Supply, Tax, and Incidence

Econ 9: Section 2

TA: Sara Sutherland

What is a change in supply? A change in quantity supplied?

- A change in supply causes a "shift" in the supply curve. This means that, for the same price, the quantity purchased changes.
- Holding all else constant, a change in quantity supplied is just a change in quantity resulting from a change in price.

What causes the supply curve to shift? (change in supply)

1. Change in cost of an input used in producing a good
    a. If inputs become less expensive, the supply curve shifts outward.
    b. If inputs become more expensive, the supply curve shifts inward.

2. Technological improvements that result in an increase in efficiency (increased production for a set amount of inputs) would result in an outward shift in the supply curve.

3. Change in expected demand for a good or service (i.e. expecting preferences to change)
    a. Supply will shift outward if demand is expected to increase
    b. Supply will shift inward if consumer's preferences are expected to change in favor of an alternate good.

        Example…

A change in the price of a good or service, holding all else constant, will result in a movement along the supply curve.

REVIEW QUESTIONS

1. Milk and chocolate chip cookies are complementary goods. If the price of milk decreases what will happen to the quantity demanded for chocolate chip cookies

    a. The quantity demand for cookies will decrease
    b. The quantity demand for cookies will not change
    c. The quantity demand for cookies will increase

2. Demand is _______ when a change in price leads to a relatively larger change in the quantity demanded. On the other hand, demand is _________ when a change in price leads to a relatively smaller change in the quantity demanded

    a. Increasing, decreasing
    b. Decreasing, increasing
    c. Elastic, inelastic
    d. Inelastic, elastic

3. Tom was recently laid off from his job. His shortage of income has restricted him from buying jewelry for his wife. The jewelry that Tom can no longer afford is an example of what kind of good?
    a. An inferior good
    b. A normal good
    c. A complementary good
    d. A neutral good

4. A production possibilities curve illustrates:
    A) scarcity.
    B) market prices.
    C) consumer preferences.
    D) the distribution of income.

5. The production possibilities curve illustrates the basic principle that:

    A) the production of more of any one good will in time require smaller and smaller sacrifices of other goods.
    B) an economy will automatically obtain full employment of its resources.
    C) if all the resources of an economy are in use, more of one good can be produced only if less of another good is produced.
    D) an economy's capacity to produce increases in proportion to its population size.

Price Elasticity of Demand

A measure of how responsive demand is to change in price. The formula use to calculate price elasticity of demand can be found below. Q stands for quantity and P stands for price.

Take Away:

If $\varepsilon_D > 1$, demand is considered elastic.

If $\varepsilon_D < 1$, demand is considered inelastic.

If $\varepsilon_D = 1$, demand is unit elastic.

$$\varepsilon_D = \left|\frac{\%\ Change\ in\ Q}{\%\ Change\ in\ P}\right|$$

$$\varepsilon_D = \left|\frac{(Q_2 - Q_1)/Q_1}{(P_2 - P_1)/P_1}\right|$$

Curve Shape and Elasticity

A flat demand curve is typically more elastic than a steep demand curve.

Elasticity and Taxes

- If we want to tax a consumer good such as gas, who ends up paying? The consumer? The gas station?
    - It depends on how "elastic" demand is…
        - i.e. how sensitive are consumers to change in price.
    - If consumers are very responsive, the company will bare the burden of the tax.
    - If consumers are not very responsive, they will bear the burden.

When we talk about *incidence of a tax*, we are referring to who pays the burden of the tax.

Why do we tax?

Practice Problem: Demand & Price Elasticity of Demand

Jill's demand Schedule for Lattes

Price	Quantity Demanded
$2	28
$3	24
$4	20
$5	16

1) What is Jill's demand curve for Lattes?

2) When the price increases from $3 a latte to $4 a latte, Jill's demand decreases from 24 lattes a month to 20 lattes a month. Calculate Jill's elasticity of demand.

3) Is her demand for lattes elastic, inelastic or unit elastic?

Practice Problem: Demand for Surf Lessons

Channel Island Surf Co. is trying to find ways to make more money. One of the employees suggested they increase the fee for private surf lessons. The current price for a private lesson is $100. Would increasing the price of a surf lesson to $120 increase revenue?

Price	Quantity Demanded
$60	200
$80	150
$100	100
$120	50

Take Away:

If demand is elastic, increasing price decreases revenue.

If demand is inelastic, increasing price increases revenue.

If demand is unit elastic, increasing price does not change revenue.