Byeong-Hak Choe

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CURRENT POSITION

Aug 2021–present Lecturer in Data Analytics, School of Business, SUNY Geneseo.

EDUCATION

Degree	Field	Institution	Year
Ph.D.	Economics	University of Wyoming	2021
M.Sc.	Economics	Arizona State University	2015
M.A.	Economics	SUNY Stony Brook	2014
B.Sc., B.A. *(Summa cum laude)*	Applied Mathematics & Economics	Hanyang University at Ansan *(in South Korea)*	2012

FIELDS OF INTEREST

Primary Fields	Environmental Economics, Economics of Climate Change.
Secondary Fields	Energy Economics, Applied Microeconomics.
Research Methods	Causal Inference, Machine Learning, Economic Theory.

RESEARCH

Working papers

1. *Social Media Campaigns, Lobbying and Legislation: Evidence from #climatechange/#globalwarming and Energy Lobbies*.

   Abstract: To what extent do social media campaigns compete with fossil fuel lobbying on climate change legislation? In this article, I estimate the effect of social media campaigns on a congressperson's legislative activities against climate change actions during the U.S. Congresses (January 2013-January 2019). I find that (1) a 1% increase in the per-capita level of activities of climate change campaigns using Twitter decreases Democrats' tendency to support climate-unfriendly legislation by 0.9%, while it increases Republicans' one by 0.2%; and (2) a

1% increase in the fossil fuel industry's lobbying expenditure relative to the rest of industries' lobbying expenditure increases Republicans' tendency to support climate-unfriendly legislation by 1.1%. I also find that negative sentiment in social media campaigns contributes to affecting congresspersons' support for climate-unfriendly legislation.

2. *Climate Finance under Conflicts and Renegotiations: A Dynamic Contract Approach*.

Abstract: Considering climate funds (e.g. the Green Climate Fund) as the financial mechanism to provide funding to developing countries, this paper examines a long-term climate funding relationship between two agents—the rich country and the poor country. Conflicts between the rich and poor countries arise when determining 1) the size of climate funding that the rich country contributes to the poor country, and 2) the funding allocation between climate adaptation and mitigation projects in the poor country. In addition, the rich country cannot be forced to commit contractual contributions to the poor country, and the climate funding relationship can be repeatedly renegotiated. This paper derives the following results: (1) climate funds converge to the first-best in the long-run, in terms of the size of climate funding and its balance between adaptation and mitigation projects, if and only if climate damage becomes *sufficiently* severe. (2) funding allocation between adaptation and mitigation projects becomes more favorable to the poor country if marginal climate costs in the poor country grow faster than in the rich country. (3) fewer conflicts and fewer renegotiations between the rich and poor countries make climate funding contracts more efficient, remedying inequality between the poor and rich countries.

Work in progress

1. *'Hiding Behind a Small Cake' in an Online Dictator Game: The Way You Hide Matters!*, (with Tabaré Capitan (1st author) , Jason Shogren, and Benjamin White).

Abstract: Using an online dictator game in which receivers have incomplete information of the size of the endowment (big or small), the article, "'Hiding behind a small cake' in a newspaper dictator game (Ockenfels and Werner (2012))" shows that a few givers who received the big endowment use their giving to signal they received the small endowment (i.e., to lie). In other words, even though a giver will never meet the corresponding receiver, he cares enough about how he could be perceived by others to lie (i.e., second-order beliefs enters his utility function). In our experiment we provide givers with the opportunity to lie about the size of the endowment without using their giving. Similar to Ockenfels and Werner (2012) we find that (i) few take the opportunity to lie—but those who do give less when their giving is not constrained by its role as a signal—and (ii) givers are more likely to lie when the lie is private. However, using a second stage in the experimental design, we show that liars are the most responsive group of givers to a simple message stating the expectation of the receiver.

RELEVANT POSITIONS

2017–2021	Research Assistant to Prof. Charles Mason, University of Wyoming. - Scraping web-data from the U.S. Energy Information Administration, the U.S. Patent and Trademark Office, Thomson Reuters WestLaw, Google Scholar and Microsoft Academic. - Numerically solving a system of differential equations for the dynamics of the use of solar and oil energy using MATLAB. - Constructing geographical data sets of railroad shipments for crude oil and associated incidents in the United States using confidential raw data provided by the Surface Transportation Board (STB) and the Pipeline and Hazardous Materials Safety Administration (PHMSA), used in the research paper, Charles F. Mason, 2018. *Analyzing the Risk of Transporting Crude Oil by Rail*, NBER Working Papers 24299, National Bureau of Economic Research, Inc. - Imputing missing values of amounts of oil reserves in the United States by employing various econometric models such as the Chow-Lin method, state-space and the Kalman Filtering approaches.
2016	Volunteer Research Assistant, Center for Environmental Economics and Sustainable Policy, Arizona State University. - Assisting modeling the Arizona Energy Project under the Clean Power Plan in the United States.
2011	Volunteer Research Assistant, Institute for Industrial Management, Hanyang University at Ansan. - Calculating rate of returns for small-, middle-, and large-cap stocks in the Korea Stock Exchange.

