

Tong Wu

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EDUCATION

Ph.D. candidate in Applied Economics and Management 2019-present
Cornell University, Ithaca, NY

Ph.D. Dissertation Committee:

Prof. C.-Y. Cynthia Lin Lawell (Chair), Prof. David R. Just, and Prof. Ariel Ortiz-Bobea

M.S. in Applied Economics and Management August 2019
Cornell University, Ithaca, NY

M.S. Thesis Committee: Prof. C.-Y. Cynthia Lin Lawell (Chair) and Prof. David R. Just

B.S. *magna cum laude* in Agricultural and Resource Economics May 2017
University of Maryland, College Park, MD

B.S. in Agricultural Economics May 2017
China Agricultural University, Beijing, China
Joint program with University of Maryland.

FIELDS OF INTEREST

Natural resource economics

Forestry economics

Agricultural and applied economics

Environmental and energy economics

HONORS AND AWARDS

Agricultural & Applied Economics Association (AAEA) Land, Water and Environmental Economics Section (ENV) Poster Presentation Award (2024)

College of Agricultural and Life Sciences (CALS) Outstanding Graduate Teaching Assistant Award (2024)

DEEP-GREEN-RADAR Research Excellence Award (August 2024)
TREESPEAR Research Excellence Award (May 2024, June 2024)
Dyson Graduate Student – Outstanding Engaged Research Award (2024)
TREESPEAR Excellence in Resource Economics Award (May 2024)
Cornell University Graduate School Conference Grant (May 2022, August 2022, October 2022)
Western Forest Economists (WFE) Forest Business Economics Award (2023)
Dyson Graduate Student – Research Excellence Award (2023)
DEEP-GREEN-RADAR Research Grant (August 2022, November 2023, May 2024)
Khaled H. Kheiravar Memorial Scholarship (2022-2023)
Dyson Graduate Teaching Assistant – Outstanding Service Award (2021)
TREESPEAR Research Grant (June 2021, June 2022, October 2022, November 2023,
December 2023, May 2024)
Cornell Dyson nominee, Agricultural and Applied Economics Association (AAEA)
Outstanding Master’s Thesis Award (2020)
Alpha Lambda Delta Honor Society (2017)
Ray A. Murray Merit Scholarship (2016)

PUBLICATIONS

Wu, Tong, David R. Just, C.-Y. Cynthia Lin Lawell, Jiancheng Zhao, Zhangjun Fei, Ariel Ortiz-Bobea, and Qiang Wei. (2024). Optimal forest management under uncertainty: A framework for stochastic dynamic bioeconomic modeling. International Business Analytics Conference Proceedings, 1 (1), 56-61.

Barrett, Christopher B., Kate Ghezzi-Kopel, John Hoddinott, Nima Homami, Elizabeth Tennant, Joanna Upton, and Tong Wu. (2021). A scoping review of the development resilience literature: Theory, methods and evidence. World Development, 146, 105612.

Wu, Tong. (2019). Optimal Moso Bamboo Forest Management: A Dynamic Model. M.S. Thesis, Cornell University.

WORKING PAPERS

Wu, Tong, David R. Just, C.-Y. Cynthia Lin Lawell, Ariel Ortiz-Bobea, and Jiancheng Zhao. (2024). Optimal forest management for interdependent products: A nested stochastic dynamic bioeconomic model and application to bamboo. Working paper, Cornell University. [**Job Market Paper**]

Abstract: Sustainable forest management is a complex dynamic problem, and an important issue worldwide. Forests supply the world’s population with a variety of

forest products, including renewable products such as fruits, nuts, and maple syrup that can be harvested at more frequent intervals than the trees themselves. When there is both uncertainty and interdependent forest products, the interaction between these two phenomena leads to a complicated set of trade-offs; developing a model at this nexus is the primary innovation of our paper. In particular, we develop a nested stochastic dynamic bioeconomic model of optimal forest management under uncertainty for interdependent products that differ in their growth cycles, rates of growth, lengths of growing periods, and potential harvest frequency. Our model enables us to assess the optimality of actual decisions made by forest managers and to develop a dynamic structural econometric model to understand the beliefs and perceptions that underlie and rationalize their management strategies. We apply our model to bamboo forests, which generate two interdependent products: bamboo shoots and bamboo stems. Our model has important implications for the sustainable management of forests worldwide.

PRESENTATIONS

“Optimal Forest Management for Interdependent Products: A Nested Stochastic Dynamic Bioeconomic Model and Application to Bamboo”. Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting. Seattle, WA. October 2024.

“Optimal Forest Management for Interdependent Products: A Nested Stochastic Dynamic Bioeconomic Model and Application to Bamboo”. Sustainable Environment Energy and Resource Economics (SEERE) seminar. Cornell University. October 2024.

“Optimal Forest Management for Interdependent Products: A Nested Stochastic Dynamic Bioeconomic Model and Application to Bamboo”. Ph.D. Placement Week. Cornell University. September 2024.

“Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Poster presentation. Agricultural & Applied Economics Association (AAEA) Annual Meeting. New Orleans. July 2024.

“Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Annual Conference of the European Association of Environmental and Resource Economists (EAERE). Leuven, Belgium. July 2024.

“Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Northeastern Agricultural and Resource Economics Association (NAREA) Annual Meeting. Rehoboth Beach, DE. June 2024.

“Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. United States Society for Ecological Economics (USSEE) Conference. Schenectady, NY. June 2024.

- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. International Business Analytics Conference. State University of New York at Freedonia. Freedonia, NY. May 2024.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Sustainable Environment Energy and Resource Economics (SEERE) seminar. Cornell University. April 2024.
- “Dynamic Economic Analyses of Forest Management and Agricultural-to-Energy Land-Use Transitions”. A-exam presentation. Cornell University. October 2023.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model”. Western Forest Economists (WFE) 2023 Annual Meeting. Portland, Oregon. September 2023.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Sustainable Environment Energy and Resource Economics (SEERE) seminar. Cornell University. April 2023.
- “Agricultural-to-Energy Land Use Transitions: A FEW System”. Cornell University. December 2022.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Agricultural & Applied Economics Association (AAEA) Annual Meeting. Anaheim, CA. August 2022.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Association of Environmental and Resource Economists (AERE) session at the Western Economic Association International (WEAI) Annual Conference. Portland, OR. July 2022.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Northeastern Agricultural and Resource Economics Association (NAREEA) Annual Meeting. Mystic, CT. June 2022.
- “Agricultural-to-Energy Land Use Transitions: A FEW System”. Resources and Sustainability: Deep Dive. 2022 INFEWS PI Workshop. Princeton University. February 2022.
- “Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Sustainable Environment Energy and Resource Economics (SEERE) seminar. Cornell University. February 2022.

“Optimal Forest Management for Interdependent Products: A Nested Dynamic Bioeconomic Model and Application to Bamboo”. Applied Economics and Management 2nd-year Ph.D. presentation. Cornell University. May 2021.

“Optimal Moso Bamboo Forest Management: A Dynamic Model”. Applied Economics and Management 2nd-year Ph.D. presentation. Cornell University. February 2021.

“Optimal Moso Bamboo Forest Management: A Dynamic Model”. Forests & Livelihoods: Assessment, Research, and Engagement (FLARE). University of Michigan at Ann Arbor. August 2019.

RESEARCH EXPERIENCE

Cornell University TREESPEAR May 2018-present

Think-tank for Resources, Energy, and the Environment:

Science and Policy-related Economic Analysis and Research (TREESPEAR)

Graduate Research Associate

Advisor: Professor C.-Y. Cynthia Lin Lawell

Cornell University DEEP-GREEN-RADAR Sep. 2021-present

Dynamics, Economics, Econometrics, Policy, and Games:

Rigorous Environmental, Energy, Natural Resource, Agriculture, and Development Analysis and Research (DEEP-GREEN-RADAR)

Graduate Research Associate

Advisor: Professor C.-Y. Cynthia Lin Lawell

Research Assistant for Professor Christopher B. Barrett, Cornell Sep. 2018-present

- Review the resilience literature identified by the scoping search using Covidence.
- Apply inclusion / exclusion criteria to categories.
- Tag, deduplicate, and summarize findings using Zotero.

Student Information Assistant, Ithaca, NY Nov. 2017-present

- Assist researchers on their research questions.
- Respond to questions on database, works cites, access to articles, etc.

Editor, Farmers' Daily, Beijing, China June-July 2016

- Interview agricultural producers in Shanxi province.
- Generate news articles based on interviews and research.
- Publish news articles as second or third writer
- Attend conference held by Ministry of Agriculture of the PRC.

TEACHING EXPERIENCE

- AEM 4500 / ECON 3860 / AEM 5500: Resource Economics Spring 2021 - present
Teaching Assistant for Professor C.-Y. Cynthia Lin Lawell
Cornell University
Teaching evaluations overall rating:
4.91 out of 5.0 (Spring 2021)
[course was not offered in Spring 2022]
4.86 out of 5.0 (Spring 2023)
4.74 out of 5.0 (Spring 2024)
- AEM 4515 / AEM 5515 / ECON 3870: Business and Economics of Energy Fall 2022
Teaching Assistant for Professor Todd Gerarden
Cornell University
- AEM 2220: Foundational Perspectives and Contemporary Issues in Entrepreneurship Spring 2022
Teaching Assistant for Professor Robert Karpman
Cornell University
- AEM 3310: Introduction to Business Regulation Fall 2020, Fall 2021
Teaching Assistant for Professor Robert Karpman
Cornell University
- Guest Lecture on Effects of Entrepreneurship on Economy March 2022
AEM 2200: Foundational Perspectives and Contemporary Issues in Entrepreneurship
Cornell University
- Guest Lecture on Women and Minorities in Entrepreneurship - A Case Study in Venture Capitalists April 2022
AEM 2200: Foundational Perspectives and Contemporary Issues in Entrepreneurship
Cornell University
- Guest Lecture on Introduction to Energy Regulation in the United States November 2021
AEM 3310: Introduction to Business Regulation
Cornell University

SERVICE

- Vice-President, Applied Economics and Management (AEM) Graduate Student Association,
Cornell University (2019-2022)
- Proctor, Student Disability Services (SDS), Cornell University (2022-present)

MEDIA CITATIONS

“Tong Wu awarded Western Forest Economists (WFE) Forest Business Economics Award”. Cornell University Think-tank for Resources, Energy, and the Environment: Science and Policy-related Economic Analysis and Research (TREESPEAR). November 2023. URL: https://treespear.dyson.cornell.edu/tong_wu_awards_WFE_ForestBusinessEconomicsAward.html

“Tong Wu presented at NAREA, AERE@WEAI, and AAEA”. Cornell University Think-tank for Resources, Energy, and the Environment: Science and Policy-related Economic Analysis and Research (TREESPEAR). August 2022. URL: https://treespear.dyson.cornell.edu/tong_wu_news_NAREA_AERE-WEAI_AAEA.html

SKILLS

Proficient in Microsoft Excel, Word, PowerPoint, MATLAB, R, STATA, Zotero.