Allocative efficiency: A regulatory goal

Lecture 1

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Section 1

Static efficiency

Static efficiency

Definition

Definition (Static efficiency)

It is not possible to make any consumer better off without making another consumer worse off (synonym: 'Pareto' efficiency).

Static efficiency

Definition

Necessary conditions

- If consumption and production cause no external effects:
  - All consumers have same marginal willingness to pay.
  - Marginal willingness to pay equals marginal cost.
- No X-inefficiency / no waste of resources: It is not possible to produce the same quantity of output at lower costs.

Static efficiency

Scenarios with positive welfare effects

Perfect competition	
Conditions	(1) Consumers and suppliers are price takers. (2) $MC = AC$
Merits	Pareto efficient allocation.

Static efficiency

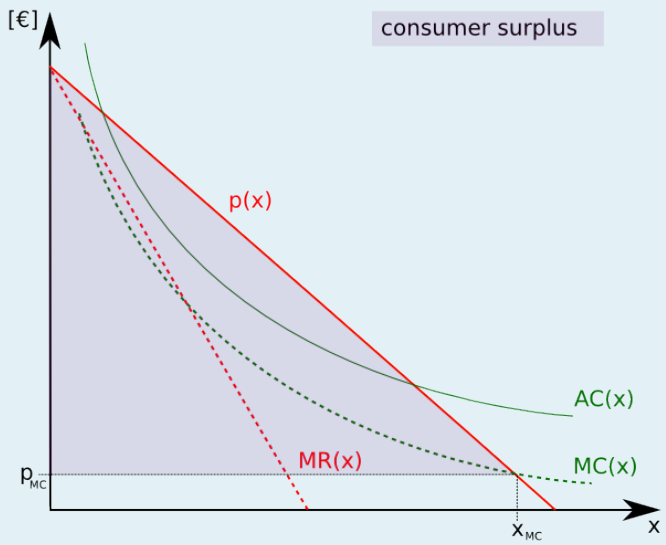
Scenarios with positive welfare effects

Natural monopoly	
Conditions	Average costs decline as quantity of output increases ('economies of scale').
Merits	Monopolist can produce at lowest overall costs.

Static efficiency

Scenarios with positive welfare effects

Natural monopoly

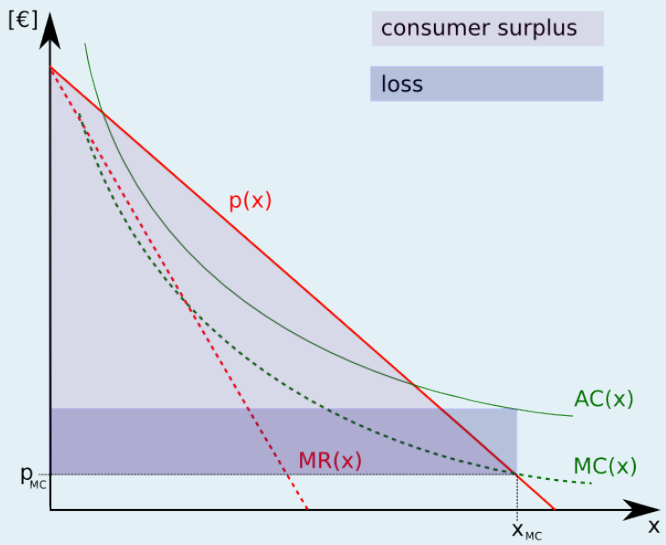


In a natural monopoly, the $(p = MC)$-rule is not sustainable.

Static efficiency

Scenarios with positive welfare effects

Natural monopoly



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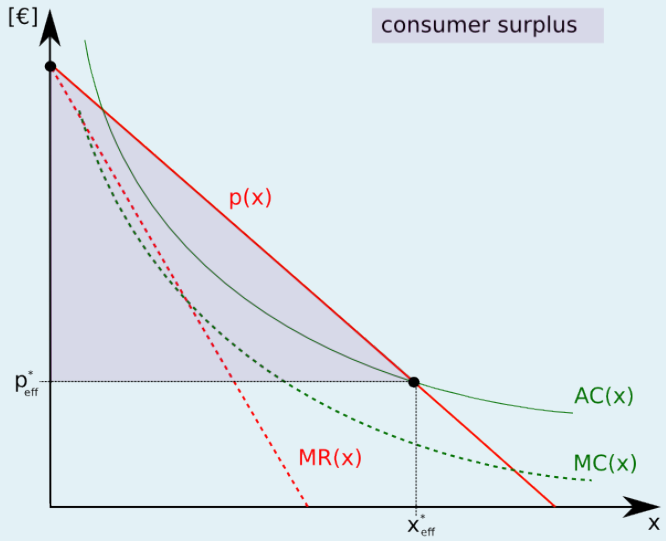
Static efficiency

Scenarios with positive welfare effects

Natural monopoly



The $p = AC$-rule is the 2^{nd} best solution.

