A Theory of Favoritism

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Favoritism in Organizations

- Widespread favoritism and its harmful impacts are well-known
- But why do employers favor some employees albeit harmful impacts
- Simple answer: employers are altruistic and derive utility from favoritism
- It does not bite when employers are residual claimants

Favoritism in Organizations

- There might be efficiency-enhancing motivations for playing favoritism
- Which could offset the harmful impacts
- Understanding the main incentive issues in organizations is key
- Favoritism prevails in organizations relying on subjective assessments
- Subjectivity opens a door to favoritism

Tournaments as Incentive Schemes

- Tournaments are typical incentive schemes in these organizations
- Fixed prize mitigates employer's opportunism
- Competition for prize provides strong incentives for high efforts
- Well-known in the economic literature

Collusion under Tournaments

- Tournaments are vulnerable to collusion
- The outcome depends on relative performance
- Which is related to the difference of employees' efforts rather than absolute value
- Expected payoff does not change when they jointly cut their efforts
- Employees benefit from saving effort costs
- Collusion is commonly observed in organizations, see Tirole (1992)

Favoritism as A Response to Collusion

- The design of incentive mechanism must account for collusion possibility
- When collusion becomes a serious concern
- Favoritism allows to reduce incentive cost for collusion-proofness
- Whereas it does not benefit the employer absent collusion

Favoritism Absent Collusion

- Suppose an employer hires two homogeneous employees
- Employees' efforts are unobservable by other parties
- The employer aims at inducing the high efforts of both employees at minimum incentive costs
- The employer commits a fixed prize only for the winner of the tournament
- Favoritism differentiates the incentive constraints of employees
- Increasing bias slightly engenders two opposite effects

Favoritism Absent Collusion

- It relaxes the incentive constraint of the favored employee
- This decreasing the incentive cost for the favored guy
- But also tightens the constraint of the disfavored one
- Which calls for higher incentive cost for the disfavored one
- Since the employer must encourage both types of employees
- The tournament prize needs to be even higher than absent favoritism

Favoritism under Collusion

- Employees are treated unequally under favoritism
- They should be also treated asymmetrically under collusion
- Employees collude on low efforts
- Under favoritism they face different incentives for deviating to high effort unilaterally
- The favored one has stronger incentives to deviate from collusion
- It is thus less costly to induce the favored one to deviate under adequate favoritism

Favoritism under Collusion

- One employee's deviation is sufficient to break down collusion
- Thus favoritism lowers the cost of collusion-proofness
- However, excessively high favoritism reduces the favored one's incentives for high effort
- Which in turn calls for higher prize to prevent collusion
- The optimal degree of favoritism is thus endogenously determined

Literature Review

- Prendergast and Topel (1996, JPE) focus on organizations with employer-supervisor-worker
- The supervisor derives utility from favoring the worker (altruistic), but also bears a cost of false report
- The optimal bias balances this trade-off
- We focus on the organizations with employer and multi-employees
- The employer is the residual claimant and does not derive utility from playing favoritism
- Favoritism differentiates the incentive constraints of employees

The Model

- A principal and two homogeneous agents
- Agents are risk-neutral but protected by limited liability
- Agents can choose two effort levels, high ($e = h$) with effort cost c, and low ($e = 0$) with zero cost
- Output of each agent, $y^i = e^i + \varepsilon^i$, can be only assessed subjectively
- Where ε^i is a random shock with zero mean, and i.i.d. distribution with symmetric density function
- The principal commits a prize t only for the winner of the tournament
- Focus on truthful equilibria only

The Model

- The principal could overestimate the output of favored agent by granting a bias $b \geq 0$
- So the favored agent wins the tournament if and only if $y_f + b \geq y_d$
- Where the subscript f stands for favored agent and d stands for disfavored one
- The probability of winning is $G\left(e_f - e_d + b\right)$ for the favored one and $G\left(e_d - e_f - b\right)$ for the disfavored one
- Where $G\left(x\right)$ is the distribution function satisfying $G(x) = 1 - G\left(-x\right)$
- With $g(x) = g\left(-x\right)$ and $g(x)$ decreases for $x \geq 0$

