



EE475 Natural Resource Economics

Economic Frameworks and Natural
Resource Problems (2):

Static Efficiency, Market Failure, and Role of the Government

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Outline

- ▶ the Assignments
- ▶ Static Efficiency
 - ▶ Consumer Surplus, Producer Surplus, and Social Welfare
 - ▶ Property Rights Structure
 - ▶ Production Possibility Frontiers (PPF) and Social Indifference Curve
- ▶ Market Failures
 - ▶ Externalities
 - ▶ Monopoly
- ▶ Government Failure



Assignment 1

- ▶ Each member of a group writes 1-2 pages summary of current situations / problems of the resource in the context of Thailand.
- ▶ Content written by each member of the group must be different but connected to give overall picture of the resource current situation.
- ▶ This assignment is to be in the first class of each resource sector.
 - ▶ 10 - 15 minutes per person
- ▶ The paper is submitted in the first class of each resource sector.
 - ▶ Through email: cholb@econ.tu.ac.th



Assignment 2

- ▶ Each member of the group reads an academic article and summarizes the content in 1-2 pages.
 - ▶ Summary of the content (what is the main message of the author?)
 - ▶ Information or knowledge that you find interesting + reason(s)
 - ▶ Other comments (e.g. writing style, policy implications, etc.)
- ▶ Presentation: 10-15 minutes per person
- ▶ The academic article has to be informed to and approved by the lecturer 3 weeks before the last class of each resource sector.



Positive vs Normative ?

What are the differences between the followings ?

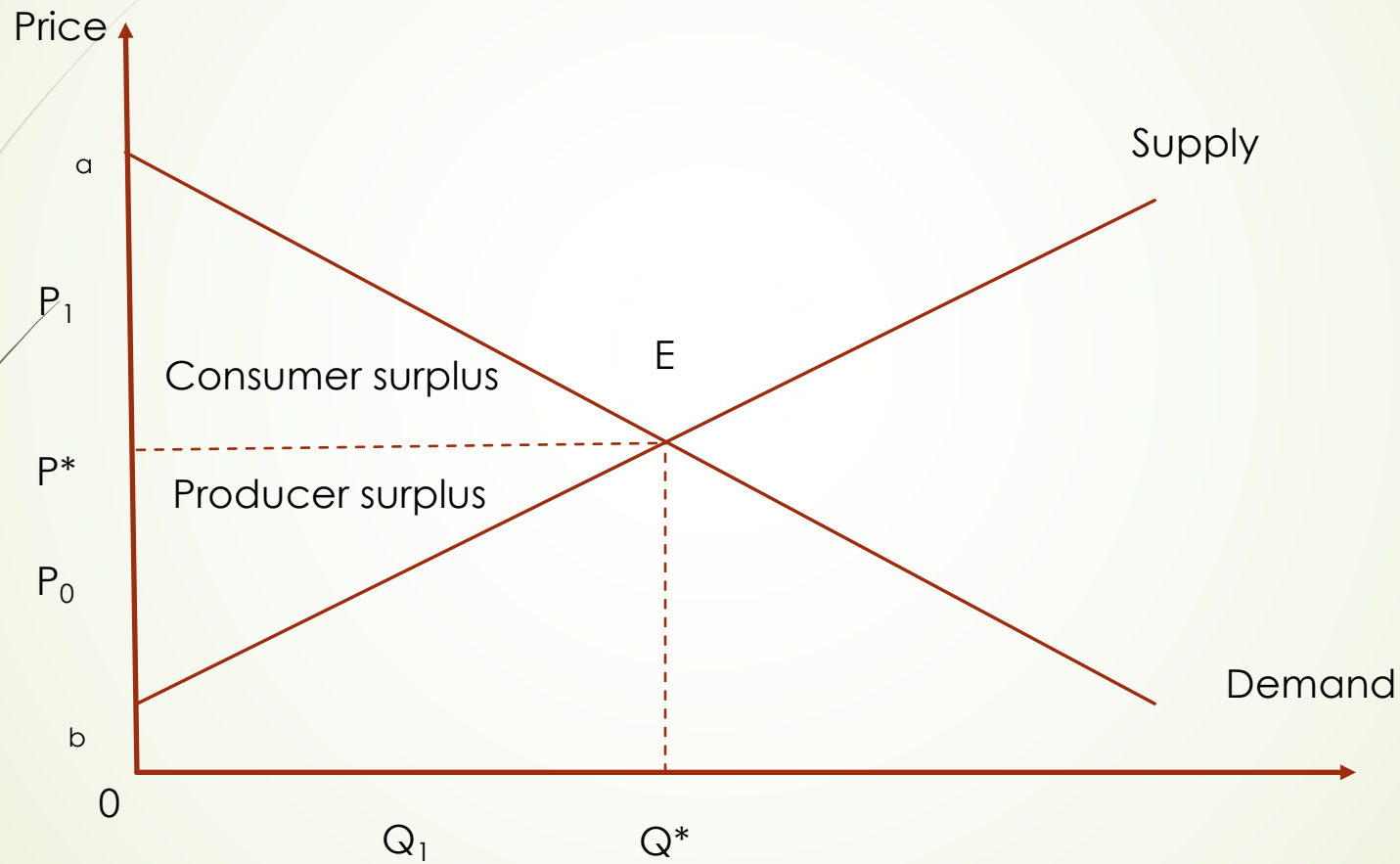
- ▶ Positive Statement & Normative Statement
- ▶ Positive Disagreement & Normative Disagreement
- ▶ Positive Economics & Normative Economics



