

# Opportunities for Economics Research

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# Outline

1. Benefits of research experience
2. Types of opportunities
3. Faculty demand for research help
4. Preparing yourself for opportunities
5. Q & A

## Who benefits from undergraduate research experience?

People who want to:

- ▶ do a Ph.D. (especially in economics)
- ▶ explore whether they want to do a Ph.D.
- ▶ do independent research
- ▶ do a masters in economics
- ▶ work in an economic analyst position

How would a research experience fit with your goals?

- ▶ What type of experience?
- ▶ Do you need to set up a progression of experiences?

## Research opportunities at SU for econ undergrads

### Workshops, information and training

- ▶ ESA workshops (like this one!)
- ▶ SOURCE FAQ
- ▶ SOURCE Explore Program
- ▶ CFSA-SOURCE Emerging Research Fellows Program
- ▶ McNair Scholars Program

### Supervision of independent projects

- ▶ Skepticism of non-paid, non-credit arrangements
- ▶ Distinction program in economics
- ▶ Honors capstone
- ▶ Independent study course

## More opportunities at SU: Research assistant (RA) positions

With Economics department faculty

- ▶ Helping a professor with their research project(s)
- ▶ Typically funded through SOURCE or other grants that faculty members apply for

Some centers/institutes on campus hire RAs, such as

- ▶ [Maxwell X Lab](#)
- ▶ [Lender Center for Social Justice](#)
- ▶ [Autonomous Systems Policy Institute](#)
- ▶ [Dynamic Sustainability Lab](#)

## Research opportunities outside SU

### Research assistant positions (“Pre Docs”)

- ▶ Professors at other universities hire people just out of undergraduate studies ([#EconTwitter](#) and [@econ\\_ra](#); [NBER list](#))
- ▶ Federal Reserve Banks
- ▶ Think tanks & NGOs (e.g. Peterson Institute, World Bank)
- ▶ Economics consulting firms

List of training programs curated by the AEA & CSMGEP

# What is actually involved in a research experience?

Lots of variation

1. Theorizing and formulating hypotheses
2. Literature review and other summaries, writing
3. Finding, cleaning, exploring and summarizing data
  - ▶ Can be mostly manual
  - ▶ or highly technical
  - ▶ or both
4. Statistical analysis
5. Documentation!!!

## Finding opportunities at SU



1. [My mailing list](#)
2. [ESA outlook group](#)
3. Handshake
4. Generate opportunities through relationships with professors

QR code: my mailing list



## Costs v. benefits

Will the benefits of bringing an RA onto this project outweigh the costs?

- ▶ Benefits: more work will get done
- ▶ Costs: salary and time (for training, providing guidance, coordinating and managing)

More important: uncertainty about both benefits and costs (your professors are not risk neutral!)

- ▶ What's my best guess at the investment I will have to make versus the payoff?
- ▶ How bad will it be if it's bad?

# Asymmetric information

You know more about yourself than the professor does

Various ways to communicate (send signals) about yourself

- ▶ Listing skills / experience / characteristics on resume
  - ▶ It's good to summarize on resume, but talk is cheap!
  - ▶ Need to send costly and/or verifiable signals
    - All the things I suggest on the following slides actually *make you better able to contribute* as well
- ▶ Narrative in cover letter
- ▶ Hard evidence of skills / experience / characteristics
- ▶ Recommendation from someone credible

# Resume

## Summary of skills and experiences

- ▶ List relevant learning, e.g. workshops, jobs, classes
  - ▶ ECN B.S. strictly preferred to B.A.
- ▶ List your relevant skills, e.g. software, languages

## What's most likely to be relevant?

- ▶ Read job posting carefully
- ▶ Things that demonstrate that you are reliable and careful
- ▶ Things that demonstrate the items on the next few slides

## Cover Letter

1. Read their papers, show interest in what they do
2. Relate what they care about to your goals
3. Describe *why* you're interested in the opportunity
4. Tell more about your relevant learning, e.g. SOURCE workshops, jobs, classes
  - ▶ Especially *why* you did it
  - ▶ See recommendations on next few slides
5. Tell how you **will** prioritize their work and be reliable

# Hard evidence (1)

## 1. Classes with good grades

- ▶ **ECN 310** “Economic Research in Practice”
- ▶ Statistics
  - ECN 521/522 as early as possible
  - Could take MAT 221/222 earlier; MAT 521/525
- ▶ Data Science, e.g.
  - IST 256: Introduction to Application Programming (Python)
  - IST 387: Introduction to Applied Data Science (R)
  - IST 414: Data Driven Inquiry
  - IST 421: Information Visualization
- ▶ Coding, e.g. CIS 252: Introduction to Computer Science
- ▶ Math: 295/296; 397; 331; 375; 412; 531
- ▶ WRT 205: Critical Research and Writing

## Hard evidence (2)

1. Classes with good grades
2. Certification in statistical software
  - ▶ [Excel](#) is good first step, free to Maxwell students
  - ▶ Stata and R are most widely used among economics faculty
    - [Tutorials and resources](#) on ESA's website
    - R on Coursera
    - LinkedIn Learning is free for SU
    - Could also look on Udemy, Udacity, EdX
    - DataCamp, Pluralsight (not sure about certificate)
  - ▶ Any proof of coding / stats skill (Python, SPSS, etc.) is valuable

## Hard evidence (3-4)

1. Classes with good grades
2. Certification (Excel, Stata, R, etc.)
3. Something you've done on your own
  - ▶ Do free course or on-line training (no certificate) but do a short project using the skills, e.g. a [Shiny App](#)
  - ▶ [Github repo](#) with small project
  - ▶ Frank DiTralia's [Econ 224 course materials](#)
  - ▶ <https://empirical-methods.com/>
  - ▶ Knowledge of LaTeX impresses, but lower impact than statistical software
4. Something you produced in a class or for a job

# Recommenders

1. Build relationships with faculty
  - ▶ Get advice similar to what I've told you, but specialized to your interests
  - ▶ This can generate opportunities personal to you that otherwise wouldn't have existed
  - ▶ We have to expend social capital to recommend you
2. Freshmen: consider ECN 310 "Economic Research in Practice"
3. Work experiences (high school, internships, campus job, community work)



# Questions?