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

Ming Yin¹, Yiling Chen¹, Yu-An Sun²

¹Harvard University  ²Xerox Innovation Group

Introduction

Financial incentives are commonly used in online labor markets such as Amazon Mechanical Turk (MTurk).
• But how effective are financial incentives in influencing worker effort and work quality?
• Increasing the magnitude of performance-independent financial rewards increases the quantity but not the quality of work [Mason & Watts 2009, Rogstadius et al. 2011].

Questions & Method

For performance-contingent financial rewards:
• Does a higher reward lead to better performance or higher effort of workers?
• Do changes in the magnitude of the reward affect workers’ performance or effort?

Experiment Settings

• Ten treatments with varying bonus levels (cents):
  Base treatments: 4-4, 8-8, 16-16, 32-32
  Treatments with increasing bonus: 4-8, 4-16, 4-32
  Treatments with decreasing bonus: 8-4, 16-4, 32-4

• Motor task - Button Clicking (BC)
  Work Quality: # of clicks on the green button

• Cognitive task - Spotting Differences (SD)
  Work Quality: # of differences correctly spotted
  Worker Effort: Total time and longest interval

Increasing Reward Better Performance / Higher Effort

• Work quality and worker effort increase (decrease) as the reward increases (decreases) in a sequence.

Interpretation

• Workers anchor their perception of “fair” payment on the initial bonus level that they receive and supply a corresponding fraction of their normal effort level.

• Workers exert more (less) effort, which leads to increase (decrease) in work quality, when they feel overpaid (underpaid).

Higher Reward Better Performance / Higher Effort

• Both work quality and worker effort have similar mean values across 4 base treatments for both types of tasks.