Static Efficiency

- What do economists mean by “Efficiency” ?

Static Efficiency: What can we tell?



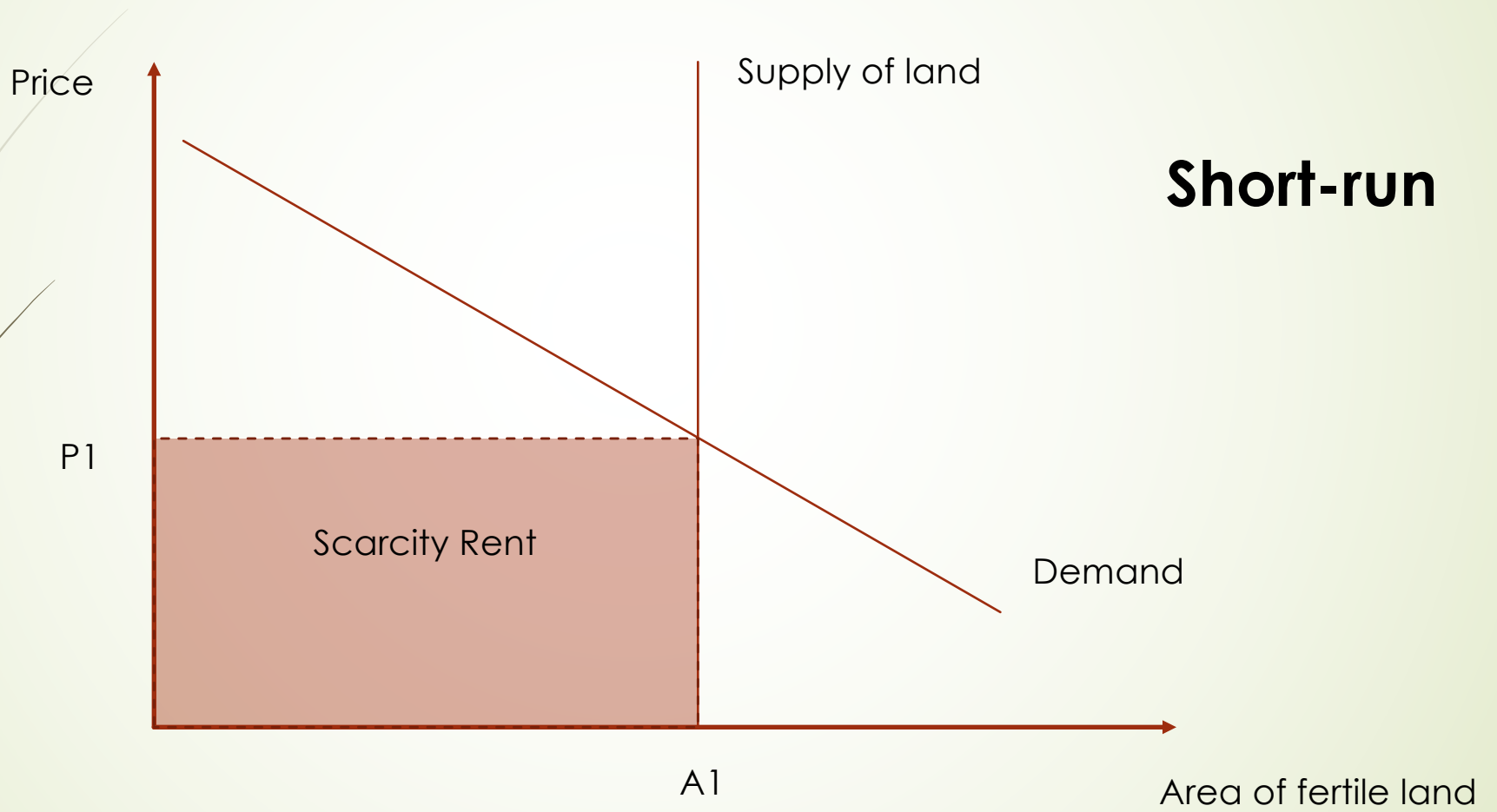


Producer surplus

