

Hanae Bouazza

Department of Economics, University of Massachusetts Amherst

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H-Index: 1 (Google Scholar)

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Education

Ph.D. in Economics, University of Massachusetts Amherst, 2026

M.A. in Economics, University of Massachusetts Amherst, 2023

B.A. in Economics (Double Major: Mathematics), Trinity College, 2020

A.A. in Business Administration, Tunxis Community College, Valedictorian 2017

Additional degrees (Morocco): Professional M.A. in Communication, Université Mohamed V, 2012;

B.A. in Telecommunications, Ecole Marocaine des Sciences de l'Ingénieur 2003; A.A. in Computer and Telecommunications Business, ISTA, 2001

Fields

Primary: Macroeconomics

Secondary: Econometrics

Comprehensive Exams

Macroeconomics

Microeconomics

Dissertation

Title: "Land-Use Factors in the Green Transition"

Summary: Explains variability and harmonizes land-use metrics across studies; explores dual-use strategies' technical, economic, and social impacts; demonstrates 100% renewable energy is achievable with minimal new land disturbance through strategic siting.

Committee: Robert Pollin (chair), Michael Ash, Mara Prentiss, Juniper Katz

Job Market Paper: "Land-Use Factors in Green Transition: Evidence from Germany and the US."

Publications Peer Reviewed

Pollin, Robert, and **Hanae Bouazza** (2024) *Considerations on inflation, economic growth, and the 2 per cent inflation target*. *Review of Keynesian Economics*, 1(aop):1-22.

Publications Under Review

Hanae Bouazza (Under Review) *Land-Use Factors in the Green Transition: Dual-Use Strategies and System Costs in Germany*. *Energy Policy*

Hanae Bouazza (Under Review) *Land-Use Factors in the Green Transition: Evidence from the U.S*. *Energy Policy*

Ahmed, Rasha, **Hanae Bouazza**, and Wensu Li (Working pape) *Consumer Attitude Towards Hybrid Shopping: Identifying Barriers and Opportunities*.

Public Scholarship

Pollin, Robert, and **Hanae Bouazza** (2023) *Two Percent Inflation Targeting Harms Growth. The American Prospect*, 1225 Eye Street NW, Suite 600, Washington, DC.

Research Experience

Research Assistant to Robert Pollin, UMass Amherst Fall 2022–Summer 2026
 Research Assistant to Robert Pollin and Michael Ash, UMass Amherst Summer 2022

Research Interests

◊ Renewable energy land-use economics ◊ Energy transition feasibility and cost analysis ◊ Dual-use deployment strategies and climate policy design ◊ Regional economic impacts of energy transitions ◊ Industrial policy for green transition ◊ Macroeconomic policy flexibility and inflation targeting frameworks

Teaching Experience

Visiting Assistant Professor, Trinity College Fall 2026–Spring 2027
Courses: Introduction to Statistics for Economics with Stata (2 semesters); The Macroeconomics of Structural Transformation (2 semesters).
 Visiting Lecturer, Trinity College Fall 2024–Spring 2026
Courses: Introduction to Statistics for Economics with Stata (3 semesters)
 Visiting Lecturer, Trinity College Fall 2022–Spring 2024
Courses: Introduction to Statistics for Economics (4 semesters)
 Teaching Assistant, University of Massachusetts Amherst Fall 2020–Spring 2022
Courses: Intermediate Macroeconomic theory (1 semester), Introduction to Microeconomics (1 semester), Introduction to Macroeconomics (2 semesters)
 Teaching Assistant, Trinity College Fall 2018–Fall 2019
Courses: Calculus II (1 semesters), Basic Econometrics (1 semesters), Introduction to Physics (1 semesters).

Teaching Interests

Environmental, Energy, and Ecological Economics

- ◊ Renewable energy and land-use economics
- ◊ Ecological macroeconomics

Macroeconomics

- ◊ Macroeconomics of structural transformation and industrial policy
- ◊ Economic growth and macroeconomic modeling

Economics Core Courses

- ◇ Statistics, econometrics, and mathematics for economists
- ◇ Applied data analysis with Stata and R
- ◇ Principles and intermediate microeconomics
- ◇ Principles and intermediate macroeconomics

Teaching Philosophy

I create learning environments where mastery builds confidence. Confidence encourages communication, and active participation strengthens understanding. By presenting complex economic concepts in accessible ways and maintaining extended office hours with an open-door policy, I ensure perseverant students can succeed regardless of background or preparation level.

Teaching Evaluations Summary

Trinity College, Instructor of Record, 2023–2026

Dimension	Accessibility	Preparedness	Enthusiasm	Organization
Average Score (5-point scale)	4.76	4.68	4.53	4.42
Teaching record	Six semesters of introductory statistics instruction			

Selected Student Comments:

“Prof. Bouazza managed to explain difficult and very “dry” content in a very interesting and clear way!! That’s not an easy task to achieve! Always very prepared and organized in class!!”

“I really appreciated the professor. Her willingness to help, flexibility, and eagerness to teach us the material and make sure we genuinely understood the material is extremely appreciated.”

“Instructor was an amazing and understanding Professor.”

