EXPER

Econ Conference

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เวลา 09:00 - 16:15 น.

ณ ห้องประชุมภัทรรวมใจ ธนาคารแห่งประเทศไทย

CBEE
Center for Behavioral and Experimental Economics
Chulalongkorn University

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สำนักงานกองทุนสนับสนุนการสร้างเสริมสุขภาพ

PIER

เนื้อหาในสื่อกับการทุจริต
Media Content and Dishonesty

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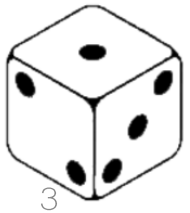
Introduction

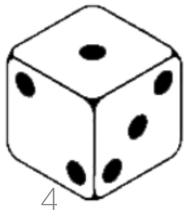
- Corruption/cheating is a big problem in Thailand.
- Limited data: Few quantitative studies on Thai corruption.

- Objective of this study
  - Using experiments to study cheating/corruption in Thailand
    - How many of Thais do cheat?
    - Incentive for cheating
    - Characteristics of cheaters
  - How does media report on cheating affect individual behavior?



Subjects

- Variety of Subjects
- 5 sessions in 5 provinces
  - 2 Colleges in Bangkok and Pathum thani
  - 3 Villages in Kanjanaburi, Phitsanulok, Ratchaburi
- 30 subjects x 5 sessions (60 college students + 90 villagers)
- Experimental subjects better represent the general population



Experimental Labs

- Classrooms, village centers and in the temple

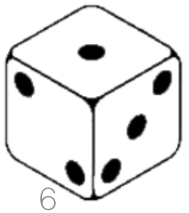
Village Center (Kanjanaburi)

Temple (Pitsanulok)

Experiment

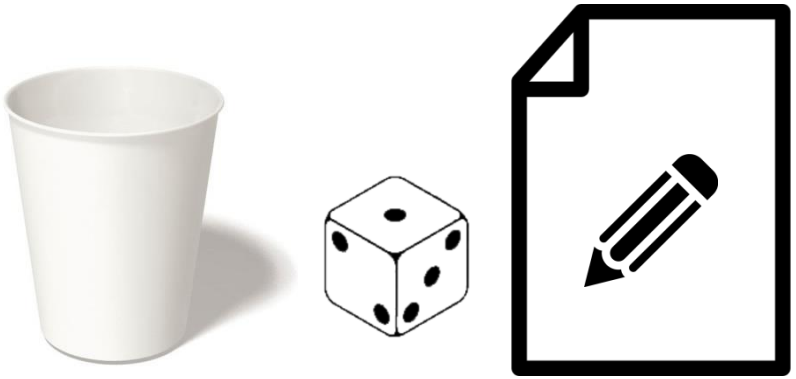
- Anonymity: Each subject is only referred by his number.
- The experiment consists of 36 periods.
  - 18 periods
  - Media Report
  - 18 periods
  - The first and second 18-periods are identical.

18 periods → Media Report → 18 periods



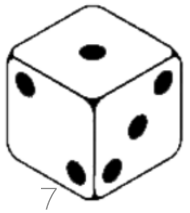
In Each Period

- Each subject
  - roll his dice in his cup.
  - mark in his paper.



Period	Matched Number	Matched/Unmatched	Points Received If Matched
1	3	☐Matched ☐Unmatched	3
2	4	☐Matched ☐Unmatched	4
3	1	☐Matched ☐Unmatched	1

- Each subject may cheat.

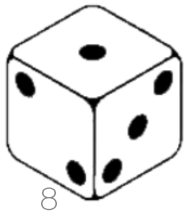


Points and Payment

- The experiment took about 45 minutes
- The total pay for each session is 30 subjects x 300 baht.
- Payment for subject i

$$Payment_i = \frac{Point_i}{Average\ Point}.300$$

- $Point_i$ = the sum of the matched number of subject *i*.
- If someone gains from the cheating, the others would lose.
- The subject cheat against the other subjects.



Point and Payment

- Subject 1 marked the matched box only in period 1 and 2.
- He gets 3+4 points.

