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2003-2007 Ph.D. (Business) Indiana University – Bloomington.
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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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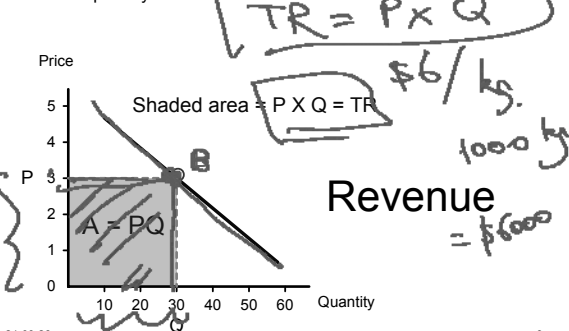
ECO 2011 (Sections L07-10) Basic Microeconomics

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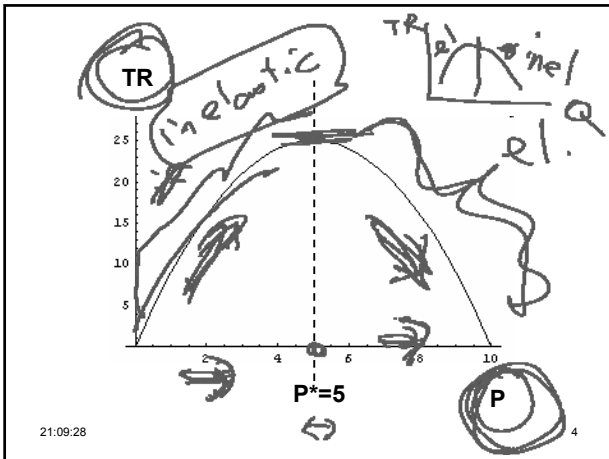
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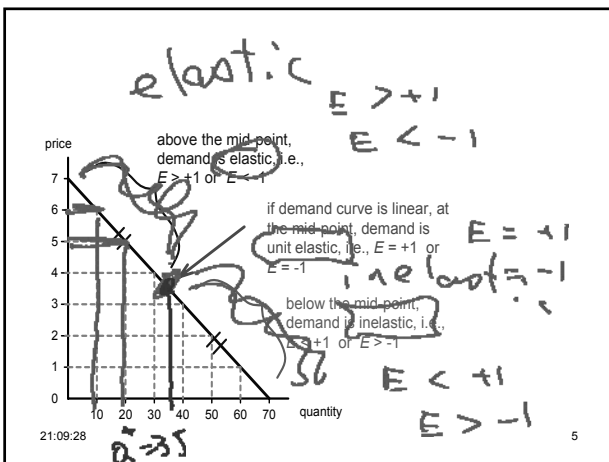
Total revenue ($TR = P \times Q$) is the amount paid by buyers and received by sellers of a good, computed as the price of the good times the quantity sold.



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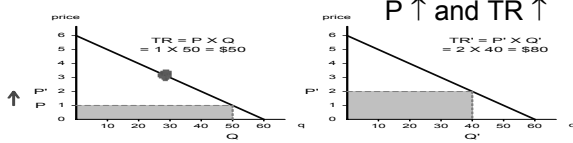
$TR = P \times Q$

$P = \frac{P - P}{(P + P)}$

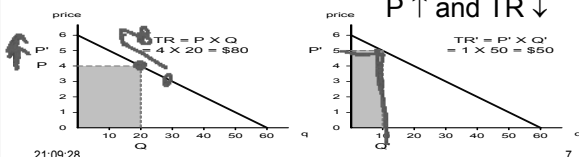
P	Q	TR	MR	%ΔP	%ΔQ	Elasticity	description
0	0	0	0				
10	6	60	4	0.15	2.00	13.00	elastic
20	4	80	4	0.30	1.67	3.67	elastic
30	2	60	0	-0.22	0.40	1.80	elastic
40	3	120	0	-0.29	0.29	1.00	unit elastic
50	2	100	-2	-0.40	0.28	0.56	inelastic
60	1	60	-4	-0.67	0.18	0.27	inelastic
70	0	0	-6	2.00	0.15	0.08	inelastic

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Case (i): when demand is inelastic: price and TR move in the same direction



Case (ii): when demand is elastic: price and TR move in the opposite direction



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Mankiw, Gregory, *Essentials of Economics*, 2012, p. 96:

- (i) If demand is inelastic, price and TR move in the same direction;
- (ii) If demand is elastic, price and TR move in the opposite directions;
- (iii) If demand is unit elastic, TR remains constant when the price changes

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Example 4.6.
Price Elasticity Estimates for Selected Products

Good or service	Price elasticity
Green peas	-2.8
Restaurant meals	-1.63
Automobiles	-1.35
Electricity	1.2
Beer	-1.19
Movies	-0.87
Air travel (foreign)	-0.77
Shoes	-0.7
Coffee	-0.18
Theater, opera	-0.18

Estimates

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Mankiw, Gregory, *Essentials of Economics*, 2012, pp.90-91:

Determinants of Price Elasticity of Demand:

- 1) Availability of **close substitutes**
- 2) **Necessities** (inelastic) versus **luxuries** (elastic)
- 3) **Definition of market** (narrowly defined market tend to have more elastic demand than broadly defined markets)
- 4) **Time horizon** (demands are more elastic over longer time horizons)

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1) Availability of close substitutes

Mankiw, Gregory, *Essentials of Economics*, 2012, p. 90:

Goods with **close substitutes** tend to have more elastic demand because it is easier for consumers to switch from that good to others.

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2) Necessities versus luxuries

Mankiw, Gregory, *Essentials of Economics*, 2009, p. 90:

Necessities tend to have inelastic demands, whereas luxuries have elastic demands.

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ness --

"When the price of doctor's visit rises, people will not dramatically reduce the number of times they go to a doctor"

lux --

"When the price of sailboats rises, the quantity of sailboats demanded falls substantially"

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Necessity good

https://en.wikipedia.org/wiki/Necessity_good
Accessed 20211014

... Necessity goods are product(s) and services that consumers will buy **regardless of the changes in their income levels**, therefore making these products less sensitive to income change. Examples include ... tobacco, ... electricity and water, and critical medicine such as insulin. ...

Luxury goods

https://en.wikipedia.org/wiki/Luxury_goods
Accessed 20211014

Luxury goods have **high income elasticity of demand**: as people become wealthier, they will buy proportionately more luxury goods. This also means, however, that should there be a decline in income its demand will drop more than proportionately. ...

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3) Definition of the market

Mankiw, Gregory, *Essentials of Economics*, 2012, p.90:

Narrowly defined markets tend to have more elastic demand than broadly defined markets because it is easier to find **close substitutes** for narrowly defined goods.

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Mankiw, Gregory, *Essentials of Economics*, 2012, p.90:

For example, food, a broad category, has a fairly inelastic demand because there are **no good substitutes** for food. Ice cream, a narrower category, has a more elastic demand because it is easy to **substitute** other desserts for ice cream.



4) Time horizon

Mankiw, Gregory, *Essentials of Economics*, 2012, p. 90:

Goods tend to have more elastic demand over longer time horizons.

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The end

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