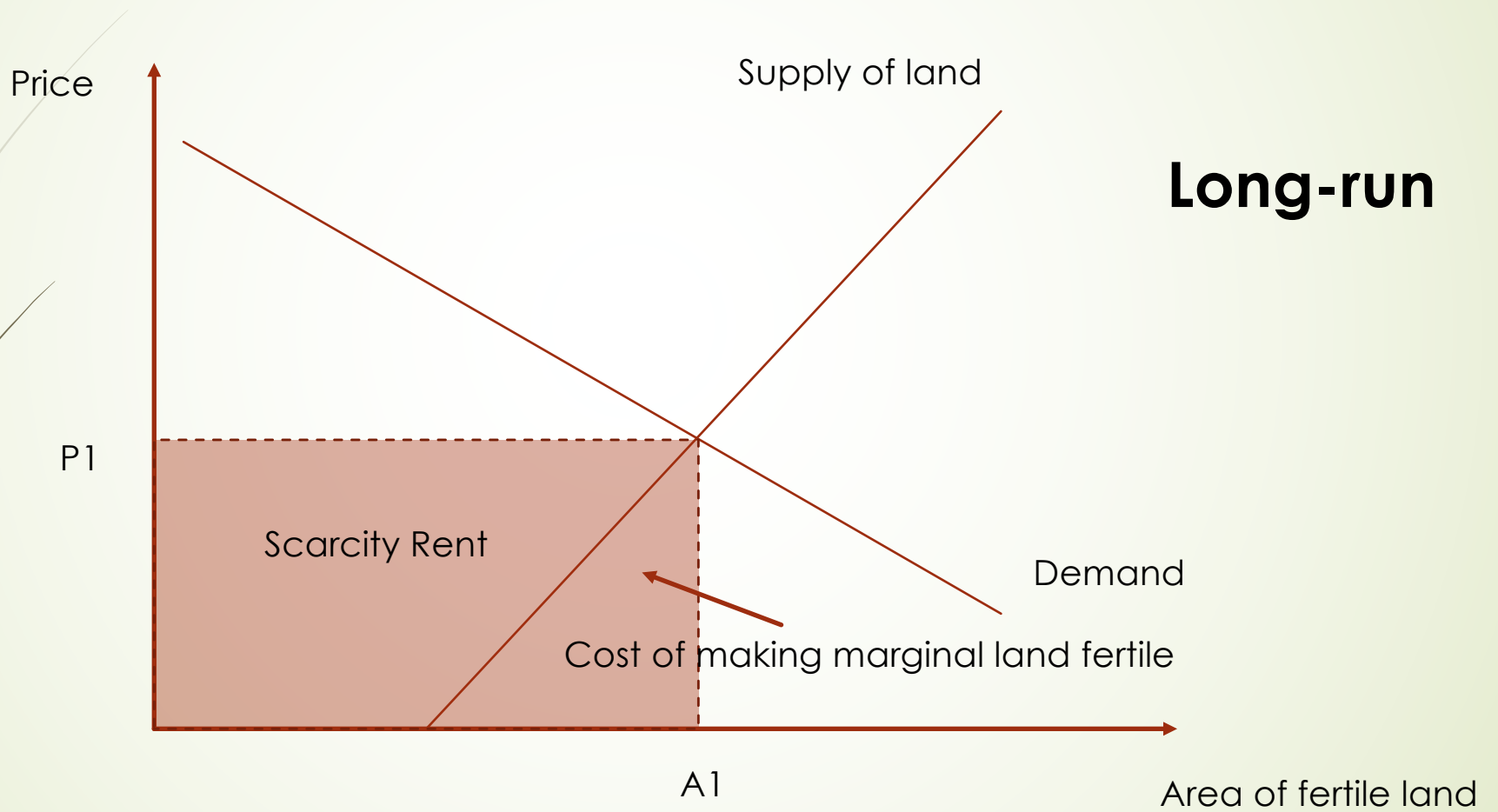
- ▶ In short-run, producer surplus = Excess profit + Fixed cost
- ▶ In long-run, = Normal profit + **Scarcity Rent**

