Fiscal Policy and Inequality

4. Rules Versus Taxes

Elliott Ash

ETH Zurich

Summary

- Rules or taxes?
  - In public economics, the focus is on taxes.
  - In law and economics, the focus is on rules.
- The key point is that both should be understood as incentive systems.
  - for example, to regulate externalities
  - see O'Flaherty (2008, ch. 8 sec. 2)

Public Economics: Optimal Pigouvian Taxes

- Standard model in public economics: Optimal Pigouvian tax
- Tax (or subsidize) an activity so that private marginal cost equals social marginal cost (or private marginal benefit equals social marginal benefit)
- (graph representation)

Neoclassical Preference for Taxes

- Neoclassical economists generally prefer taxes to rules:
  - If government sets tax to reflect true SMC, then activity only occurs when benefits exceed costs
  - Rules are blunt instruments

Rules Versus Taxes: Role of Information

- But if govt has enough information to set right taxes, then it can set rules that work just as well as taxes:
  - Permit activity when benefits exceed costs, and prohibit other instances.
- When information is very good, rules work just as well as taxes.
- Real question: With imperfect information, when do rules work better than taxes?

Rules versus taxes: Enforcement and Information

- For Pigouvian taxes to work, the government must be able to enforce them and must have reliable information on the net social marginal costs of the externality-creating activity.
- Sometimes communicating the information to a judge is easier than communicating information to a tax collector
- External harm may be so great that optimal number of times is clearly zero, e.g. arson.

Rules vs. Taxes: MXC versus MPB and Quantity

- Rules preferred to taxes when:
  - marginal external cost (MXC) sensitive to quantity
  - marginal private benefit (MPB) not sensitive to quantity
- Taxes preferred to rules in opposite case:
  - MXC not sensitive to quantity
  - MPB sensitive to quantity.

Road Intersections Example

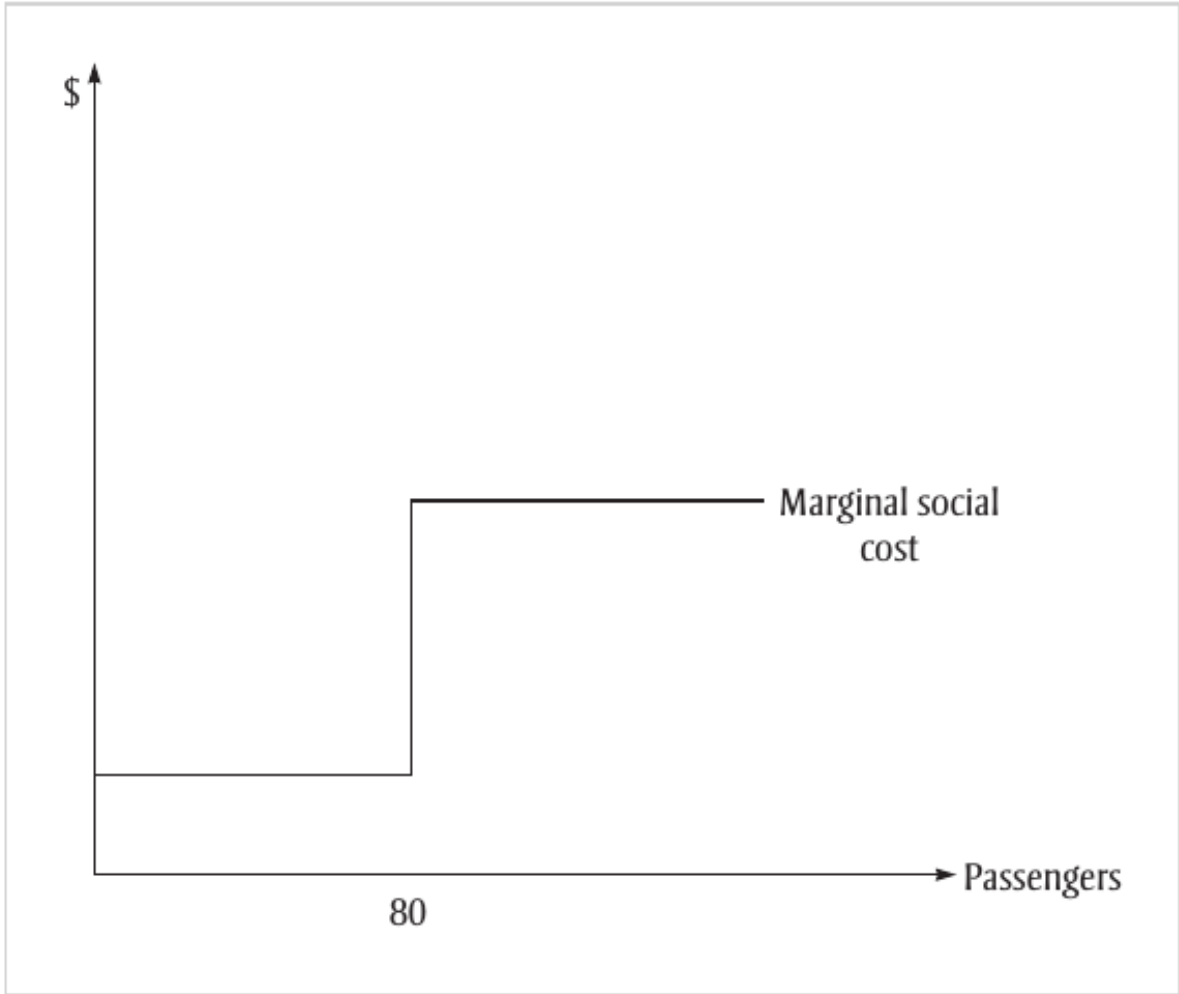
- How many cars should go through an intersection at one time?
  - MXC of one car: about zero
  - MXC of second car: very high: a collision
  - MPB about the same for each car.
- **Traffic intersections should be governed by rules.**

