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Employment:
2014-present Senior Lecturer, Department of Economics, CUSZ – Shenzhen.
2012-2014 Lecturer, School of Economics and Finance, University of Hong Kong.
2006-2012 Instructor, Department of Economics, CUHK – Hong Kong.

Education:
2003-2007 Ph.D. (Business) Indiana University – Bloomington.
1987-1991 BS.Sc. (Economics) Chinese University of Hong Kong – Hong Kong.

Research paper:
Chung, Barick, "Two Level Price Discrimination and Vertical Relationship" (March 05, 2012). Available at SSRN: <http://ssrn.com/abstract=1997070>.

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ECO 2011 (Sections L07-10) Basic Microeconomics

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Mankiw, Gregory, 2012, *Essentials of Economics*, p. 136:

Welfare economics is the study of how the allocation of resources affects economic well-being.

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Pindyck and Rubinfeld, p. 321:

Economic efficiency: Maximization of aggregate consumer and producer surplus.

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Pindyck and Rubinfeld, p. 321:

Deadweight loss (DWL): Net loss of total (consumer plus producer) surplus (TS).

DWL

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Mankiw, Gregory, 2012, *Essentials of Economics*, p.137:

Consumer surplus is the amount a buyer is willing to pay for a good minus the amount the buyer actually pays for it.

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Pindyck and Rubinfeld, p.132:

Consumer surplus:

Difference between what a consumer is willing to pay for a good and the amount actually paid.

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Example #1:

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The price of an apple is \$5, and John's willingness to pay for the apple is \$10. If John buys the apple, how much is his consumer surplus?

$$\begin{aligned} P &= \$5 \\ WTP &= \$10 \\ CS_{John} &= WTP - P \\ &= \$10 - \$5 \\ &= \$5 \end{aligned}$$

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Pindyck and Rubinfeld, p.132:

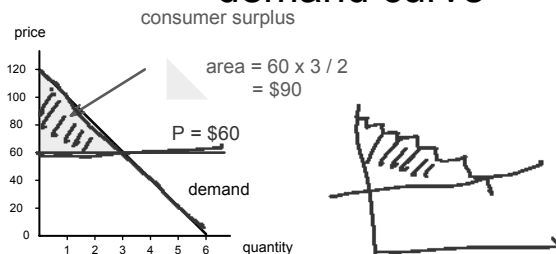
When we add the consumer surpluses of all consumers who buy a good, we obtain the **aggregate** consumer surplus.

$$\begin{aligned} CS_1 &= \$10 \\ CS_2 &= \$5 \\ \text{aggregate } CS &= \$10 + \$5 \\ &= \$15 \end{aligned}$$

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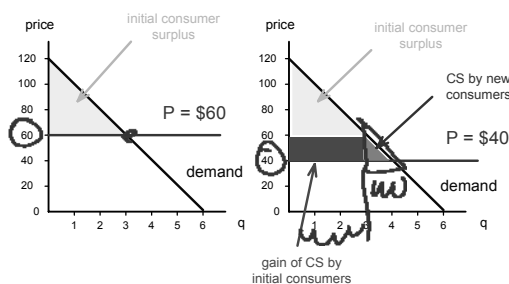
Continuous demand curve



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2) The lower the price, the larger is the consumer surplus.



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Summary:

1) Consumer surplus (CS) is the area below the demand curve and above the price.

2) The lower the price, the larger the CS, because:

2a) Initial buyers enjoy larger CS because the price is lower.

2b) More people enter the market because the price is lower, and these new buyers gain CS from the trade.

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Mankiw, Gregory, 2012, *Essentials of Economics*, p. 141:

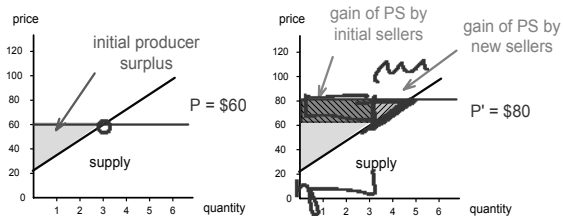
Producer surplus is the amount a seller is paid for a good minus the seller's cost of producing it.

$$PS = P - WTS$$
$$= P - C$$

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The higher the price, the larger is the producer surplus.



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Summary:

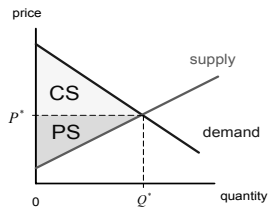
- 1) Producer surplus (PS) is the area above the supply curve and below the price.
- 2) The higher the price, the larger is the PS, because:
 - 2a) Initial sellers enjoy larger PS because the price is higher.
 - 2b) More sellers enter the market because the price is higher, and these sellers gain PS from the trade.

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Definition:

Total surplus is the sum of consumer and producer surplus.



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1) Consumer surplus (CS) = value to buyers (or willingness to pay) - actual amount paid by buyers = $v - p$

2) Producer surplus (PS) = amount received by sellers - cost to sellers = $p - c$

3) Total surplus = $CS + PS = (v - p) + (p - c) = v - c$

$$TS = CS + PS$$

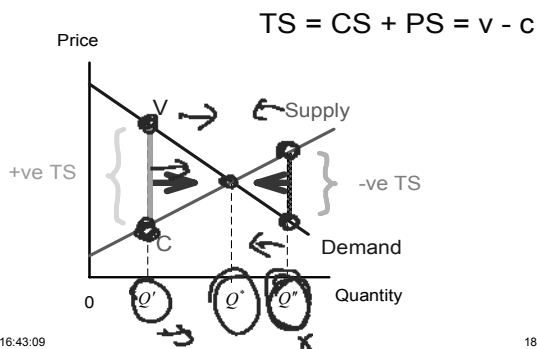
$$= v - p + p - c = v - c$$

$$TS = v - c$$

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To increase TS (total total surplus):



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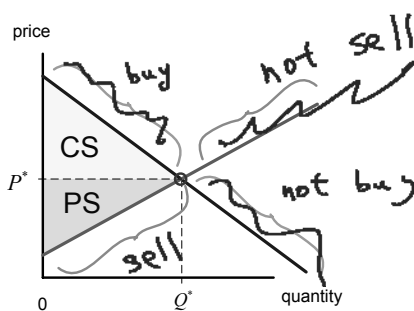


Mankiw, Gregory, *Essentials of Economics*, 2012, p. 147:

- 1) Free markets allocate the supply of goods to the buyers who value them most highly, as measured by their willingness to pay
- 2) Free markets allocate the demand for goods to the sellers who can produce them at least cost
- 3) Free markets produce the quantity of goods that maximizes the sum of consumer and producer surplus

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