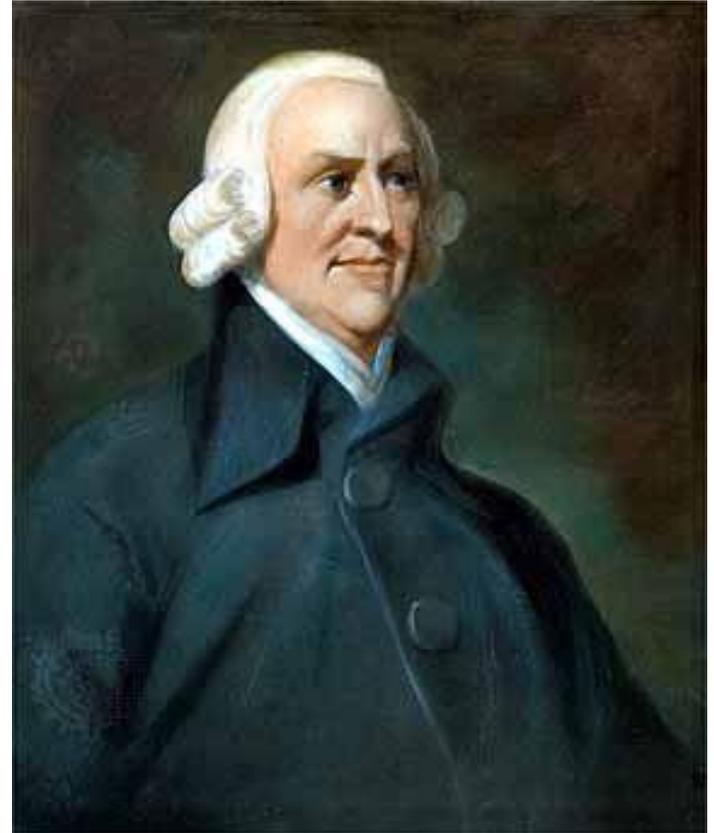


# Unit 3

## **Fundamentals of a Market-Based Economy**

# Adam Smith (1723 – 1790)

- 18<sup>th</sup> century social philosopher & political economist
- Wrote *The Wealth of Nations*
  - Observations in book form the foundation for much of modern economic thought



# Key Components of Adam Smith's Observations

- *Self-Interest*

- People want not only basic necessities (food, clothing, shelter), but also things that make life easier, more convenient, and/or entertain them
- People will pursue these self-interests

- ***“Invisible Hand”***

- As individuals pursue their self-interest, they will engage in mutually beneficial transactions
- These beneficial transactions will allow those individuals to acquire the things they want and need to improve their standard of living
- This improves the standard of living for the overall society and is the “invisible hand” that lifts society up

- **Free & Competitive Markets**

- Competitive markets free from any interference will benefit the ordinary citizen

- Because of competition, producers will work to supply the public with better & cheaper goods
    - As workers become more productive, they will be able to command a higher wage, giving them more purchasing power

- Actions that distort the market will harm the ordinary citizen

- Government providing direct benefits to producers (called ***subsidies***) or using regulations to restrict competition in order to protect existing producers do more harm than good
      - Called ***crony capitalism***

# Key Characteristics of a Market Economy

- **Economic Freedom**

- Ability to buy what we want from whom we want
- If we do not like what one business is selling, we can go elsewhere
- We are free to start and run a business or seek any job we choose
- Businesses are free to make what they want, hire whomever they choose, and set their own wages & prices
- Commonly referred to as ***laissez-faire*** (French for “let them do”)
  - Normally free from government intervention
  - Since there are no true market economies, government does interfere to some extent

- **Competition**

- Rival sellers competing for customers' business
- Customers benefit from more, newer, and better goods & services to choose from
- Producers seek to use their resources more efficiently (less waste) in order to lower cost
  - Translates to lower prices, so consumers benefit again

- **Equal Opportunity**

- We are born equal in terms of rights, freedoms, and the opportunity to make the best of our talents & abilities
- Discrimination prohibited

- **Binding Contracts**

- ***Contract*** = a legally binding agreement between two “parties” (people, businesses, etc.) to do a specific transaction

- Examples:

- Buy a car

- Pay an accountant to do your taxes

- Pay a cell phone service provider to provide you cell phone service

- Both sides have to fulfill their ends of the deal

- Legal system must uphold contracts

- If not, you would have no reason to expect the other person to uphold their end of the deal

- **Profit Motive**

- ***profit*** = the money earned by a business after subtracting the costs of operation
- Profit is the incentive to work or start/operate business
- Profit is also the reward for working or starting/operating a business
- Profit is the payment for the risk you take in foregoing another economic activity
- Businesses produce goods & services not out of the kindness of their hearts, but in order to improve their economic situation
- Profit is not guaranteed
- Owners are the ***last*** to receive anything out of the business
  - All wages, bills, and other business items must be paid before the owner gets anything

- **Property Rights**

- You have the right to own property
  - Land, homes, buildings like businesses, etc. (called ***real property***)
  - Cell phones, clothes, cars, etc. (called ***personal property***)
- Legal system must protect this right
  - If someone could just take your property from you at any time for nothing in return, what incentive would there be to own or take care for that property?
  - Would you risk investing your life savings and all the time, effort, and money to start and run a business if the government can seize it if it wants to?
- This includes creations of the mind that have commercial value (called ***intellectual property***)
  - A **patent** gives an inventor the sole right to make, use, or sell his/her invention for 20 years
  - A **copyright** gives the creator of a literary or artistic work the sole right to reproduce, distribute, perform, or display the copyrighted work for 70 years beyond the life of the author
  - Without intellectual property protection, what incentive would there be to spend the time, money, and effort to create those things if there was no way to recoup those costs?

- **Limited Government**

- In general, the government does not try to control businesses or compete with businesses
- Government intervention generally limited to:
  - Protecting property rights & contracts
  - Promoting the general welfare
    - Provide projects & programs that benefit society as a whole
  - Preserving competition
  - Protecting consumers, workers, & the environment
  - Stabilizing the economy
    - Steady economic growth rather than big boom or bust periods

# Specialization

- An approach to production in which individual workers become highly skilled at a specific task
  - Worker focuses only on one part of the overall production process
  - Results in a ***division of labor*** where each individual performs their specific part of the production process, then passes the product on to the people performing the next step in the production process
- Specialization also applies to businesses & even countries
  - They focus on what they do best & rely on someone else to do the things they don't do as well

# Specialization Leads To Economic Interdependence

## 1. Specialization improves productivity

- Each individual business focuses on what they do best and become experts at it
- This will allow them to produce more output for a given amount of inputs (land, labor, capital)
- As a result, more goods & services are available to more people
- Standard of living improves for all in that society

## 2. Specialization encourages trade

- When people/businesses/countries specialize, they no longer produce everything for themselves
- They must trade with others for what they do not produce themselves
- This allows them to:
  - Satisfy their own wants & needs
  - Focus on what they do best
- **trade** = a voluntary exchange in which both parties give up something in order to get something they want
  - You give up something because you feel that what you are getting is of greater value to you than what you are giving up

## – Methods of trade

- **Barter**

- Direct exchange of one good for another
- Requires a ***coincidence of wants*** (you have something that I want & I have something that you want)

- **Money**

- Eliminates need for coincidence of wants
- As long as everyone is willing to accept the money for items (called ***medium of exchange***), you can trade money for an item, then that party can trade the money for a different item, etc.
- Facilitates trade because it is easy to carry & convenient to use

### 3. Trade creates economic interdependence

- You now depend on others to produce the goods & services you no longer produce
- You rely on them to trade with you for those goods & services
- Those others are in the same position
  - They rely on you to produce what they no longer produce
  - They rely on you to trade with them for those goods & services
- Result is a complex web of economic links that connect producers and consumers throughout society

# Absolute Advantage

- One group (individual/business/state/country) can produce a given item cheaper and/or better than another group
- Example: Apples & Oranges
  - Due to climate, Virginia can produce apples much better (and more cheaply) than Florida.
  - Likewise, Florida can produce oranges much better (and more cheaply) than Virginia.
  - Each state could produce the other fruit, but it would be much more costly (need for greenhouses, artificial lighting, etc., to simulate the climate needed for the other fruit).
  - Virginia has an absolute advantage over Florida in producing apples.
  - Florida has an absolute advantage over Virginia in producing oranges.
  - Virginia grows apples for use & to sell to Florida
  - Florida grows oranges for use & to sell to Virginia

