Drip pricing:
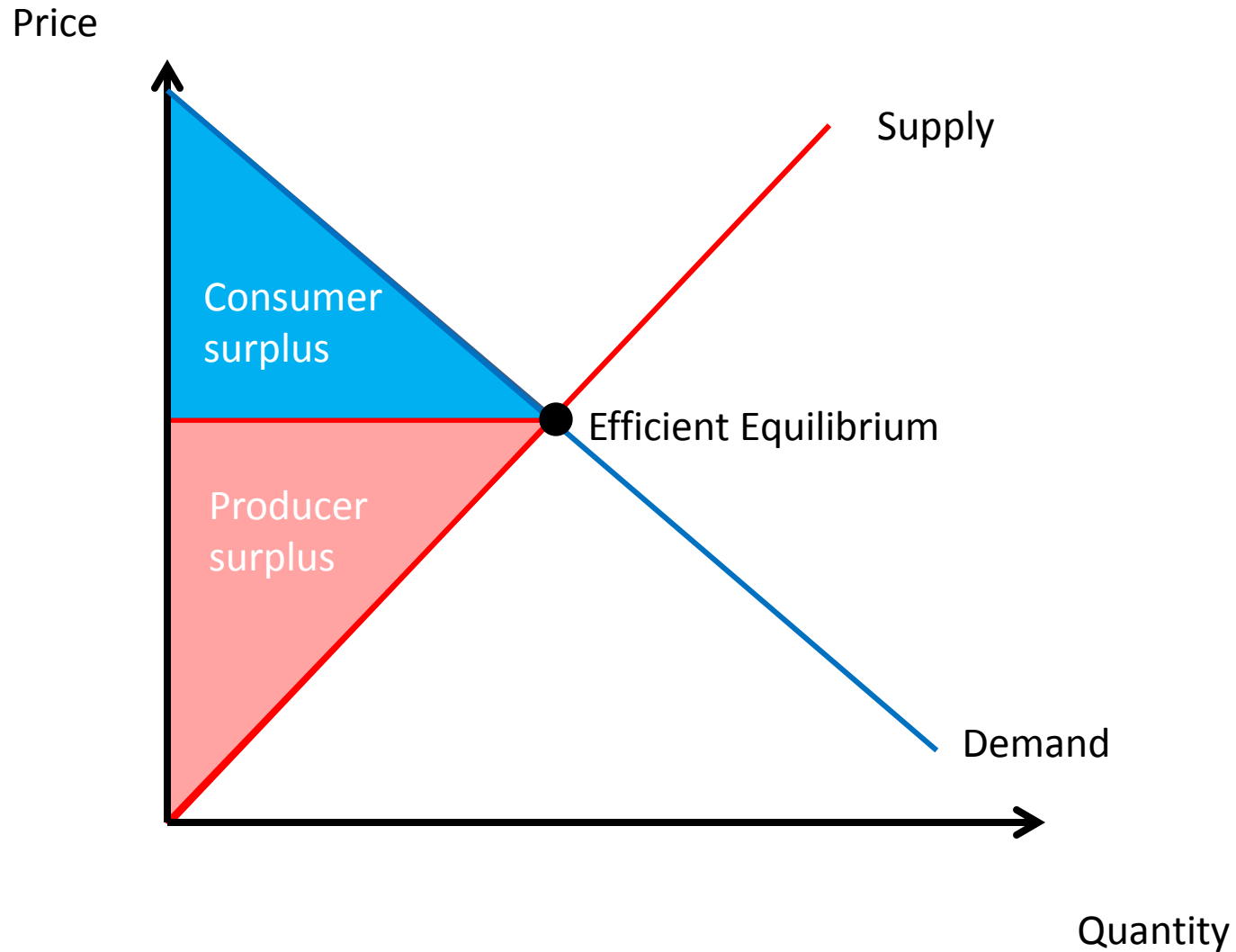