Economics

Chapter 4: Demand

Microeconomics

What is Microeconomics?

- The part of economics that studies the choices made by individuals and firms.
- The focus is on individual units.

Market Economy

- Economic system in which people and firms make all the economic decisions.
- People and firms act in their own best interest in order to answer the basic economic questions.
- Demand is what drives a market economy.

Demand

What is demand?

- The combination of desire, ability, and willingness to buy a product.

Requirements for demand:

- You must be **willing** to purchase a good.
  - Many people have the ability to buy a jar of pig snouts at the grocery store, but very few are willing.
- You must have the **ability** to purchase a good.
  - Many people may be willing to buy the Minnesota Twins if they were for sale, but very few can afford it

Demand Curves vs. Schedules

Price	Quantity Demanded per Month	New Quantity Demanded per Month
$15	1	0
12	2	1
9	3	2
6	5	4
3	7	6

Demand Schedule

- A table that lists how much of a product consumers will buy at all possible prices within a time period

Demand Curves vs. Schedules

Demand Curve

- A graph that shows the **quantities** demanded at all possible **prices**.

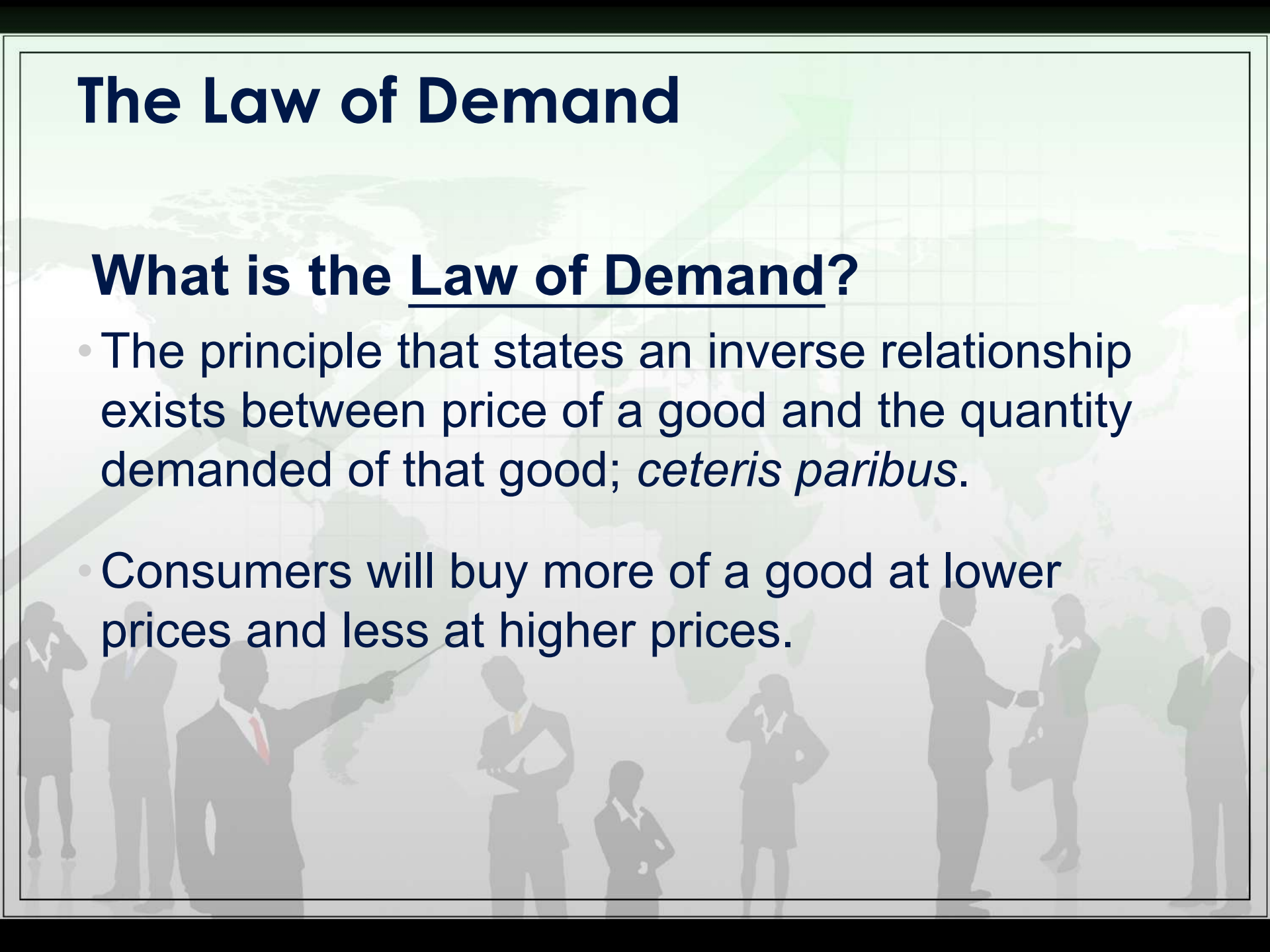
Market Demand Curve

- A graph that shows how much of a product is demanded by everyone who is interested in buying it at all possible prices.

The Law of Demand

What is the Law of Demand?

