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Incentives and the Sorting of Altruistic Agents into a Street-Level Bureaucracy

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Employment Caseworkers!

Introduction

1. Which allocations will agents make?

2. Which agents take the job?

3. What is the optimal personnel policy?

4. What happens when we introduce an incentive: more alignment or different caseworkers?

Roadmap

- **Model**

- **Flat Wages**

- **Pay-for-performance**

- **Summary**

Model

Clients - Unemployed or Welfare Recipients

- Differ in willingness and ability to find a job

- And differ in preferences and utility U_c derived from employment services:
  - L = willing, unable   =>   like $U_c = k > 0$
  - M = willing, able   =>   indifferent $U_c = 0$
  - N = non-willing   =>   dislike $U_c = -g < 0$

- But sanctions, all clients   =>   dislike $U_c = -v < 0$

- Total number of clients = L + M + N

Model

Principal - Benefit Administration or PES

- Knows average client's type, not individual type

- Hires endogenous number of agents with unknown altruism to determine client's type and make an allocation

- Wants to allocate employment service or sanction to clients:
    - L = willing, unable   =>   help $b - c > 0$
    - M = willing, able   =>   no help 0
    - N = non-willing   =>   sanction $z > 0$

Model

Agents - Caseworkers

- Large pool of job applicants

- Differ in altruism θ_j from complete indifference ($\theta_j=0$) to highly altruistic ($\theta_j=\bar{\theta}$)
- Altruistic agents take **their** clients' utility into account

- Thus their utility depends on client's utility $\theta_j U_c$ and salary w

- Know average client's type before applying
- Only take job if utility larger than outside option $\bar{A}$

Model

Timing

- Principal offers a labor contract

- Agent accepts or refuses

- Agent meets a client and allocates a service

- Payoffs are realized

Flat wages

Which allocations will the agents make?

- L= willing, unable => Employment services
- M= willing, able => No help
- N= non-willing => No help

- Agent avoids sorrows of sanctioning => $- v\theta_j$
- But principal misses payoffs from sanctioning => z

- No full alignment

Flat wages

Agent's expected utility from the job

$$EU_a = w + \underbrace{\frac{L}{L + M + N}}_{\substack{\text{Chance meets} \\ \text{willing, unable client}}} \underbrace{\theta_j k}_{\substack{\text{Joys} \\ \text{helping}}} \geq \overline{A}$$

- Nonpecuniary rewards higher for more altruistic agents

Flat wages

Which agents take the job?

$$\theta_j \geq \tilde{\theta} = \left(\overline{A} - w\right)\left[\frac{Lk}{L + M + N}\right]^{-1}$$

- Most altruistic agents

Willingness to take job increases with

- Higher salary
- Less appealing alternative
- More favorable client population
- Employment services which are more appealing to clients

Flat wages

Optimal personnel policy: number of agents

Higher number of agents:

- More clients can be served
- Necessitates salary increase for all agents

It can be optimal to hire **less** agents than necessary to serve all clients:

Insufficient staffing and overload of clients may be an optimal choice!

Pay-for-Performance

Can principal change behavior of agents and at what cost?