Cruse Ship Example

- Small cruise ship has 20 crew members, and lifeboats for 100 people total.
- An additional passenger beyond 80 endangers an additional crew member (high MXC)
- The first 80 passengers pose no risk (low MXC).

Marginal social cost for the cruise ship

Figure 8.1 Marginal social cost for the cruise ship.



Cruse Ship Example

- Small cruise ship has 20 crew members, and lifeboats for 100 people total.
- An additional passenger beyond 80 endangers an additional crew member (high MXC)
- The first 80 passengers pose no risk (low MXC).
- You know for sure the quantity threshold for high MXC (80), but you don't know for sure how many passengers you'll have at a given price.

- Might get more than 80 passengers, which could be tragic.

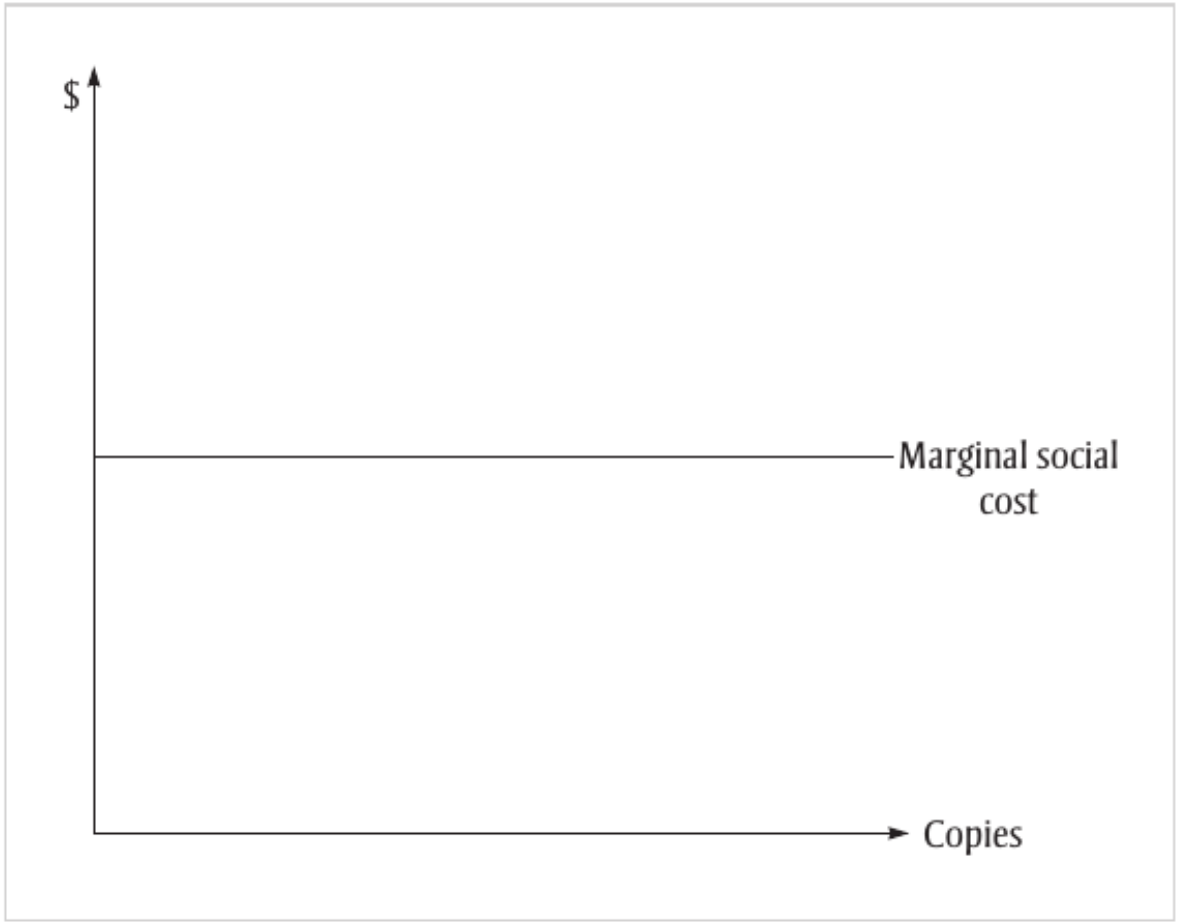
- **Set a rule: no more than 80 passengers.**

Library Copies Example

- Copy machine in a public library.
- MXC to the library of a copy is the same no matter how many copies are made.
  - No particular number where MXC suddenly jumps up.

Marginal social cost for the library

Figure 8.2 Marginal social cost for the library.