- The principle that states an inverse relationship exists between price of a good and the quantity demanded of that good; *ceteris paribus*.
- Consumers will buy more of a good at lower prices and less at higher prices.



The Law of Demand

Ceteris Paribus (other-things-being-equal)

- The assumption that nothing else is changing
  - Economist use this in order to exam the relationship between price and quantity demanded.
  - Example: When considering the how a change in the price of Mountain Dew will affect the quantity demanded, it is assumed that the price of Mellow Yellow will remain the same.

Demand

Change in Quantity Demanded

- A movement along the demand curve that shows how the amount consumers are willing to buy changes as the price changes.
- Price ↓ Quantity Demand ↑
- Price ↑ Quantity Demand ↓
- Causes for changes in quantity demanded:
  - Income effect
  - Substitution effect
  - Diminishing Marginal Utility

http://instruction.blackhawk.edu/ghoffarth/economics/ecounit3.htm

Income Effect

- How the quantity demanded of a good is affected by a change in a consumer's **real** income.
- Prices ↓ Buying Power ↑
- Prices ↑ Buying Power. ↓

How does this affect the demand curve?

- It makes it slope downward.

The Substitution Effect

- How the quantity demanded of a good is affected by a change in price which makes other goods more or less expensive.

- Example: If the price of potato chips goes up, people will buy less potato chips. Instead people will buy more corn chips.