# Comparative Advantage

- The ability to perform a task at a lower ***opportunity cost*** than someone else is able to perform that task

# Example of Comparative Advantage: Two Electronics Factories

- Two electronics factories are capable of producing both Blu-Ray/DVD players and video game consoles
  - Each factory can only have 500 workers working there
- Factory A has an absolute advantage over Factory B in both Blu-Ray & video game console production

# Production Capacity for Factory A & B

Products	Factory A Workers	Factory A Output	Factory B Workers	Factory B Output
Blu-Ray/DVD Players	<b>200</b>	<b>100,000</b>	<b>200</b>	<b>90,000</b>
Video Game Consoles	<b>300</b>	<b>60,000</b>	<b>300</b>	<b>30,000</b>

- For each product, Factory A can produce more of a given item for the same number of workers at Factory B
- Total output from these two factories would be:
  - 190,000 Blu-Ray/DVD Players
  - 90,000 Video Game Consoles

# Option 1:

Factory A Builds Only Blu-Ray/DVD Players  
Factory B Builds only Video Game Consoles

Products	Factory A Workers	Factory A Output	Factory B Workers	Factory B Output
Blu-Ray/DVD Players	<b>500</b>	<b>250,000</b>	<b>0</b>	<b>0</b>
Video Game Consoles	<b>0</b>	<b>0</b>	<b>500</b>	<b>50,000</b>

- Factory A, if it only focuses on Blu-Ray/DVD Players, will increase the total number Blu-Rays produced to 250,000 (up from 190,000 if both produced them)
- Factory B, however, can only produce 50,000 Video Game Consoles (down from 90,000 if both produced them)

## Option 2:

Factory A Builds Only Video Game Consoles

Factory B Builds only Blu-Ray/DVD Players

Products	Factory A Workers	Factory A Output	Factory B Workers	Factory B Output
Blu-Ray/DVD Players	<b>0</b>	<b>0</b>	<b>500</b>	<b>225,000</b>
Video Game Consoles	<b>500</b>	<b>100,000</b>	<b>0</b>	<b>0</b>

- Factory A, if it only focuses on Video Game Consoles, will increase the total number consoles produced to 100,000 (up from 90,000 if both produced them)
- Factory B, by focusing on Blu-Ray Players, can increase the total number of players produced to 225,000 (up from 190,000 if both produced them)

# Opportunity Costs

Factory	Blu-Ray/DVD Players Only	Video Game Consoles Only
<b>A</b>	250k Blu-Ray, 0 Game Consoles	225k Game Consoles, 0 Blu-Ray
<b>B</b>	100k Blu-Ray , 0 Game Consoles	50k Game Consoles, 0 Blu-Ray

- Factory A
  - Opportunity cost for each Blu-Ray/DVD Player is **0.9** Video Game Consoles (225k/250k)
  - Opportunity cost for each Game Console is **1.11** Blu-Ray/DVD Players (250k/225k)
- Factory B
  - Opportunity cost for each Blu-Ray/DVD Player is **0.5** Video Game Consoles (50k/100k)
  - Opportunity cost for each Game Console is **2.0** Blu-Ray/DVD Players (100k/50k)

- Factory A has a ***comparative advantage*** over Factory B in producing Video Game Consoles
  - Opportunity cost for each Video Game Console produced by Factory A is lower (1.1 Blu-Ray) compared to Factory B (2.0 Blu-Ray)
- Factory B has a ***comparative advantage*** over Factory A in producing Blu-Ray/DVD Players
  - Opportunity cost for each Blu-Ray/DVD Player produced by Factory B is lower (0.5 consoles) compared to Factory A (0.9 consoles)
- By each factory focusing on what it has a comparative advantage in, society benefits with more of each item available for the labor available
  - Most efficient use of the limited resource (labor)
  - More of both products will be available to society

# Another Example of Comparative Advantage: An Eye Surgeon

- Imagine you are an eye doctor who paid your way through college washing cars
- Now you have a car of your own
  - Should you wash it yourself or pay someone to wash it for you?
  - Suppose you could wash your car more quickly than the person you hire (absolute advantage)
- Would your limited time available be better spent washing cars on in the operating room saving people's eyesight?
  - Even though you have an “absolute advantage” in both activities, you have a “comparative advantage” in doing eye surgery

