# Honest Agents in a Corrupt Equilibrium

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# Overview

- Honesty is often seen as fundamental in the fight against corruption.
  - E.g., business ethics a fundamental principle (World Bank; Siemens case)
- At the same time, bribery and corruption is often too costly to root out
- We study the role of honesty when allowing bribery is optimal in equilibrium (theory of the second best)
- While honest agents do not require incentives to behave correctly, they also introduce a negative externality
- We show that honesty is helpful on balance only if it is widespread enough

# Negative externality of honesty

- Honest agents refuse to bribe – preference – cannot reap the benefit of bribery
  - E.g., pay higher penalties, miss out on contracts (*Foreign Corrupt Practices Act of 1977* )
- Leads to misallocation of resources since incentives adversely affected
  - Honest entrepreneurs may invest in the wrong sector, become an academic, go abroad
  - Liu (2016): agents "with high corruption attitudes are more likely to join firms with high corruption culture", Barr and Serra (2010): honest students sort into less corrupt countries
- Protecting or offering additional incentives to honest agents is costly and may be ineffective
  - Difficult to screen; any agent can claim these; information rent for strategic agents
- To include a few honest agents may then require a higher compensation to all (strategic) agents
  - A trade-off due to honesty ignored in the literature

# Implications

- While honest agents do not require incentives, they introduce a negative externality in terms of information rent for strategic agents
- On balance, honesty hurts the principal when the proportion of honest agents is sufficiently low.
- To reduce their negative impact, some (the less efficient) honest types shut down.
- A micro-foundation for the existence of a “corruption trap” – increase in honesty helps only if proportion of honest agents large enough.
- To change corrupt norms, a big push needed for honesty to be beneficial.
  - Consistent with Svensson (2005) and Klitgaard (1988): effective policies consist of a sweeping multi-pronged set of policies as opposed to changes in small increments.
- Increases in productivity, e.g., with development, is also a way out of the trap as it lowers the threshold for honesty to be beneficial.

# Brief literature review

- Tirole's collusion-proofness principle (1986, 1992): it can be without loss of generality to study contracts that deter collusion between the auditor and agent
  - Increase in honesty will help
- Collusion assumed to occur exogenously (e.g., Shleifer-Vishny (1993), Ahlin and Bose (2007), Drugov (2010))
  - Increase in honesty helps if monitor/bureaucrat knows agent's type
- Endogenous collusion when the proportion of honest auditors is high enough (e.g., Besley and McLaren (1993), Kofman and Lawarree (1996), Acemoglu and Verdier (2000), Auriol (2006))
  - Increase in honesty will help
- In contrast, in our model, corruption occurs endogenously in equilibrium even without honesty
  - Increase in honesty hurts if proportion of honest agents small enough

# Model

- A principal (“she”) contracts with an agent (“he”) to form a productive relationship.

- By incurring a fixed cost $c > 0$, the agent privately receives an income $\theta$, where $c < \theta$.
  - Only agent knows whether income is low ($\theta = \theta_1$) or high ($\theta = \theta_2$).
  - Everyone knows: $Prob(\theta = \theta_1) = f_1; Prob(\theta = \theta_2) = 1 - f_1$
  - $\theta_2 - \theta_1 = \Delta\theta > 0$

- The agent then pays a portion of the income as a transfer $t_i$ to the principal.
  - Government collects taxes from individuals
  - An Investor collects income generated by an entrepreneur
  - Limited liability/wealth $t_i \leq \theta_i$

# Two benchmarks

- First best: income is publicly observable
  - The principal extracts all the agent's income less the investment cost, for $i = 1, 2$:

$$t_i = \theta_i - c$$

- Second best: only the agent observes $\theta$
  - The principal must offer a pooling contract since no screening is possible

$$t_1 = t_2 = \theta_1 - c$$

  - Type 2 retains information rent (since he can misreport) : $\theta_2 - c - t_2 = \Delta c$

  - Assume optimal to hire both $\theta_1$ and $\theta_2$ agents

# Auditing

- The principal hires an auditor who collects a signal about $\theta$ at no cost
  - Learns true $\theta$ with probability $p$
  - Learns no information ($\emptyset$) with probability $1 - p$

- Corruption:
  - Bribery occurs when the auditor accepts a payment in return for misreporting information in favor of the agent
  - Extortion occurs when the auditor obtains a payment from the agent by threatening to misreport evidence that was favorable to the agent

- Information manipulation:
  - Alone, the auditor can freely hide information, i.e., change any signal into $\emptyset$, but the auditor requires the agent's help to alter the report to 1 or 2
  - Nash bargaining to determine how agent and auditor share their surplus; enforceable contracts

- Honesty: a proportion $q$ of agents are honest and refuse to bribe or misreport; $(1 - q)$ proportion are strategic

# Benchmark: incorruptible auditor

- Send the auditor only when agent claims low income
- The principal maximizes her (net) expected payoff subject relevant incentive compatibility and participation constraints.
- Key incentive issue:
  - Understate income: agent type $S2$ (strategic high type) can mimic either low type ($S1$ or $H1$)
  - Since there is no bribery, $S1$ (strategic low type) has no advantage over an honest agent.
- Main benefit from auditing is to reduce $S2$'s rent:

$$u_2 = \Delta\theta(1 - p) - c$$

More accurate audits (higher $p$) ⇒ lower rent

# Main model: corruptible auditor

- Result: Extortion/Framing is suboptimal – will always be deterred
  - Punishes people for doing the “right thing,” just funnels money to the auditor
  - How to deter? Remove/reduce incentives for auditor
  - Less effective incentive scheme: auditor’s information cannot be used as well as when auditor was incorruptible

