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The Five Foundations of Economics: **What is Economics?**

Misconception

- Economics is the “dismal science”
- Thomas Malthus, economist (1798)
 - Prediction: due to limited resources and population growth, humankind will experience widespread starvation.
- Today
 - Seven billion people
- What did Malthus miss?
 - He did not account for increases in technology and agricultural productivity.



Malthus

What is Economics?

- Scarcity
 - The limited nature of society's resources
 - Nothing is infinite in nature—not even air and water!
- Economics
 - The study of how people allocate their limited resources to satisfy their nearly unlimited wants
 - The study of how people make decisions

Unlimited Wants? Really?

- Which do you prefer?
 - \$10 or \$20?
 - One vehicle or two?
 - One meal a day or three?
 - 200 gigabytes of disk space or 400?
- Idea:
 - More is preferred to less. This leads to unlimited wants. We will generally never say “no” to having more. It doesn’t mean we’re “greedy”
- Question:
 - How does this relate to scarcity?



Microeconomics versus Macroeconomics

- Microeconomics
 - Concerned with decisions of individuals, households, and businesses
 - What happens to my consumption if I lose my job?
 - Jim decides to buy a house while the interest rate is low.
- Macroeconomics
 - Looks at the broader economy, including inflation, growth, employment, interest rates, and productivity
 - What happens to the economy if there is widespread unemployment?
 - The Federal Reserve decreases interest rates to spur spending and kick start the economy

Microeconomics versus Macroeconomics

- Microeconomics
 - Individual units that comprise the economy
- Examples
 - Individual choosing to take a job in Florida or California
 - Couple decides to start a family
 - Firm choosing to open another factory
 - Effect of government intervention on a single market

Microeconomics versus Macroeconomics

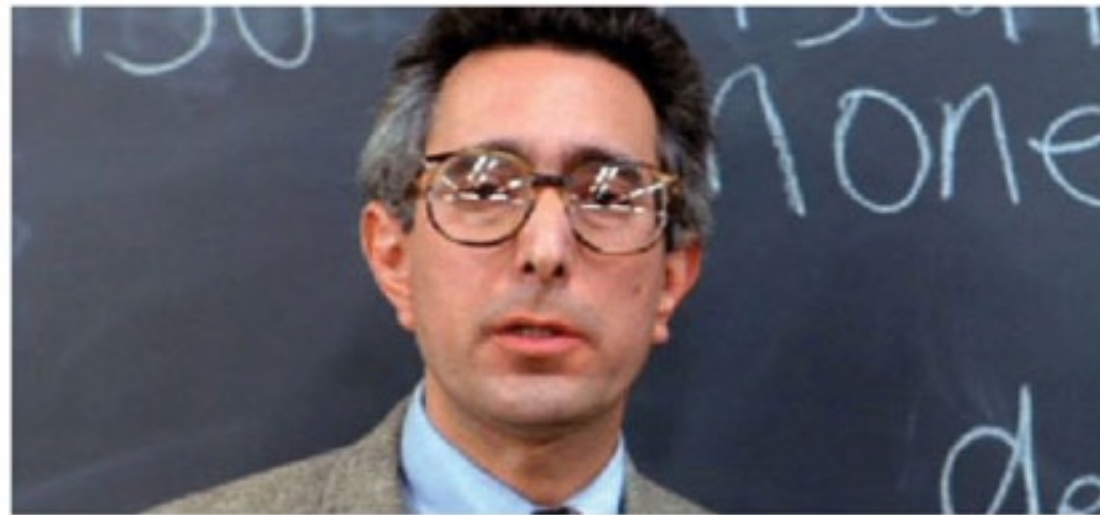
- Macroeconomics
 - The study of the broader economy
- Examples
 - Inflation
 - Economic growth and productivity
 - Unemployment
 - Interest rates
 - Aggregate demand and supply

The Five Foundations of Economics

1. Incentives matter
2. Life is about trade-offs
3. Opportunity costs
4. Marginal thinking
5. Trade creates value

Economics in *Ferris Bueller*

- Here is a stereotypical representation of a “boring” economics class. Hopefully, you’ll enjoy this course a little more.