Period	Match Number	Matched/Unmatched	Points Received If Matched
1	3	✓Matched ☐Unmatched	3
2	4	✓Matched ☐Unmatched	4
3	1	☐Matched ✓Unmatched	1

- Suppose the average point is 14. The payment of subject 1 is 7/14x300 = 150 baht.

The Media Report

- At the end of the first 18 rounds, experimenter collects the paper from each subject and then announce a report about the first 18 rounds.

Experimental Results: 1st18 rounds

- First 18 rounds:
  - Identical in all sessions
  - Treatment free in all sessions
  - Baseline for study on how people cheat

Cheating in 1st 18 periods

Sess.	Province	Subjects	# of Subj.	# of Obs.	Match prob.	t-stat	p-value
1	Kanchanaburi	villagers	30	540	0.302	8.429***	1.000
2	Ratchaburi	villagers	29	522	0.320	9.396***	1.000
3	Phitsanulok	villagers	31	558	***0.333***	10.564***	1.000
4	Bangkok	students	30	540	0.307	8.776***	1.000
5	Pathum Thani	students	30	540	0.224	3.580***	1.000
All	All	all	150	2700	0.297	18.229***	1.000

- Without cheating, the matched prob. is 0.167 (1/6).
- From the data, the match probability of the whole sample is 0.297.
- For all session, at 99.99 confidence level, we accept that some subjects cheat.
- The average of match prob. is about 0.3 in most of the sessions.
- Interestingly, subjects cheated most in the temple in Phitsanulok (session 3).

of Cheaters

-Without cheating, the average # of matches of a subject is 3 (18/6).

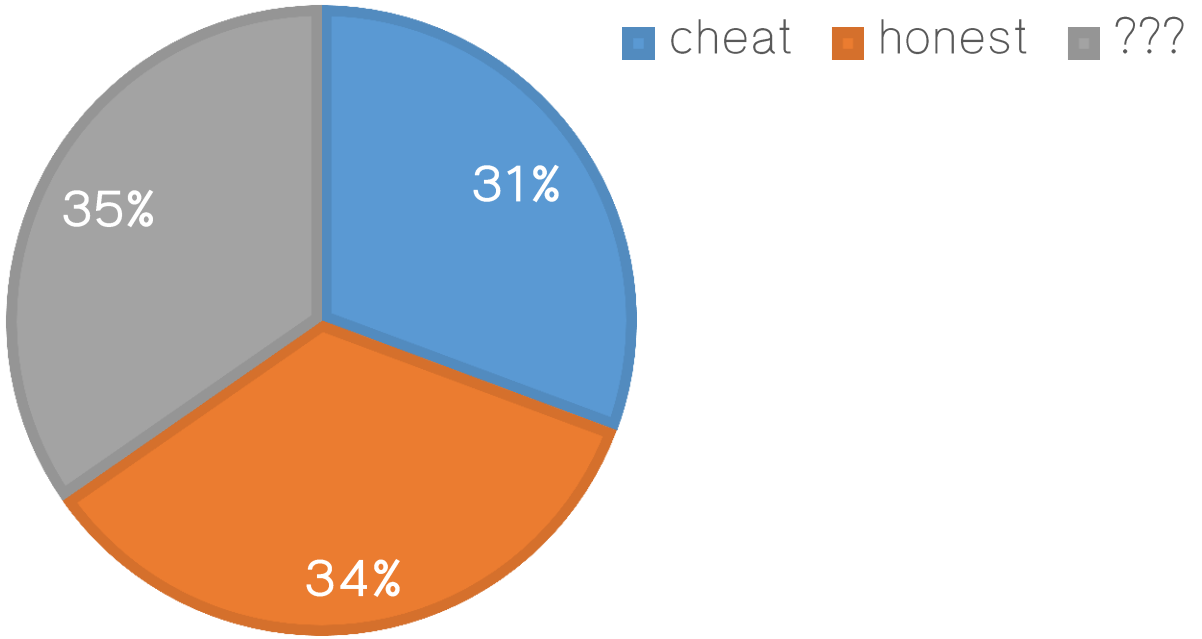
-We define a cheater as a subject whose number of matches is ≥ 7 from 18 rounds.