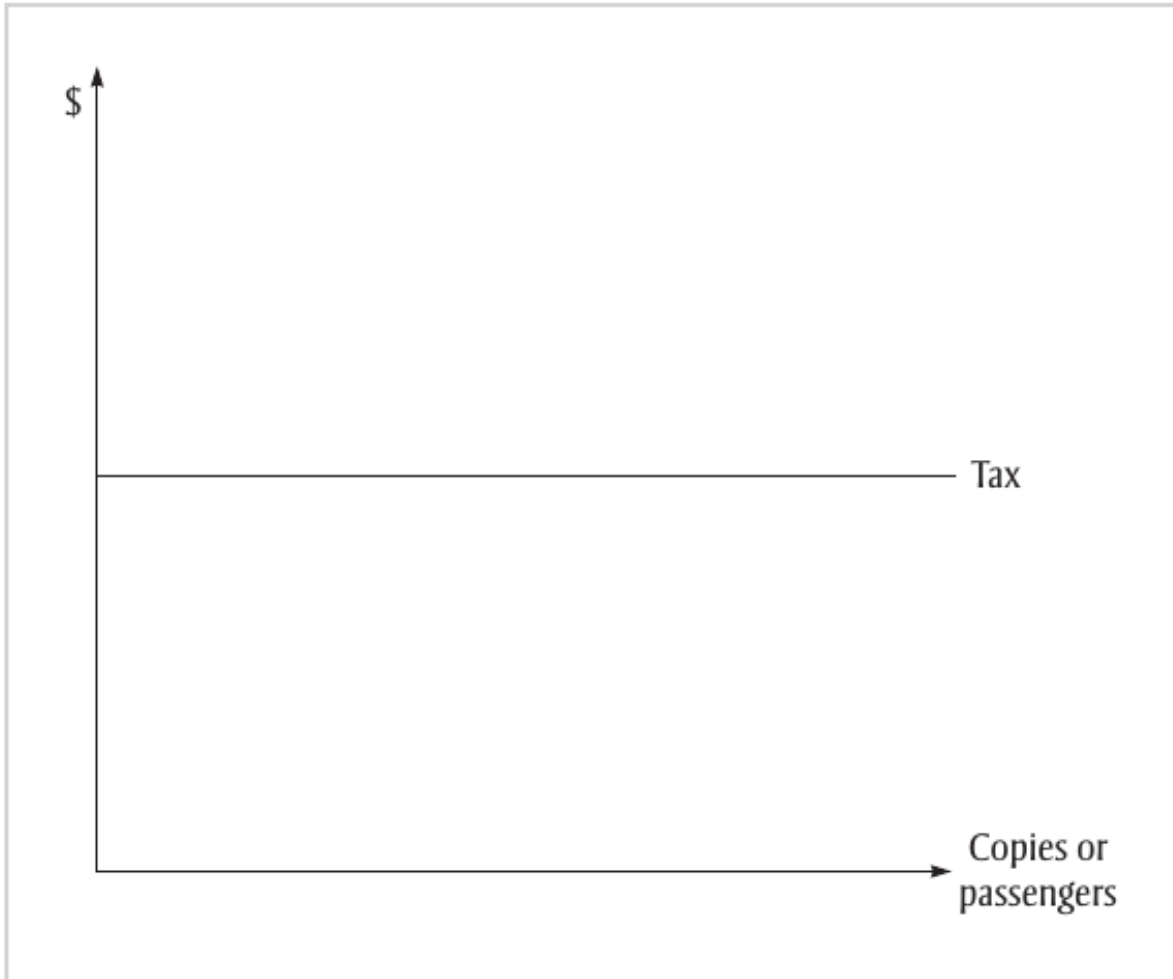


Library Copies Example

- Copy machine in a public library.
- MXC to the library of a copy is the same no matter how many copies are made.
  - No particular number where MXC suddenly jumps up.
- Setting a rule such as "Only 80 copies a day" would be a bad idea:
  - Someone might want 200 copies and is willing to pay for it – the 80-copies rule would preclude a Pareto improvement.
- **Set the price equal to MSC.** No matter how many copies patrons wanted to make at that price, the outcome would be Pareto optimal.