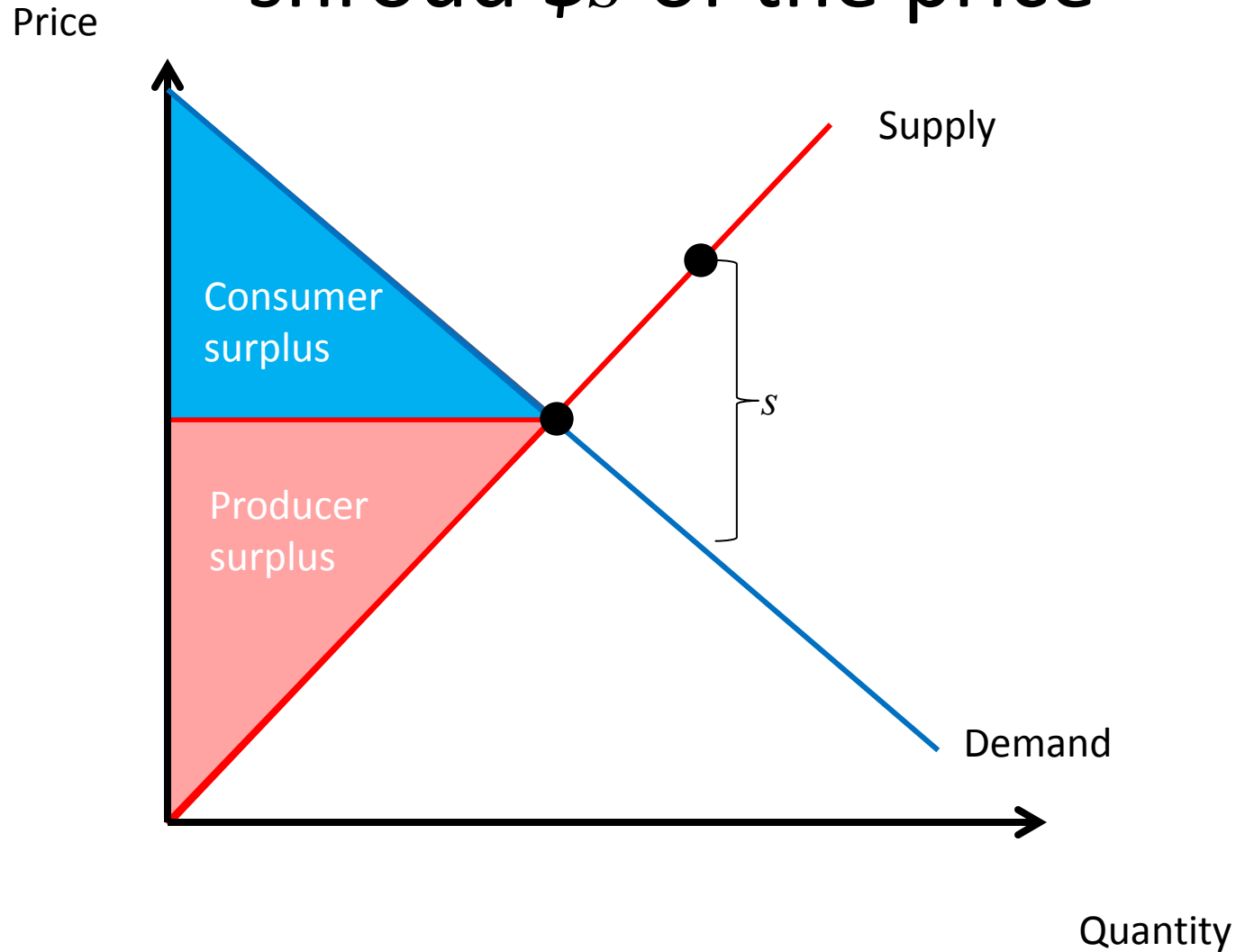# A behavioral economics perspective