- **Quantity demanded of potato chips** ⬇

- **Quantity demanded of corn chips** ⬆

Utility

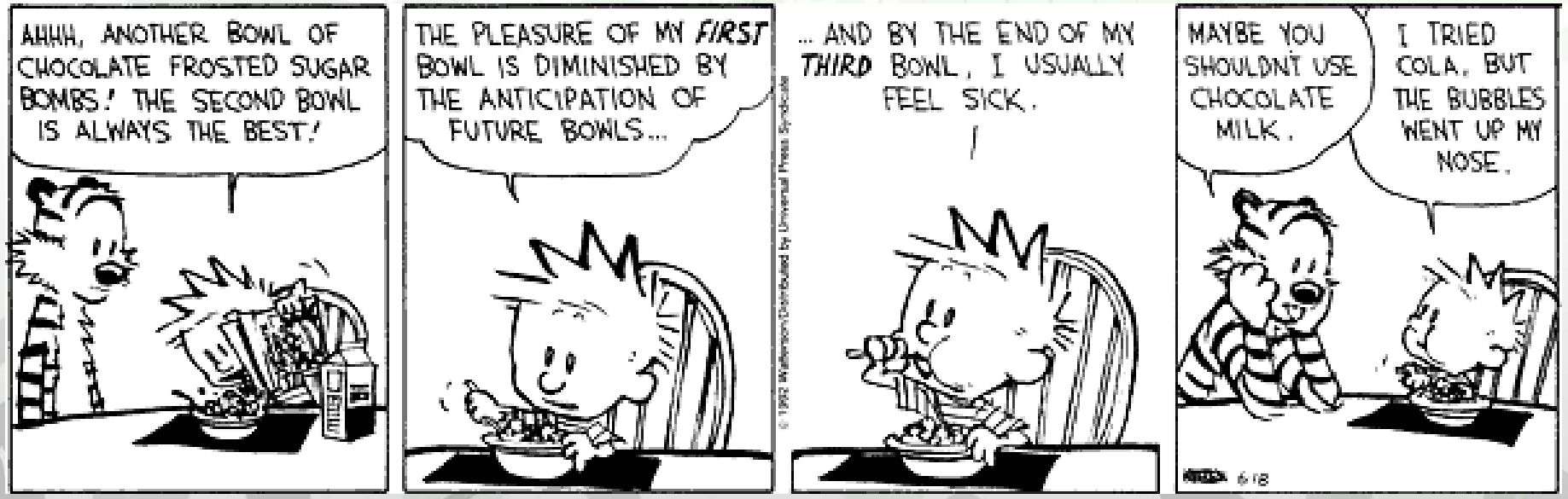
- **Utility**
  - The ability of a good or service to be useful and give satisfaction to someone
- **Total Utility**
  - The amount of satisfaction obtained from the entire consumption of a product.
- **Marginal Utility**
  - The additional satisfaction or usefulness a consumer gets from having one more unit of a product.

$$MU = \frac{\text{Change in TU}}{\text{Change in Q}}$$

Diminishing Marginal Utility

- **What is Diminishing Marginal Utility?**
  - A decrease in the satisfaction or usefulness of a product as additional units are acquired
  - Each successive unit of a good consumed yields less additional utility
- **Example:**
  - A child goes trick-or-treating on Halloween. After collecting a large amount of candy the child decides to eat half of it that same night. After eating twenty pieces of candy the child begins to feel sick. Each additional piece of candy that he eats only makes him feel worse.