# Entrepreneur

- Specialized form of human capital
- Someone who starts, owns, and operates a business
- Acquires and arranges the allocation of productive resources to provide a product or service

# Roles of the Entrepreneur

- ***Innovator***
  - Thinks of ways to turn new inventions, technologies, techniques, or ideas into goods or services that people want
- ***Strategist***
  - Supplies the vision and makes key decisions that set the course for business enterprises
- ***Risk Taker***
  - Take on risks of starting new business
  - Investing time, energy, abilities, and their own (and often other people's) money
  - No guarantee of success
- ***Sparkplug***
  - Supplies energy, drive, & enthusiasm needed to turn ideas into realities

# Characteristics of Successful Entrepreneurs

- ***Ambition***

- Highly motivated with the ability to see the big picture & stay focused on the end result
- Set goals for themselves & never stop striving to achieve those goals

- ***Self-Confidence***

- Believe in themselves
- Feel certain that they can accomplish what they set out to do

- ***Willingness To Take Risks***
  - Not afraid to risk their time, money, & energy on an idea
- ***Energy & Self-Discipline***
  - Thrive on hard work
  - Willing to sacrifice in other areas to focus on their business (vacations, free time, etc.)
- ***Perseverance***
  - Don't give up
  - May have setbacks or experience failure along the way, but still keep going

- ***Problem-Solving Ability***
  - Ability to come up with solutions to problems
- ***Organizational Skill***
  - Able to manage time, resources, and people effectively and efficiently
- ***Ability To Motivate Others***
  - Good at inspiring others to join team

# Why Do Entrepreneurs Do What They Do?

- **Personal Satisfaction**
  - Be your own boss
  - Set your own hours
  - Do something that makes you happy
- **Contribute to the Economy**
  - Help local area
  - Provide jobs for others
- **Profit Motive**
  - Hope to make money to provide self/family the lifestyle they want

# Profit

- Calculated using:
  - **Revenues** = money made from selling the products produced
  - **Expenses** = costs of production; expenses incurred from the production of the products sold; cost of the inputs of productive resources (natural, human, capital)

- How to calculate

$$\text{Profit} = \text{Revenues} - \text{Expenses}$$

- Profit is the ***incentive*** for starting and operating that business
  - Owner's scarce resources (time, energy, money) have alternative uses
    - Could work for someone else
    - Could take money and do something else with it (invest, spend, save, etc.)
  - There is risk associated with this
  - Owner hopes the reward (profit) will outweigh the risk
  - Profits are not guaranteed
    - Many businesses lose money and go out of business
  - Owner only gets paid (profits) after everyone else (employees, suppliers, landlord, etc.) are paid

# Example of Calculating Profit\*

## Revenues

Sales: 1 pizza \$10.00

## Costs of Production

Pizza cook labor costs (1 pizza every 5 minutes @ \$12.00/hr wage) \$1.00

Ingredients 3.00

Box 0.50

Driver labor costs (15 min per delivery @ \$8.00/hr wage) 2.00

Total Costs of Production 6.50

Profit Per Pizza **\$3.50**

\* Note: this profit only reflects the costs that can be directly attributable to the making of the pizza, and does not include other expenses such as rent, advertising, insurance, taxes, etc. (called **overhead expenses**). This profit amount is normally referred to as **gross margin**. Total profit is normally calculated by adding up all sales, then subtracting all costs of production and overhead expenses.

# Profits for Selling 100 Pizzas

Sales Revenue

100 pizzas X \$10.00 per pizza \$1,000.00

*minus*

Cost of Production

100 pizzas X \$6.50 per pizza \$650.00

*Equals*

Profit **\$350.00**

# What If You Could Increase Productivity?

- Train pizza cook better (reduce time to prepare pizza from 5 min to 2.5 min)
- Rearrange driver routes (reduced delivery time from 15 min to 10 min)
- Profit per pizza goes up from \$3.50 to \$4.67

## Revenues

Sales: 1 pizza \$10.00

## Costs of Production

Pizza cook labor costs (1 pizza every 2.5 minutes @ \$12.00/hr wage) \$0.50

Ingredients 3.00

Box 0.50

Driver labor costs (10 min per delivery @ \$8.00/hr wage) 1.33

Total Costs of Production 5.33

Profit Per Pizza **\$4.67**