DO WOMEN SHY AWAY FROM COMPETITION? DO MEN COMPETE TOO MUCH?

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1. Introduction

· Psychology studies suggest:
  · Boys: competitive games
  · Girls: noncompetitive activities, no winner, no clear end point
  · Adulthood: more men than women describe themselves as competitive

· Do men and women differ in their preferences for competition?

· If men more competitive than women:
  Chance of women succeeding in competitions for promotion and lucrative jobs decreases
2. Theory

What may cause men and women of equal ability to differ in their propensity to enter a competitive environment?

• Men enter the tournament more than women because they:
  • ... like to compete (1)
  • ... are more overconfident (2)
  • ... are less risk averse (3)
  • ... are less averse to feedback (4)
3. Experimental Design

5 minutes, solve as many as possible:

| 21 | 35 | 48 | 29 | 83 |

→ No gender differences in ability on easy math tests expected

· University of Pittsburgh
· 80 subjects, 20 groups → 2 men, 2 women in each group
· $5 show-up fee, $7 for completing the experiment, $ from selected task
· 4 Tasks, one of it randomly chosen for payment
· Information about absolute performance after each task
· relative performance revealed at the end of the experiment
3. Experimental Design

**TASK 1: PIECE RATE**
- $0.50 per correct answer

**TASK 2: TOURNAMENT**
- $2 per correct answer for the winner, others receive $0.

**TASK 3: CHOICE OF COMPENSATION SCHEME FOR FUTURE PERFORMANCE**
- If piece rate: $0.50 per correct answer
- If tournament: $2 per correct answer if score of task 3 > scores of other group members from task 2

**TASK 4: CHOICE OF COMPENSATION SCHEME FOR PAST PIECE RATE PERFORMANCE**
- If piece rate: $0.50 per correct answer
- If tournament: $2 per correct answer for the winner
3. Experimental Design

Belief-assessment question

• Subjects have to guess their relative performance (rank 1 to 4)
• $1 for correct guess
• Elicit for Task 1 and 2 because same incentive scheme for everyone
4. Results

A. Performance in Piece Rate and Tournament

<table>
<thead>
<tr>
<th></th>
<th>women</th>
<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piece Rate</td>
<td>10.15</td>
<td>10.68</td>
</tr>
<tr>
<td>Tournament</td>
<td>11.8</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Probability of winning the tournament:

- Conditional on gender: 26% men, 24% women
- Conditional on performance:
  - 13 problems: 26.6%
  - 14 problems: 47.8% women, 47.7% men
  - 10 problems: <2%
  - 15 problems: >70%

→ No gender differences in task 1 and 2
4. Results

B. Gender Differences in Tournament-Entry

• Choosing Tournament depends on:
  • beliefs regarding own ability
  • other players past performance

• Despite similar performances:
  • 73% of men entered tournament
  • 35% of women entered tournament

→ Gender gap in tournament-entry is substantial and significant
4. Results

C. Tournament-Entry Decision Conditional on Performance

<table>
<thead>
<tr>
<th>Probit of Tournament Choice in Task 3</th>
<th>Coefficient</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-.380</td>
<td>.00</td>
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<tr>
<td>Tournament</td>
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<td>.41</td>
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<tr>
<td>Tournament–piece rate</td>
<td>.015</td>
<td>.50</td>
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</tbody>
</table>

→ Performance under both compensation schemes does not affect tournament-entry decision, but gender does!

· Gender effect: **-0.380** (performance: 12 problems in task 1, 13 problems in task 2)

→ **Controlling for past performance, women are less likely to select a competitive compensation scheme**
5. Explanantion for the Gender Gap in Tournament-Entry

A. Does Greater Male Confidence about Relative Performance Explain the Tournament-Entry Gap?

• Relative to their actual rank, both men and women are overconfident: 75% of men, 43% of women

→ conditional on performance, women are significantly less confident about their relative ranking
5. Explanation for the Gender Gap in Tournament-Entry

B. Do General Factors Cause Gender Differences in Choice of Compensation Scheme?

• For a given performance, 40% of women and 30% of men would have higher earnings from submitting. But: 25% of women, 55% of men submit piece rate

→ absent future compensation: gender differences in general factors cause a gap in choice of compensation scheme among high performers
5. Explanation for the Gender Gap in Tournament-Entry

C. Do Preferences for Performing in a Competition Cause Gender Differences in Choice of Compensation Scheme

- Controlling for beliefs on relative performance: gender gap reduced from 37.9 to 27.8% points
- Controlling for the decision to submit the piece rate: gender gap reduced to 16.2% points

<table>
<thead>
<tr>
<th>Prob of Tournament-Entry Decision (Task 3)</th>
<th>Coefficient (p-value)</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td>-.379</td>
<td>-.278</td>
<td>-.162</td>
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<tr>
<td></td>
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<td>(.01)</td>
<td>(.01)</td>
<td>(.05)</td>
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<td>-.002</td>
<td>-.009</td>
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<tr>
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<td>(.01)</td>
<td>(.01)</td>
<td></td>
</tr>
<tr>
<td>Submitting the piece rate</td>
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<td>.258</td>
<td>(.012)</td>
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</tbody>
</table>

→ men and women differ in their preference for performing in a competitive environment
6. Conclusion

• Gender gap in tournament-entry caused by:
  • Men being more overconfident than women
  • Differences in preferences for performing in a competition

• Extend to other domains:
  • Gender differences in labor market outcomes because women dislike the process of negotiating
  • Women negatively interpret their grades and have low self-confidence

→ even in an environment where women and men perform equally well and where issues of discrimination or time spent on the job do not have any explanatory power, there are large gender differences in propensity to choose competitive environments
→ “create environments in which high-ability women are willing to compete“