- ▶ **Scarcity rent**
 - ▶ Rent = Differential surplus
 - ▶ Differential surplus = Actual earnings - Transfer earnings of factor of production
 - ▶ Scarcity rent exists **so long as the supply is less than perfectly elastic.**
 - ▶ Scarcity rent is determined by the scarcity of resource and its demand

Scarcity Rent

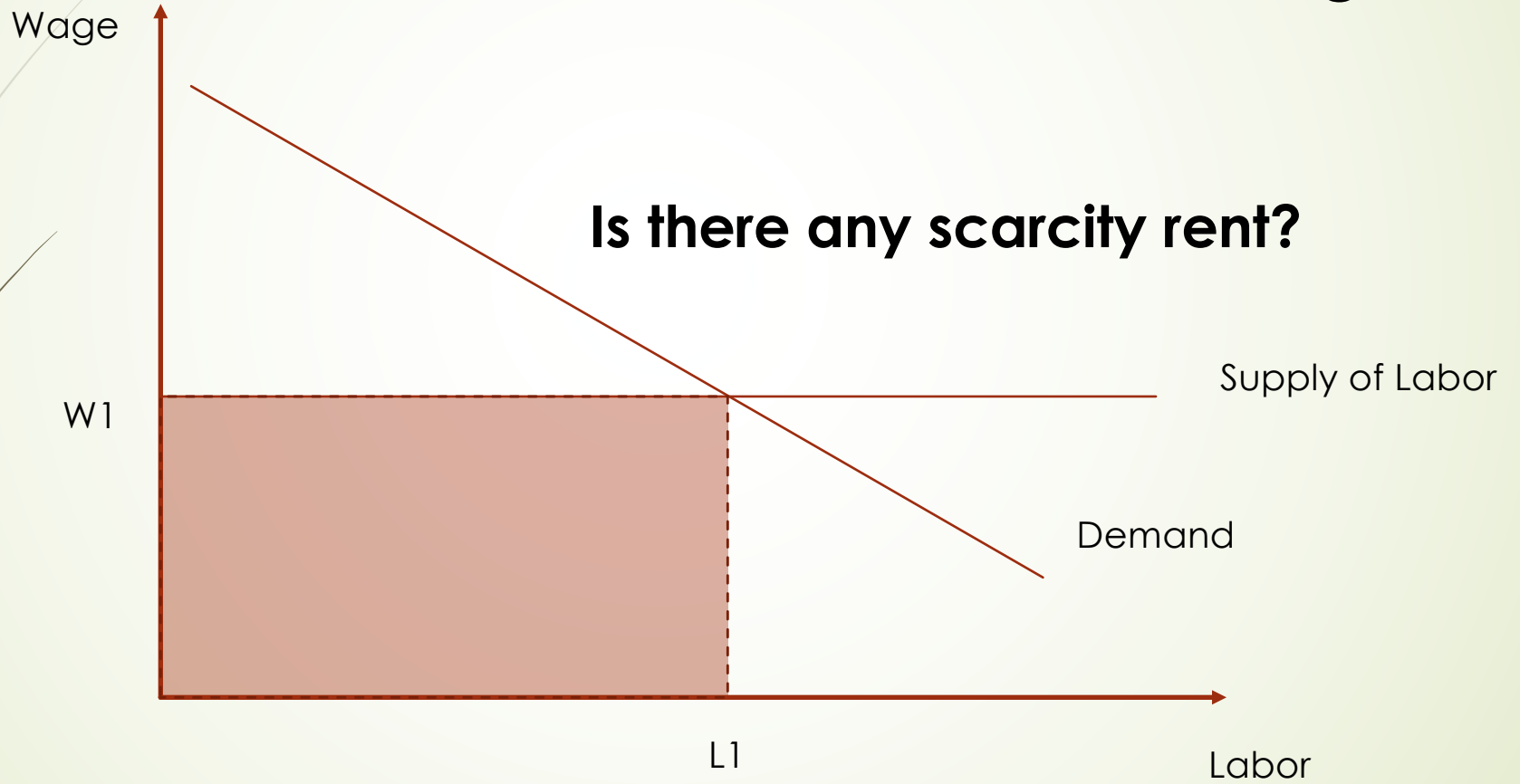


Scarcity Rent



Scarcity Rent

Long-run





Property Rights and Efficiency in Resource use

Structures of the property rights that promote efficiency of market economy.

- *Exclusivity* - All benefits and costs accrued as a result of owning and using the resources should accrue to the owner, and only to the owner, either directly or indirectly by sale to others.
- *Transferability* - All property rights should be transferable from one owner to another in a voluntary exchange.
- *Enforceability* - Property rights should be secure from involuntary seizure or encroachment by others.



