

Gender Representation in Economics Across Topics and Time: Evidence From the NBER Summer Institute

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The views expressed do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System.

Motivation: Representation of Women in Economics

American Economic Association declares that economics is not exclusively a man's field.

December 1971 AEA Meeting Resolutions

- Following resolution in 1971, CSWEP was formed.
- Share of women and minorities in economics has grown:
 - Female graduate students: 11% in 1973 → 30% in 2016.
 - Asst. profs at Ph.D. granting depts 7% (1974) to 28.3% (2016).
- Improvement has been dramatic, but still lower than STEM fields.

Alternative motivation, since my (female) coauthor couldn't come



This paper: an alternative approach to measuring women in economics

- Most previous work: representation of women in **economics departments**

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This paper: an alternative approach to measuring women in economics

- Most previous work: representation of women in **economics departments**
- Our paper: hand-collected panel data (2001-2016) to measure female economists on the program at the NBER Summer Institute.
- Use data to measure female representation across both **time** and **subfields**.



Labor Studies
Corporate Finance
etc.

The importance of conference presentations

- Presenting at conferences is valuable:
 1. Showcase new work
 2. Receive feedback from audiences of peers
 3. Facilitate collaborative networking
 4. Prestige & enhanced visibility
 5. Metrics of external recognition
 - critical to professional advancement
- Our goal: measure the presence of women at conferences
- Does this representation reflect the overall presence of female economists?

What is the NBER Summer Institute?

- Annual three-week conference hosted by the NBER in July
- 2,763 registered participants from 440 academic & policy institutions



July 2017						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

What is the NBER Summer Institute?

- Annual three-week conference hosted by the NBER in July
- 2,763 registered participants from 440 academic & policy institutions
- Advantage of NBER SI data → cross-field variation:
 - **macroeconomics** (e.g. Economic Fluctuations and Growth)
 - **applied microeconomics** (e.g. Labor and Public)
 - **finance** (e.g. Asset Pricing + Corporate)



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The calendar for July 2017 shows three overlapping colored bars representing the NBER Summer Institute sessions: a yellow bar from July 3 to 15, a blue bar from July 10 to 22, and an orange bar from July 17 to 29.

What's new?

Our work is new in three ways:

1. New metrics on female representation over time at conferences
→ extension of Cunningham and Zavodny (2012)
2. New metrics on **heterogeneity** across sub-fields
→ quantify “folk wisdom” on gender disparities
3. Data on acceptance / rejection decision, conditional on submission

Main Findings

Measurement

- From 2001-2016:
 - Share of female authors: 18.5% ↗ 20.6%
 - Persistent gap between subfields
 - finance (14.4%)
 - macroeconomics (16.3%)
 - microeconomics (25.9%)
- % female authors \approx % tenure-track profs, but 10 p.p. lower than share of female asst profs

Channels

- *Conditional on submission*, acceptance rate for women is **statistically indistinguishable** to that of men
- **Within conference program**, when a woman organizes the program, the share of female authors and discussants is higher.

Conference data is scraped from NBER website

- Conference data constructed from public schedules
 - Total of 6,867 papers & 17,474 authors and discussants for 2001-2016.

SI 2018 Corporate Finance

Antoinette Schoar and Amir Sufi, Organizers

July 9-10, 2018

Ballroom

Royal Sonesta Hotel

40 Edwin H. Land Blvd.

Cambridge, MA

Monday, July 9

Corporate Governance

10:20 am

Wei Jiang, Columbia University and NBER

Alon Brav, Duke University and NBER

Tao Li, University of Florida

Picking Friends Before Picking (Proxy) Fights: How Mutual Fund Voting Shapes Proxy Contests

Discussant: Dirk Jenter, London School of Economics

11:10 am

Erik P. Gilje, University of Pennsylvania and NBER

Todd Gormley, University of Washington in St. Louis

Doron Y. Levit, University of Pennsylvania

The Rise of Common Ownership

Discussant: Nancy L. Rose, Massachusetts Institute of Technology and NBER

Conference data is scraped from NBER website

- Identify gender of authors + discussants in two steps:

