Delegating relational contracts to corruptible intermediaries

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Relational contracts

- Relational contracts are informal **ongoing** agreements where the future of the relationship serves as an enforcement mechanism rather than a third party
  - "managers often rely on “hand-shake” agreements to support their deals (Macauley 1963); companies and States motivate employees (Foss 2003) and bureaucrats (Xu 2011) by promising to delegate authority; large corporations such as General Motors rely on informal and flexible routines to manage their workers and suppliers (Helper and Henderson 2014); and long-distance traders enter commercial contracts even in the absence of reliable courts(...) (Milgrom et al. 1990)." p.3 Gil & Zanarone (2014)

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- Growing empirical **evidence**:
  - Bernstein 1992&1996; McMillan & Woodruff 1999: Johnson et al. 2002; Grief 2005; Fafchamps 2006; Gibbons & Henderson 2012; Antras & Foley 2013; Gibbons 2013; Macchiavello & Morjaria 2014.

Relational contracts: The good

Valuable alternative when **formal court-enforced contracts** not available

> *Informal meetings are often more important than formal negotiations in many emerging markets...* **building relationships is very important**.

'Doing Business in Emerging Markets', Cavusgil et al., 2002

Relational contracts: The bad

Corruption is built on trust and reciprocity...
...long-term relationships are an especially advantageous environment for bribery to emerge.

Abbink, 1999

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- A good relational contract is needed (e.g. to procure a non-contractible quality)
- The implementation of this incentive relational contract is delegated to a supervisor
- It is well known that delegation can lead to kickbacks (bribes or non-monetary benefits)
- First paper where the same relational contract incentivize a valuable activity and sustains a kickback More

Questions

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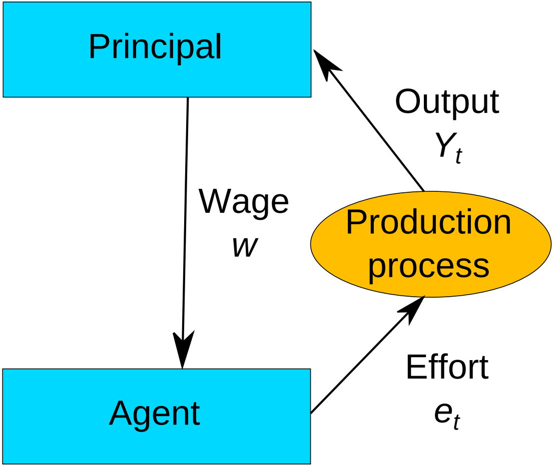
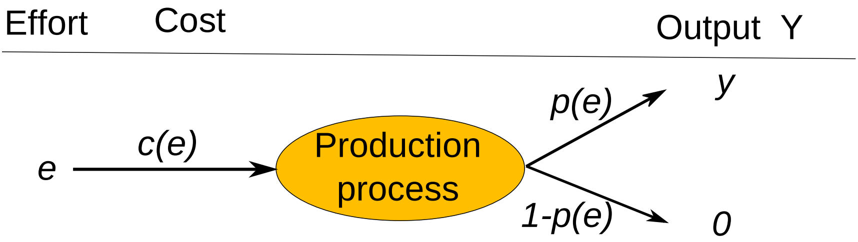
- Can delegating to such a corrupt supervisor ever be optimal?
- How should the principal tailor the contract to minimize "unnecessary bribery"?

Principal-agent relationship (Levin 2003, AER)



Production process



Moral-hazard with non-verifiable output:

- e only observed by agent
- y observed but non-verifiable

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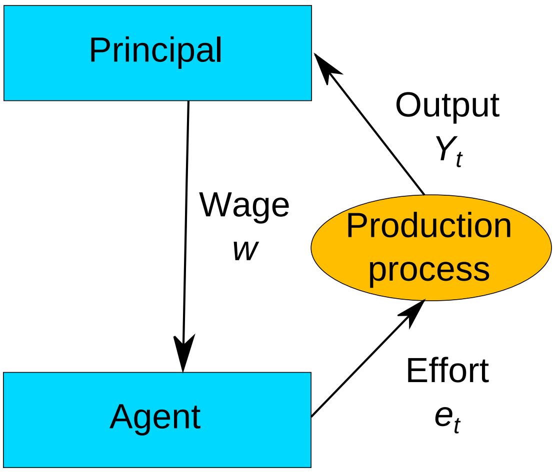