The Model

- The favored agent obtains an expected payoff $U_f = G\left(e_f - e_d + b\right) t - C\left(e_f\right)$
- The disfavored one earns $U_d = G\left(e_d - e_f - b\right) t - C\left(e_d\right)$
- The principal's expected utility is $V = ER(y_f, y_d) - t$
- Where $ER(y_f, y_d)$ is the expected revenue and is increasing with efforts
- Assume that the expected revenue under high efforts is much higher than that under low efforts
- So that the principal aims to induce the high efforts at the minimum incentive cost

Tournament Absent Collusion

- Absent collusion, the favored agent is willing to take the high effort if $G(b)\, t \geq c$
- And has no incentives to deviate unilaterally to low effort if $(G(b) - G(b-h))\, t \geq c$
- Which amounts to

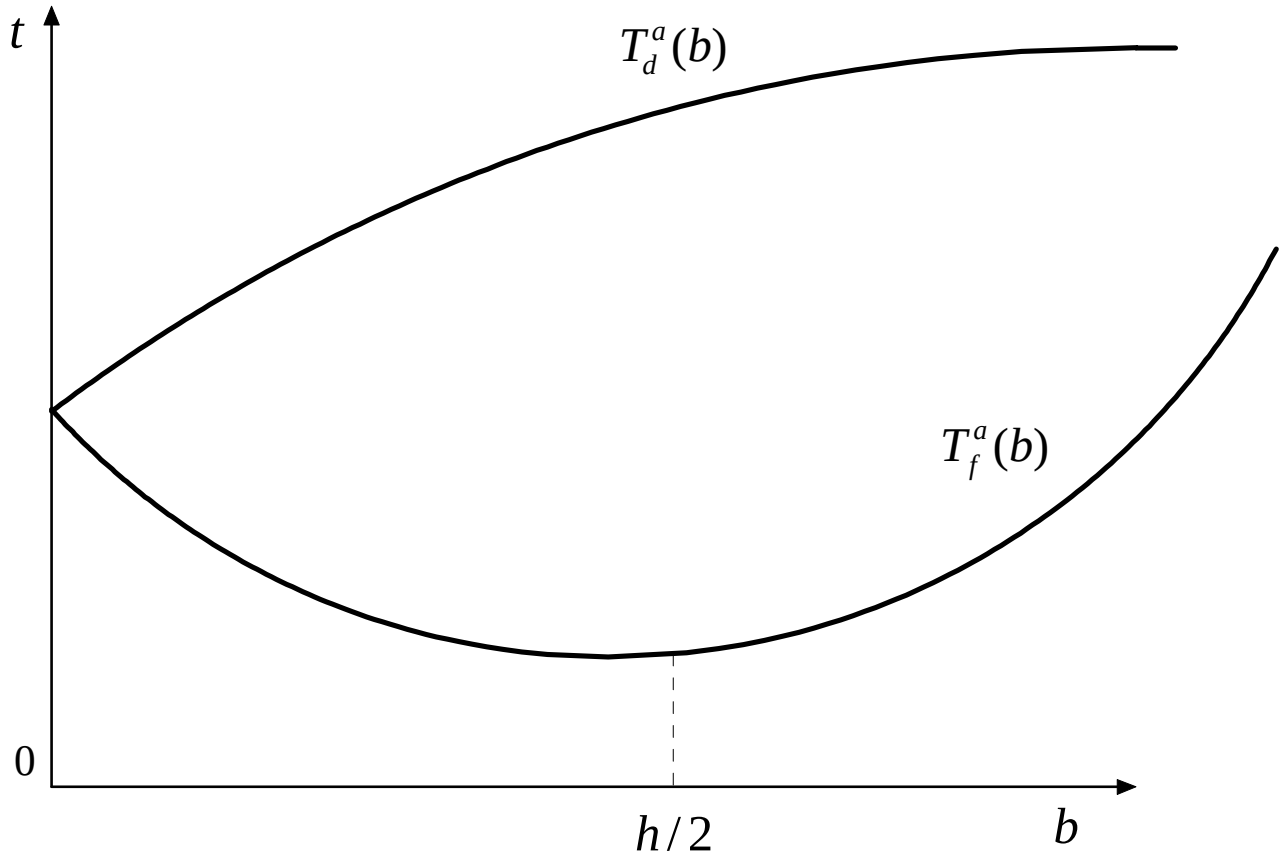
$$t \geq T_f^a(b) \equiv \frac{c}{G(b) - G(b-h)}$$