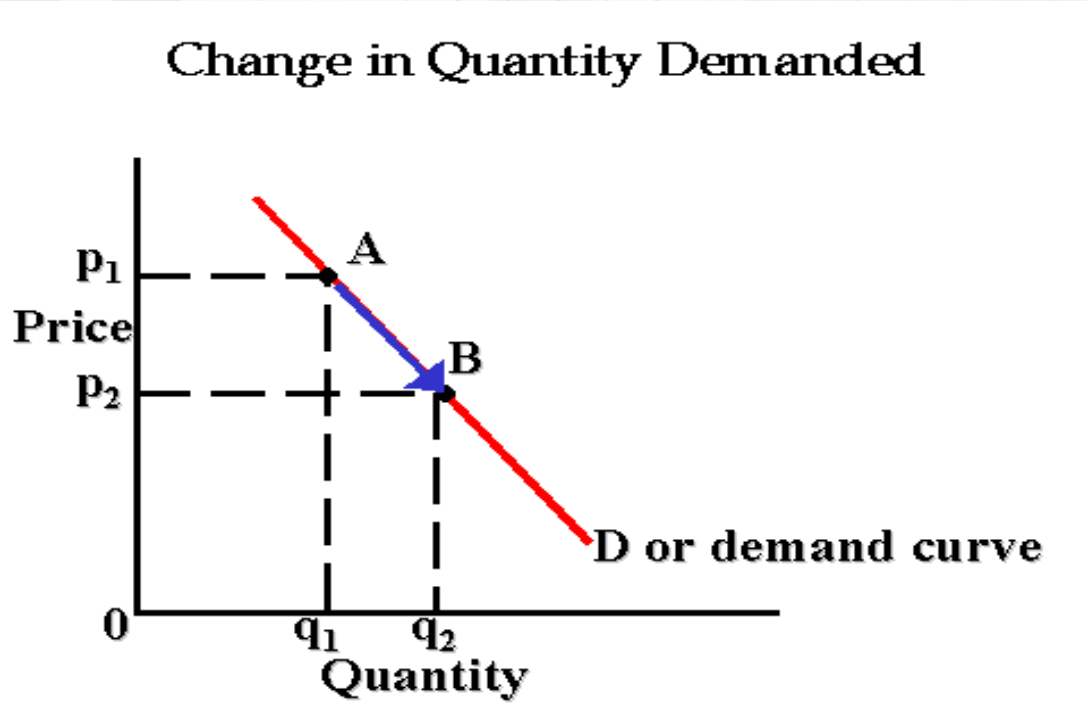
Diminishing Marginal Utility



http://apecon2.wikispaces.com/Diminishing+Marginal+Utility

Change in Quantity Demanded

- A change in price causes a change in the quantity demanded
- This creates a movement along the demand curve



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Normal Goods

- A good for which an increase in consumer income results in an increase in demand

Inferior Goods

- A good for which an increase consumer incomes results in a decrease in demand

Substitute Goods

- A pair of goods for which an increase in the price of one results in an increase in demand for the other

Complementary Goods

- a pair of goods for which an increase in the price of one results in a decrease in demand for the other

Determinants of Demand

1. Consumer Income
2. Consumer Tastes
3. Number of Consumers
4. Price of a Substitute Product
5. Price of a Complementary Product
6. Consumer Expectations
    a) Future Price
    b) Future Income