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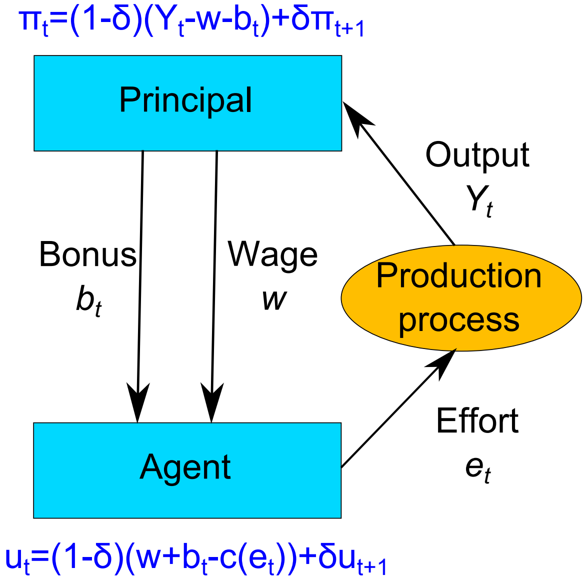
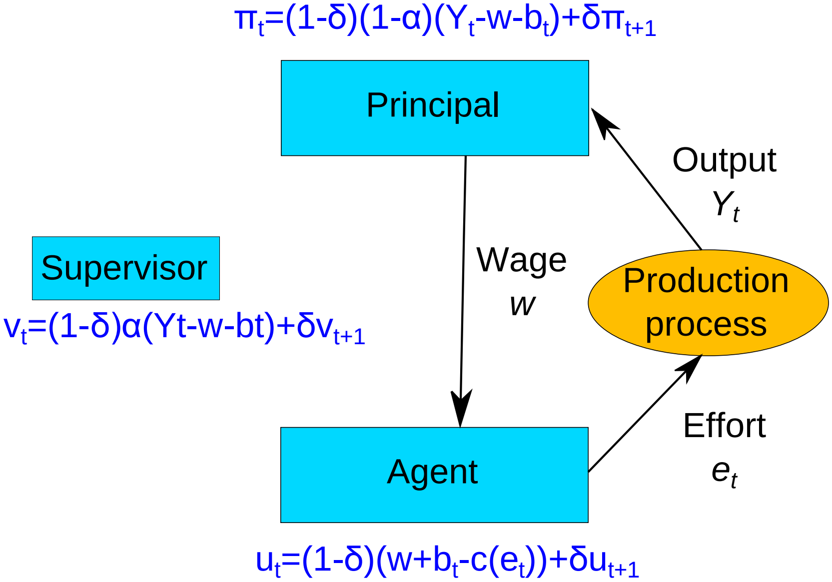


Delegation to a supervisor



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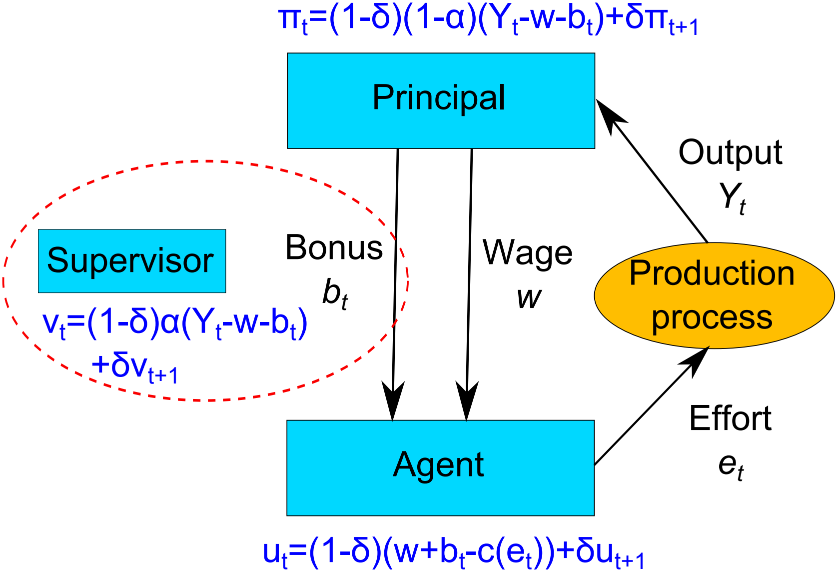