- Natural monopolist produces at lowest overall costs.
- Duplication of monopolist's infrastructure would be a waste of resources.

Static efficiency

Scenarios with positive welfare effects

Natural monopoly – Example

Utilities such as water firms.

The costs of setting up a water network are enormous, the marginal costs of delivering an extra quantity of water are practically zero.

Static efficiency

Scenarios with positive welfare effects

Monopoly & economies of scope	
Conditions	It is cheaper to produce a product portfolio jointly in a single firm than separate products in separate firms ('economies of scope').
Merits	Monopolist can produce at the lowest overall costs.

Static efficiency

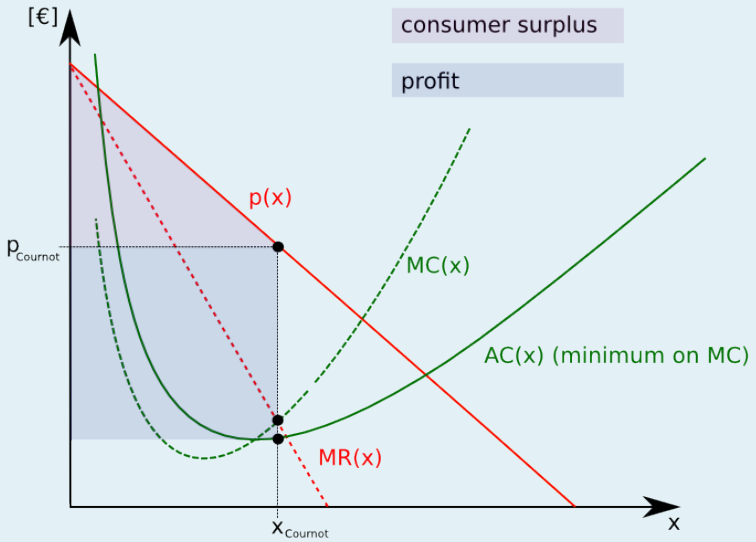
Scenarios with negative welfare effects

Non-contestable monopoly	
Conditions	Monopolist is protected from potential competition by barriers to market entry.
Downsides	Monopolist can afford... ▶ ...to charge prices above marginal costs, causing a dead-weight loss. ▶ ...to waste resources.

Static efficiency

Scenarios with negative welfare effects

Non-contestable monopoly



Monopoly causes a dead weight loss.

Static efficiency

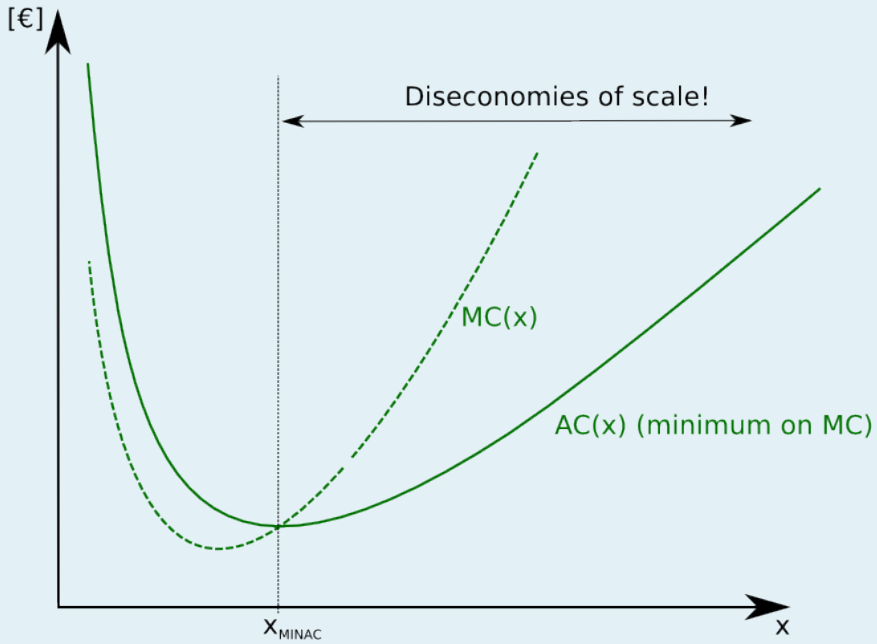
Scenarios with negative welfare effects

Contestable monopoly & diseconomies of scale	
Conditions	(1) Diseconomies of scale. (2) Absence of barriers to market entry.
Downsides	There will be just one monopolist ($p = AC$), though two or more firms could produce any output on top of the monopolist's output at lower overall costs.