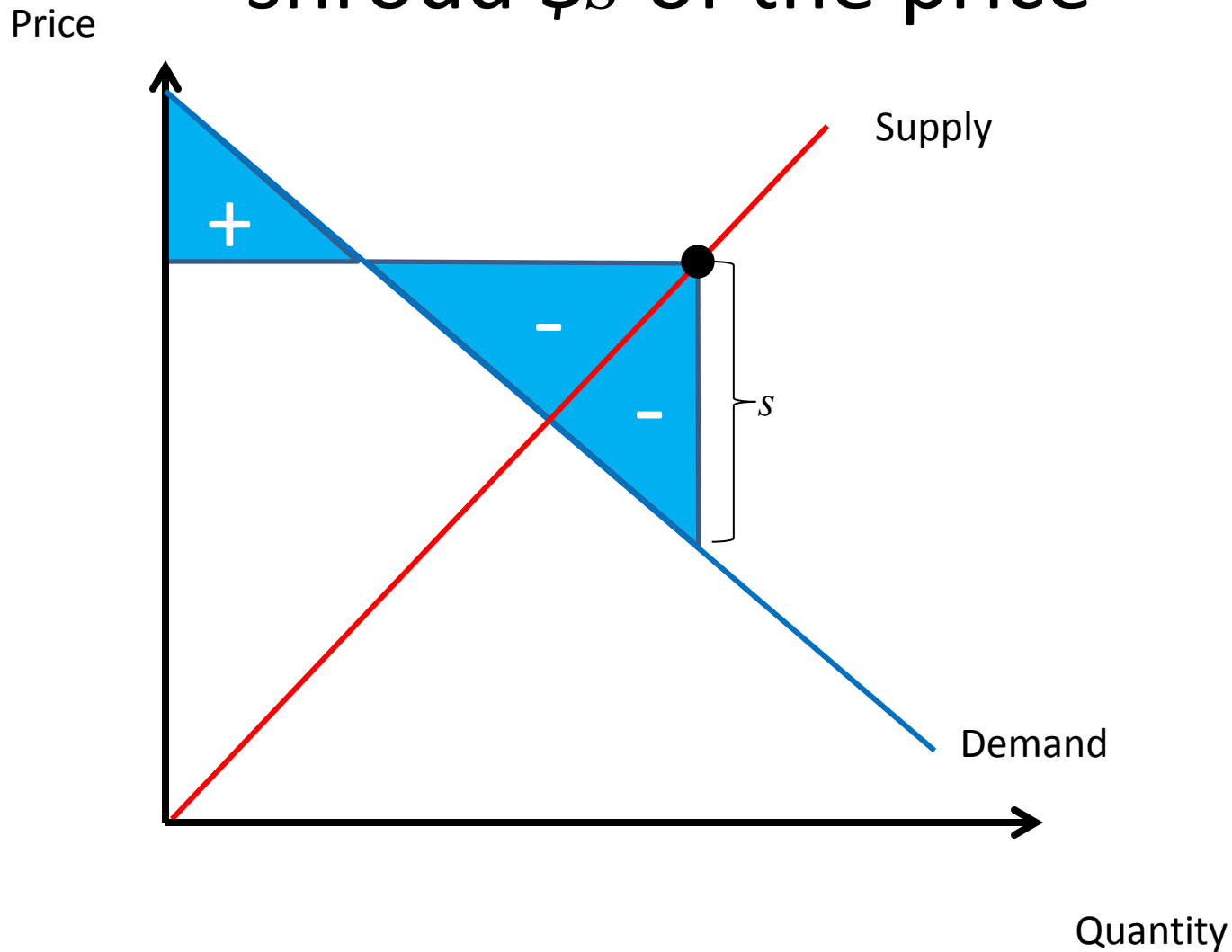
David Laibson

