

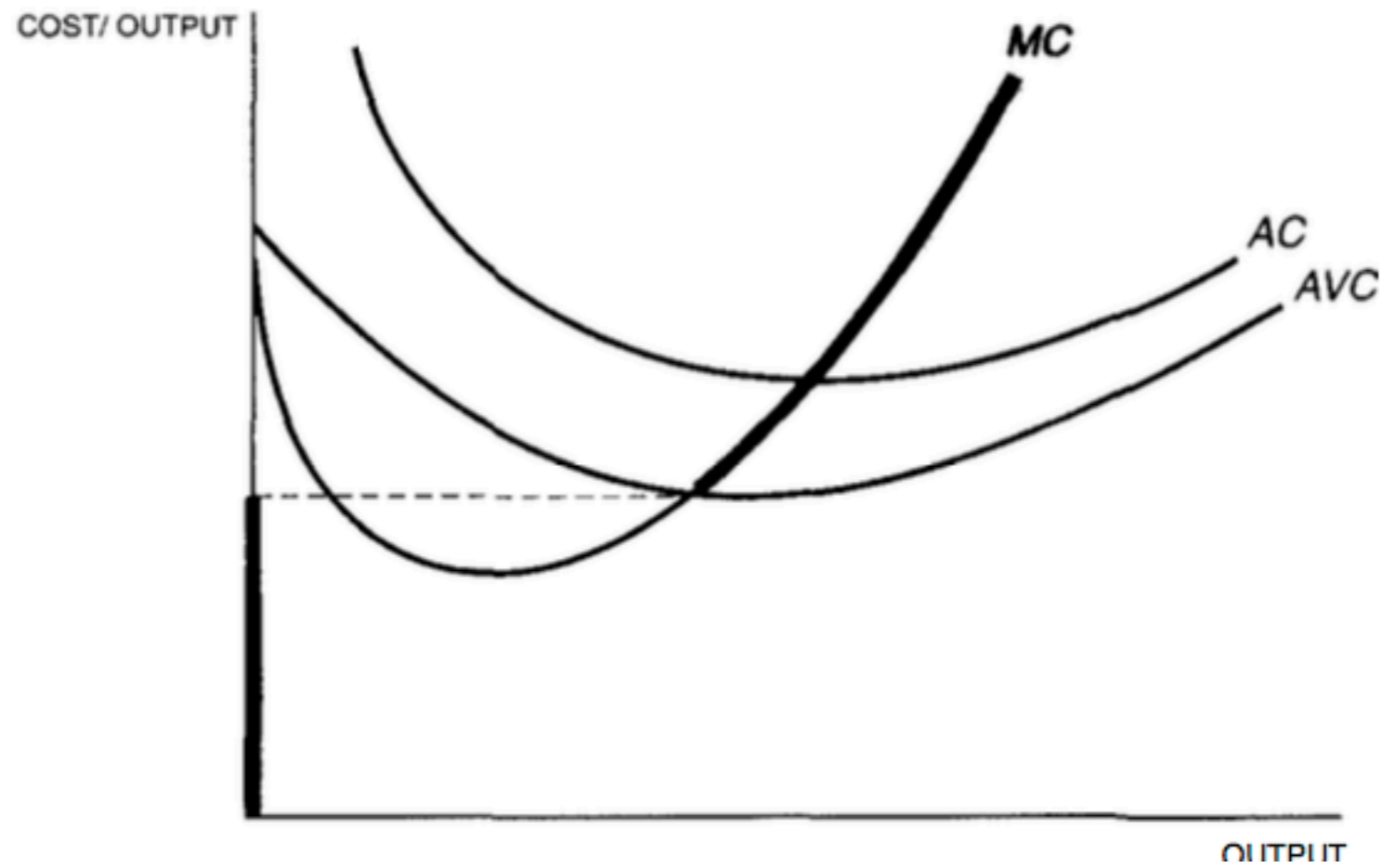
Competitive markets

Microeconomic analysis

Competitive firm

$$D(p) = \begin{cases} 0 & \text{if } p > \bar{p} \\ \text{any amount} & \text{if } p = \bar{p} \\ \infty & \text{if } p < \bar{p}. \end{cases}$$

