

Which theory is best at explaining lying behavior: loss aversion or reputation?

Recent papers support both explanations:

- Pro reputation: Abeler et al.(2017), Gneezy et al.(2016)
- Pro loss aversion: Garbarino et al. (2016)

Research idea: Design an experiment for which the two theories yield opposing predictions

Manipulation of ex-ante probability q that lying is actually possible:

- Loss aversion: expectation dependent preferences à la Kőszegi and Rabin (2006) predict that lying **increases** in q
- Reputation: models combining lying costs and reputation costs predict that lying **decreases** in q

Experimental results

- Show up payment \$0.30
- Lottery: With $p=25\%$, a participant was entitled to an additional \$0.30
- Two treatments: $qH=90\%$ and $qL=50\%$
- Participants were informed that there exists a winning and a losing code
- In case of winning the lottery, they were only given the winning code
 - No possibility of downwards lying
- In case of losing the lottery, they would receive the losing code
 - With probability q , they would also learn about the winning code
- Payment only dependent on the code participants report to the experimenter
- 320 subjects in treatment H; 576 subjects in treatment L
 - Expected number of subjects who can lie is identical (216) in both treatments

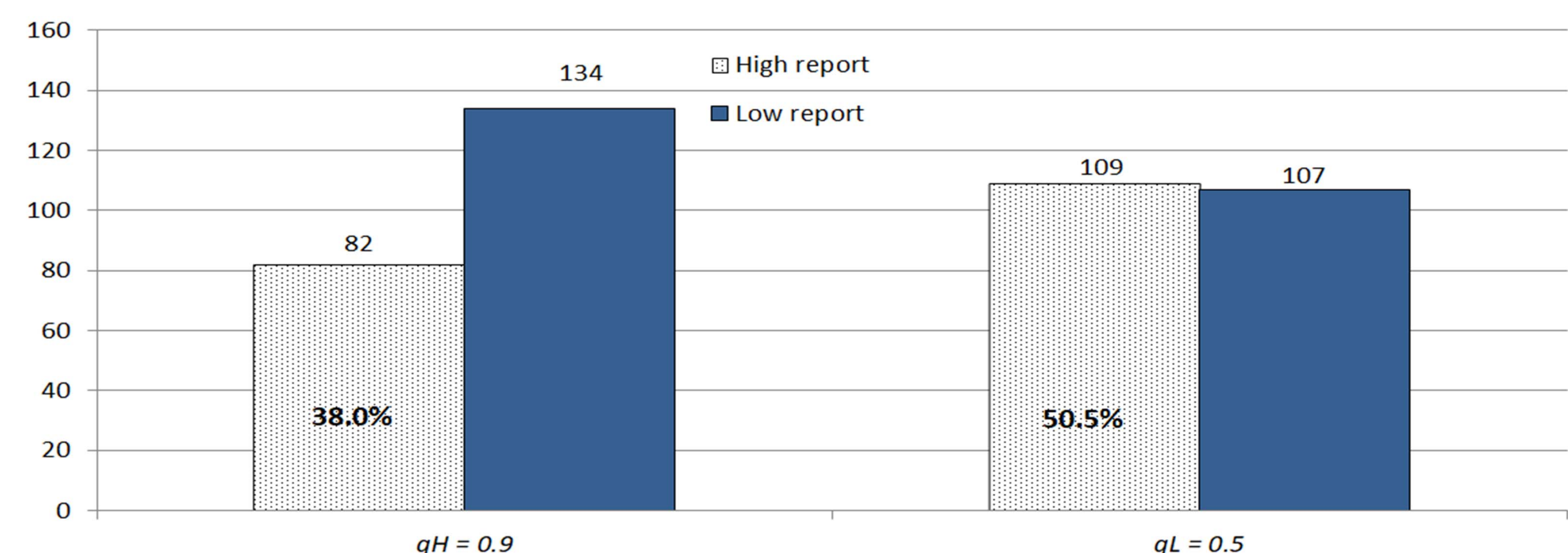


Chart 1. Reports given by individuals who were able to misreport. The difference between treatments is significant at the 1% level in a chi²-test.

Conclusion

- Results clearly in favor of reputation model
- “External” concerns have high predictive power, while focusing on internal concerns only is misleading
- Further evidence on hidden costs of control: reducing the probability that lying is possible partially backfires

Lying opportunities and incentives to lie: Reference dependence versus reputation

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Abstract and Theory

Abstract

Recent experiments on lying behavior show that the lying frequency in case of low outcomes increases in the ex ante probability of high outcomes. This finding is in line with models consisting of internal lying costs and external reputation costs, but also with models combining internal lying costs and loss aversion. To compare the explanatory power of these two approaches, we manipulate the ex-ante probability that lying is possible at all. We show theoretically that the reputation model predicts that the lying frequency decreases in the probability that lying is possible, while the loss aversion model suggests the opposite. Our experimental results strongly support the reputation model. From an applied perspective, our results suggest that safeguards for reducing the probability that lying is possible may (partially) backfire.

Time-line

$t = 0$	$t = 1$	$t = 2$	$t = 3$
An agent enters a lottery where the outcome is H with probability p and 0 with probability $1 - p$. Nature determines lying costs θ_ℓ .	The agent observes the outcome of the lottery, which is her entitlement $e \in \{0, H\}$ and private information.	High outcome is always reported. In case of low outcome, the agent can lie with probability q .	The agent reports and receives $m \in \{0, H\}$.

Expectation based reference points

- Consumption utility u_k and gain-loss utility μ à la Kőszegi and Rabin (2006):
 - $u(c|ref) = \sum_k u_k(c_k) + \mu(u_k(c_k) - u_k(ref_k))$
 - $\mu(x) = \eta_k x$ for $x > 0$ and $\mu(x) = \eta_k \lambda_k x$ for $x \leq 0$, where $\eta_k \geq 0, \lambda_k \geq 1$
- Two dimensions k : utility from monetary payoffs and utility from (no) lying costs
- Distinguish between lying and truth-telling strategy
- Personal equilibrium: strategy is incentive compatible (IC)
- Preferred personal equilibrium: IC strategy with highest ex-ante expected utility
- **Lying strategy** has an upper threshold for IC that **increases in q**
- **Truth-telling strategy** has lower threshold for IC that is **independent of q**
 - ➔ Utility difference between lying and truth-telling **increases in q**
- **Hypothesis:** The lying frequency in case the outcome is low and lying is possible increases in the ex-ante probability that lying is possible.

Reputation model

- Utility consists of monetary payoffs, lying costs, and reputation costs
 - $u_R = m - \theta_\ell l(m, e) - \theta_r \mathbb{E}_{\theta_\ell, \theta_r} [v(r)]$
 - l is an index variable that takes the value 1 if $m \neq e$ and 0 otherwise
- Reputation costs $v(r)$ are increasing in the lying frequency r assumed by outsiders after observing the high report
- Expected utility decreases in lying costs and reputation costs, therefore there exist types who are indifferent between lying and truth-telling
- If q increases, the lying frequency assumed by outsiders **increases**
 - ➔ An indifferent type now strictly prefers to tell the truth due to higher reputation costs
- **Hypothesis:** The lying frequency in case the outcome is low and lying is possible decreases in the ex-ante probability that lying is possible.

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