Determinants of Demand

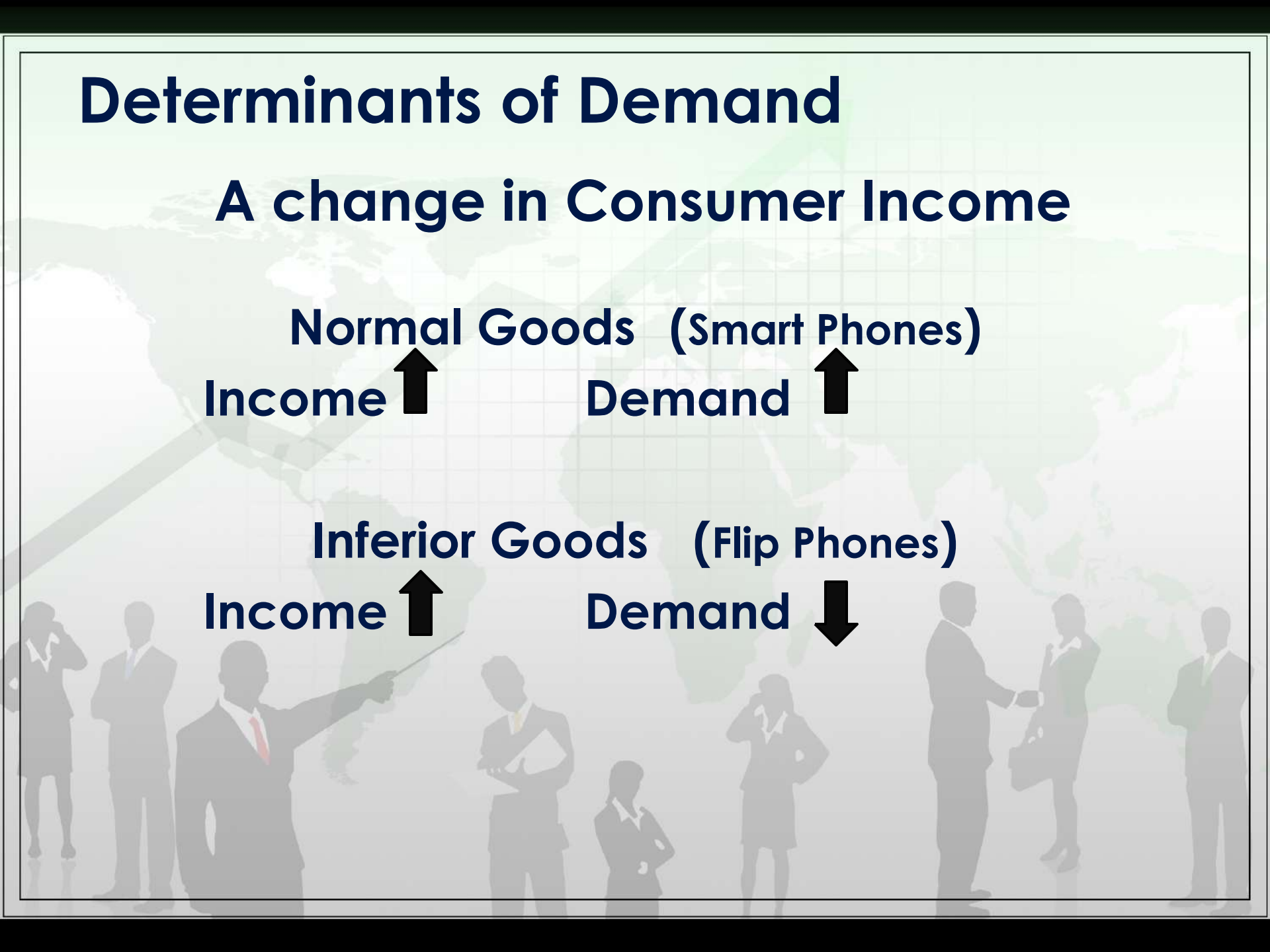
A change in Consumer Income

Normal Goods (Smart Phones)

Income ↑ Demand ↑

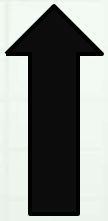
Inferior Goods (Flip Phones)

Income ↑ Demand ↓



Determinants of Demand

A change in Consumer Tastes

Attitude  → Demand 

Example: When DVDs came out consumer tastes for video formats changed; demand for VHS tapes decreased and eventually production of VHS were discontinued

Determinants of Demand

A change in the number of consumers

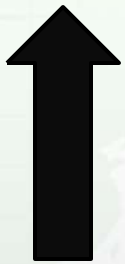
# of Consumers ↑ → Demand ↑

As more consumers enter the market, the demand for a product increases

Example: Due to rising incomes in China. the number of people driving cars in the world continues to increase. Thus the demand for gasoline continues to go up.

Determinants of Demand

A change in the price of a substitute product

Price of substitute good  → **Demand for original product** 

If the price of Mellow Yellow increases, then demand for Mountain Dew will increase.

Determinants of Demand

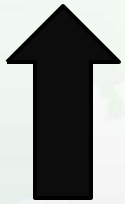
A change in the price of a complementary product

Price of complementary good  → **Demand for original product** 

If there is a decrease in the price of peanut butter, then we expect an increase in the demand for a complementary good, such as Jelly.

Determinants of Demand

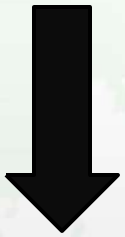
A change in consumers' future expectation of price

Expectation of future price  **→ Demand** 

If consumers believe the price of a product will go up, then they will rush to buy it now. Thus, causing demand for the product to rise.

Determinants of Demand

A change in consumers' future expectation of income

Expectation of future income  → **Demand** 

If consumers expect their incomes to fall, then they will cut back on how much they spend. Thus, causing demand to decrease.

Changes in Demand

A Change in Demand

- A shift in the demand curve itself
- Consumers demand different amounts of a product at every price. This causes the demand curve to shift either to the left or the right.

