The impact of risk perception and risk attitudes on corrupt behavior: Evidence from a petty corruption experiment

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Motivation
Petty corruption

Def: behavior where the public is required to bribe (low level) bureaucrats to make them do what they have to do anyway or speed up the bureaucratic process on a regular basis. (Jain 2001)

Characteristics

- Almost anonymous interaction between briber and bribee
- Typically occurs at a high frequency
- Small amounts of bribes are involved
- Detection rate is rather small
- Particular problem in developing and transition countries (e.g. in South Africa third most prevalent crime after housebreaking and theft in 2007)
Petty corruption and the role of risk perception

- Top-down monitoring is found to have an important role in combating corruption → does this extent to the case of regular bribes as in the case of petty corruption.
- What do we learn about individual risk perception in the case of compound lotteries:
  
  - Read/Loewenstein/Rabin (1999) argue with the concept of „choice bracketing“ that misperceptions of risk occur because the choices that are available for the decision maker are mostly seen independent
  
  - Systematic underestimation of the total risk involved in engaging in corrupt behaviour might nullify measures to fight petty corruption by increased governmental auditing
Design/
Experimental Model
An experimental petty corruption set-up

- Consider a situation where a bureaucrat decides upon accepting small amounts of bribes from the public when being confronted with government agency charged with uncovering corrupt public officials.
  - bureaucrat takes his decision under partial equilibrium assumptions → detection prob. taken as given
  - Decision resembles a decision in a repeated binary lottery.
  - income of 80 units which will increase by 25% if he accepts a bribe.
  - detection probability of 20%
  - Income in remaining periods reduced to 20 units once detected (sudden death)
- 10 Periods
Experimental Design

Treatment earned income

10 periods

Test Period → Stage 1: Real Effort → Stage 2: Decision Lottery → Multiple Pricing List (to elicit risk attitude) → Questionnaire

Treatment endowed income

10 periods

Stage 1: Endowment → Stage 2: Decision Lottery → Multiple Pricing List (to elicit risk attitude) → Questionnaire
Hypotheses
Hypotheses

H1: The first bribe is accepted in earlier periods than predicted by expected utility theory.

H2: A higher degree of risk aversion leads subjects to accept the bribe in later periods.

H3: The first bribe in the earned income treatment is accepted in later periods than in the endowed income treatment.

H4: Female participants accept the first bribe in later periods than male participants.
Results
Taking the bribe...is it a pattern or could they just not resist the temptation once?

<table>
<thead>
<tr>
<th>Did NOT accept bribe in first period</th>
<th>Accept bribe already in first period</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of switches</td>
<td>frequency (%)</td>
</tr>
<tr>
<td>0</td>
<td>3 (3.23)</td>
</tr>
<tr>
<td>1</td>
<td>70 (75.27)</td>
</tr>
<tr>
<td>3</td>
<td>15 (16.13)</td>
</tr>
<tr>
<td>4</td>
<td>1 (1.08)</td>
</tr>
<tr>
<td>5</td>
<td>4 (4.30)</td>
</tr>
<tr>
<td>total</td>
<td>93</td>
</tr>
</tbody>
</table>

Note: 85 participants (78%) show a clear pattern.

→ H1: We reject the null hypothesis that the total number of accepted first bribes are distributed equally in period 9 and in the periods before (Binomial test with an event probability of 0.5, p<0.0001, two-sided)
Results for H2 (Risk attitude) : H2 cannot be supported

In total: 69 of 104 risk averse/slightly risk averse; 35 of 104 are risk neutral/ risk seeking
Results for H3 (Source of income):

- A significantly higher proportion of subjects in Eal accept the first bribe in later periods compared to Endl.

Significant (Kolmogorov Smirnov, one-sided, D=0.249, p<0.05, one-sided)
Results for H4 (Gender): H4 cannot be supported

50 male, 56 female participants

Not significant (Kolmogorov-Smirnov Test $D=0.121$, $p > 0.1$, two-sided)
Conclusion

• We find compelling clues that the high rates petty corruption reported for many countries are driven by an incorrect risk assessment by individuals.

• Behavior in our experiment cannot be explained by risk attitudes of participants (in line with Berninghaus et al. 2010).

• Decisions in the experiment might be explained by „Narrow bracketing“ (Read/Loewenstein/Rabin 1999) which should be investigated in further research.

• Methodological contribution to experimental corruption literature by implementing earned income treatment that lead to less corruption in our experiment.
Thank you for your attention