Static efficiency

Scenarios with negative welfare effects

Contestable monopoly & diseconomies of scale

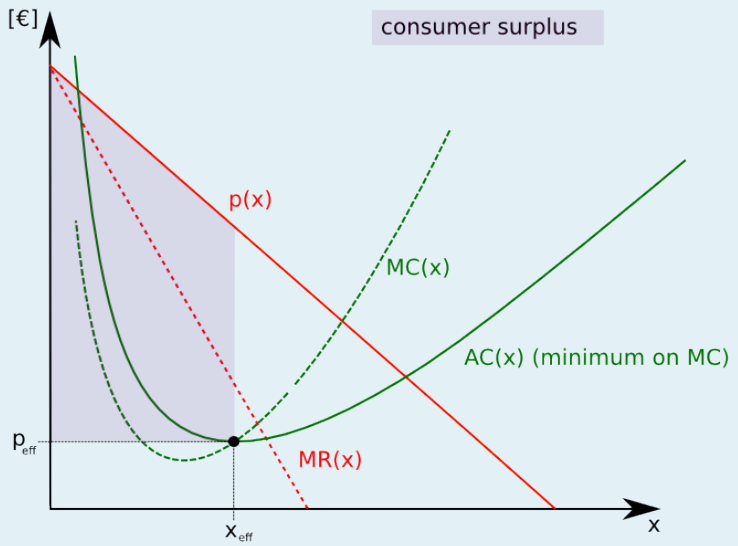


Two or more firms could produce outputs exceeding x_{MINAC} at lower overall costs than a monopolist.

Static efficiency

Scenarios with negative welfare effects

Contestable monopoly & diseconomies of scale

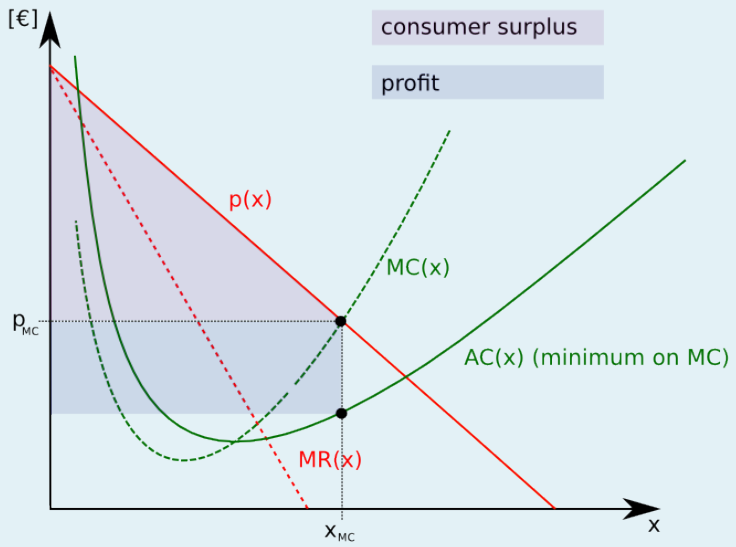


Absence of barriers to market entry does not imply maximization of consumer surplus.

Static efficiency

Scenarios with negative welfare effects

Contestable monopoly & diseconomies of scale



$p = MC$ will not maximize consumer surplus.

Section 2

Dynamic efficiency

Dynamic efficiency

Definition

Definition (Dynamic efficiency)

Promotion of innovation, such as

- product innovation – development of products that suit customer needs better.
- technological innovation – development of cost-saving technologies.

Dynamic efficiency

Scenarios with positive welfare effects

Non-contestable monopoly	
Conditions	Monopolist is protected from potential competition by barriers to market entry.
Merits	Prospect of excess profits provides an incentive... ▶ ...to enter the market (which is risky). ▶ ...to invest in innovation (Schumpeter's 'creative destruction').

Dynamic efficiency

Scenarios with negative welfare effects

Non-contestable monopoly	
Conditions	Monopolist is protected from potential competition by barriers to market entry.
Downsides	Monopolist can keep its dominant position without investing in innovation.

Dynamic efficiency

Scenarios with negative welfare effects

Examples for discussion

- Ability of software companies to write software for MS windows.
- Microsoft's tying its media player / its internet explorer to windows.
- Deal between AT&T and Apple that AT&T deliverance for IPhones.