- Similarly the disfavored agent takes the high effort in NE if

$$t \geq T_d^a(b) \equiv \frac{c}{G(-b) - G(-b-h)}$$

Tournament Absent Collusion

- The properties of the two thresholds



Tournament Absent Collusion

- The principal offers $t \geq T^a(b) \equiv \max\{T_f^a(b), T_d^a(b)\}$
- Since $T_d^a(b) \geq T_f^a(b)$ and $T_d^a(b)$ is increasing in b
- Minimizing $T^a(b)$ yields $b = 0$
- Thus favoritism does not benefit the principal absent collusion

Collusion among Agents

- Tournaments are not robust under collusion
- Since the probability of winning is $G\left(e_f - e_d + b\right)$ for the favored and $G\left(e_d - e_f - b\right)$ for the disfavored
- Cutting efforts jointly does not change the probability of winning
- Agents benefit from saving the effort costs

Collusion among Agents

- Collusion among employees are often sustained by non-judicial mechanisms
- Such as reputation, social norms, or "word of honour"
- We are not motivated to study the collusion-enforcement mechanism here
- Following Tirole (1986, 1992), we assume collusion is enforced by a mediator
- This is a short-cut modelling approach for repeated interaction

Collusion among Agents

- Side payment from the winner to the loser must be imposed to mitigate moral hazard under collusion
- Side transfer often incurs deadweight loss due to non-judicial enforcement mechanism
- Assume that a side payment s from the winner is worth of ks to the recipient, $k \in (0, 1)$
- There is deadweight loss $(1 - k)\, s$

Timing of Game

- S1: Principal offers a tournament contract; agents accept or not
- S2: Mediator proposes a side contract; agents accept or not
- S3: Agents take efforts simultaneously
- S4: Outputs are realized and contracts are enforced

Side Contracting

- Mediator proposes side transfer s_f and s_d for the favored and disfavored agents
- The favored agent will accept if

$$G(b)(t - s_f) + (1 - G(b))\, ks_d > G(b)t - c$$

call it constraint (CIR_f)

- The disfavored one will accept if

$$G(-b)(t - s_d) + (1 - G(-b))\, ks_f > G(-b)t - c$$

call it constraint (CIR_d)

Side Contracting

- Agents may have incentives to take high effort unilaterally
- The favored agent will not deviate to high effort if

$$(G(h+b)-G(b))(t-s_f-ks_d)<c$$

  call this constraint (CIC_f)
- The disfavored will not deviate if

$$(G(h-b)-G(-b))(t-s_d-ks_f)<c$$

  call this constraint (CIC_d)
- A side contract (s_f, s_d) is incentive feasible if it satisfies the above four constraints