<https://www.youtube.com/watch?v=dxPVyieptwA>

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The Five Foundations of Economics

1. Incentives Matter

1. Incentives Matter

- Incentives
 - Factors that motivate you to act or exert effort
 - People respond to incentives!
 - Incentives are everywhere, and financial gain often plays a prominent role
- Positive incentives
 - Tax refund, pay raise, employee of the month award, sticker and a smiley face, extra credit
- Negative incentives
 - Taxes, jail, fees, fines, spankings, getting grounded, getting fired, failing class



Direct and Indirect Incentives

- Direct incentives
 - Generally easy to recognize
 - “Do my yard work and I’ll give you \$40”
 - “Get straight A’s and I’ll give you \$500”
- Indirect incentives (using third example)
 - Maybe the child now has been given an indirect incentive to cheat!
 - Another indirect incentive: don’t get involved in extracurricular activities.

Unintended Consequences

- Unintended consequence
 - An unplanned result (usually negative and unwanted) of an incentive
- Example: social safety net
 - Most agree that we need a safety net for those without employment or low income
 - However, what if the money from the safety net is higher than he can make at a job?
 - Indirect incentive to stay on welfare rather than work!

Unintended Consequences

- Imagine you are low-skilled and out of work.
 1. You could get a full-time low-wage job and get \$400 per week.
 2. You could remain on welfare, and get \$450 per week and not work.
- Which do you choose?
 - Option #2 is clearly better. More pay and zero work!
 - It's not that you're lazy, you're just intelligently responding to the indirect incentive given to you!
- How to solve this?
 - Fix programs to eliminate incentives to remain on welfare when work is possible.

Unintended Consequences

- Example: Child Safety Seats

Incentives and Innovation

- Patents and copyrights
 - Incentives to innovate
 - Why work hard, bear all costs (time and monetary) if someone could just steal your idea for profit?
- Result of a strong patent system?
 - More innovation, since people are rewarded for new popular inventions
 - Innovation → economic growth, higher standards of living
 - But ... those big, greedy pharmaceutical companies!



Incentives and Innovation



Roland Fryer on the Colbert Report “Paying for Grades”
<http://thecolbertreport.cc.com/videos/7058uf/roland-fryer>

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The Five Foundations of Economics

**2. Life is About
Trade-offs**

3. Opportunity Costs

2. Life is About Trade-offs

- With scarcity, decisions incur costs
- Individual examples
 - Go to theater: do I watch the action movie or the romantic comedy?
 - Go to food court: do I eat at Panda or Brick Oven?
 - After high school: do I attend SJSU or CalPoly?
 - Which president do I vote for?

Trade-offs and Policy

- Governments face trade-offs as well
 - Spend tax dollars on education or the highway system?
 - Should we penalize polluting companies?
 - Gain: cleaner air, better health
 - Loss: less industry, higher prices in some sectors?
 - Different cultures may have different values.
Often depends on wealth.

TANSTAAFL

3. Opportunity Cost

- Opportunity Cost
 - The highest-valued alternative that must be sacrificed in order to get something else
 - **Not** all alternatives, just the **next best** choice
- In economics:
 - The cost of something is what you give up to get it

Scarcity → Choice → Opportunity Cost

Opportunity Cost

- Easy example: go to the mall or the pool?
 - Opportunity cost of going to the mall:
 - Lost opportunity to go to the pool
 - Opportunity cost of going to the pool:
 - Lost opportunity to go to the mall
 - Decision-making key:
 - Minimize opportunity cost by selecting the option that has the largest benefit. Go to whichever you enjoy more, the pool or mall.
- Another example
 - A business makes a profit. That's great!
 - However, could it have made MORE profit producing something else? This is the economical way of thinking.