1. Use first names to construct gender probability:

$$\hat{p}_{male} = \hat{\Pr}(\text{male}|\text{name})$$

2. **male** $\equiv \hat{p}_{male} > 0.95$
female $\equiv \hat{p}_{female} > 0.95$

3. For unidentified names, we identify manually.

- 5,604 of 7,215 authors are automatically identified

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Data: Submissions Data

- NBER provided acceptance rate data by gender for 2016 + 2017
- To preserve anonymity, NBER reported acceptance rates semi-aggregated format
 - **macroeconomics** (e.g. Economic Fluctuations and Growth)
 - **applied microeconomics** (e.g. Labor and Public)
 - **finance** (e.g. Asset Pricing + Corporate)
- This identifies

$$\mu = Pr(\text{Acceptance}|\text{Submission, Male}) - Pr(\text{Acceptance}|\text{Submission, Female})$$

but not

$$\mu^* = Pr(\text{Acceptance}|\text{Male}) - Pr(\text{Acceptance}|\text{Female})$$

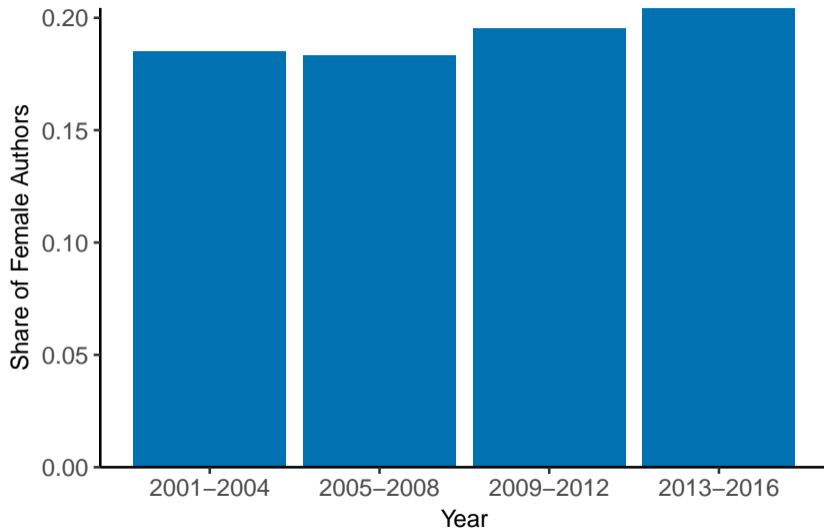
Choice of benchmark for comparison

- We compare our time series to two sets of benchmarks:
 - CSWEP annual survey data
 - NBER affiliate membership
- CSWEP data measures 126 economic departments from universities with graduate programs
 - shares of female professors at different levels of seniority over time
- We identify all NBER members from website
 - Measure the gender of member using name