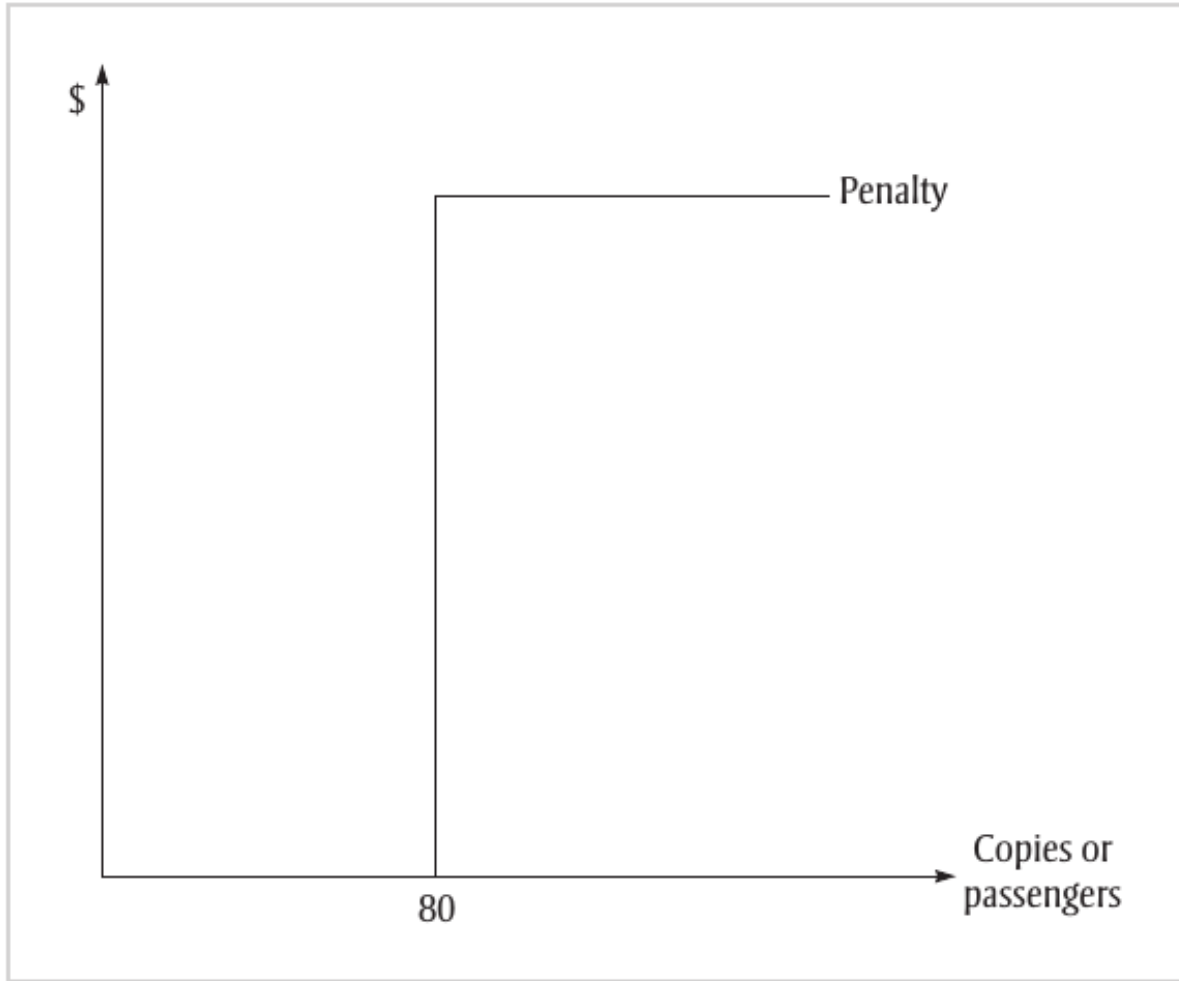
Graphical Depiction of a Tax

Figure 8.3 A tax.



Graphical Depiction of a Rule

Figure 8.4 A rule.