- Feasible to deter *both* bribery and extortion (not always optimal)
  - Suitably remove/reduce incentives from both agent and auditor
  - Again, less effective incentive scheme: auditor’s information cannot be used as well as when auditor was incorruptible

# Allowing bribery may be optimal

- If bribery is allowed, the agent-auditor coalition moves from $\emptyset$ to 1
  - The auditor reports finding low income even when it observes “nothing”, and the agent pays a smaller transfer to the principal
  - They split the savings through a bribe

- The bribe is still a penalty and helps reduce information rent of $S2$
  - Instead of a bribe from the agent, if the principal tried to provide incentive directly to the auditor, she would induce extortion

# Optimal contract: three possible solutions

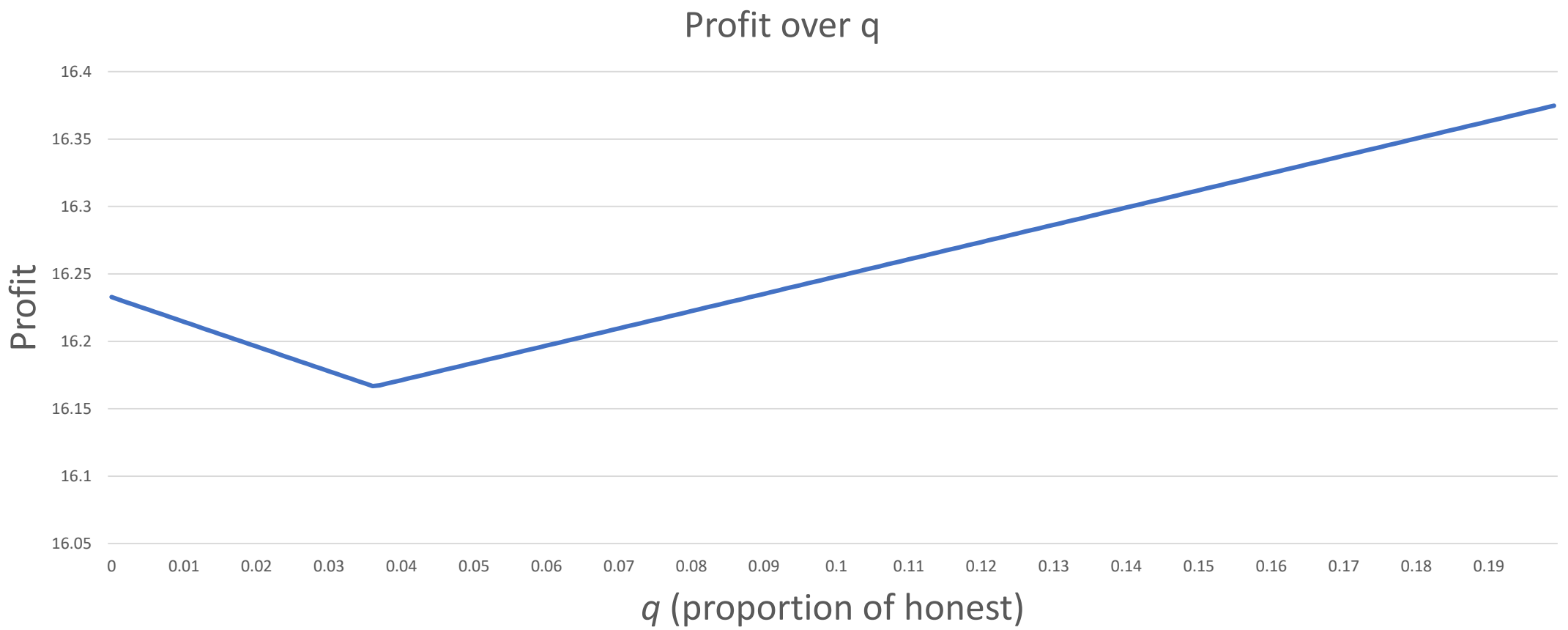
- Deter both bribery and extortion
  - Weak incentives – optimal when low accuracy of audits

- Allow only bribery and include all types of agents
  - Stronger incentives, but honest agents must be given extra incentives since they pay a high penalty instead of smaller bribe
  - Strategic agents earn extra rent – negative externality of honesty

- Allow only bribery but exclude (shut-down) $H1$
  - Remove externality (lower info rent to strategic types), but (i) lose output from agents who do not require incentives, (ii) “misallocation of talent”
  - Optimal when proportion of honesty is small

# The principal's profit decreases in $q$ when $0 < q < \underline{q}$

Example: $p = 0.35, f_1 = 0.2, \theta_1 = 16, \theta_2 = 19, c = 1, \lambda = 0.1$



# Summary

- In a setting with endogenous corruption, we introduced honest agents who refuse to bribe
- This inability to bribe adversely affects their incentive to participate and they must be offered additional incentives.
- Since agents' attitudes towards honesty is not known to the principal, the presence of honest agents introduces an opportunity for strategic agents to collect information rent
- Thus, honest agents impose a negative externality
- The principal can shut down the honest types to remove this externality but only at the cost of losing the revenue from honest types – optimal when the proportion of honest agents is small
- When shut down is optimal, increased honesty will not help the principal
- If the principal chooses to deter corruption, e.g., when audits are inaccurate, honest agents are always beneficial

# Conclusions

- To fight corruption, it is widely believed that moral incentives strengthen financial and legal incentives
- However, if weak institutions oblige the policy maker to allow for some corruption, then promoting honest behavior can have unintended negative consequences
- Honest agents require special treatment to stay, but it is difficult to withhold this special treatment from everyone
- To change corrupt norms, a big push may be needed for honesty to be beneficial
  - Consistent with Svensson (2005) and Klitgaard (1988): effective policies consist of a sweeping multi-pronged set of policies as opposed to changes in small increments

Thank you!