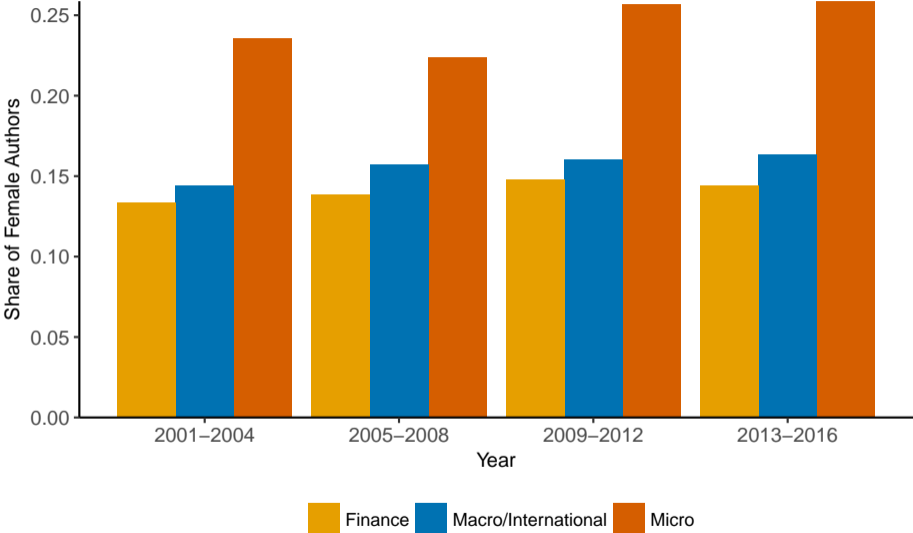


Results

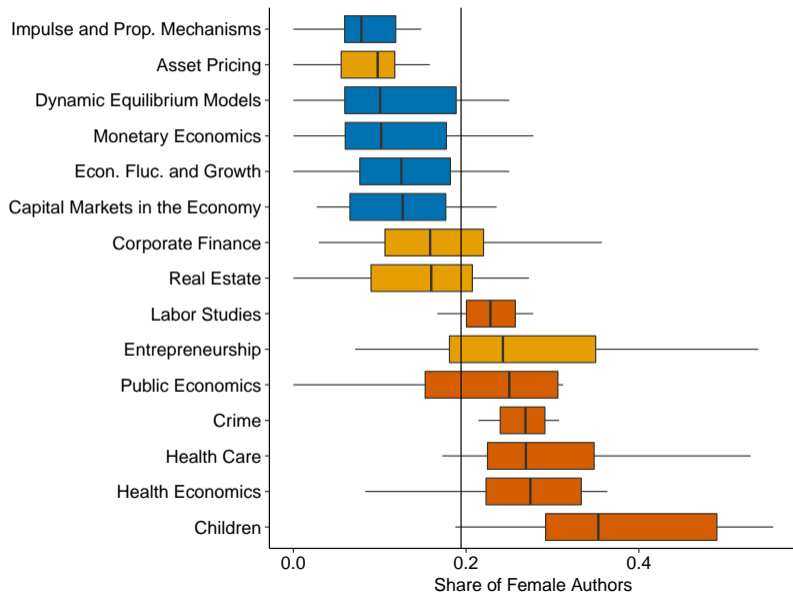
Time-series patterns in aggregate



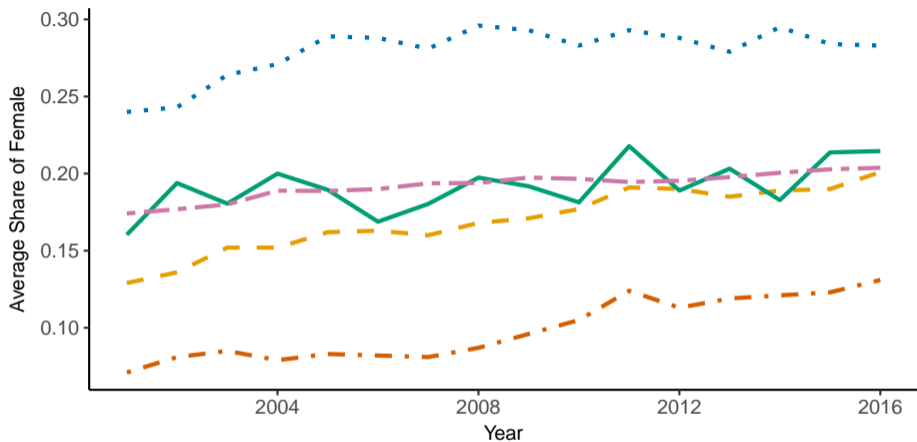
Time series patterns across sub-fields



Gender distribution across programs

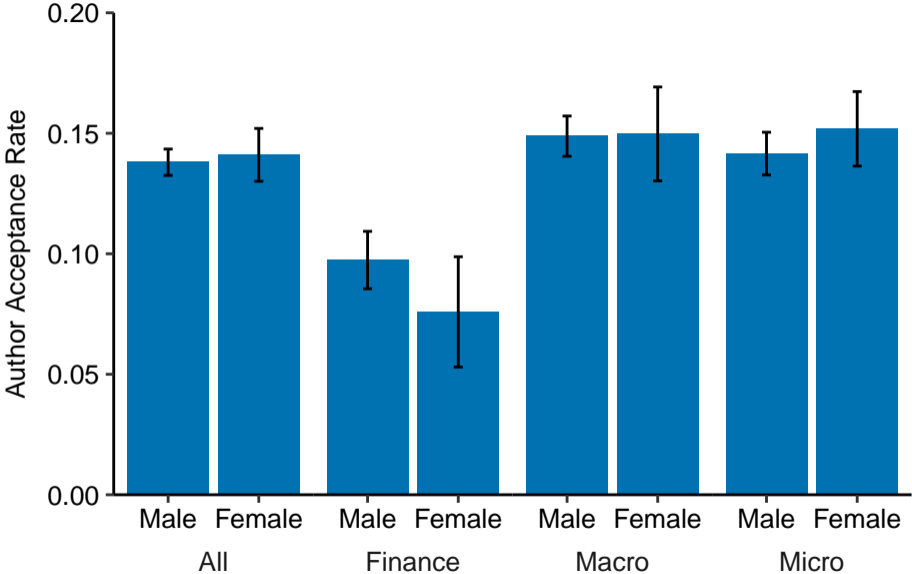


Benchmarking the share of women



— All Tenure Track - Full Professor - NBER Members
- Assistant Professor - NBER Authors

Acceptance rate across submissions (2016+2017)



Role of Organizer Gender and Female Authorship

$$\text{Female Share}_{it} = \alpha_j + \alpha_t + \text{Female Organizer}_{it} + \epsilon_{it} \quad (1)$$

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$$\text{Female Share}_{it} = \alpha_j + \alpha_t + \text{Female Organizer}_{it} + \epsilon_{it} \quad (1)$$

	(1) Share Female	(2) Share Female	(3) Share Female	(4) Share Female	(5) Share Female	(6) Share Female
Any Female Organizer	0.027 (0.020)	0.035** (0.015)	0.032* (0.016)			
× Finance				-0.040 (0.043)	-0.039*** (0.007)	-0.022 (0.016)
× Micro				-0.002 (0.029)	0.025 (0.016)	0.022 (0.017)
× Macro				0.067** (0.027)	0.072*** (0.026)	0.064** (0.029)
Observations	654	654	544	544	544	544
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Program FE	No	Yes	Yes	No	Yes	Yes
Field-Year FE	No	No	Yes	No	No	Yes

- We cannot fully rule out reverse causality → as the share of women increases, more women are organizers & featured on the program.

Role of Organizer Gender and Female Discussants

$$\text{Female Discussant}_{it} = \alpha_i + \alpha_t + \text{Female Organizer}_{it} + \epsilon_{it} \quad (2)$$

	(1) Share Female	(2) Share Female	(3) Share Female	(4) Share Female	(5) Share Female	(6) Share Female
Any Female Organizer	0.048*** (0.015)	0.035* (0.020)	0.030 (0.024)			