Property Rights and Efficiency in Resource use

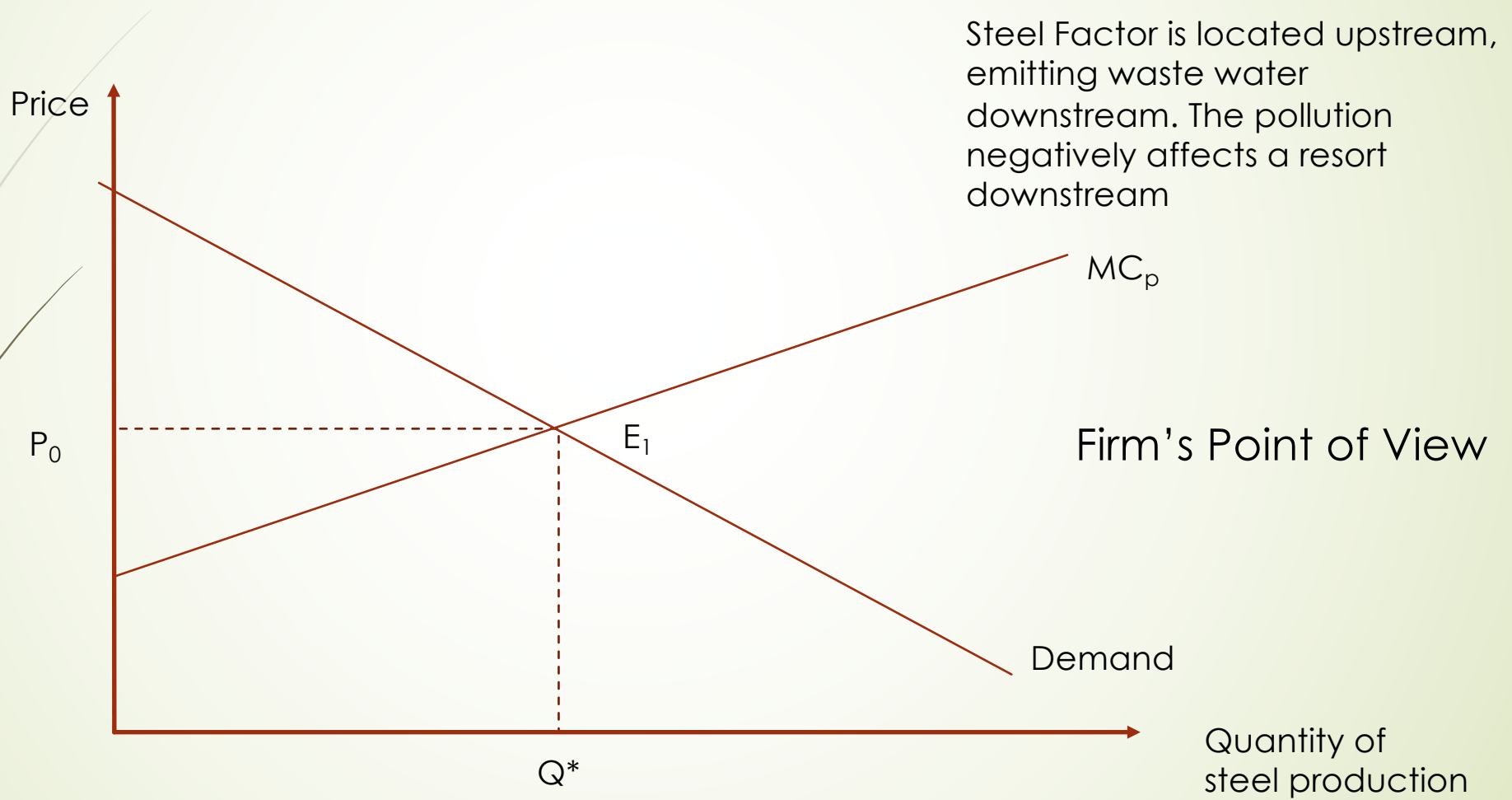
	Private Property Rights	Common Property Rights	Open-Access
Exclusivity	Exclusion is possible at individual level.	Resource is shared among members. Exclusion of non-member is possible.	Not possible
Transferability	Transferability is totally possible.	Transferability is limited within the members, or non-existence.	Not possible
Enforceability	Under proper legal and enforcement system	For members, this depends on local rules. Enforcing local rules on non-members can be limited and requires state recognition	Not possible