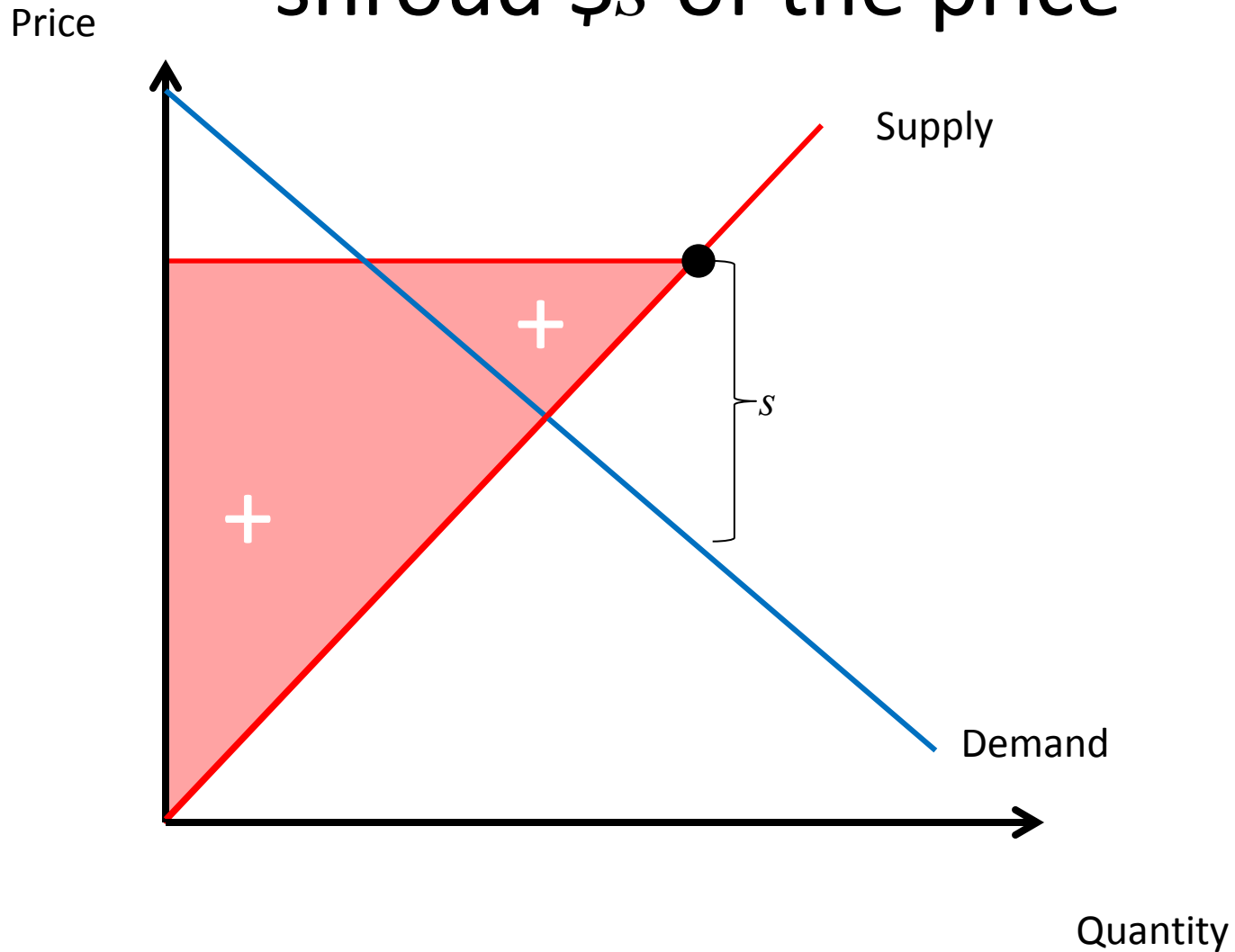Harvard University

May 21, 2012

"Classical" equilibrium

Firms use drip pricing to shroud $$s$ of the price

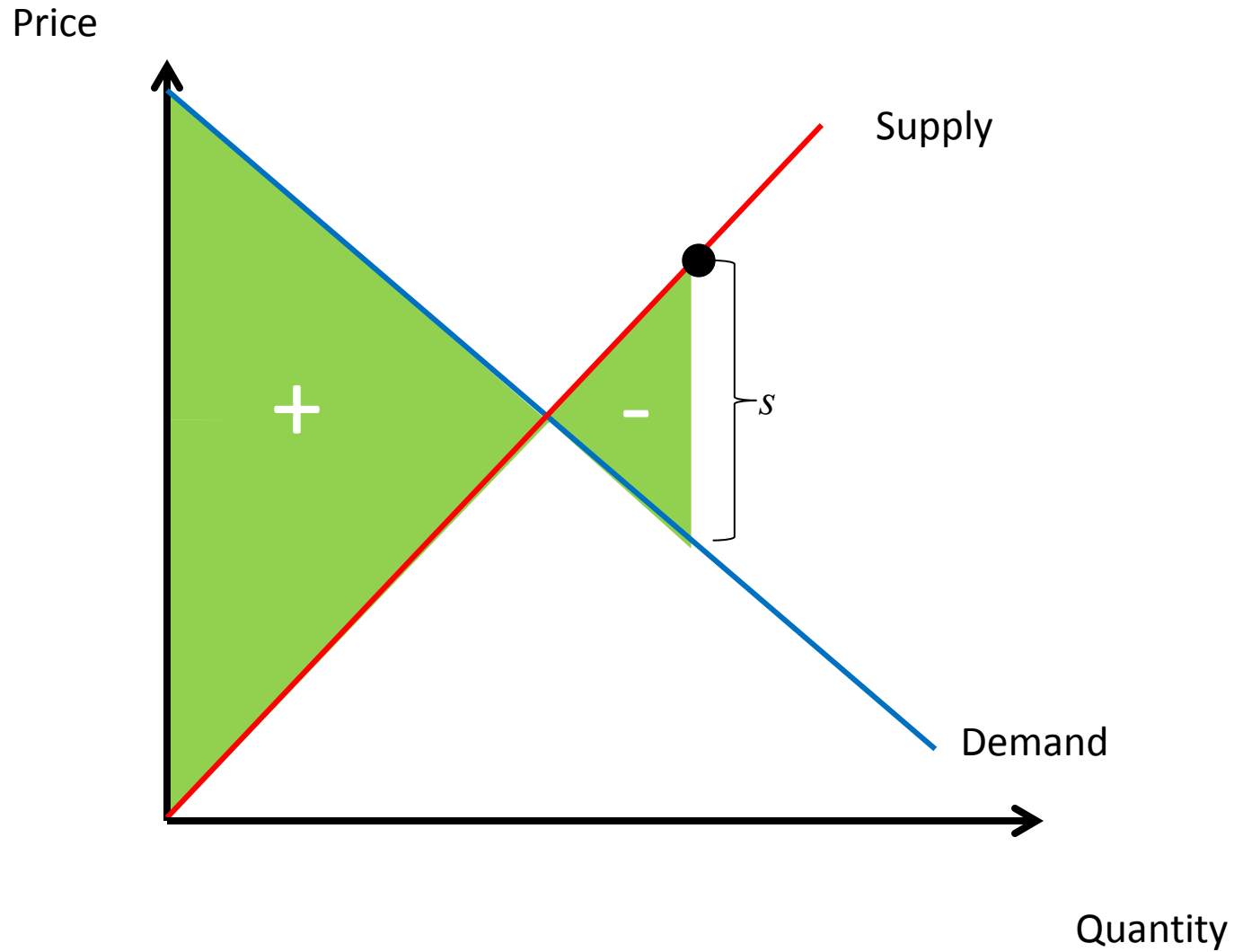# Firms use drip pricing to shroud $\$s$ of the price

Firms use drip pricing to shroud $$s$ of the price

Price

Quantity

Supply

Demand

s

+

+

Social surplus falls.