UMass Amherst (Teaching Assistant, 2021–2022)

Dimension	Explained Clearly	Cleared Confusion	Interest in Helping	Welcomed Questions	Overall
Average Score (5-point scale)	4.91	4.89	4.94	4.97	4.75
<i>Sections taught</i>	<i>8 discussion sections, 2021–2022</i>				

Selected Student Comments:

“Breaking down large concepts and then applying it to the application problems in pieces was very helpful in understanding the material. Hanae has easily been one of the best teaching assistant’s I have had at UMass so far.”

“She truly loved teaching and always answered any questions and made sure we actually understood her explanations.”

Service and Leadership

Sustainability Committee, Co-Chair, Trinity College (2023–Present): Lead college-wide initiatives on environmental sustainability and climate action and coordinate cross-departmental collaboration on sustainability education and policy.

Panelist, “Fast Fashion and Global Wealth Inequality,” Trinity College (2024): Contributed economic analysis of fashion industry’s impact on global wealth distribution

Economics Graduate Student Organization, Co-Chair, UMass Economics Department (2023-2024): Represented graduate students in periodic meetings with department chair and organized faculty-student departmental assembly on curriculum reform and mentorship.

Seminars and Presentations

International Conference in Ecological Macroeconomics, September 2026 (forthcoming). Paper to be presented: “Ecological Macroeconomic Dynamics of the Energy Mix: A Theoretical Model with Evidence from Germany.”

The Political Economy Research Institute Conference 2022
Paper presented: “Considerations on Inflation, Economic Growth and the 2% Inflation Target.”

Awards and Fellowships

John Kenneth Galbraith Prize , Department of Economics, University of Massachusetts Amherst. 2026

Awarded annually for outstanding dissertation research using economic reasoning and evidence to inform public discussion in the spirit of John Kenneth Galbraith

Presidents Fellow , Mathematics, Trinity College. 2019-2020

Competitive merit-based award recognizing outstanding academic achievement and wide-ranging intellectual interests; selected by department nomination from Class of 2020

Phi Gamma Delta Prizes First Prize, Mathematics, Trinity College. 2019

Annual awards for outstanding work in mathematics courses

Phi Gamma Delta Teaching Fellowship , Mathematics, Trinity College. 2019

Valedictorian , Tunxis Community College. 2017

Languages and Skills

Languages: English (Fluent), French (Fluent), Arabic (Native)

Skills: Stata(Advanced), R(Advanced), LaTeX(Advanced), Excel(Advanced), Python(Basic)

References

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Dissertation Summary

Title: “Land-Use Factors in Green Transition”

The transition to renewable energy has sparked debate over land requirements for wind and solar power. My dissertation examines whether large-scale solar and wind deployment can support deep decarbonization while limiting new land disturbance and controlling energy-system costs. It harmonizes land-use metrics across the renewable-energy literature, develops a net land-use intensity measure that distinguishes new land disturbance from shared land use, and evaluates the land-energy yield-cost tradeoffs of alternative siting strategies. Using Germany and the United States as contrasting case studies, the dissertation combines land-cover data, technology performance assumptions, and levelized-cost estimates to compare single-use and dual-use deployment pathways. The findings show that renewables-dominant energy systems can be achieved with limited use of undisturbed land and lower total energy expenditures than recent fossil-based systems, provided that siting policies prioritize low-impact and dual-use options.

Chapter 1: Harmonizing Land-Use Metrics for Renewables

This chapter reviews and standardizes disparate land requirement metrics for solar and wind power, introducing a conversion framework that reconciles differences in capacity factor, operational phase, and siting definitions. The land-energy literature is notoriously difficult for non-engineering researchers and policymakers to navigate due to its heavy reliance on technicalities, varying definitions, and a lack of standardized measures. My motivation for this chapter arose from grappling with these complexities firsthand and recognizing a pressing need to simplify and harmonize the field for interdisciplinary audiences. The analysis demonstrates that focusing on direct land impacts, rather than total area, yields a more policy-relevant and comprehensible basis for comparing energy sources and guiding future planning.

Chapter 2: Dual-Use Siting and the Land-Energy Yield-Cost Frontier

This chapter develops a framework for evaluating dual-use solar and wind deployment across artificial surfaces, agricultural land, water bodies, and undisturbed land. It introduces net land-use intensity, a measure of new land disturbance, and combines it with capacity factors and levelized costs to identify a land-energy yield-cost frontier across siting options. The analysis distinguishes land-saving from cost-saving strategies for high-energy-demanding economies facing different land and budget constraints. It also assesses the economic, environmental, and social limits of dual-use deployment, showing how siting design and governance affect the feasibility and acceptability of renewable transitions.

Chapter 3: Case Studies Germany and the United States

Case studies of Germany and the US are deliberately selected to illustrate contrasting land availability and policy regimes: Germany contends with scarce land and proactive regulation, while the US possesses ample land and a diverse, often fragmented policy landscape. Each case study uses harmonized metrics and conservative assumptions, systematically building on findings from previous chapters and integrating recent data. The analysis first estimates the dual-use potential for solar and wind across artificial surfaces, agricultural land, and water bodies, then calculates land and cost requirements under two scenarios: (1) a baseline with no dual use, and (2) an average dual-use deployment. Results indicate that both countries can feasibly meet clean electricity goals if dual-use strategies estimated at their average levels are maximized but only by accepting increased costs, confirming the importance of the land/cost tradeoff in energy planning. The policy section highlights regulatory bottlenecks, public acceptance, and implementation hurdles as decisive factors for land-efficient renewable scaling.