The Demand for Internship Experience

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Background on the internship market: Jaeger, Nunley, Seals, and Wilbrandt (2019)

• Internships are increasingly becoming an important part of the labor market.
  • Over half of college students intern
  • Many internships turn into jobs

• Internships tend to be unpaid (62%), and they tend to be part time (72%).

• Strong link between paid/unpaid and part-time/full-time status:
  • Part-time internships tend to be unpaid (75%)
  • Full-time internships tend to be paid (71%)
Internships per 100,000 18-25 year olds
Background on the internship market: Jaeger, Nunley, Seals, and Wilbrandt (2019)

- Internships are more common in the following occupation categories:
  - Business and financial operations
  - Arts, design, entertainment, sports, and media
  - Sales

- The internship market behaves much like the regular labor market.
  - When the internship is more "job-like", firms tend to pay.
  - When unemployment is low, firms are more likely to pay.
  - In areas with higher minimum wages, firms are less likely to pay.
Do internships help students in the labor market?

• Lots of anecdotal evidence that internships lead to regular employment.

• Studies tend to find a positive correlation between interning and employment outcomes.

• Only two studies rely on randomized or natural experiments to measure the causal effect of interning:
  • Nunley et al. (2016)
    • 14% higher probability of receiving callbacks from employers
  • Saniter et al. (2018)
    • 6% rise in earnings over the life cycle
Our study

• Study initial employment prospects for new college grads using a résumé audit study.
  • Identical audits in 2016 and 2017 (March – July).
  • Submitted 37,872 unique, randomly generated resumes to 9,468 job openings.
  • Résumé characteristics were randomly assigned to fictive applications, which includes 60 different types of internship experience.
  • Outcome of interest is employer callbacks (interview requests, positive responses)
• Use machine-learning algorithm to classify student internships and job openings into detailed occupation categories.
• Link audit data with the data from the Occupational Information Network (O*NET) to examine task content of internships and jobs and how they might interact.
Applicant characteristics

• The fictive applicants were randomly assigned the following:
  • Name
  • Address
  • University
  • Major
  • Grade point average
  • Work experience during college
  • Basic computer skills (e.g., Microsoft Applications).

• Portions of the fictive applicants were assigned the following:
  • Minors
  • Different types of internship experience
  • Volunteer experience
  • Ability to speak Spanish
  • Receipt of study-abroad scholarships
  • Skills associated with data management, manipulation and analysis.
What can our data tell us?

• A large percentage of interns end up working for that same firm as an employee.

• But some do not place with the same firm.

• Some answerable questions:
  • Do internships help these students?
  • Do the characteristics of the student internships matter?
  • Do student internship characteristics interact with the tasks required by jobs?
  • Does the intensity of the tasks completed as part of the student internship affect employer demand?
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<thead>
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<th>(2)</th>
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<tbody>
<tr>
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<tr>
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</tbody>
</table>

*Notes: The full sample of 37,872 observations is used, which creates 9,468 unique clusters. Standard errors with one-way clustering on job advertisements are in parentheses. *p < 0.10, **p < 0.05, ***p < 0.01*
Effect sizes

• Overall, the effect of interning appears to be small.
  • Callback rate rises by about 4-5% (0.6 percentage points)

• However, the overall estimate masks some heterogeneity:
  • Overall effect is driven solely by greater returns for internships that require social interaction (e.g., persuasion, coordination, social perceptiveness).
  • These types of internship experiences raise the callback rate by about 9% (1.1 percentage points).
  • Analytical internships do not appear to affect callback rates.
Tasks Required by Employers

• Using the occupation codes assigned to the ads, we incorporate the tasks required by firms.
• To do this, we follow Deming (2017).
• Three measures:
  • Social skill task intensity
  • Nonroutine cognitive task intensity
  • Routine task intensity
• Group these into "high" and "low" bins.
• Examine these subsamples.
## The Effects of Internship Experience on Callback Rates by Task Intensity

<table>
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<th>Social Skills (1)</th>
<th>Nonroutine Cognitive (2)</th>
<th>Routine (3)</th>
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<td>(N)</td>
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</table>

**Notes:** The top panel examines a subsample of jobs assigned high values for social skill task intensity, nonroutine cognitive task intensity, and routine task intensity, while the bottom panel examines a subsample of jobs assigned low values for the task content variables. Standard errors with one-way clustering on job advertisements are in parentheses.

* * p < 0.10, ** p < 0.05, *** p < 0.01
Examining employer responses to task intensity

• Examine a subset of the data that includes only applicants with internship experience.

• For each detailed occupation, we compute share of applicants receiving callbacks and the average of each task intensity measures for the student internships.

• Measure employer responses (i.e. callback rates) against increases in task intensity.
Scatterplot with Linear Fit

Share Receiving Callbacks versus Social Skill Task Intensity

N=175
Conclusions

• Internships tend to improve job prospects for new college grads.

• The type of internship matters
  • Internships emphasizing social and interpersonal skills generate higher callback rates, but analytical internships do not.

• The type of job does not seem to matter very much
  • "Social" internships have robust, positive effects across jobs requiring different levels of task intensity.

• Employers appear to respond to the task content of students' internship experiences:
  • Callback rates rise with social skill task intensity.
  • Callback rates do not seem to vary with nonroutine cognitive task intensity.
  • Callback rates fall with routine task intensity.