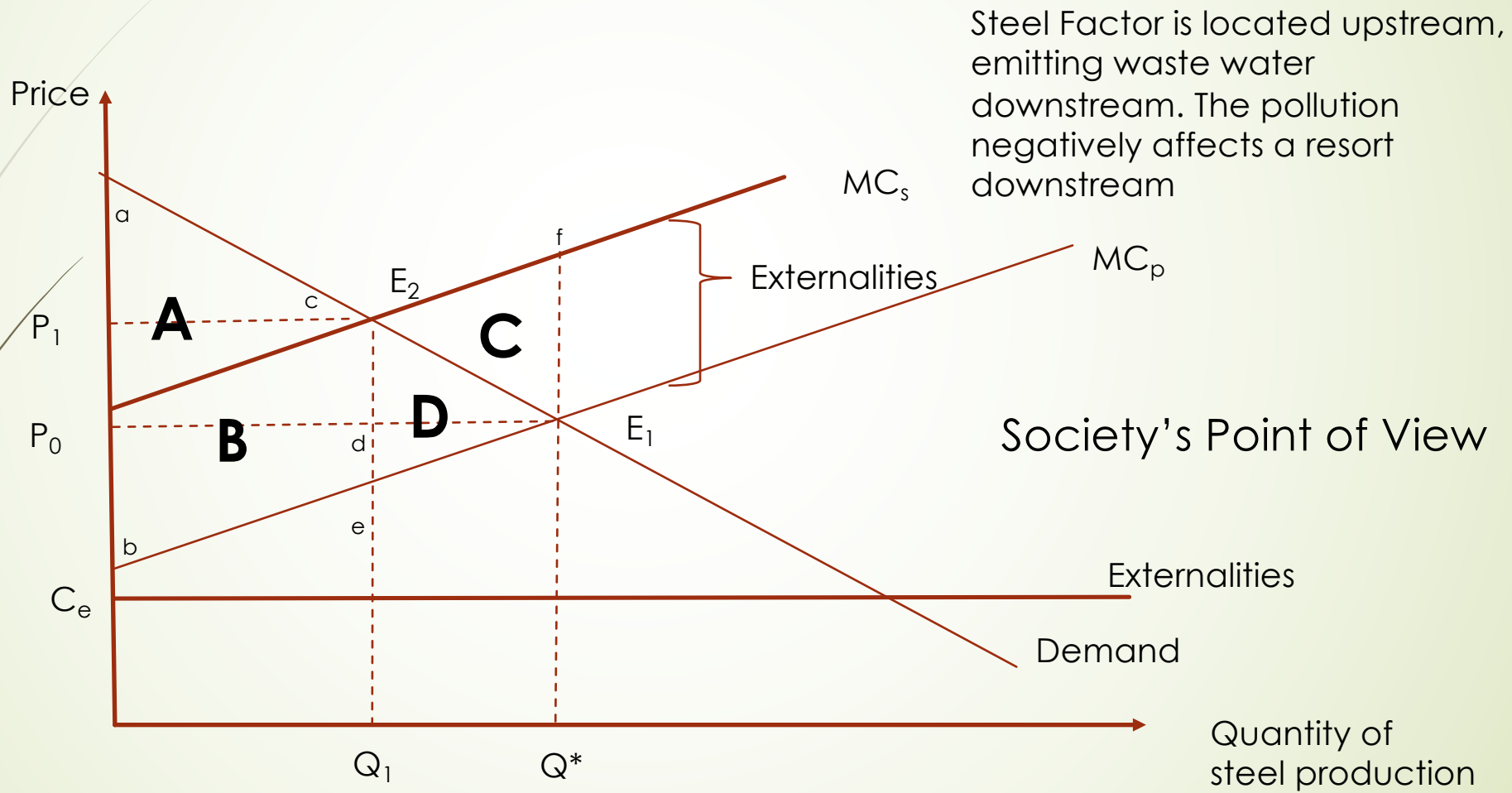
Market Failure

- ▶ What is market failure?
- ▶ Which types of market failure are relevant to natural resource use?

Externalities: What can we tell?



Externalities: What can we tell?





What do you know?

- ▶ What needs to be done in order to correct the market failure?
- ▶ Who has to pay for the external cost?
 - ▶ The steel factory?
 - ▶ The victim of pollution?



The pursuit of Efficiency

- ▶ The Courts: Property rules and Liability Rules
- ▶ “Property rules”
 - ▶ specify the initial allocation of the entitlement.
 - ▶ *In our case*: Conflicting entitlements - the right to add waste products to the river and the right to have an attractive river.
 - ▶ The court merely decides which right is preeminent and places an injunction against violating that right.
 - ▶ In the absence of a court decision, the entitlement is naturally allocated to the party that can most easily seize it.