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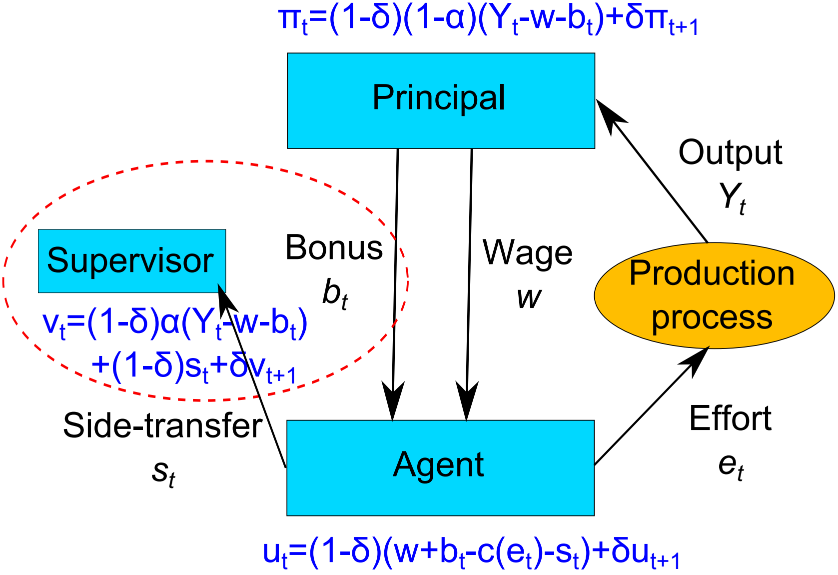

Principal's choices

At the beginning of the game:

The principal sets:

- w = court-enforceable wage

- $\overline{b}$ = court-enforceable cap on the discretionary bonus that supervisor can pay

- α = the share of the supervisor in the total payoff

There is a one-off side-payment (i.e. up-front fee), s_0, between the supervisor and the agent

Principal ($\alpha = 1$)

A supervisor with $\alpha = 1$ is equivalent to direct principal-agent relational contracting (à la Levin, 2003):

- Bribes are equivalent to changing the bonuses, hence they are not used
- All incentives are given through bonuses (and not the future value):
  - $b(y) = \frac{c'(e)}{p'(e)}$ if the output is high
  - $b(0) = 0$ if the output is low
- Wage w chosen to split surplus appropriately - w does not affect the surplus

Corrupt supervisor ($\alpha < 1$)

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  $\Longrightarrow$ she cares less about paying the bonus and yet values the relationship because of the expected stream of future kickbacks
  $\Longrightarrow$ by not honoring her promises, the supervisor jeopardizes the kickback
- The optimal contract between the supervisor and the agent is stationary and maximizes their joint surplus ▸ More

Some evidence of kickbacks as an enforcement mechanism

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1. When relational contracts are needed because quality is not contractible, "the supplier allows the client to hold back roughly 20 percent of the contract value until one month after delivery, until the client is satisfied that the product meets the specified quality" $\Longrightarrow$ "**kickback is paid only after all contract payments have been made**." (p.411)

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1. When relational contracts are needed because quality is not contractible, "the supplier allows the client to hold back roughly 20 percent of the contract value until one month after delivery, until the client is satisfied that the product meets the specified quality" $\Longrightarrow$ "**kickback is paid only after all contract payments have been made**." (p.411)
2. Where it is "difficult to verify the quantity and quality" (p. 419), the agent "usually specifies the kickback amount in advance but typically does not **start paying until the first deposit is made**" (p.420)

Types of contracts

Proposition

Supervisor-agent contract depending on their joint surplus:

- *High wage:*
  - *Same bonus is always paid (high output is always reported):* $\overline{b} = b(y) = b(0) > 0$
  - *Only bribes used to provide incentives:* $s(y) < s(0)$
- *Intermediate wage:*
  - *Bonuses used to provide incentives:* $b(y) = \overline{b} > b(0)$
  - *Bribes used to provide incentives:* $s(y) < s(0)$
- *Low wage:*
  - *Only bonuses used to provide incentives:* $b(y) > b(0)$
  - *Same bribe is paid:* $s(y) = s(0)$

