

Andrew Earle

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Education

PhD, Economics, Michigan State University, expected 2023, dual major Environmental Science & Policy
M.A., Economics, Michigan State University, 2020
B.S., Mathematical-Economics, University of Pittsburgh, 2018

Fields

Primary: Applied Microeconomics, Environmental Economics
Secondary: Public Economics, Urban Economics, Industrial Organization

Research Interests

Climate impacts, leisure, non-market valuation, local economic impacts, congestion, time use

Job Market Paper

“Visiting ‘America’s Best Idea’: Demand for the US National Park System” (Job Market Paper)

Abstract: The U.S. National Park System protects some of the world’s most spectacular resources and attracts 300 million visits each year, generating surplus for visitors and supporting local economies. I create a versatile and unified framework to analyze demand for U.S. national parks. Combining nationally representative surveys with park-level visitor counts, I estimate a discrete-choice model of visitation from 2005 through 2019. The model controls for changing travel costs and inter-park substitution while permitting the use of causal inference techniques. I apply the framework to analyze how long-run average temperatures and short-run temperature shocks impact demand. Visiting a park generates the most surplus when temperatures fall between 70°F and 85°F. Relative to this ideal range, visiting when the average high temperature is 30°F reduces willingness to pay by \$503 per-trip. Visiting when the average high temperature is 95°F reduces willingness to pay by just \$107. Positive temperature shocks increase willingness to pay when temperatures are less than 80°F and have no discernible impact at warmer temperatures. The results provide insight to the welfare impacts of climate change, and the framework is broadly applicable to management challenges facing the national parks.

Works in Progress

“Willingness to Pay to Avoid Crowding on Public Beaches,” with Frank Lupi, Caroline Tompson, and Roger von Haefen

Abstract: It is difficult to disentangle preferences for crowding from other desirable attributes that are unobserved to the researcher. As a result, crowding is omitted from many recreation demand models, despite its influence on recreational experiences. To overcome this empirical challenge, we combine stated and revealed preference data. We identify preferences for crowding using contingent behavior questions and choice experiments. We then input the stated preferences for crowding into site choice models for the Great Lakes and Gulf Coast regions.

“Climate Change and Outdoor Recreation Participation,” with Soren Anderson.

Abstract: Unlike most other forms of leisure, outdoor recreation is directly exposed to weather conditions and thus especially influenced by climate change. Previous research has identified clear relationships between temperature and participation in recreational activities, as well as sizable

welfare impacts. However, no current studies account for inter-activity substitution, an important behavioral response to climate change. Using nearly two decades of time-use diaries and large-scale survey data on recreation participation, we estimate how temperature impacts participation for over 20 different recreational activities. We then estimate discrete-choice model of participation that accounts for inter-activity substitution when estimating the welfare impacts of climate change on outdoor recreation.

“Valuing Water Quality with High-Frequency Data,” with Hyunjung Kim

Abstract: We leverage a unique dataset collected by entry pass scanning technology throughout the Detroit regional park system to value the recreational losses from a beach closure in the summer of 2021. While recreation demand models are a critical tool for valuing the benefits of improved water quality, most rely on survey data that has a number of limitations. Our dataset contains the universe of visitors, avoids recall bias, and captures precise entry times, allowing us to provide new evidence on the value of water quality.

“Weather and College Student Achievement,” with Raghav Rakesh

Presentations

- 2023: Midwest Economic Association (upcoming)
- 2022: Southern Economic Association, MSU Economics Applied Micro Seminar, National Park Service Social Sciences Team, Camp Resources, UM-MSU Environmental and Energy Economics Day, MSU Economics Grad Student Seminar
- 2021: Property and Environment Research Center (PERC), MSU Economics Red Cedar Conference

Grants, Fellowships, and Awards

- Dissertation Completion Fellowship, Michigan State University, 2023
- Graduate Fellow, Property and Environment Research Center (PERC), Bozeman, MT, 2021
- Peter Schmidt Award for Best First Year PhD Student, Michigan State University, 2019
- Environmental Science and Public Policy Fellow, Michigan State University, 2018
- Asher Isaacs Prize for Best Graduating Economics Major, University of Pittsburgh, 2018
- Rahangdale Research Grant, University of Pittsburgh, 2017
- Brackenridge Research Fellow, University of Pittsburgh, 2017

Referee Service

Land Economics

Additional Research Experience

- Research Assistant, Professor Oren Ziv, “The Decline of the Manufacturing Belt,” 2020
- Research Assistant, Professor Jon Eguia, “A measure of partisan advantage in redistricting,” 2019

Teaching Experience

- Instructor, Introduction to Microeconomics, Michigan State University, Summers 2020 and 2022
- TA, Public Economics, Michigan State University, 2022
- TA, International Economics Michigan State University, 2020 and 2022
- Co-Instructor, Microeconomics Preliminary Exam Preparation, Michigan State University, 2021
- TA, Senior Seminar in Public Finance, Michigan State University, 2021
- TA, Senior Seminar in Sports Economics, Michigan State University, 2021
- TA, Introduction to Econometric Methods, Michigan State University, 2020
- TA, Intermediate Microeconomics, Michigan State University, 2018 and 2020
- TA, First Year PhD Fall Semester Microeconomics, Michigan State University, 2019
- TA, Intermediate Macroeconomics, Michigan State University, 2019

Professional Service

President, Economics Graduate Student Organization, Michigan State University, 2021 - 2022

Instructor, Microeconomics Preliminary Exam Prep, Michigan State University, 2021

Board Member, Economics Graduate Student Organization, Michigan State University, 2020 - 2021

Technical Skills

R, Python, Stata, MATLAB, ArcGIS

References

Soren Anderson (chair)

Associate Professor

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