Side Contracting

- The two participation constraints can be further written as

$$G(b)s_f - G(-b)ks_d < c. \quad (CIR_f)$$

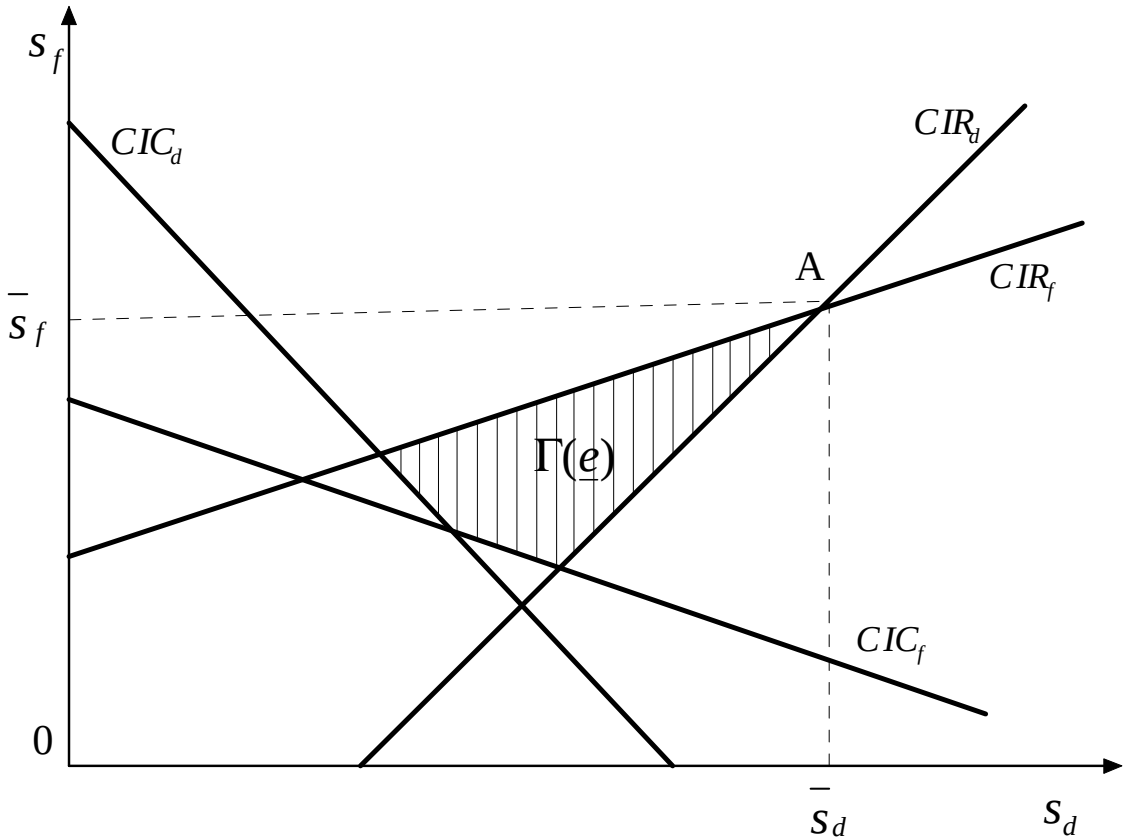
$$G(-b)s_d - G(b)ks_f < c. \quad (CIR_d)$$

  which are independent of t
- Two IC constraints can be rewritten as

$$s_f + ks_d > t - \frac{c}{G(h+b) - G(b)}. \quad (CIC_f)$$

$$s_d + ks_f > t - \frac{c}{G(h-b) - G(-b)}. \quad (CIC_d)$$

Side Contracting



Prevent Collusion

- The set of incentive feasible side contracts (denoted by $\Gamma(\underline{e})$) varies with t
- Participation constraints (CIR_f) and (CIR_d) are not affected by t
- But increasing t tightens incentive constraints (CIC_f) and (CIC_d)
- The loci move towards north-east
- Thus $\Gamma(\underline{e})$ turns to be empty when one of the two loci goes through point A

Prevent Collusion

- Side payment from the favored agent engenders the deadweight loss $(1-k)\,G\,(b)\,s_f$
- It must be less than the gain of collusion c
- This requires the side payment be bounded above