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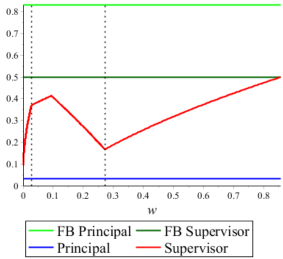
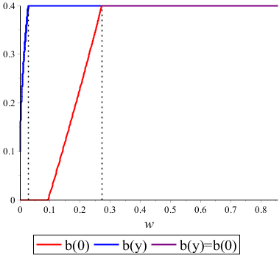
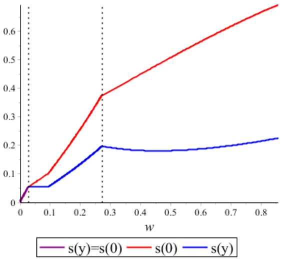


Effort



Bonuses



Kickbacks

How should the principal delegate?

Proposition

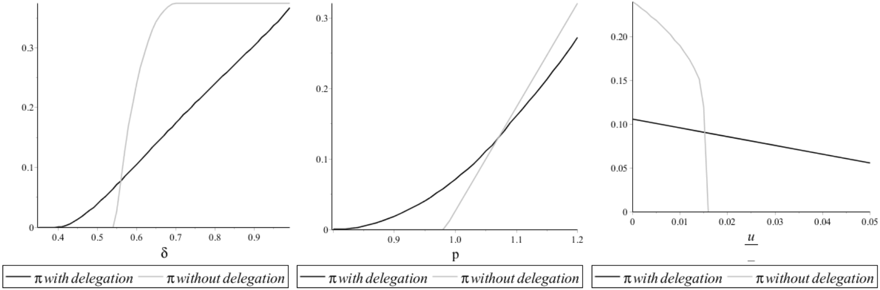
The optimal α *lies strictly between* 0 *and* 1*. The principal sets* w *and* $\overline{b}$ *such that* $b(0) = 0$ *and* $b(y) = \overline{b}$*.*

- The optimal contract is chosen so that the supervisor and the agent can only enforce a low surplus contract
- The effort is induced only through bonuses, where the supervisor has a comparative advantage

When should the principal delegate?

Proposition

The principal benefits from delegating if relational contracting is difficult: δ or p is low or $\underline{u}+\underline{\pi}$



Take-away messages

- Same relationship can facilitate both productive and corrupt actions
- The supervisor can over-pay the agent (i.e. too much and too often) and ask for kickback in exchange. However, the supervisor faces a more relaxed time inconsistency problem - if she does not honour her promises, she will damage the corrupt relationship. This may make delegation optimal because of corruption
- Delegation is optimal when relational contracting is difficult
- A larger wage may not lead to a higher effort because it can sustain bonuses being paid regardless of the output
- By choosing the agent's compensation scheme, the principal can control (and deliberately allow) how much corruption (over-reporting & bribes) takes place

Literature

- **Relational contracts** literature (survey Malcomson 2012)
  - Delegation to an agent: Goldlücke&Kranz (2012), Li et al. (2014)
  - Hermalin (2014): the relationship between two firms' managers a sustains productive activity. Collusion against shareholders is allowed but not sustained through relational contracting, since it only occurs when it is costless for the managers
- Literature on **corruption** has typically abstracted from enforcement problems (Tirole 1986, 1991; survey Banerjee 2012). However, *"corrupt contracts are primarily relational contracts"* (Lambsdorff&Teksoz, 2005). Few exceptions (Martimort, 1999; Basu, 2012)
- **Delegation** can solve commitment problems (Rogoff 1985, Vickers 1985, Melumad and Mookherjee 1989). First to consider corruption as a tool to influence the supervisor's payoff Back

Corrupt supervisor ($\alpha < 1$)

There are 2 important differences:

1. The joint supervisor-agent surplus not only increases in e but also in $b(Y)$ and w because the supervisor only pays for part of it
2. w cannot be used to split the surplus because it is chosen by the principal

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$$\Downarrow$$

- The initial transfer s_0 can be used to split the surplus
  - $\hookrightarrow$ Focus on contracts that maximize their joint surplus
- Any variation in continuation values can be transferred into variation of kickbacks (as Levin does with bonuses)
  - $\hookrightarrow$ Any optimal contract can be replicated by a stationary contract

Back