

Zedekiah G. Higgs

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Education

- 2024 (*Exp.*) Ph.D., Agricultural and Resource Economics, University of Maryland, College Park, MD
Dissertation: Increasing Charitable Donations Using Subsidies: Theory and Experiments
- 2022 M.S., Agricultural and Resource Economics, University of Maryland, College Park, MD
- 2017 B.S., *magna cum laude*, Quantitative Economics, Washington State University, Pullman, WA
➤ *Outstanding Senior of the Year* in Quantitative Economics (2017)

Fellowships and Awards

- 2023 *Doctoral Dissertation Research Improvement Grant in Economics*, “Increasing Charitable Donations Using Subsidies: Theory and Experiments,” **National Science Foundation** (Award #2315706)
- 2022 *Jacob K. Goldhaber Travel Grant*, **University of Maryland**, to present “How Effective Are Tax Incentives for Charitable Giving? A Comparison of Rebate and Matching Subsidies in the Context of Taxes” at the North-American Economic Science Association Conference (Santa Barbara, CA)
- 2020 *The Bruce and Mary Ann Gardner Dissertation Enhancement Award*, Department of Agricultural and Resource Economics, **University of Maryland**
- 2019 *The Bessie H. DeVault Award* for the best paper by a second-year student, Department of Agricultural and Resource Economics, **University of Maryland**
- 2017-2022 *Dean’s Fellowship*, **University of Maryland** (awarded each semester)
- 2017 *Outstanding Senior of the Year* in Quantitative Economics, **Washington State University**
- 2014-2017 *President’s Honor Roll*, **Washington State University** (awarded each semester)
- 2012-2013 *President’s Honor Roll*, **Washington State University** (awarded each semester)

Courses Taught

- Co-Instructor* (with Professor Lori Lynch)
“Introduction to Economics and the Environment” (AREC240), Department of Agricultural

and Resource Economics, University of Maryland, *Summer 2023 (Terp Young Scholars Program)*

Instructor

“Elements of Agricultural and Resource Economics” (AREC250), Department of Agricultural and Resource Economics, University of Maryland, *Spring 2022*

Instructor

“Elements of Agricultural and Resource Economics” (AREC250), Department of Agricultural and Resource Economics, University of Maryland, *Fall 2021*

Research

Job Market Paper

“Do Matches Really Outperform Rebates? New Evidence from a Novel Experiment” (with Neslihan Uler). Working Paper, 2023. (This work is supported by a National Science Foundation *Doctoral Dissertation Research Improvement Grant in Economics (DDRIGE)*, NSF Award #2315706)

Abstract: This paper challenges the well-established result among existing experimental studies that donations are significantly more responsive to matches than to rebates. In previous experimental studies the budget sets available to subjects under rebates are constrained relative to those available under matches, biasing estimates of the rebate-price elasticity. We conduct a novel experiment that removes the constraint under rebates, producing equal budget sets for price-equivalent rebates and matches. Contrary to previous studies, we find dramatically smaller differences in donations under price-equivalent matches and rebates. More importantly, we find no statistical difference between our estimated rebate- and match-price elasticities. Furthermore, we show that the constraint under rebates affects the entire distribution of observed behavior, not only the behavior of individuals for whom the constraint is binding. Finally, we propose an extension of extant models that relaxes an assumption implicitly made in previous work, allowing the model to correctly predict equal price elasticities for rebates and matches.

Keywords: experimental economics, behavioral economics, microeconomic theory, charitable giving

Works in Progress

“How Donor Uncertainty Affects Their Response to Matches.” Work in Progress. (This work is supported by a National Science Foundation *Doctoral Dissertation Research Improvement Grant in Economics (DDRIGE)*, NSF Award #2315706)

Abstract: Why might studies observe different match-price elasticities of demand for giving across different settings? Is it a difference in subject pools? Or could it be the result of differences in the characteristics of the fundraisers used? In this paper I argue that fundraiser characteristics affect how donors respond to match subsidies. Specifically, the characteristics of a fundraiser affect donors' beliefs about the probability that their donation will actually receive a match, causing the same donor to respond to match subsidies differently depending on the setting. I present both theoretical and experimental evidence to support these claims.