Profit maximization problem



Industry supply function

$$Y(p) = \sum_{i=1}^m y_i(p).$$

Market equilibrium

$$\sum_{i=1}^n x_i(p) = \sum_{j=1}^m y_j(p).$$

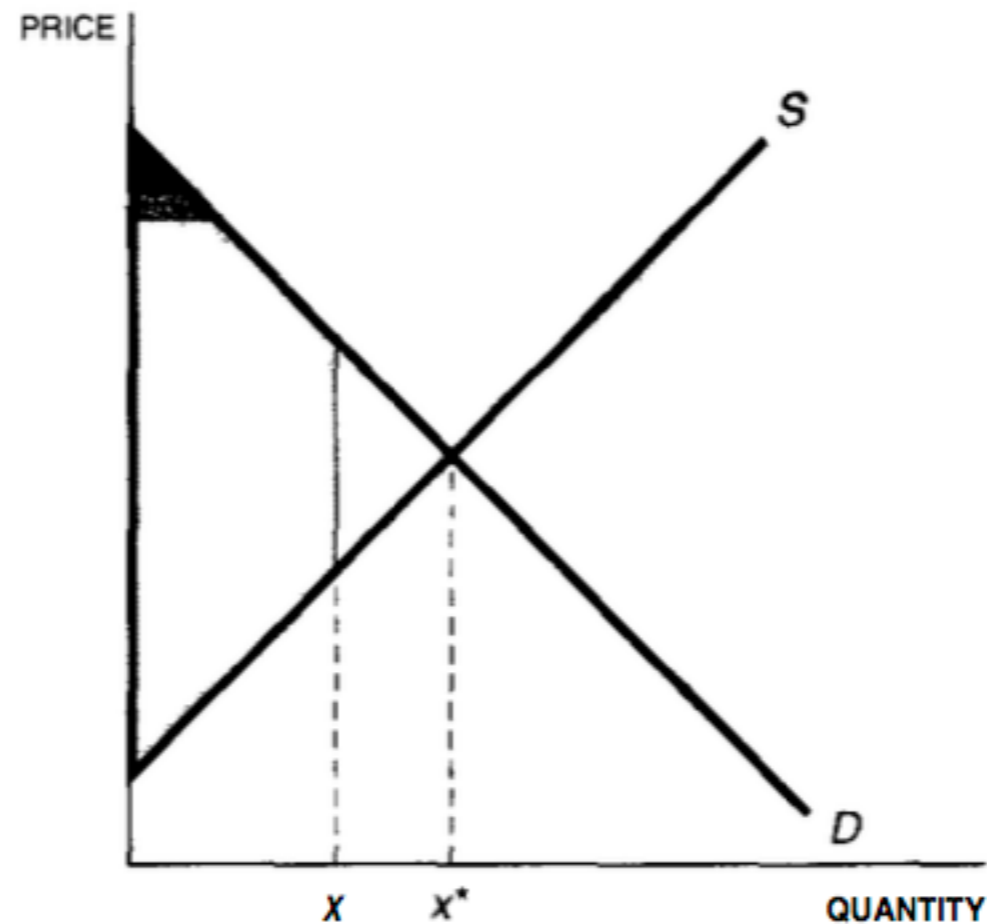
Welfare analysis

$$\max_{x,y} u(x) + y$$

such that $y = w - c(x)$

$$\max_x u(x) + w - c(x).$$

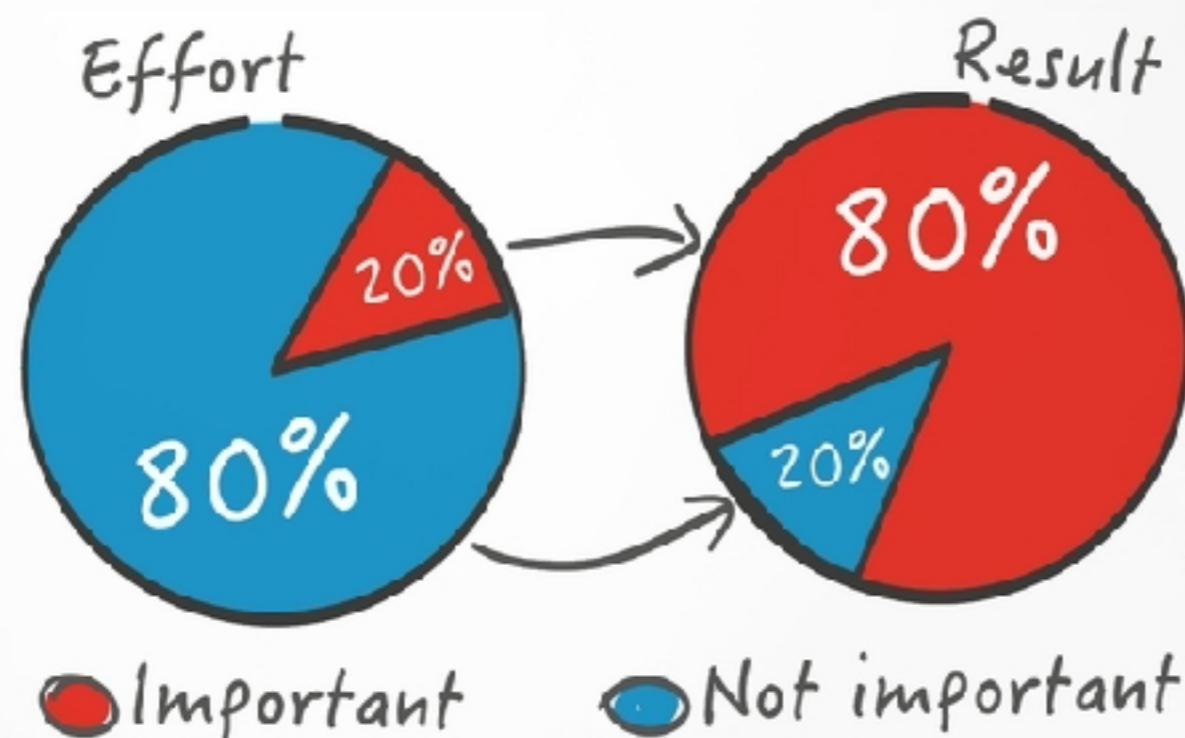
$$u'(x) = c'(x)$$



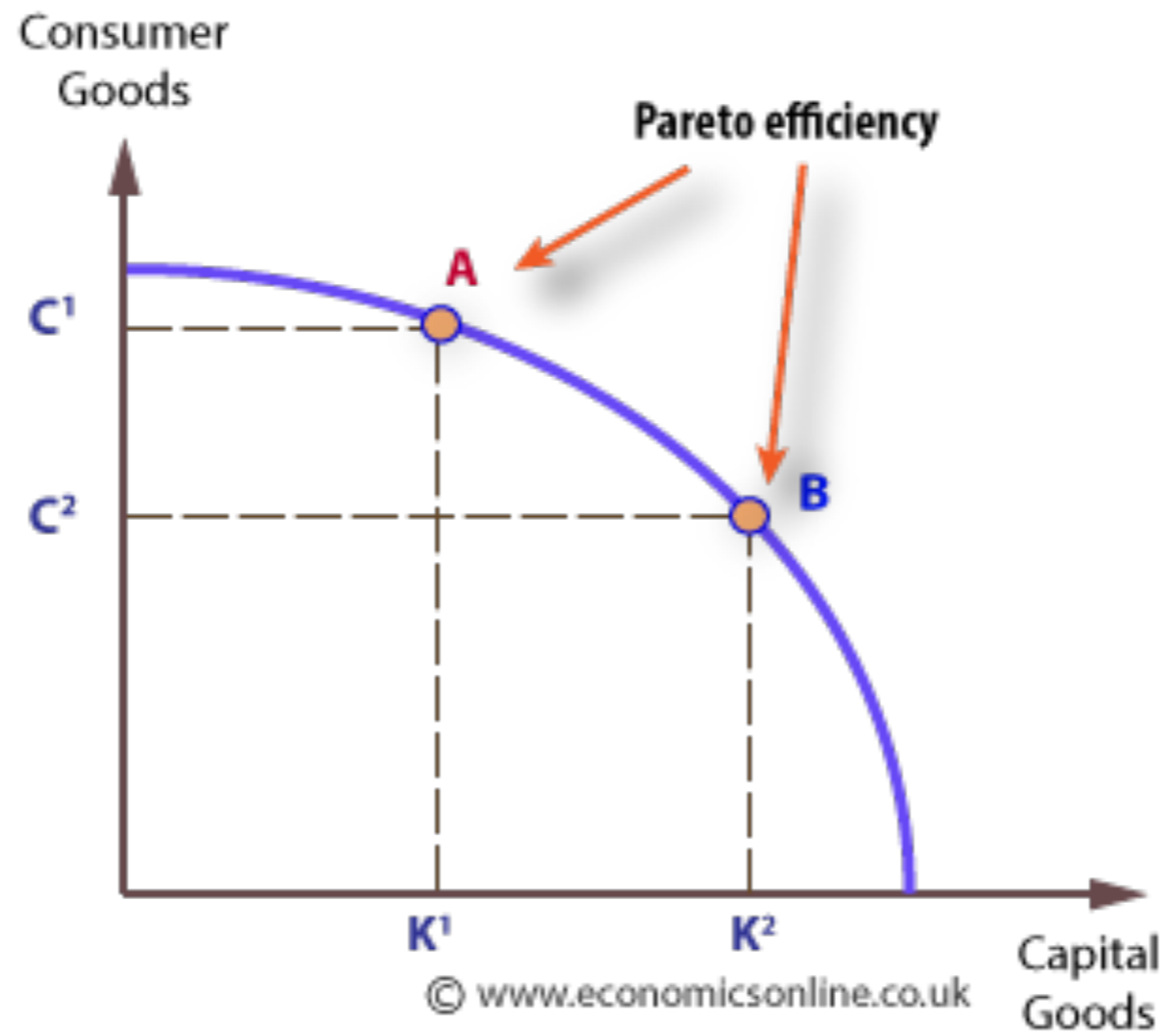
Pareto efficiency

PARETO'S PRINCIPLE

Expand your business
with the 80/20 rule



Pareto efficiency



Pareto efficiency

$$u'_1(x_1^*) = u'_2(x_2^*) = p^*$$

Taxes and subsidies

a `quantity tax` is a tax levied on the amount of a good consumed

a quantity subsidy of amount \mathbf{s} means that the seller receives \mathbf{s} dollars more per unit than the buyer pays, so that

$$P_d = P_s - \mathbf{s}$$

Deadweight loss

