9.48- Other Types of Elasticity

9.48- Identify other types of elasticities and demonstrate an understanding of their significances.

By: Carter Greene

Kickoff:

- Go to Google Classroom and complete the assignment **“10/22- KO”**
- Pick up a handout on your way in
  - Put it away for now
- Need one of my Chromebooks
- **Roll Call:** Favorite flavor of gatorade

Announcements:

- **10/23-** 1st and 3rd block midterms
- **10/24-** 2nd and 4th block midterms
  - Normal classes in yearlong classes
- **10/25-** Make up midterms
- 90 minute classes all week

Concept Check

- 15 questions, informal grade
- 20 minutes
- Must use one of my Chromebooks
- ABSOLUTLEY NO TALKING EVEN WHEN YOU'RE DONE
- When you are finished, read module 48/49 in the textbook
  - On Google Classroom

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9.48- Identify other types of elasticities and demonstrate an understanding of their significances.

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Elasticities

- How one variable responds to a change in another variable
- Price of gasoline may affect Qd of…
  - SUVs, road trips, etc.
- What may affect how often you go on vacation or how many houses you buy?
  - Income

Cross-Price Elasticity of Demand

- CPED- Measures how price change in one product affects Qd of another

$$\text{Cross-price elasticity of demand} = \frac{\%\ \text{change in quantity demanded of good 1}}{\%\ \text{change in price of good 2}}$$

- Negative = Compliments
- Positive = Substitutes

Example: Cross-Price Elasticity of Demand

- Suppose the price of plastic wrap increases by 20%, and the quantity demanded of waxed paper increases by 50%. What is the cross-price elasticity of the two goods? Are they compliments or substitutes?
- <u>CPED = 2.5</u>
- <u>Substitutes</u>

Example: Cross-Price Elasticity of Demand

- Suppose the price of hot dogs increases by 20%, and the quantity demanded of hot dog buns decreases by 10%. What is the CPED? Are the two goods complements or substitutes?
- <u>CPED = -.5</u>
- <u>Compliments</u>

Income Elasticity of Demand

- Measures how changes in income affects Qd of a good

$$\text{Income elasticity of demand} = \frac{\%\ \text{change in quantity demanded}}{\%\ \text{change in income}}$$

- Positive = Normal good
  - Income elastic if greater than 1
  - Income inelastic if less than 1
- Negative = Inferior good

Example: Income Elasticity of Demand

- Wages in Charlotte increase by 20%. The quantity demanded of used cars decreases by 5%. What is the Income Elasticity of Demand for used cars? Are used car a normal or inferior good?
- <u>Income Elasticity of Demand = -.25</u>
- <u>Inferior good</u>

Example: Income Elasticity of Demand

- Detroit's auto industry was hit hard during the financial crisis of 2008. Median incomes in detroit decreased by 25%. At the same time, the quantity demanded for steak dinners dropped by 30%. What is the Income Elasticity of Demand for steak dinners? Are steak dinners a normal or inferior good?
- <u>Income Elasticity of Demand = 1.2</u>
- <u>Normal good</u>
  - Income elastic

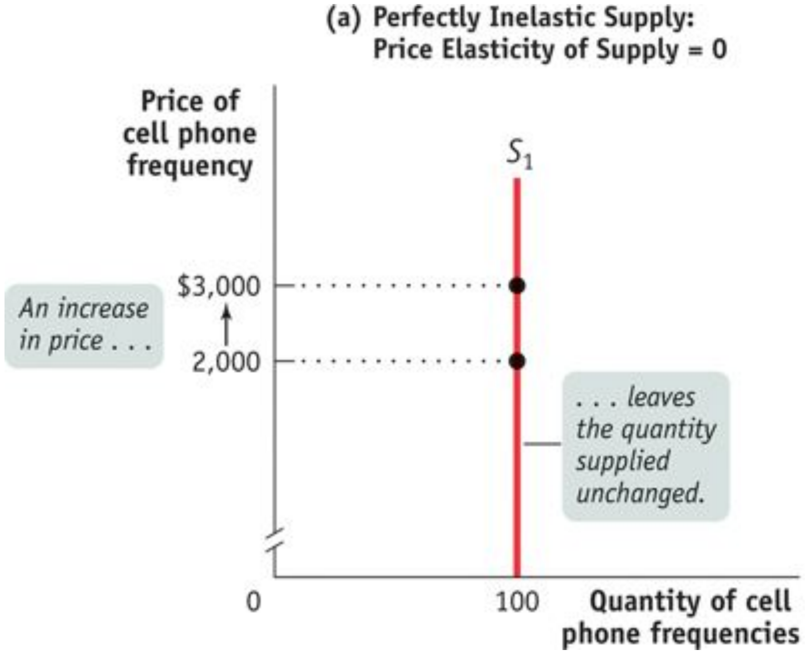
Price Elasticity of Supply

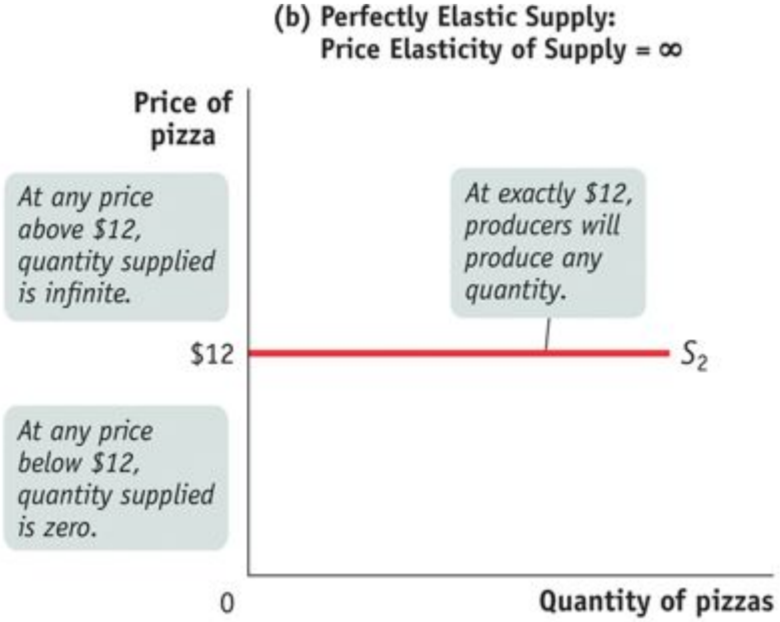
- PES- Measures how a change in price affects quantity supplied

$$\text{Price Elasticity of Supply (PES)} = \frac{\%\triangle \text{in Qs}}{\%\triangle \text{in P}}$$

- <u>Inelastic:</u> PES < 1
- <u>Unit Elastic:</u> PES = 1
- <u>Elastic:</u> PES > 1

Perfectly Inelastic vs. Perfectly Elastic Supply





Example: Price Elasticity of Supply

- A 20% increase in the price of milk leads to a 40% increase in the amount sellers are willing to supply. What is the Price Elasticity of Supply?
- PES = 2

Factors Determining Price Elasticity of Supply

- Input availability
  - How easily can inputs be shifted in and out of production
  - More easily = more elastic
- Time
  - Long-run elasticity of supply is more elastic

Elasticity Chart

Other types of Elasticity Worksheet

- ❖ Working all 4 types of elasticity
- ❖ May be completed with a partner

Closure:

1) Compare and Contrast Cross-Price Elasticity of Demand and own-Price Elasticity of demand.

2) What does the Income elasticity of demand tell you about goods and services?

3) What factors help determine the elasticity of supply for a product? Give an example of each.

Closure