Keywords: experimental economics, behavioral economics, microeconomic theory, charitable giving

“Can Loss Aversion Explain Ambiguity Aversion? Theory and Experiments.” Work in Progress.

Abstract: I propose a new model of preferences over uncertain outcomes to explain ambiguity aversion. The model is presented in the context of the classic Ellsberg two-urn problem, and simple numerical examples are provided to demonstrate the model's ability to capture observed behavior. The model combines the insights of loss aversion (Kahneman and Tversky, 1979) with the two-stage approach of previous models, primarily that of Segal (1987). The model is similar in flavor to the *vector expected*

utility model proposed by Siniscalchi (2009), in which acts are evaluated with respect to their expected utility combined with an adjustment function. More generally, Grant and Polak (2013) show that the model of Siniscalchi (2009)—and several other models of ambiguity aversion—are special cases of what they call *mean-dispersion preferences*, in which acts are evaluated with respect to their mean utility accounting for deviations from the mean. The key difference in the model I propose is that acts are evaluated differently depending on whether they are presented in isolation or alongside another act (capturing the insights of Fox and Tversky (1995)), and preferences are centered around a *reference utility* rather than the expected utility. Because of this, the model I propose is not a form of mean-dispersion preferences (Grant and Polak, 2013) or even the more general dispersion aversion model of Chambers et al. (2014). The model I propose provides an intuitive explanation for ambiguity aversion, and the examples provided demonstrate the model's ability to capture observed behavior across several different settings.

Keywords: ambiguity aversion, microeconomic theory

Archived Projects

“College Expenditures and Federal Aid Policy in the Market for Higher Education.”

Abstract: It's straightforward that increases in federal student aid should increase the number of students attending college, all else equal. But how do schools compete for these new students? Do they invest more in education related items—like instructors, lecture halls, and computer labs—or do they instead focus on making their campuses more luxurious by investing in non-education related items—like fancier dorms, student centers, and recreation centers? To answer this question I build a computable general equilibrium (CGE) model of the market for higher education, in which private schools are assumed to be education-quality maximizers and students are assumed to vary in ability, income, and affinity for luxuriousness. I parameterize the model to closely match key characteristics of the U.S. market for higher education, and then use the parameterized model to simulate an increase in federal student aid funding. I find that a certain class of private universities shift their expenditures toward non-education related items in response to an increase in aid, despite being education-quality maximizers.

Keywords: computable general equilibrium (CGE) models, higher education

Professional Experience

- 2023 *Co-Instructor* with Professor Lori Lynch, “Introduction to Economics and the Environment,” Department of Agricultural and Resource Economics, University of Maryland, Terp Young Scholar Program (AREC240 TYS)
- Shared all teaching responsibilities with the other co-instructor, including designing and structuring the course, preparing and giving lectures, creating and grading homeworks and exams, managing classroom activities, etc.
- 2023 *Teaching Assistant* for Lecturer Maria Soppelsa, “Introduction to Economics and the Environment,” Department of Agricultural and Resource Economics, University of Maryland (AREC240)
- Managed the course for the last weeks of the semester, while Maria was away on maternity leave
- 2021-2022 *Instructor*, “Elements of Agricultural and Resource Economics,” Department of Agricultural and Resource Economics, University of Maryland (AREC250)
- Designed the course and developed the course syllabus
 - Prepared and presented all lectures
 - Created all course materials, including lecture notes, problem sets, and exams
 - Managed a teaching assistant who assisted with grading

