
Using Mechanical Turk to Collect Longitudinal Data

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Reasons to conduct longitudinal research

- Theoretical
 - Examine consistency or change over time
 - Understand how people respond to world events
 - Practical
 - Prescreening
 - Minimizing respondent burden
 - Separating measures to reduce cross-contamination
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What predicts attrition?

- For web studies:
 - “_(ツ)_/”
 - For traditional surveys:
 - Awareness (Ribsl et al., 1996)
 - Benefits (Donnellan & Conger, 2007)
 - Costs (Hoogendoorn, & Sikke, 1998)
 - Demographics (Radler & Ryff, 2010)
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Study Design

- 176 HITs (34,766 participants), for which eligibility is contingent upon completion of a prior HIT.
 - Retention rate: $\frac{\text{N of completes at T2}}{\text{N of completes at T1}}$
 - Top down modeling strategy using random effects meta-analysis
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Awareness Factors

- Were participants emailed about the survey?
 - Time interval between T1 and T2
 - Interaction between time interval and email
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Benefits (T1 and T2)

- Payment for completing the HIT
 - Hourly wage
 - +/- \$6 an hour threshold
 - Interaction between wage and threshold
 - Interaction between T1 wage and T2 wage
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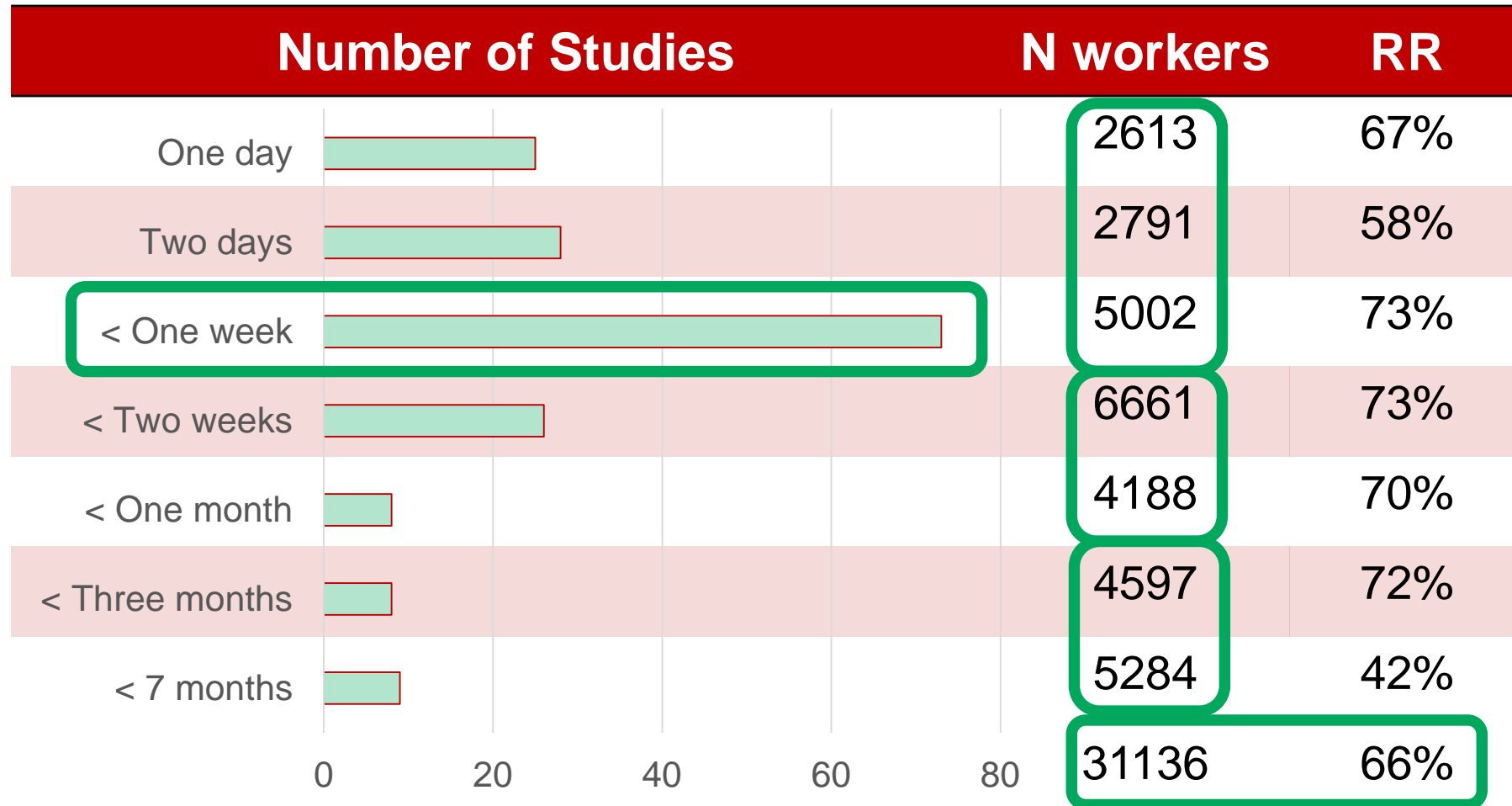
Costs (T1 only)