- If demand increases, then P and Q will increase

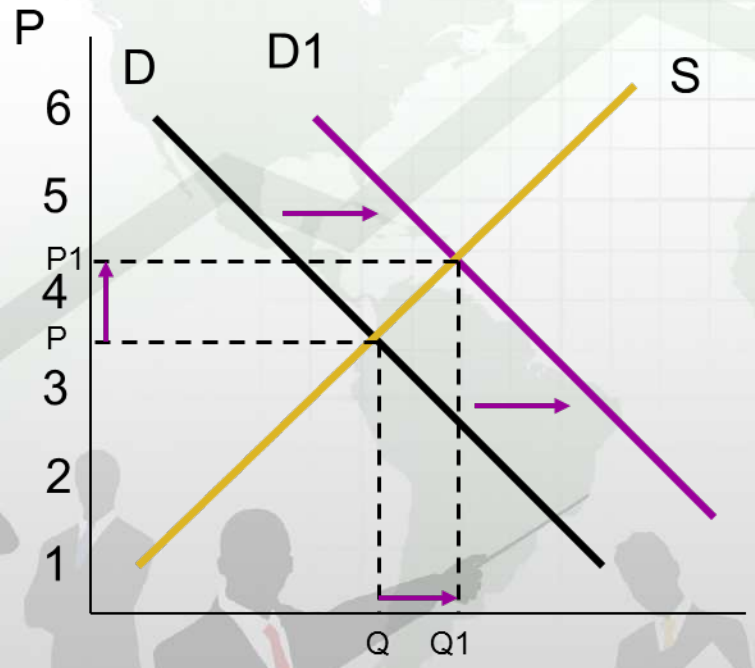
If demand decreases, then P and Q will decrease

Demand ↑ then P ↑ and Q ↑

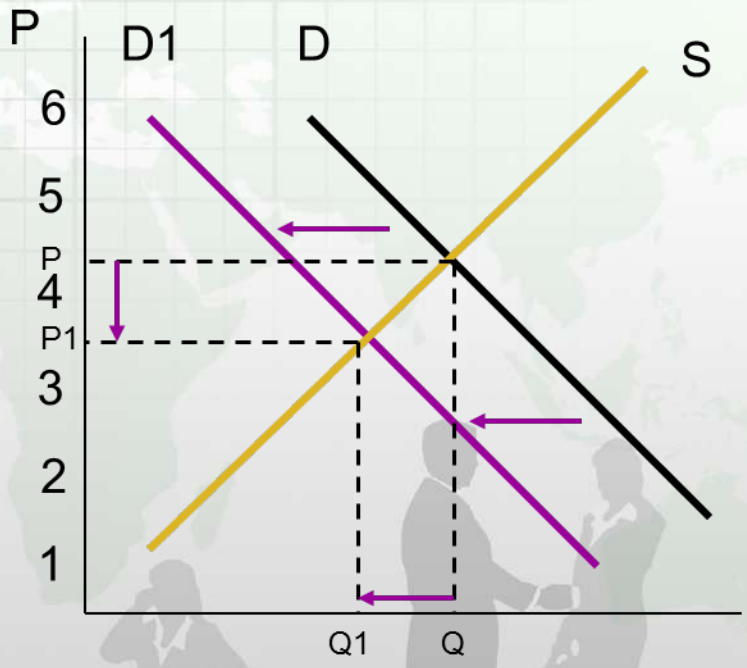
Demand ↓ then P ↓ and Q ↓

Graphing Changes in Demand

Increase in Demand



Decrease in Demand



Remember: a change in demand requires a new curve to be drawn

Price Elasticity of Demand

What is demand elasticity?

- **A measure of how much a change in price affects a change in quantity demanded**

$$\text{Price Elasticity of Demand} = \frac{\%\ \text{change in Qd}}{\%\ \text{change in Price}}$$

- **If PE > 1, then demand is price elastic**
- **If PE <1, then demand is price inelastic**
- **If PE = 1, then demand is unit price elastic**