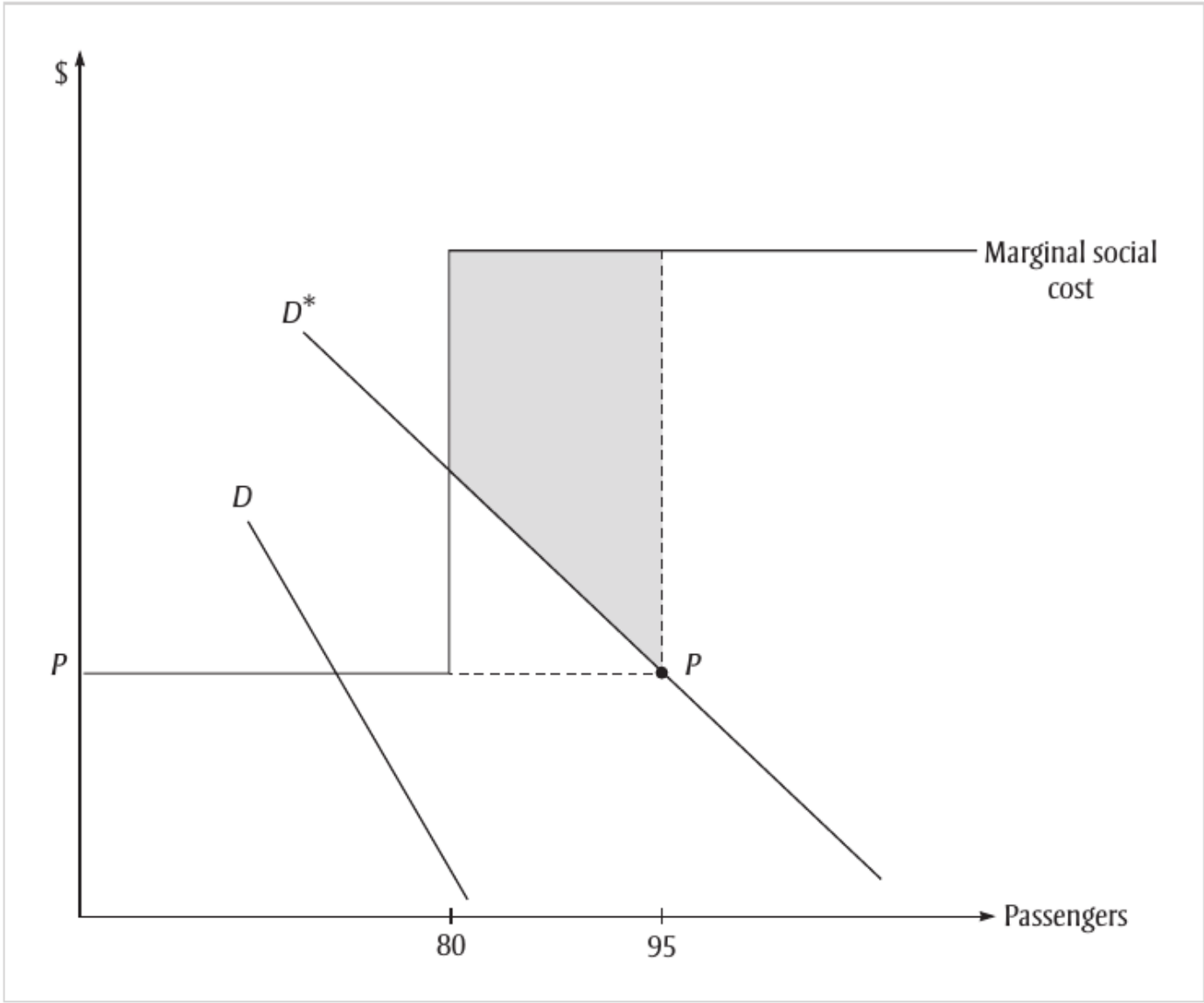


Graphical Rules of Thumb

- When marginal social cost looks like a tax, use a tax.
- When marginal social cost looks like a rule, use a rule.
- The form of the response should match the form of the harm.

