

# Making Choices...EFFICIENTLY

(SSEF2) Give examples of how rational decision-making entails comparing the marginal benefits and the marginal costs of an action.

#### Think about it...

Fred is a businessman - he sells snack foods to students at Wilco. He is only able to sell a maximum of 21 bags (per block) of Flaming Hots or 15 Capri Sun drinks (per block). He has found that the best combination of sales are: 15 Capri Suns (CS) and 0 Flaming Hots (FH); 8 FH and 14 CS; 14 FH and 12 CS; 18 FH and 9 CS; 20 FH and 5 CS; 21 FH and 0 CS. However, his cousin suggested he try to sale 10 bags of Flaming Hots and 12 Capri Suns. Would following his cousin's advice be the most productive?



• Trade Offs are <u>all the alternatives that we give up</u> whenever we choose one course of action over another.

# Types of Trade Offs

- Individual Trade Offs
- Businesses Trade Offs
- Society Trade Offs: "Guns or Butter"
  - Should we produce more military goods ("guns") or more consumer goods ("butter")?

# **Opportunity Costs**

• The **most desirable alternative given up** as the result of a decision is called the opportunity cost.



If you choose to use your savings to pay off a credit card bill instead of going on the senior trip, what is your opportunity cost?

# What is the opportunity cost represented in this cartoon?



#### Marginal Costs vs. Marginal Benefits

- Marginal Benefit: The additional benefit incurred from one more unit.
- Marginal Cost: The additional cost gained from one more unit.

# Thinking at the Margin

• When you're trying to decide, "how much more, or how much less?"...you are *thinking at the margin* 

Rational Decisions are made when the marginal benefits equal or exceed marginal costs

# Making Decisions Activity

- Describe five decisions you have made in the recent past (in the last four years).
- Analyze the marginal benefits and costs of each decision.
- <u>USE THE PROVIDED CHART TO COMPLETE THE ACTIVITY</u>

#### Marginal Costs & Marginal Benefits

- Alternative definitions:
- <u>Marginal Costs</u>: refers to the value of what is given up in order to produce that additional unit
- <u>Marginal Benefits</u>: refers to what people are willing to give up in order to obtain one more unit of a good

## Cost/Benefit Analysis Practice

 Fred has decided to increase his supply of Capri Suns. It will cost Fred \$75 to purchase an additional case of drinks. Once sold, this will result in \$100 of additional revenue. Did Fred make a rational decision?

#### Productions Possibilities Curve (PPC)

- Production Possibilities curve: Graphical representation of how an economy makes decisions
- Shows the <u>choices</u> an economy can make with respect to its <u>available resources</u>



# Interpreting the PPC

- All points on the curve represent the <u>efficient</u> production of goods and services (you are using your resources well)
- Any point inside the curve represents an underutilization of resources (you're wasting resources – could be producing more)
- Any point outside the curve represents unattainable levels of production (current productive resources and technology will not allow the economy to produce at that level

#### Help Fred make the most efficient decision...

Fred is a businessman - he sells snack foods to students at Mays. He is only able to sell a maximum of 21 bags (per class period) of Flaming Hots or 15 Capri Sun drinks (per class period). He has found that the best combination of sales are: 15 Capri Suns (CS) and 0 Flaming Hots (FH); 8 FH and 14 CS; 14 FH and 12 CS; 18 FH and 9 CS; 20 FH and 5 CS; 21 FH and 0 CS. However, his cousin suggested he try to sale 10 bags of Flaming Hots and 12 Capri Suns. Would following his cousin's advice be the most productive?

#### Make a Production Possibilities Chart...

Combination	Flaming	Capri Suns
	11013	
Α		
В		
С		
D		
E		
F		

Combination	Flaming Hots	Capri Suns	Flaming Hots Opportunity Cost (Capri Suns given up)
Α			
В			
С			
D			
Е			
F			

#### Why are PPCs valuable to decision-makers?

- Production Possibility Curves are graphical illustrations of opportunity cost to produce more of one good (or service) over another
- Shows how efficient (or inefficient) an economy is working
- Shows growth or reduction

# Why would the PPC move?

- When the quantity or quality of land, labor, capital, or technology <u>grows</u>, the ENTIRE PPC will *shift to the right*
- When the quantity or quality of land, labor, and capital <u>shrinks</u>, the ENTIRE PPC will *shift to the left*

#### Think about it...

Refer back to our example of Fred selling Flaming Hots and Capri Suns. What circumstances would cause his PPC to shift to the right? What circumstances would cause his PPC to shift to the left?

#### Opportunity Costs and the PPC

• The PPC is a graphical illustration of the opportunity cost involved in producing more of one good (or service) over another

# Increasing Opportunity Cost

- A convex production possibility curve always indicates increasing opportunity cost.
- The opportunity cost of an additional storage shed (8 to 9) is 70 crab puffs.
- Storage shed production results in increasing opportunity costs.



## Constant Opportunity Cost

- The opportunity cost of additional sheds does not change. Each additional unit costs the same amount of crab puffs. The PPC curve will not be convex or concave.
- The opportunity cost of more sheds also remains constant. It has a 45 degree angle.



#### Decreasing Opportunity Cost

- When the curve is concave, there are decreasing opportunity costs.
- The opportunity cost of the first storage shed is 250 crab puffs; the ninth shed is only 15.

