract Reviewer</i>	2022, 23
<i>AAEA-Health Economics Section (Chair- Prof. Di Fang) Official Twitter Handle co-Manager</i>	2022-23