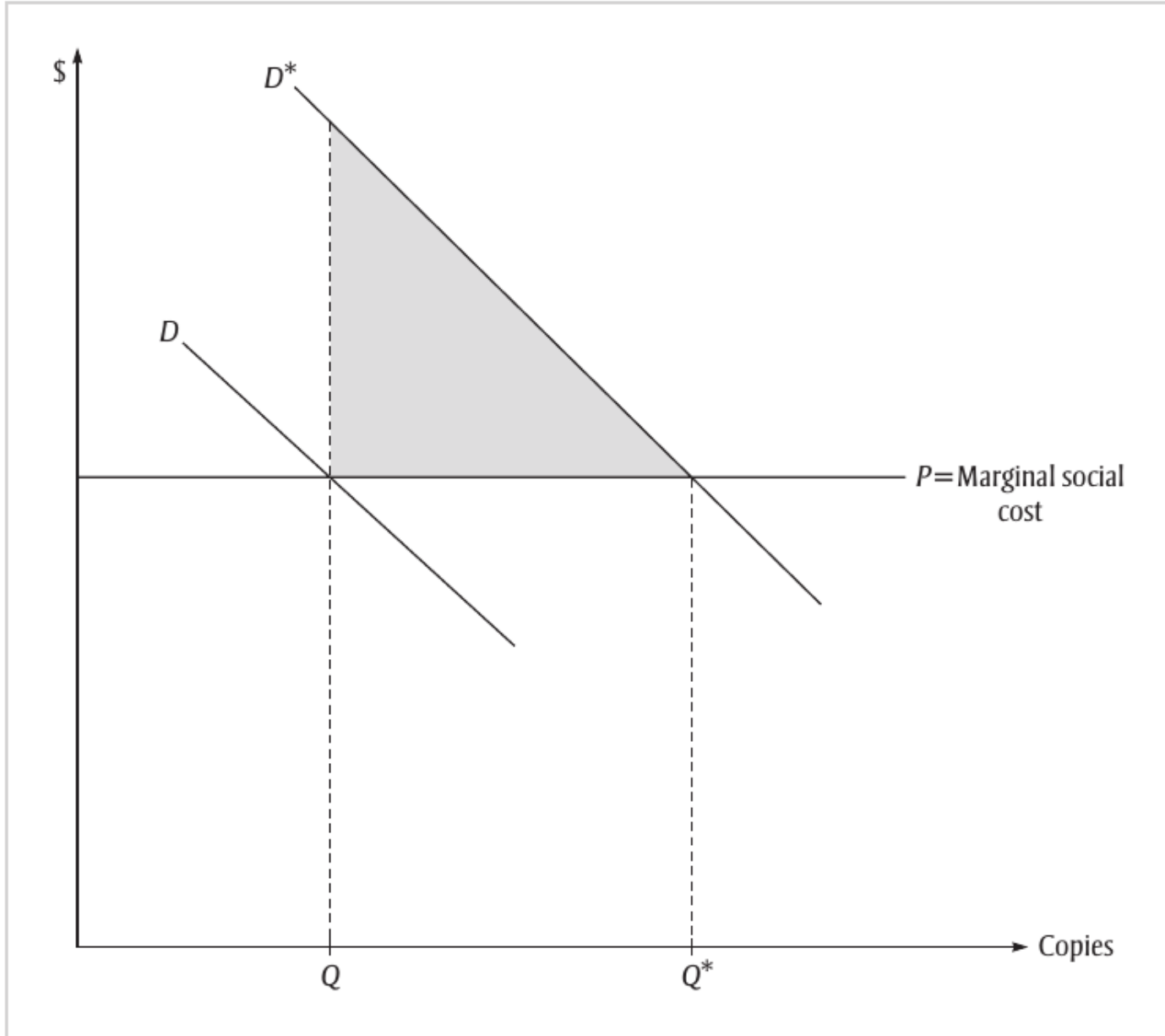
Deadweight loss from the wrong price

Figure 8.5 Deadweight loss from the wrong price.



Deadweight loss from the wrong rule

Figure 8.6 Deadweight loss from the wrong rule.



Community Reporting

- Community reporting is often cheap – much easier for neighbors to know whether someone is breaking a rule than whether she has paid her taxes.
- Example: Reducing Sunday liquor sales: Ban or tax?
  - Easy for neighbors to tell whether a liquor store is open on Sundays
  - Not so easy to tell whether they paid their taxes on Sunday purchases.

Community Reporting

- When community monitoring is cheap and easy, and/or when tax collectors are likely to be lazy or corrupt, rules will work better than taxes to enforce desired behavior.

- Other examples of when to use rules:
  - hunting and fishing limits
  - rules on where buildings can be built
  - height limitations
  - restaurant and bar closing hours
  - noise ordinances
  - laws on endangering the welfare of children