-At 2.1% type-I error (98% confidence level),

Session/ Cheat if	# of subs. with # of matches ≥ 6	# of subs. with matches ≥ 7	# of subs. with matches ≥ 8
Session 1	12	9	5
Session 2	16	15	11
Session 3	8	8	7
Session 4	10	8	8
Session 5	9	6	0
Total	55	46	31
Type-I error	6.5%	2.1%	0.5%

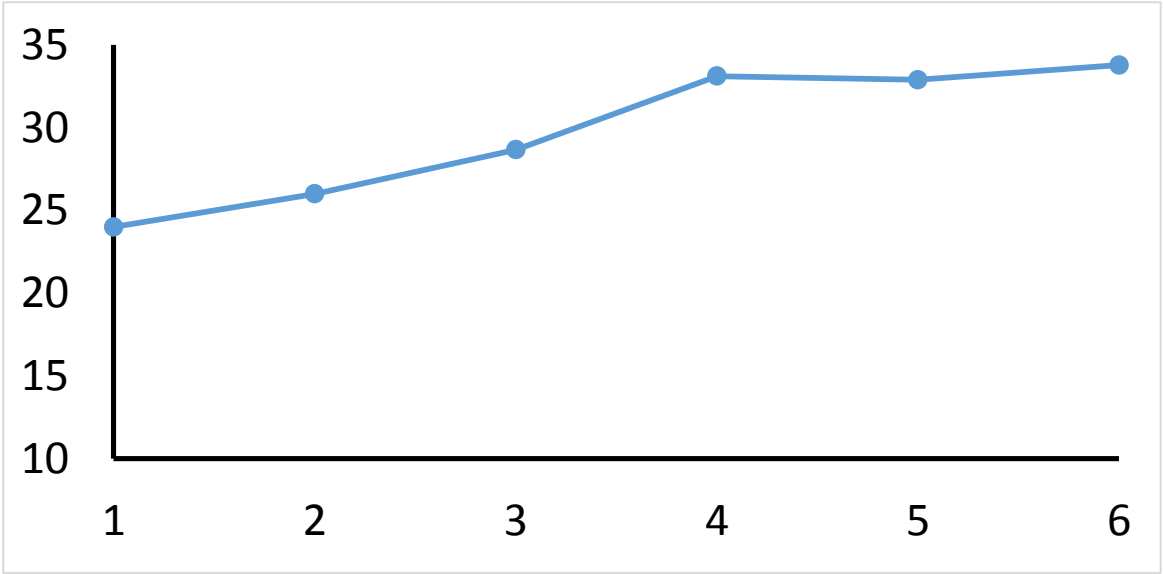
of Honest Subjects and Cheaters

- We define a honest as a subject whose number of matches is ≤ 3.
- 52 from 150 subjects were honest.



Incentive for Cheating: Payoff

- There is a significant relationship between the matched number and the match prob. of each subject.



matched number and matches (percent)

- The logistic regression confirm this relationship.

Characteristics of Cheaters

Villagers				College Students		
	Corr. with # of Matches	p-value			Corr. with # of Matches	p-value
Gender	-0.038	0.728		Gender	-0.0917	0.4858
Age	0.180*	0.096		Age	0.0723	0.5829
Education	-0.295**	0.006		Education	-0.0234	0.8592
Family size	-0.060	0.579		Family size	0.0602	0.8449
Income	-0.105	0.366		Income	0.1175	0.3712
Temple	0.214**	0.049		Temple	0.1023	0.4367
				Grade	0.0855	0.5236
# of Obs.	90	90		# of Obs.	60	60

*** p<0.01, ** p<0.05, * p<0.1

Cheating villagers: low education, old, temple goers

3 Types of Media Reports

- 3 treatments: 3 different reports
  - **Neutral report:** Average number of matches of *all subjects*
  - **High report:** Average number of matches of *10 subjects with most matches*
  - **Low report:** Average number of matches of *10 subjects with least matches.*
- *For example, in the high cheating report treatment, the experiment announced*

  "In the data we just collected, the average number of matches of the top 10 subjects with most matches is XXX"

Media Report and Cheating

Sess.	Treatment	# of matches/subjects (1st 18 periods)	Reported value	# of matches/subjects (2nd 18 periods)
1	Neutral Report	5.43	5.43	5.23
2	High Report	5.76	9.50	6.34
5	High Report	4.03	5.90	3.80
3	Low Report	6.00	2.50	5.58
4	Low Report	5.53	1.90	5.17

Anchoring effects of Media Report

- Anchoring effect (Tversky and Kahneman)
  - People adjust their behavior toward some reference point.
- The most salient reference point is the number reported in the mid of each session. (X)
- We expect that subjects would adjust their cheating to toward the reported level.