- Bounce Rate
- Completion Rate
- Difference between expected and actual duration

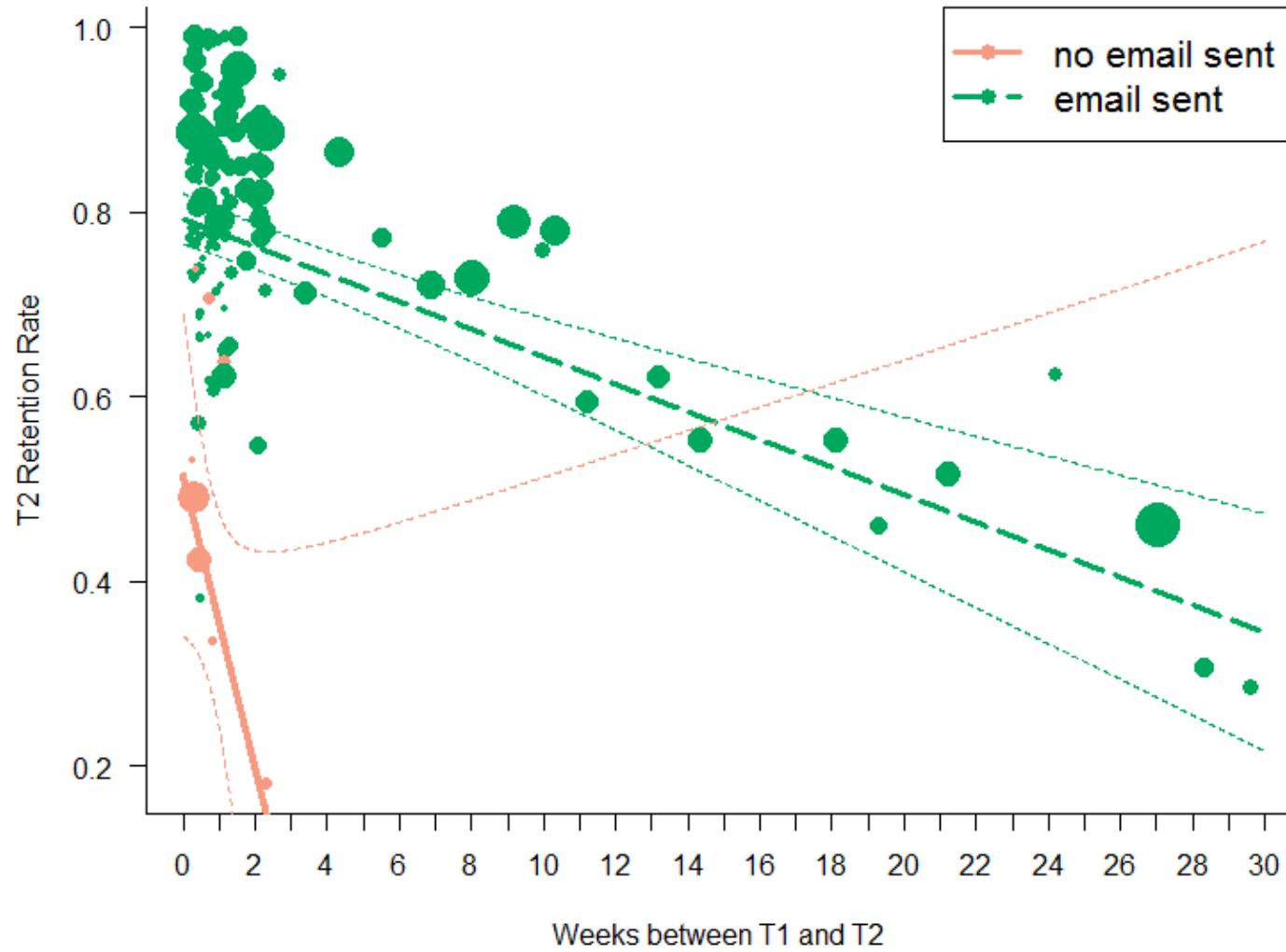
Demographics

- Minimum Hit Acceptance Ratio