Pay-for-performance

- Base salary **and on top** bonus for good performance

- Thus (non) pecuniary bonus for every correct decision, $\pi > 0$

- E.g. dependent on clients' labor market performances

Pay-for-Performance

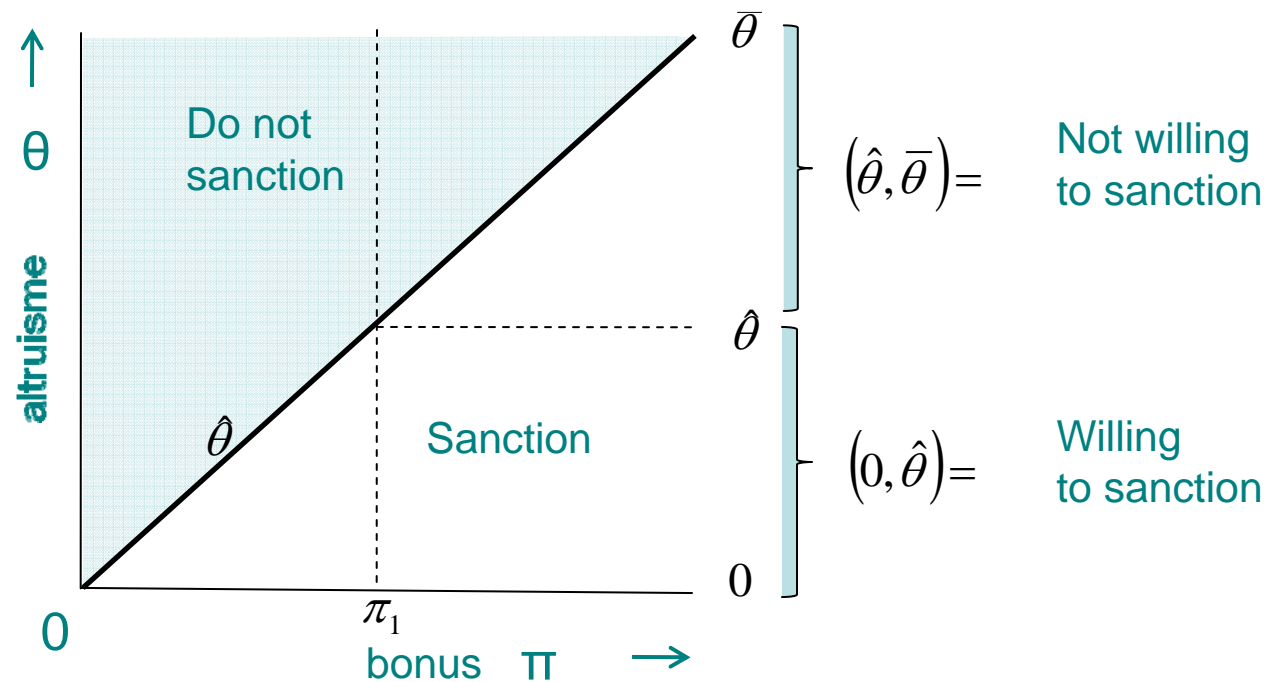**Which allocations will the agents make?**

- L= willing, unable => Employment services
- M= willing, able => No help
- N= non-willing => No help or **sanction** !

- If bonus high enough, less altruistic agents willing to sanction: $\theta_j < \hat{\theta} = \dfrac{\pi}{v}$

Pay-for-Performance

- **Which allocations will agents make?**

Pay-for-Performance

But who is willing to take job now?

Expected utility agents who do not sanction:

$$EU_a = w + \underbrace{\frac{(L+M)\pi}{L+M+N}}_{\substack{\text{Bonus allocations} \\ \text{to willing}}} + \underbrace{\frac{Lk\theta_j}{L+M+N}}_{\text{Joys of helping}} \geq \overline{A}$$

- Fairly similar to flat wages: No sanctioning, only joys of helping people $\theta_j \geq \tilde{\theta}$

- Still most altruistic!

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Pay-for-Performance

Expected utility agents who sanction:

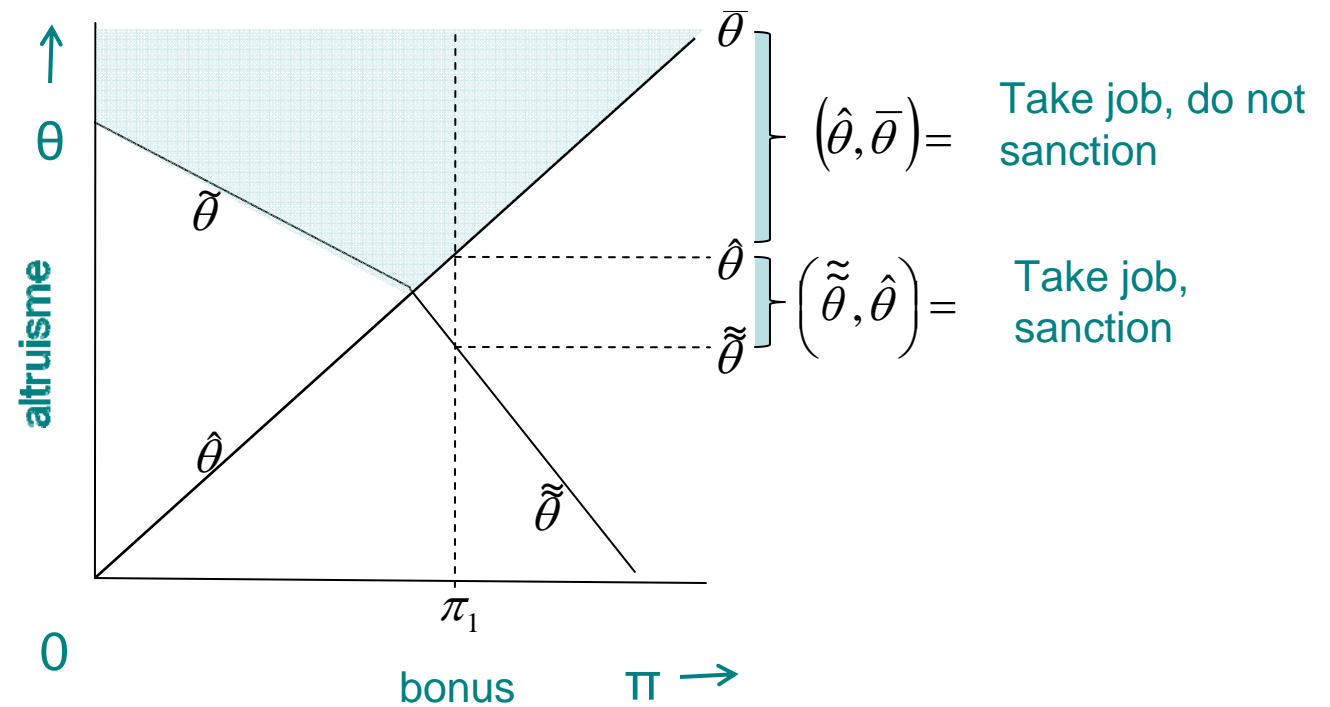$$EU_a = w + \pi + \frac{(Lk - Nv)\theta_j}{L + M + N} \geq \overline{A}$$

Bonus all allocations

Joys helping **and** sorrows sanctioning

- Agent gets bonus more often, but encounters sorrows of sanctioning non-willing

- But as long as *Lk – Nv > 0*, still fairly similar to flat wages $\quad \theta_j \geq \tilde{\tilde{\theta}}$

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Pay-for-Performance

- **Which agents take job if *Lk − Nv > 0***

$(\hat{\theta}, \overline{\theta}) =$ Take job, do not sanction

$(\tilde{\tilde{\theta}}, \hat{\theta}) =$ Take job, sanction

Pay-for-Performance

Principal's optimization problem more complicated

- Not only determine how many agents, but also what agents do: sanction or not sanction

- Can use two instruments: bonus and base salary

Pay-for-Performance

Optimal personnel policy if $Lk - Nv > 0$

- Resembles flat wage case: highly altruistic agents are hired

- But due to bonus least altruistic among those induced to sanction

- Not all agents will be induced to sanction

Pay-for-Performance

If $Lk - Nv < 0$ expected utility agents who sanction changes:

$$EU_a = w + \pi + \underbrace{}_{\substack{\text{Bonus all}\\\text{allocations}}} \frac{\overbrace{(Lk - Nv)\theta_j}^{}}{\underbrace{L + M + N}_{\substack{\text{Joys helping and}\\\text{sorrows sanctioning}}}} \geq \overline{A}$$
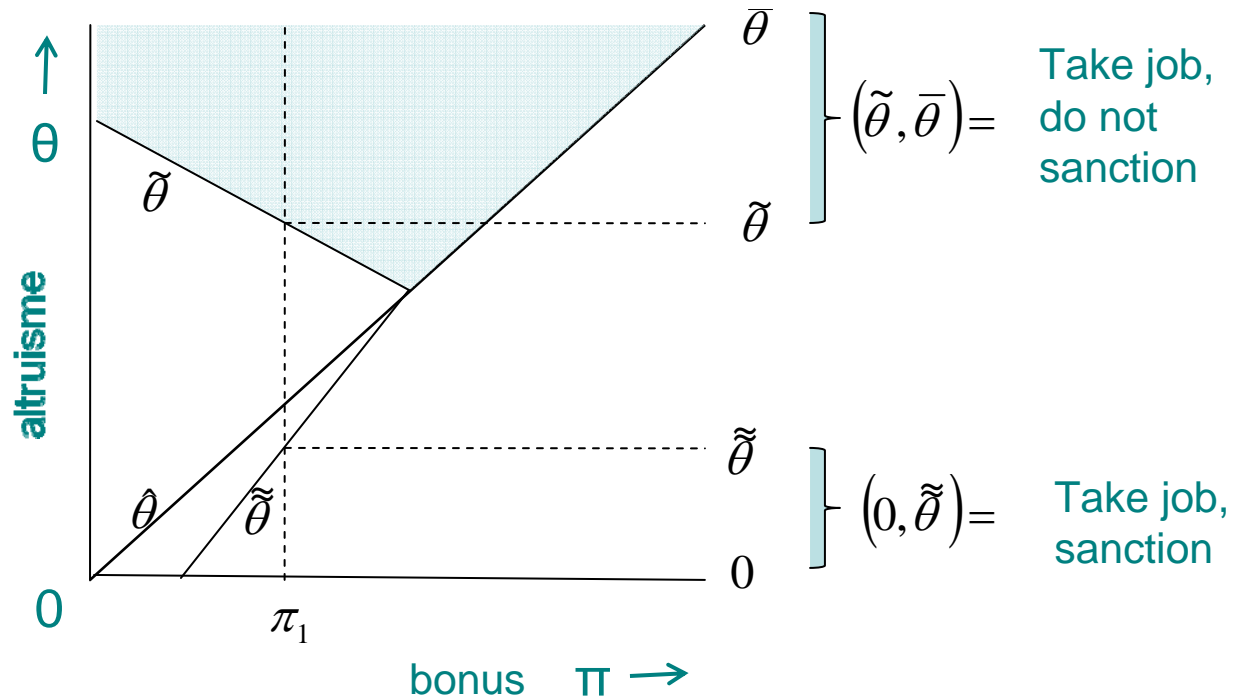
- Sorrows sanctioning larger joys helping: negative nonpecuniary payoffs

- Negative feelings worse when more altruistic, thus $\quad \theta_j \leq \tilde{\tilde{\theta}}$

Pay-for-Performance

- **Which agents take job *Lk – Nv < 0***

$(\tilde{\theta}, \bar{\theta}) =$ Take job, do not sanction

$(0, \tilde{\tilde{\theta}}) =$ Take job, sanction

Pay-for-Performance

Which agents take the job if *Lk – Nv < 0*

- Still highly altruistic agents not willing to sanction

- But also some of **least altruistic** agents take job and sanction!

- And to make agents sanction and take job, principal has to pay them a lot!

  At least: $w + \pi \geq \overline{A}$

Summary

Incentive pay leads to more alignment,

but also self-selection!

Summary

- **Flat wages only**
  - Most altruistic caseworkers hired & they do not sanction!
  - Job more attractive with favourable client population
  - Overload of clients can occur

- **Pay-for-performance**
  - Still a nice job for those who sanction
    - Again most altruistic caseworkers are hired
    - Bonus might induce least altruistic among those to sanction

  - Tough job for those who sanction
    - Caseworkers with very high and low levels of altruism hired at same time
    - The latter sanction
    - But have to be paid much more
    - And Piet's and Petra's together might cause tensions among personnel!

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Thank you for your attention!