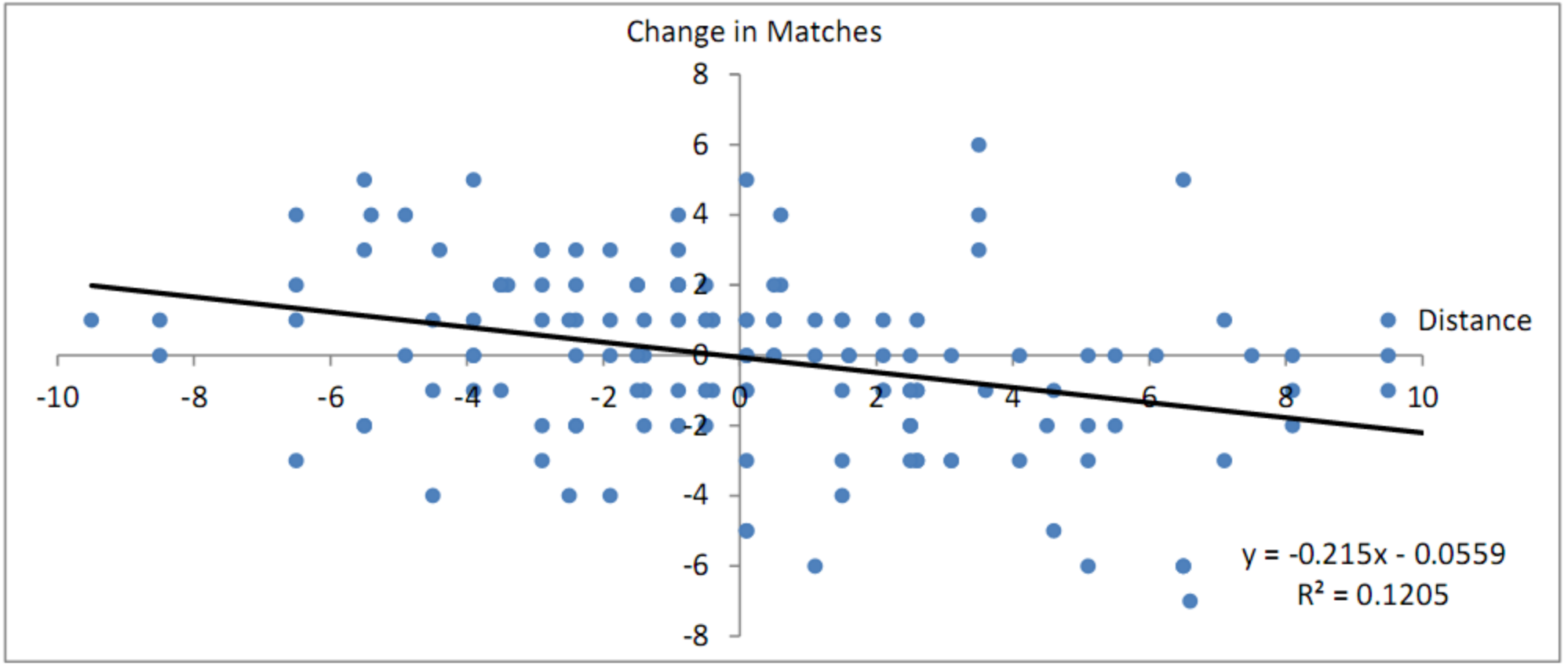
Anchoring effects of Media Report

- $\Delta match_{i,j} = \beta_0 + \beta_1 dist_{i,j} + \theta_i + \epsilon_j;\ \beta_1 < 0$
- $dist_{i,j}$ = distance from the report
- Example of Somchai:
  - First 18 periods: # matches = 3
  - Mid Report: # matches = 8
  - Second 18 periods: # matches = 6