The pursuit of Efficiency

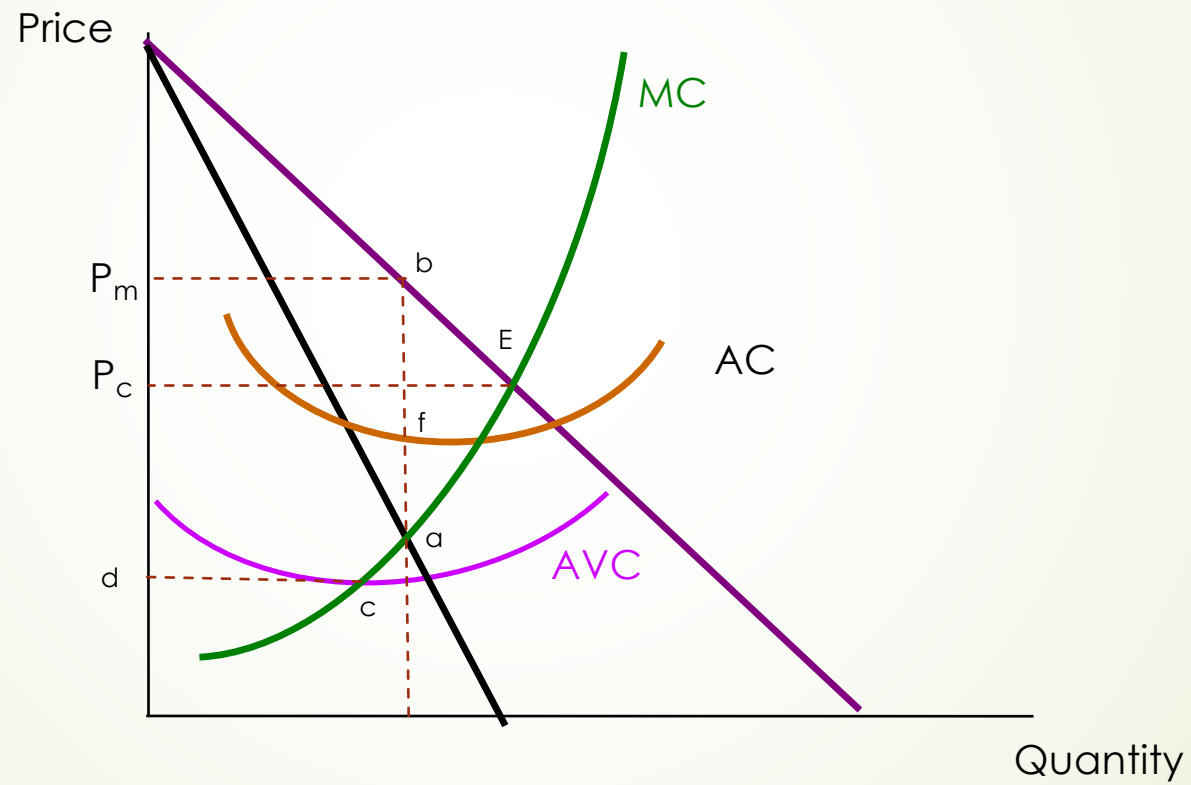
- ▶ “Liability Rules”
 - ▶ The liability rules award monetary damages, after the fact, to the injured party.
 - ▶ The steel factory has to compensate the resort for all damages incurred: the area between two marginal cost curves from the origin to the chosen level of output.
 - ▶ Internalization of Externalities



The pursuit of Efficiency

- ▶ Coast Theorem - Ronald Coase (1960)
 - ▶ As long as negotiation costs are negligible and affected consumers can negotiate freely with each other (when the number of affected parties is small), the court could allocate the entitlement to *either* party, and an efficient allocation would result.
 - ▶ The only effect of the court's decision would be to change the distribution of surplus among the affected parties.

Monopoly: What can we tell?





Monopoly

- ▶ What are the problems of monopoly?
- ▶ What are the remedies for monopoly problem?



Government Failure

- ▶ Government and political process can be the cause of inefficiency in resource allocation.
 - ▶ Providing wrong incentives is the root of the problem.
- ▶ Rent Seeking
 - ▶ Examples
 - ▶ Producers seek protection from competitive pressures
 - ▶ Consumer groups seek price ceiling or special subsidies.
- ▶ Increase benefits of the interest group, lower the surplus to society as a whole.



Government Failure

- ▶ Why, normally don't the losers rise up to protect their interests?
- ▶ Why voters (you?) remain ignorant to the problems?