Properties of the shrouded equilibrium

- Social surplus falls
- Consumer surplus falls by (much) more
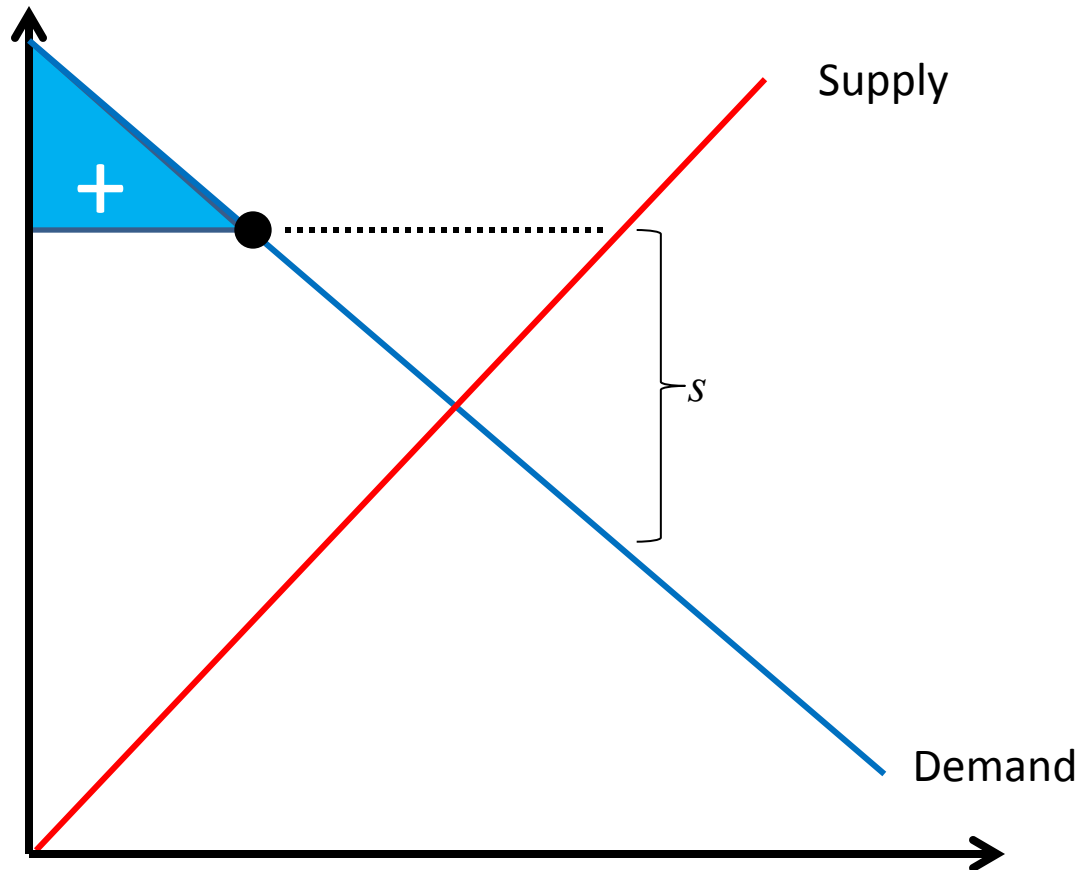- Producer surplus rises

Worse news

- The consumer welfare losses are likely to be concentrated among the consumers who have low levels of economic literacy ("regressive" welfare consequences)

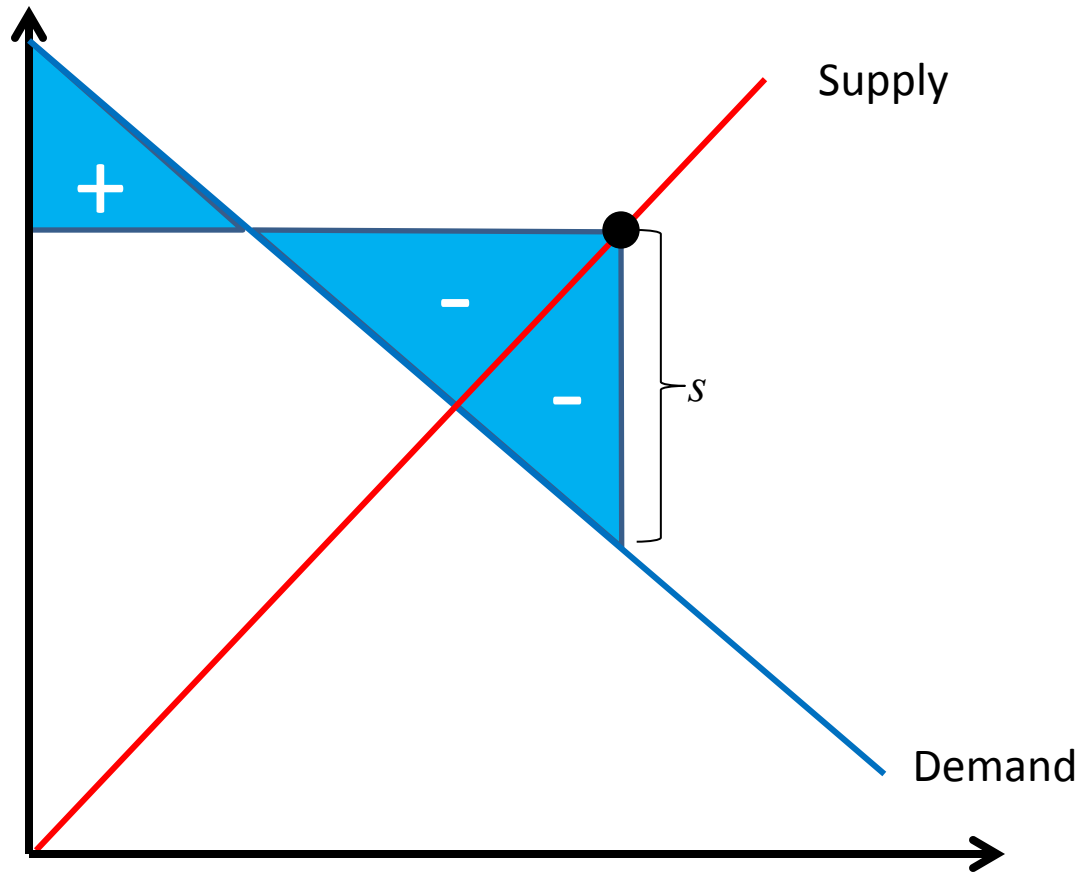# Welfare consequences for **sophisticated** consumers

