ECO111 : Lecture 13

Source: Economy, Society, and Public Policy

Fairness and Inequality

- Fair does not automatically mean compensating losers
- Too much inequality could lead to increasingly consider about fairness
- Inequality in terms of i) income; ii) hourly wage; iii) health; iv) happiness; iv) freedom; v) respect and dignity in society
- Economic inequalities could undermine democracies
- Two ideas of fairness
  - Substantive idea of fairness : subjective judgement on how unequal the allocations are
  - Procedural idea of fairness : how did the inequality come about and then is perpetuated

How to judge fairness?

- No good way
- Economists have a few suggestions when it comes to public policy making though
- How dimensions of unfairness could be connected
- Trade-offs between fairness and efficiency
- Public policies to address unfairness
- The effects of introduction of new policy

Implementing public policies

- Governments or regulators can implement policies via
  - *Prohibitions and directive*
  - *Providing incentives*
  - *Making information available*
- The implication of these government policies might not be as anticipated or effective
- There is a strategic interaction between the government and the private players involved

Returning to the tragedy of commons…

		Farmer B	
		Restrict	Do not restrict
Farmer A	Restrict	10, 10	6, 12
	Do not restrict	12, 6	8, 8

- Consider that there are only two players now and each of them can have their 20 each cattle graze on the common property or restrict grazing by only 10 cattle each there by preventing the tragedy of the commons situation.
- The payoff matrix is in the previous slide
- Here an effective government policy would be that ensures (Restrict, Restrict) is achieved
- Suppose the government imposes a tax of 0.4 units of payoff for each additional cow that grazes after the first 10 cows
- The overgrazing tax changes the payoffs

Tragedy of commons with the overgrazing tax

		Farmer B	
		Restrict	Do not restrict
Farmer A	Restrict	10, 10	6, 8
	Do not restrict	8, 6	4, 4

Contd…

- In the new situation, NE is (Restrict, Restrict)
- The tax has two key features
  i. Treats every player equally : averts tragedy of commons by treating every player the same, so both fair and efficient situation
  ii. Each player has to take account of the cost their action asserts on the other player

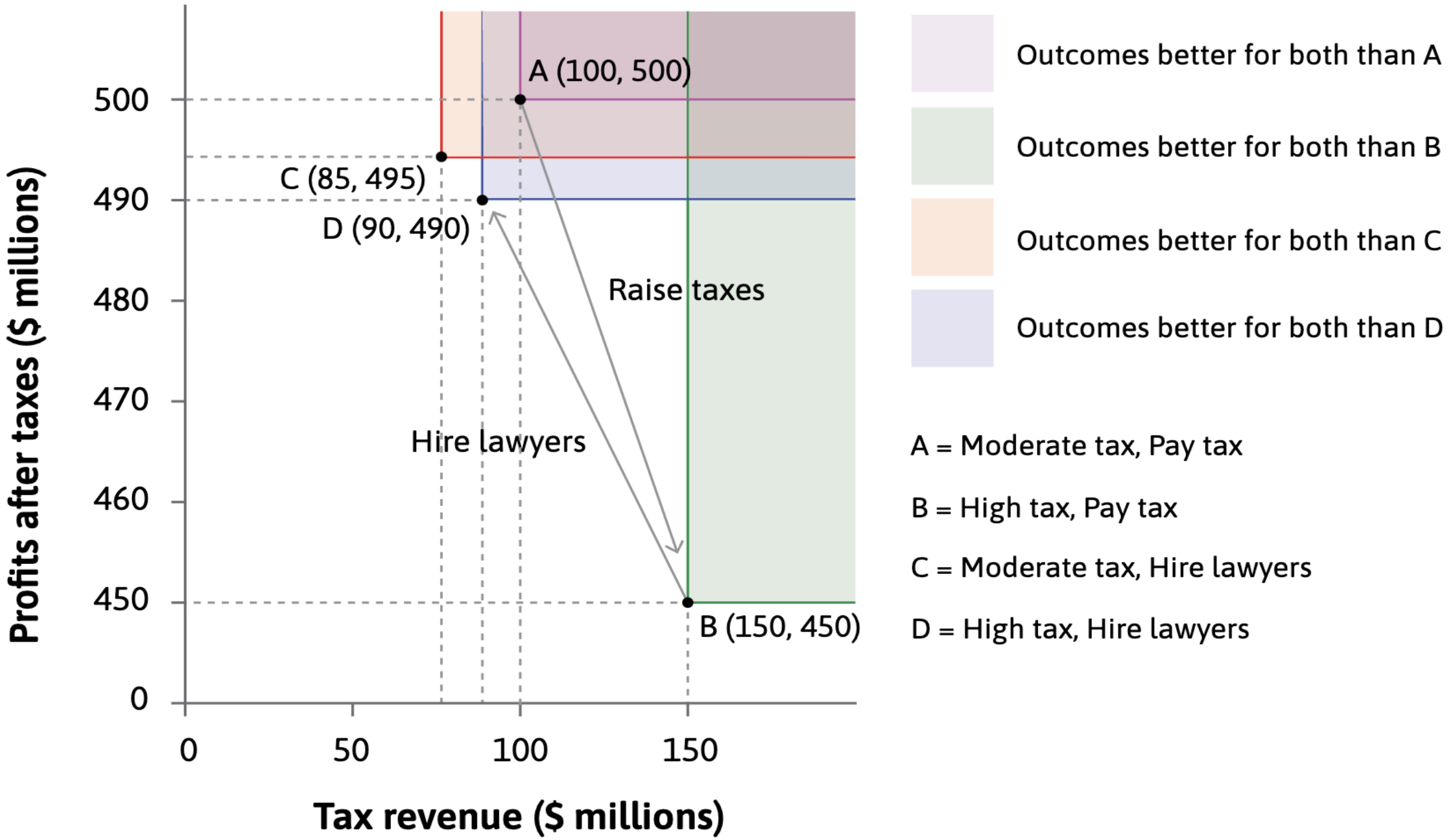
Unintended consequences of a redistributive tax