 - Minimum number of previously completed HITs
 - Sample size at T1
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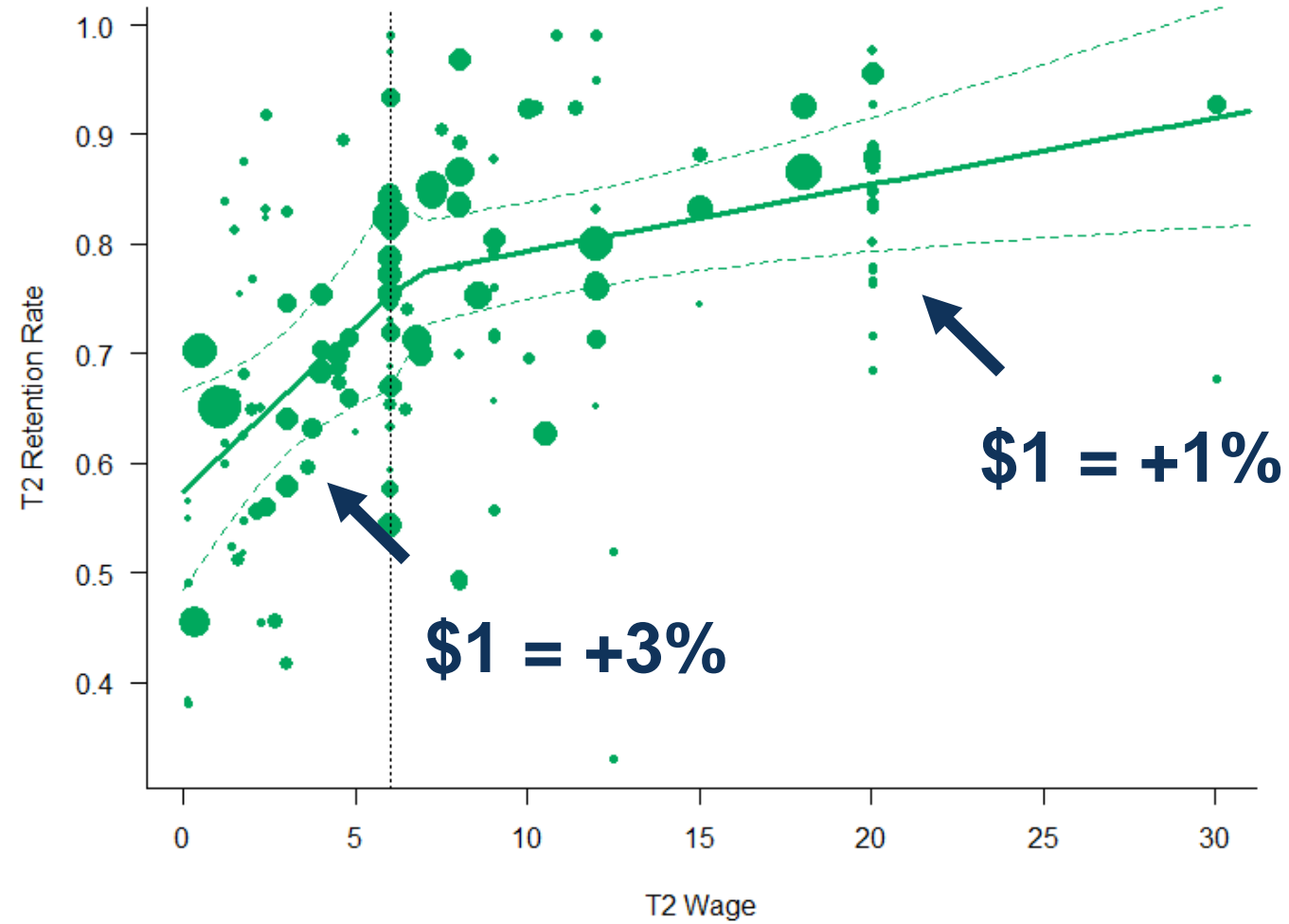
Sample description