× Finance				0.116** (0.055)	0.117** (0.056)	0.083 (0.060)
× Micro				0.045** (0.021)	0.031 (0.023)	0.037 (0.036)
× Macro				0.052*** (0.017)	-0.007 (0.021)	-0.009 (0.024)
Observations	321	321	255	255	255	255
Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Program FE	No	Yes	Yes	No	Yes	Yes
Field-Year FE	No	No	Yes	No	No	Yes

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Discussion

- Stagnant trends of women at NBER SI
- Striking differences across subfields
- *Not* driven by acceptance
- Potential channel with submissions
- Suggests a policy of improving breadth of call for papers

Female Conference Speaker				
B	I	N	G	O
Women just aren't interested in this field	There aren't enough qualified female speakers	We need big-name speakers, and few of those are women	It's a male-dominated field	There aren't a lot of women in C-level positions
Both women we called were booked that weekend	Both women we booked were bailed at the last minute	All the women were probably busy	Female speakers are always burnt out from speaking so much	Trying to get more female speakers is sexist
The organizers just wanted to get the best speakers they could find	You can't kick out a male speaker just to fit a woman in there	FREE	You can't shoehorn in a woman where she doesn't fit	Women never volunteer to present
You have to be bold; people aren't just going to invite you to present	Women are shy	Women only ever want to talk about woman-stuff	Women need to act more like men	No one has complained about this before
Attendees want to hear from people like themselves	Well, there aren't that many female attendees, either	We're only responding to demand	Fine, YOU tell me who they should have invited	Who? I've never heard of her.