Price Elasticity of Demand

Elastic Demand

- When a change in price causes a relatively larger change in quantity demanded

Inelastic Demand

- When a change in price causes a relatively smaller change in quantity demanded

Unit Demand

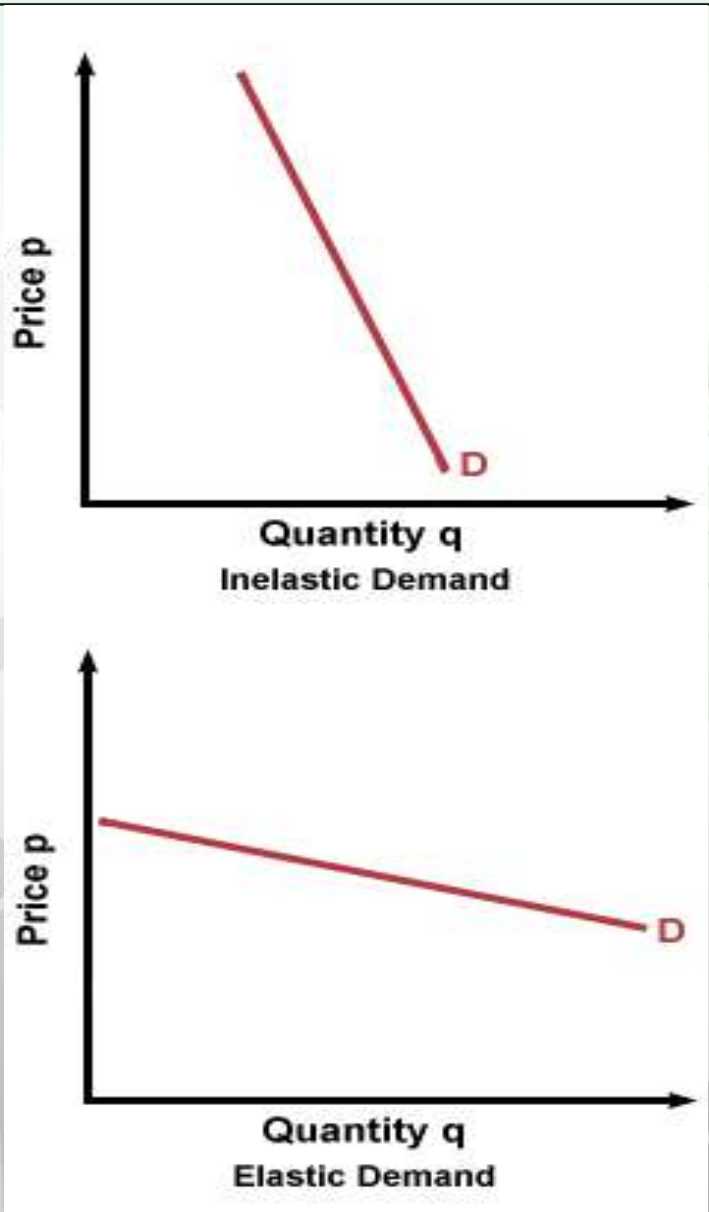
- When a change in price causes a proportional change in quantity demanded

