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Opportunities for Economics Research

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Outline

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

Research opportunities at SU for econ undergrads

Workshops, information and training

- ► ESA workshops (like this one!)
- ► SOURCE workshops
- ► Young Research Fellows Program
- ► McNair Scholars Program

Supervision of independent projects

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

More opportunities at SU: Research assistantships

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

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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

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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

QR code: my mailing list

1. My mailing list
2. ESA mailing list
3. Handshake
4. Generate opportunities through relationships with professors

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?

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What are Profs Looking For?

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

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

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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)

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Questions?