“Rank Expectations, Feedback and Social Hierarchies”

Winning for the sake of winning

Agnieszka Anna Tymula

Motivation

Our framework captures the main features of the role of self-esteem on competitive behavior. Agent’s i’s expected utility is given by:

\[ E_i(u_i) = (1-p)E_i(y_i) + p[E_i(y_i) - E_i(y_j)] - \alpha + \gamma E_i(a_i) \ln(\beta - e_i + p s_i) \]

- does privately delivered feedback about relative position in the peer group influence productivity?

YES! Individuals’ utility is influenced by their relative position in the group. Feedback affects productivity and beliefs

Methods - Theory

$23 flat fee for participation

3 feedback conditions (p={0,0.5,1})

(P1) If the agent believes his ability is high relative to the ability of the competitor then he will produce more output and expect better relative performance when the likelihood of feedback increases.

(P2) After receiving good feedback about own ability (one is better skilled than he expected), the agent’s output will decrease, for most parameter values

(P3) If the agent learns that his competitor is better skilled than expected, he decreases his future output

(P4) When the agent’s beliefs about relative performance are revised upwards, he expects better relative performance in the future

Ex-ante effect of feedback

Output is increasing over time as top performers fight for best ranks

Ex-post effect of feedback

In line with theoretical predictions, (P3) and (P4), in our competitive set up women perform and expect to perform worse the more men there are in the group.

Other effects

Our research suggests that:

- Private information regarding relative performance influences individual’s utility.
- Feedback has effects on beliefs and productivity

These results imply that:

- Principal can mitigate moral hazard by optimally providing feedback to agents about their relative performance
- By changing the reference peer group a principal can motivate underperformers to increase their productivity

Conclusion

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\[ p = \text{probability of receiving feedback}; \ e_i = \text{effort}; \ a_i = \text{ability, skill}; \ y_i = \text{output}; \ s_i = \text{standard} \]

\[ k, \alpha, \beta, \gamma = \text{parameters} \]

Methods - Experimental

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Agnieszka Anna Tymula, Università Bocconi, agnieszka.tymula@phd.unibocconi.it; Coauthored with: Camelia Kuhnen, Kellogg School of Management; Supervisor: Prof. Pierpaolo Battigalli