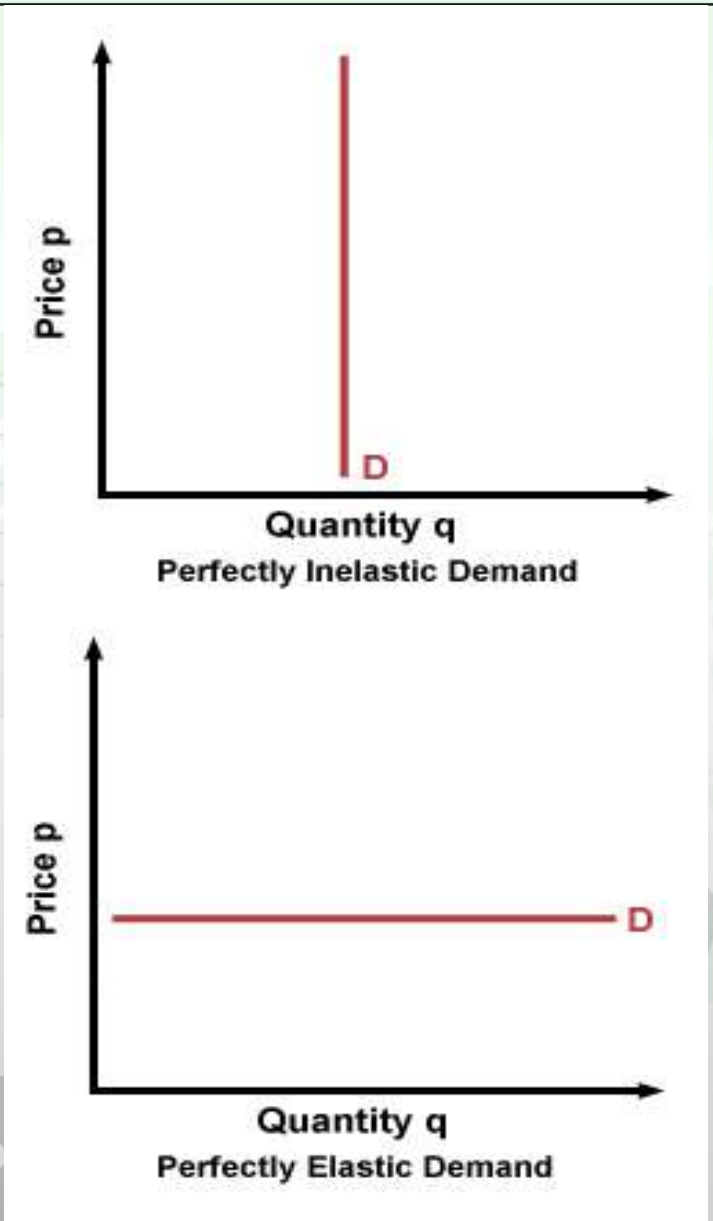
This is an example of which type of price elasticity?

- Gasoline increases from $3 to $4 a gallon, then demand for gas decreases 5%

5% / 33% = .15 The PE of gas is .15

http://www.sparknotes.com/economics/micro/elasticity/section1.rhtml





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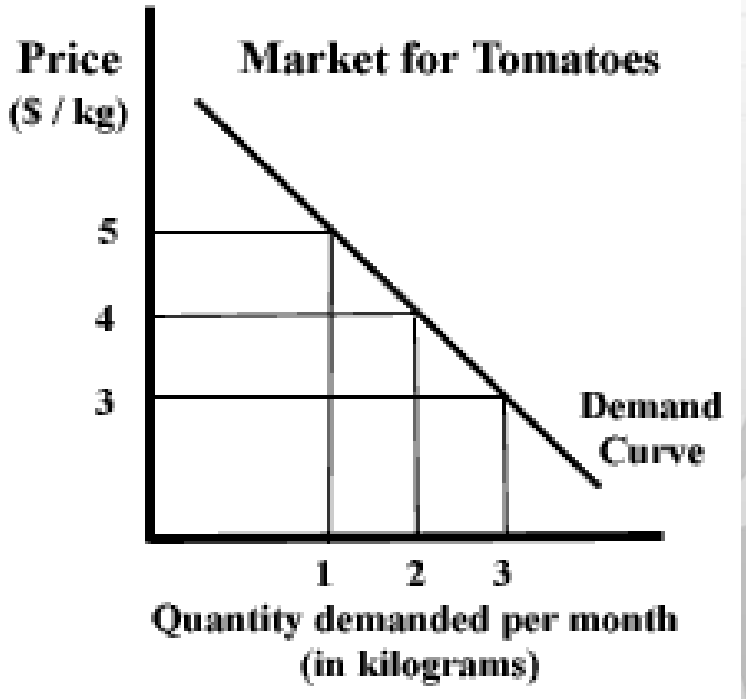
The Total Expenditures Test

- To find total expenditures multiply the price of a product by the quantity demanded for any point along the demand curve
- The market below is price elastic



1 units X $5 = $5
2 units X $4 = $8
3 units X $3 = $9
This tells a business owner if they should change price

Price Elasticity of Demand

What determines price elasticity?

1. Are adequate substitutes available?
   - The more substitutes – the more elastic it will be
2. Can the purchase be delayed?
   - If the purchase can not be delayed, then it will be price inelastic
3. Does the purchase use a large portion of the buyer's Income?
   - The bigger the amount of money = the more elastic it will be