TEACHING

Instructor

Spring 2022	DANL 399: Data Analytics Capstone, SUNY Geneseo.
Spring 2022	DANL 310: Data Visualization and Presentation, SUNY Geneseo.
Spring 2022, Fall 2021	DANL 210: Data Preparation and Management, SUNY Geneseo.
Spring 2022, Fall 2021	DANL 200: Introduction to Data Analytics, SUNY Geneseo.
Fall 2021	DANL 300: Advanced Data Analytics, SUNY Geneseo.
Summer 2019	ECON 3010: Intermediate Macroeconomics, University of Wyoming (Online).

Teaching Assistant

Spring 2020, Spring 2019	ECON 4430: Energy Economics, University of Wyoming.
Spring 2018, Spring 2017	ECON 3010: Intermediate Macroeconomics, University of Wyoming.
Spring 2017	ECON 1300: Oil: Business, Culture, and Power, University of Wyoming.
Fall 2016	ECON 3020: Intermediate Microeconomics, University of Wyoming.
Fall 2015	ECN 312: Intermediate Microeconomic Theory, Arizona State University.
Spring 2011	BUS 3059: Theory of Investment, Hanyang University at Ansan.

Grading Assistant

Fall 2015	ECN 312: Intermediate Microeconomic Theory, Arizona State University.
Spring 2011	BUS 3002: Financial Management, Hanyang University at Ansan.

University Tutor

Fall 2019	EconHelp, Department of Economics, University of Wyoming.
Fall 2010	ECO 2018: Introduction to Statistics, Hanyang University at Ansan.
Fall 2009	ECO 1002: Mathematics for Economists, Hanyang University at Ansan.

PROFESSIONAL ACTIVITIES

Presentations

Jun 2022	Interdisciplinary Data Science Workshop, Brigham Young University, Provo, Utah.
Jun 2021	Online Seminar, Department of Environmental and Business Economics, University of Southern Denmark.
Apr 2019	University of Wyoming & Colorado State University Economics Graduate Student Symposium, Laramie, Wyoming.
Jan 2019	American Economic Association Annual Meeting (poster session), Atlanta, Georgia.
Jul 2018	The 29th International Conference on Game Theory, Stony Brook, New York.

Memberships

2018–present	Association of Environmental and Resource Economists.
2017–present	American Economic Association.
2017–2019	Econometric Society.

HONORS, SCHOLARSHIPS & AWARDS

2022	Honorable Mention (with James Jordan and Jason Rappazzo), Business Analytics Competition, Manhattan College.
2020	Summer Augmentation Scholarship for Ph.D. Dissertation Research, University of Wyoming.
2019	H. A. True Chair in Petroleum and Economics Scholarship, University of Wyoming.
2019	John S. Bugas Economics Scholarship, University of Wyoming.
2019, 2018	Graduate Student Conference Travel Funding, University of Wyoming.
2018	Ralph d'Arge Scholarship in Natural Resource Economics and Finance, University of Wyoming.
2018	McMurry Excellence Fund, University of Wyoming.
2018	Joseph C. and Katherine A. Drew Scholarship, University of Wyoming.
2012	Highest Grade Point Average in Economics Class of 2012, Hanyang University at Ansan.
2009, 2010	University Tutor of the Excellent Tutoring Team, Hanyang University at Ansan.
2009–2011, 2006	Merit-based Scholarships, Hanyang University at Ansan.

MISCELLANEOUS

Computing Skills	Python, R, Stata, MATLAB, Git, LaTeX, R Markdown.
Languages	English, Korean (native).
Citizenship	South Korea.

NON-ACADEMIC EXPERIENCE

2007–2009	Completion of Military Obligation, Attained the Rank of Sergeant, Republic of Korea Army, South Korea.

REFERENCES

Professor Charles Mason
Department of Economics
University of Wyoming
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Assoc. Prof. Thorsten Janus
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