Opportunity Cost



Homer does not understand opportunity costs.

<http://www.criticalcommons.org/Members/BaileyNorwood/clips/homer-simps-understand-opportunity-cost>

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The Five Foundations of Economics

4. Marginal Thinking

4. Marginal Thinking

- Economic thinking
 - Systematically evaluating a course of action
 - Requires a purposeful evaluation of available opportunities to make the best decision
- Marginal thinking
 - Evaluate whether the benefit of one more unit of something is greater than the cost
 - Margin examples: one more unit (slice of pizza), one more hour of activity (studying, sleeping)



Marginal Thinking Example

- Suppose you are vacuuming your living room. Will you move the couch and china cabinet to vacuum underneath them?
- Marginal benefits
 - A small additional amount of carpet is cleaned
- Marginal costs
 - Vacuuming now takes more time and effort
- Cost-benefit analysis at the margin
 - Do the action (move furniture) only if the marginal benefits are greater than the marginal costs
 - Depends on your valuation of the clean room and the time and effort it takes you to move the furniture

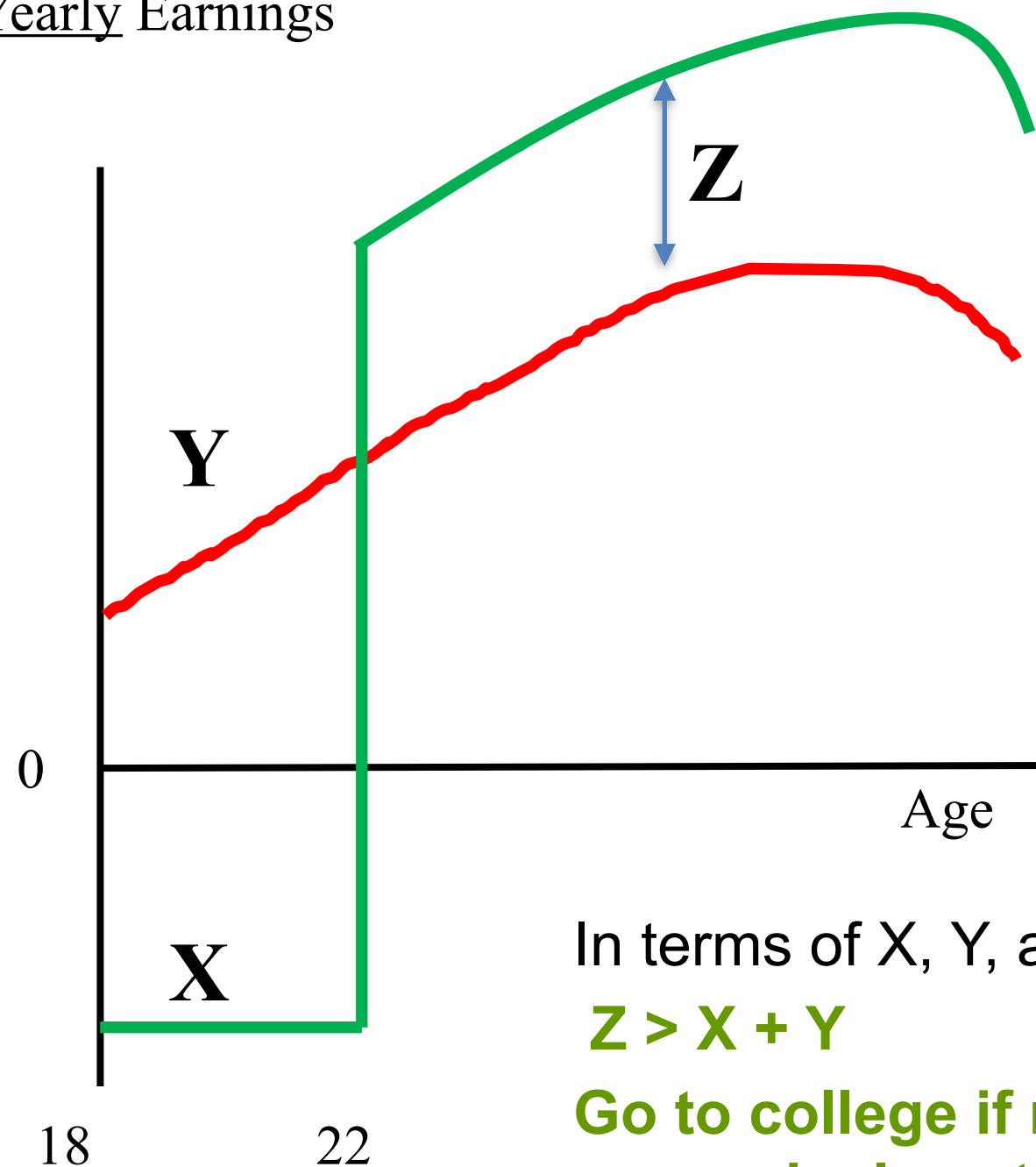


Is Going to College Worth It?

- Let's examine a college education using opportunity costs and marginal thinking.
- We often hear people (especially politicians!) say phrases like the following:
 - College graduates earn \$1 million more in their lifetimes than high school grads.
 - Everyone should go to college.
 - College will benefit everyone.
 - We expect all our nation's children to go to college.

Is Going to College Worth It?

Yearly Earnings



College

High school

- X = direct costs of college
- Y = opportunity cost of not working while in college
- Z = college premium; extra money earned.

In terms of X , Y , and Z , go to college if:

$$Z > X + Y$$

Go to college if marginal benefits are greater than marginal costs!

Is Going to College Worth It?

- Difficult question:
 - Are the benefits of college greater than the costs of college for everybody?
 - Think about this: some may have big direct costs or opportunity costs; others will have a small benefit.
- Answer:
 - If the answer to the previous question is “no,” then not everyone should go to college.
 - Economists would disagree with such blanket statements as “everyone will benefit from a college education.”



Is Going to College Worth It?

- Other non-monetary benefits of college
 - Statistically not as likely to be hit by unemployment during rough economy
 - 9.7% versus 5.2% for H.S. and Bachelor degree unemployment in 2009
 - College-grad jobs may have better hours, better working conditions
 - Sense of accomplishment
 - Education leads to positive externalities (benefits to others)

Marginal Thinking



Mr. Clifford Explains Marginal Thinking in
Monty Python and the Search for the Holy Grail

<https://www.youtube.com/watch?v=0BAMv6IV2t4>

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The Five Foundations of Economics

5. Trade Creates Value

5. Trade Creates Value

- Markets
 - Bring buyers and sellers together to exchange goods and services
- Trade
 - The voluntary exchange of goods and services between two or more parties
 - Key word = voluntary
 - You don't engage in trade if it makes you worse off; therefore, trade only occurs if both parties feel they gain from the trade!

Comparative Advantage

- Without trade, you would have to produce everything you consume.
 - You would have to make your own food, clothing, housing, and electronics.
 - You would have to do all your own services as well (hair-cutting, plumbing, dentistry, education)
- Comparative advantage
 - The situation in which an individual, business, or country can produce at a lower opportunity cost than a competitor
 - Allows gains from trade to occur



Trade

- Specialization
 - You go to Starbucks to get coffee.
 - You go to the doctor when you're sick.
 - You don't have to do everything yourself: people specialize in what they're best at (lowest opportunity cost) and you can trade with them.
- Trade controversies
 - India or China may have a comparative advantage (relative to USA) in labor-intensive goods.
 - Result: outsourcing of jobs
 - What if this causes an American worker to lose his job?



Trade



Gains from trade in “Pawn Stars”

<http://www.criticalcommons.org/Members/fsustavros/clips/history-channel-pawn-shop-bar>