3 → → → 6

8

Anchoring effects of Media Report

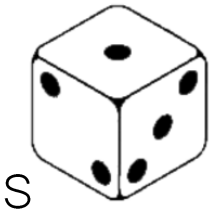


Anchoring effects of Media Report

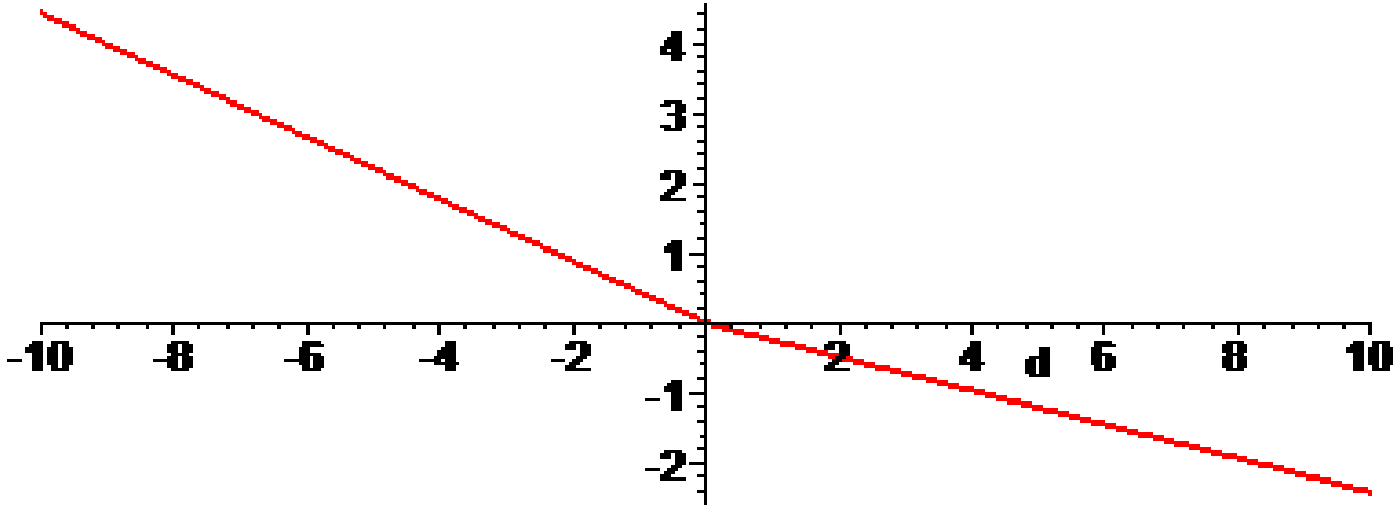
Variable/Models	(1)	(2)	(3)	(4)	(5)	(6)
Distance from the report	-0.552*** (0.000)	-0.123 (0.458)	-0.227* (0.058)	-0.325*** (0.008)	-0.768*** (0.007)	-0.319*** (0.000)
Session 2 effects						-0.416 (0.529)
Session 3 effects						0.885 (0.166)
Session 4 effects						0.980 (0.103)
Session 5 effects						-0.639 (0.285)
Constant	-0.182 (0.606)	0.128 (0.850)	0.375 (0.453)	0.815 (0.148)	-1.666** (0.026)	-0.189 (0.606)
Observations	30	29	31	30	30	150
R-squared	0.420	0.022	0.089	0.226	0.240	0.157

Note: Numbers in parentheses are robust p-values. *** p<0.01, ** p<0.05, * p<0.1

- Media report has an anchoring effect.
- Session fixed effects are not significant. Only numbers reported matters



Asymmetry of Anchoring Effects: Neutral report has upward bias effect.



- Good and bad guys adjust to the report at different rate.

Conclusion

- About 30% of subjects cheated.
- Cheating levels are about the same in all groups.
- Subjects cheat for higher payoffs.
- Anchoring effect of media report: subjects adjusted their cheating level toward the report level.
- Promoting good people can reduce cheating.
- Asymmetry in anchoring effect between people with different level of cheating.

ขอบคุณครับ

Neutral report could make people cheat more

	Before The Report	Report	After the Report	Change
Somsri	3	6	6	3
Somchai	9		8	-1
Average	6		7	1

- It is easier to seduce good people to be bad than the converse.