The Effects of Performance—Contingent Financial Incentives in Online Labor Markets

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Various Incentives in Crowdsourcing
Related Work

- [Mason and Watts (2009), Rogstadius et al. (2011)] When the magnitude of performance-independent financial incentive increased, work quality was not improved.
  - Post-task surveys showed that worker’s perception of appropriate compensation amount was consistently higher than and increasing with the actual payment.

- [Harris (2011)] The quality of work was higher when performance-contingent financial incentives (both rewards and punishment) exists.
Research Questions

For performance—contingent financial incentives:

- Does the magnitude of financial incentives affect work quality and/or worker effort in online labor markets?
  
  **Higher pay: higher effort & better performance?**

- Will work quality and/or worker effort change if the magnitude of financial incentives changes in a sequence?
  
  **Increasing pay: higher effort & better performance?**
Package two tasks in one HIT (Human Intelligence Task)

Payment in each task = Base payment + Bonus or
Experiment Treatments

- Four bonus levels: 4 cents, 8 cents, 16 cents, 32 cents

- Ten treatments:
  - Base treatments: 4 cents—4 cents, 8 cents—8 cents, 16 cents—16 cents, 32 cents—32 cents
  - Treatments with increasing bonus: 4 cents—8 cents, 4 cents—16 cents, 4 cents—32 cents
  - Treatments with decreasing bonus: 8 cents—4 cents, 16 cents—4 cents, 32 cents—4 cents
Spotting Differences (SD) and Button Clicking (BC)

- Spotting Differences: Mainly requires cognitive skills
- Button Clicking: Mainly requires motor skills
Does the Magnitude Alone Matter?

- Both work quality and worker effort have similar mean values across 4 base treatments.
Can Incentives be More Effective in Sequence?

Change in the financial incentives over the subsequent two tasks affects both work quality and worker effort!
Interpretation of the Result

- **Anchoring effect** [Tversky and Kahneman (1974)]: People tend to rely heavily on the first piece of information to make judgment.

- **Fair wage–effort hypothesis** [Akerlof and Yellen (1988)]: If the actual wage is less than worker’s perception of fair wage, they will supply a corresponding fraction of their normal effort.

![Diagram showing the anchoring effect and fair wage–effort hypothesis with 4 cents and 5 cents.]
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Future Work

- Sequence with more than two tasks: Which reward matters the most?

- Anchoring effect in other dimension: anchoring on the difficulty levels?
Thank you!

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