$$s_f < \bar{s}_f \equiv \frac{c}{G(b)\,(1-k)}$$

- Similarly for disfavored one

$$s_d < \bar{s}_d \equiv \frac{c}{G(-b)\,(1-k)}$$

Prevent Collusion

- Then favored agent has incentives to deviate to high effort if

$$t \geq T_f^c(b;k) \equiv \bar{s}_f + k\bar{s}_d + T_d^a(b)$$

- And disfavored one will deviate if

$$t \geq T_d^c(b;k) \equiv \bar{s}_d + k\bar{s}_f + T_f^a(b)$$

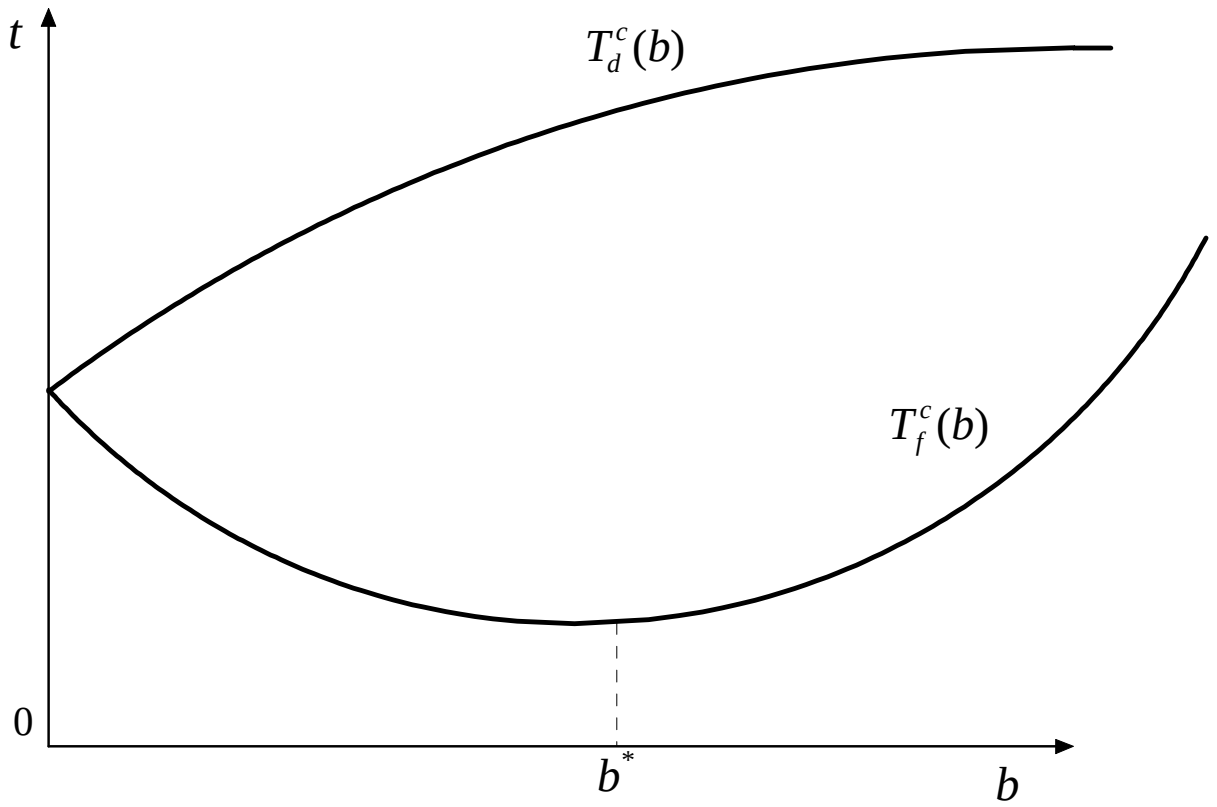
- Thus, collusion on low effort can be prevented if and only if

$$t \geq T^c(b;k) \equiv \min\{T_f^c(b;k), T_d^c(b;k)\}$$

Prevent Collusion

- Agents may collude on other effort levels such as the favored agent takes high and disfavored takes low
- It can be checked that such collusion is also not sustainable if $t \geq T^c(b; k)$
- Thus the optimal prize for high efforts is such that $t^*(b; k) = T^c(b; k) > T^a(b)$
- Preventing collusion is costly
- The principal thus chooses optimal b to minimize $t^*(b; k) = T^c(b; k)$

Prevent Collusion



Optimal Favoritism

- It is always desirable to offer some degree of bias ($b > 0$) in equilibrium
- But excessive favoritism is not desirable
- The optimal bias is endogenously determined
- Under some conditions, b^* can be solved by FOC

Conclusions

- We study the non-altruistic motivation of playing favoritism in organizations and show
  - Favoritism does not benefit the employer absent collusion
  - It does reduce the cost of collusion-proofness
  - Excessive favoritism makes the employer even worse

Conclusions

- These results are highlighted in a stylized model of tournament
- Needs to check the robustness for generalized tournament with multiple agents
- And for the case of sustaining collusion by repeated interaction
- Basic ideas should be robust:
- Favoritism differentiates incentive constraints and generates different incentive impacts on different agents