- 2021 *Teaching Assistant* for Professor Sharan Mamidupudi, “World Hunger, Population and Food Supplies,” Department of Agricultural and Resource Economics, University of Maryland (AREC365)
- Wrote a program in Matlab to automate the documentation of student attendance (on Zoom), as well as collect data such as total attendance time, entry and exit times, etc.
 - My program saved significant time for both the professor and the other TAs
 - Passed my program along to future TAs to help reduce their workloads
- 2020 *Teaching Assistant* for Professor Sara Lombardi, “The Chesapeake Bay Ecosystem: Intersection of Science, Economics, and Policy,” Department of Agricultural and Resource Economics, University of Maryland (AREC200)
- Wrote a program in Matlab to analyze students’ decisions in the *Bay Game* and generate intuitive graphs and figures to help students learn
 - Wrote a manual describing how to use my program so that it could be passed along to future teaching assistants
- 2019-2020 *Research Assistant* for Professor Neslihan Uler, Department of Agricultural and Resource Economics, University of Maryland
- Reviewed and verified theoretical findings
 - Edited drafts for publication
- 2019 *Teaching Assistant* for Lecturer Kartik Misra, “World Hunger, Population and Food Supplies,” Department of Agricultural and Resource Economics, University of Maryland (AREC 365)
- 2018 *Teaching Assistant* for Professor Kenneth Leonard, “World Hunger, Population and Food Supplies,” Department of Agricultural and Resource Economics, University of Maryland (AREC 365)
- 2017-2018 *Research Assistant* for Professor Jorge Holzer, Department of Agricultural and Resource Economics, University of Maryland
- 2016 *Undergraduate Teaching Assistant* for Professor Robert Rosenman, “Intermediate Microeconomic Analysis,” School of Economic Sciences, Washington State University (ECONS 301; upper-level undergraduate)
- Helped create questions (and solutions) for problem sets and exams
 - Held office hours and tutored students in need of assistance
- 2013-2014 *Senior Branch Manager* for StudentEdge Painting (Olympia, WA)
- Interviewed, hired, and managed a marketing team, resulting in the largest number of cold-call leads and estimates given for the US division of the company
 - Interviewed, hired, and trained crew members, successfully completing around \$100,000 of paintwork
 - Increased branch sales by over 200% from first year to second year
 - Managed all aspects of business, including marketing, sales, production, and payroll

Presentations

“Do Matches Really Outperform Rebates? New Evidence from a Novel Experiment,” Agricultural and Resource Economics Workshop, University of Maryland, College Park, MD (September 2023)

- “How Effective Are Tax Incentives for Charitable Giving? A Comparison of Rebate and Matching Subsidies in the Context of Taxes,” North-American Economic Science Association Conference, Santa Barbara, CA (November 2022)
- “Rebates Versus Matching in Charitable Fundraising: Understanding the Disparity,” Agricultural and Resource Economics Workshop, University of Maryland, College Park, MD (March 2020)
- “Do Donors Consider the Probability of Being Matched?” University of Maryland—Experimental Economics PhD Class, College Park, MD (May 2019)
- “Talkin’ ‘bout ‘Truth in Consequentiality: Theory and Field Evidence on Discrete Choice Experiments,’ by Christian A. Vossler, Maurice Doyon, and Daniel Rondeau,” University of Maryland—Experimental Economics PhD Class, College Park, MD (April 2019)
- “A Review of ‘Reference Points and Effort Provision,’ by Johannes Abeler, Armin Falk, Lorenz Goette, and David Huffman,” University of Maryland—Experimental Economics PhD Class, College Park, MD (April 2019)
- “Talkin’ ‘bout ‘Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines,’ by Nava Ashraf, Dean Karlan, and Wesley Yin,” University of Maryland—Experimental Economics PhD Class, College Park, MD (April 2019)
- “Talkin’ ‘bout ‘Private Labels and Retailer Profitability: Bilateral Bargaining in the Grocery Channel,’ by Paul B. Ellickson, Pianpian Kong, and Mitchell J. Lovett,” University of Maryland—Computational Economics PhD Class, College Park, MD (March 2019)

Professional Skills

Methods: Experimental Design, Causal Analysis, A/B Testing, Computable General Equilibrium (CGE) Models, Discrete Choice Models, Simulation, Applied Statistics, Econometrics, Panel Data, Time Series, Applied Economic Theory

Causal Inference: Diff-in-Diffs, Regression Discontinuity (Fuzzy and Sharp), Instrumental Variables, Synthetic Controls

Machine Learning: Regularization, Ensemble Methods (Boosting and Bagging), Cross-Validation, Hypothesis Testing

Languages: Python, Matlab, Stata, JavaScript, HTML/CSS, LaTeX

References

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