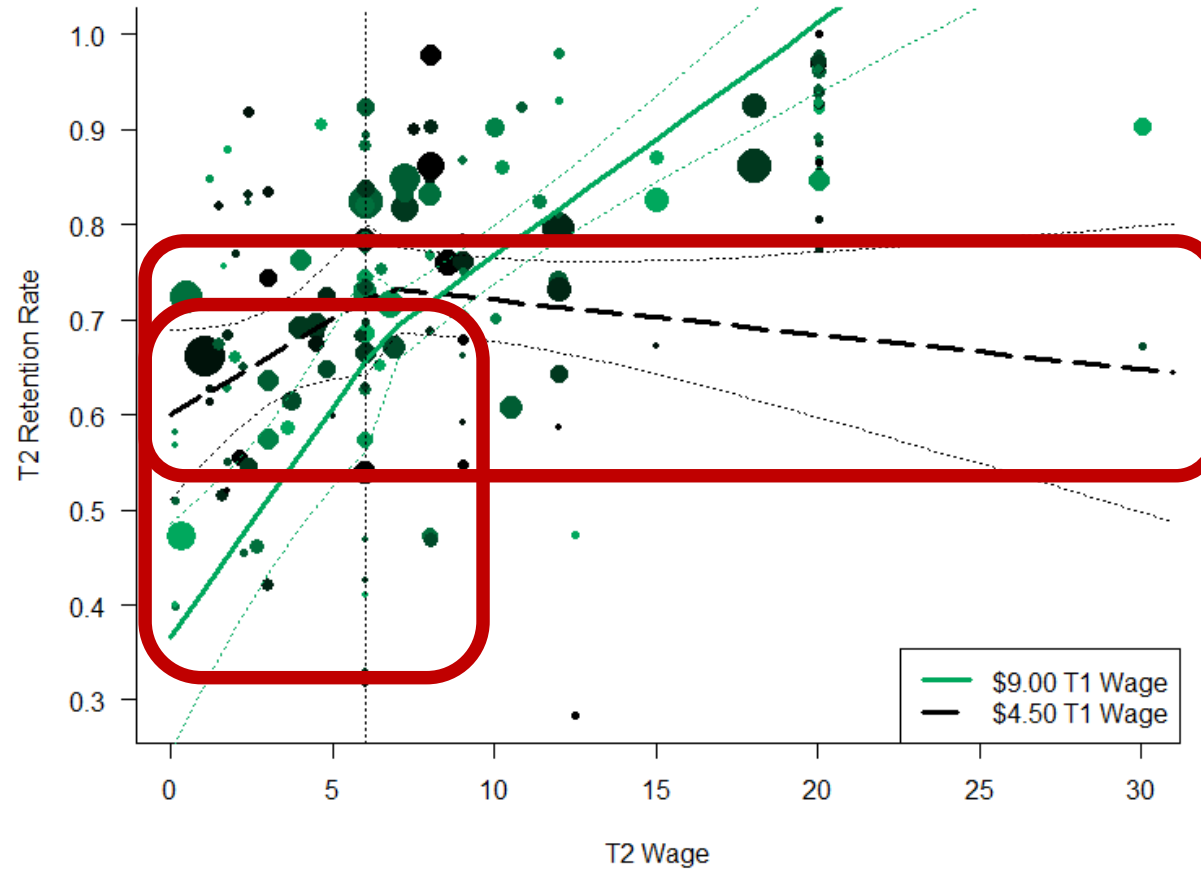
Awareness



Benefits (T2)



Benefits (T1 and T2)



Costs

- A 20% increase in bounce rate leads to a 3% decrease in retention ($B = .15, p < .001$)
 - What doesn't matter:
 - T1 completion rate
 - T1 discrepancy between stated and actual study length
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Demographics

- Requiring 95% HAR improves retention by ~6% (B = .0007, $p = .004$)
 - What doesn't matter:
 - Minimum number of completed HITs
 - Sample size at T1
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Ensuring successful longitudinal studies on MTurk

- Retention rates are decent (70%) in the short term
 - Use high quality workers
 - Emailing workers is critical
 - Pay more at T2 than at T1
 - Benefits of higher payment diminish after \$6/hr
 - Bounce rates are an early indicator of problems
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Thank you
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