- Suppose governments impose higher tax on profits of firms expecting a higher tax revenue
- Unintended consequence is tax revenue falling because firms strategize to reduce their tax compliance
- Modeling this as a game called Tax Avoidance Game
- Modeling a two-player game
- Players : Government and Firm
- Actions :
  - Government can either levy ‘high’ tax or ‘moderate’ tax
  - Firm can either ‘pay tax’ or ‘avoid tax’ by hiring a tax lawyer/CA
- Preferences : Government prefers higher tax revenue and firm prefers higher after-tax-profit

Contd…

- Tax rate is ’moderate’: $100 million in tax is collected and the firm’s after-tax-profits are $500 million
- Tax rate is ‘high’ : $150 million in tax is collected and after-tax-profits fall to $450 million
- Hiring legal advisors for tax avoidance costs $20 million
- When tax rate is ‘medium’, can save $15 million with legal advice
- When tax rate is ‘high’ can save $60 million with the legal advice
- The payoff matrix in this case is given below
- A successful policy must be a Nash Equilibrium

		Firm	
		No tax avoidance	Tax avoidance
Government	Moderate tax rate	100, 500	85, 495
	High tax rate	150, 450	90, 490


A (100, 500)
C (85, 495)
D (90, 490)
Raise taxes
Hire lawyers
B (150, 450)
500
490
480
470
460
450
0
0
50
100
150
Profits after taxes ($ millions)
Tax revenue ($ millions)
Outcomes better for both than A
Outcomes better for both than B
Outcomes better for both than C
Outcomes better for both than D
A = Moderate tax, Pay tax
B = High tax, Pay tax
C = Moderate tax, Hire lawyers
D = High tax, Hire lawyers

- When fines, prices and taxation have these unintended effected, it is said that the economic incentives have **crowded out** social preferences.
- The policy maker cannot ignore these crowding out effects
- A good policy should not change people's preferences in unintended ways
- The intended outcome of the policy should be a NE
- However, all the outcomes of a policy cannot be anticipated and thus cannot ensure NE
- Elasticity of demand plays a role in the policy outcomes (more about this when we do consumption part of the course)

Conclusion

- Causal effect vs correlation
- Evaluate allocations
- Efficiency
  - Pareto efficiency
  - Pareto criterion
- Fairness
  - Substantive judgement
  - Procedural judgement