Welfare consequences for **naïve** consumers

Classical rebuttal

- If consumers are rational, shrouding add-on prices will hurt a firm because consumers will expect the worst.

- Rational consumers infer that shrouded prices are likely to be high prices.

- Such reasoning creates an incentive for information revelation and unraveling of shrouding [Milgrom 1981].

- Some economists believe that shrouding cannot survive [Shapiro 1995], arguing that competitive firms will educate other firms' customers, offer those customers efficient pricing schemes, and consequently win their business.

Shrouding can survive in competitive equilibrium, even when unshrouding is costless.

- Gabaix and Laibson (QJE, 2006)
- Fraction α of consumers are myopes: do not foresee add-ons.
- Fraction 1-α are sophisticates.
- Basic bank account costs c for Traditional Bank to provide.
- Firms have no market power.
- Add-on services cost 0 for firm to provide.
- Add-on services priced to generate fees of p_A from myopes.
- Add-on services are avoided by sophisticates with effort cost e.

Equilibrium:

- Price for opening an account: p
- Add-on services priced p_A
- Myopes pay: $p + p_A$
- Sophisticates pay only: p
- Firms break even (0-profit): $p + \alpha p_A = c$
- Sophisticates get a cross-subsidy: αp_A .
- If $\alpha p_A > e$ sophisticates would rather stick with firm that is catering to myopes, than switch to a firm that caters to sophisticates.

Is consumer education profitable?

- Suppose a competitor offered no markups: $p = c$.

- Costs at Traditional Bank for a sophisticate:

$$p+e = [c-\alpha p_A]+e = c+e-\alpha p_A < c$$

- Sophisticated consumers prefer to pool with myopic consumers at high mark-up firms, than defect to zero mark-up firms.

- Sophisticates get "free gifts" and avoid high fees.

Conclusions

- Shrouding can destroy consumer surplus, lower social surplus, and enrich firms

- Shrouding may not unravel in equilibrium

- See Gabaix and Laibson (2006) and Heidhues, Koszegi and Murooka (2012) for examples.

Measure shrouding

- **Weak implicit shrouding:** In practice, consumers do not directly observe the prices of add-ons before purchase of the base good.
- **Strong implicit shrouding:** In practice, consumers under-estimate add-on prices at the time of purchase.
- **Explicit shrouding:** Incentivized, financially literate subjects can't locate the prices of add-ons (i) on the web or (ii) on the phone, or (iii) in brick-and-mortar stores.

Pilot intervention?

- How would an experimental intervention that reveals add-on prices influence purchase decisions?

- Find a "Staples" store that is willing to put a large information sheet on the front of every printer box they sell.

- E.g.: "If you print 30 pages a month with this printer, the ink will cost you $2000 over the next four years."