

## MBA 503 Economics Component ~ 1<sup>st</sup> day & Nellis and Parker Chapter 1

\_\_\_\_\_ overview:

### Introduction

7 classes with me ~ (oct 8, 18, 25, 29, nov 12, 19 and dec 3 -- pretty spread out....  
No two classes in a week – plenty of time for reading I guess.

This is the first part of the economics component. You will get macroeconomics with another professor next semester. Not sure how many sessions...

2 exams: oct 29 and dec 3 – these will be in-class exams composed of essay questions that will require words, graphing and perhaps some numerical answers. I will likely give you a preview of the types of questions that could appear on the exam before the exam.

4 cases due: 10/25, 10/29, 11/19, 12/3 – these will be done in your groups, so you will turn in one answer set per group. I'd like these to be typed (but your graphs can be hand-drawn) – there is no page minimum or maximum – just whatever it takes to answer the questions.

- \_\_\_\_\_ Economics is the study of choices
- \_\_\_\_\_ Opportunity cost
- \_\_\_\_\_ Micro vs. macro
- \_\_\_\_\_ Positive analysis
- \_\_\_\_\_ Marginal analysis (word on models)
- \_\_\_\_\_ Efficiency
- \_\_\_\_\_ The Principle of diminishing marginal utility (graphs)
- \_\_\_\_\_ The Principle of increasing opportunity costs & PPC
- \_\_\_\_\_ The Principle of diminishing marginal returns (graphs)
- \_\_\_\_\_ The principle of comparative advantage
- \_\_\_\_\_ 4 basic market structures

\*\* The discipline of economics can be used to study almost anything that involves behavior, because most behaviors are rooted in **choices**.

The Discipline of Economics has a dozen or so sub-disciplines:

- Health economics
- Public sector economics
- Labor economics
- Economic history
- International economics
- Monetary economics
- Environmental economics
- Natural resource economics

Choices and tradeoffs are involved in all these things

- *how* do you make choices,
- *why* do you make the choices you do, and
- *what are the consequences* of those choices (when you choose one thing, because your resources are limited – you time and money—you give up something else.
- we can study all that with economic tools.

We use a concept called “*opportunity cost*” to describe these types of trade-offs.

⊗ Opportunity cost = what we give up when we make a choice = the value of the next best (unchosen) alternative.

In economics we look at how we deal with scarcity and opportunity costs on two general levels:

the individual consumer or firm level:

- how consumers decide which goods and services to purchase, how to allocate your time,
- how firms decide which products to produce, and how to produce them – what inputs to use.
- Put these two together (buyer and seller) and we get a “market”.

These smaller level decisions in the presence of scarcity are studied under MICROECONOMICS

We can also expand up to a larger level and look at

- the society or economy-wide level:
- how markets interact to determine production in an entire economy, how nations interact to allocate goods and services through trade, how gov’t intervenes in markets through policy.
- These larger level decisions are studied in MACROECONOMICS (next semester).

So in here we’re not going to get much beyond the market level. We’ll start with a general representation of a market (the supply and demand model) then look at each side of the market (producers and consumers) in more detail.

The two are not separate tho – most of the tools and models and intuition you get from microeconomics carry over and are used in macro, just in a larger context.

Within both branches of economics, we spend a great deal of time engaged in something known as *positive analysis*.

⊗ positive analysis: analyzing or predicting the effects or consequences of actions that take place within economic systems (households, firms, markets, nations) *without making subjective judgements*.

Basically positive analysis is completing “if...then” statements.

No subjective judgement – what does “subjective” mean?

What is the opposite of subjective? → objective. Without opinion or personal bias.

So a lot of what we do in economics is purely objective – just looking at facts without interjecting our personal beliefs or opinions.

Egs:

- what will happen to the quantity of a particular good demanded when its price is raised by 10%?
- What will happen to the revenue of the company that sells the product when price is raised by 10%?
- What will happen to employment and wages when a new minimum wage law is passed?
- What happens to the price of a good when it becomes more fashionable? Less fashionable?

Macro egs:

- what will happen to housing purchases if the federal reserve decides to cut interest rates next quarter?
- What happens to the *price* of US goods when trade restrictions with Mexico are lifted?

These are all examples of positive analysis

Another extremely important word in economics is: “MARGINAL” or “Margin” = on the edge, on the border...

The marginal unit is the “next” unit, or the “incremental unit”, or the “additional” unit.

Something we do a lot of in economics is measure and compare costs and benefits. Comparing costs and benefits helps us make rational choices.

We sometimes are faced with “yes” / “no” type choices. When this is the case, we simply look at total costs vs. total benefits.

Easy: if the benefits of a given choice outweigh the costs (including the opportunity costs) then you can gain from making the choice.

Get more out than you put in => net gain. Benefits go up. Good idea.

This is common sense – you don’t even think about it – but this is the fundamental way we make decisions:

Eg: get up at 4:00 in the morning today?  
→ no. the costs outweighed the benefits

Eg: show up at econ class today and miss going to the beach?  
→ yes. The benefits of being here outweighed the costs.

This common sense decision-making process that you do all day every day can be a very powerful tool for economics when it is applied “at the margin”.

Sometimes choices are not as simple as “yes/no”, but rather are a decision of “how many”? What is the best quantity?

- How many slices of pizza?
- How many beers or cups of coffee?
- How big of a house to buy (how many sq feet)?
- How many units should your firm produce this quarter?
- How large should the new production facility be?

When this is the type of decision we have to make, comparing total costs and total benefits doesn't cut it. We have to look at marginal costs vs. marginal benefits – something called “Marginal Analysis”.

Don't let me confuse you – its just as easy, its still common sense – just a different way of looking at decision making.

Marginal analysis is simply comparing the additional or incremental benefits with the additional costs of each unit, and then make a rational decision.

Rationality in economics means making decisions where the benefits outweigh the costs – hence promoting efficiency.

“Efficiency” -- in economics, efficiency or being efficient is simply getting the most for the least – getting the highest net benefits given your available resources.

You've got 5 bucks to spend on lunch – whats the best way to use that \$5? What gives you the most satisfaction?

You have many markets in which you could place your personal capital – which is the best market for you to be in?

You have many investment opportunities for your financial capital – which is going to give you the highest return for the level of risk that you are willing to accept?

We're going to get into a lot more detail on the topic of market efficiency in later classes – but we've first got to set up our model of a market – which we'll do in the second and third classes.

Basically what I want to cover for the rest of today's class is a review of – or perhaps an introduction to – some of the basic principles of microeconomics.

- The Principle of diminishing marginal utility
- The Principle of increasing opportunity costs

- The Principle of diminishing marginal returns
- The principle of comparative advantage

Some others that we'll get to later...

- The “utility-maximizing rule” for the consumption of a single good by consumers.
- The “utility-maximizing rule” for the consumption of multiple goods by consumers.
- The profit-maximizing conditions for different types of firms.

A sort of grand plan for the 7 classes that we have is to spend today with basic ideas and principles, one class on the basics of the consumer side of the market, one class on the basic behavior of firms – this will allow us to put the two together in our 4<sup>th</sup> session and talk about different market outcomes and economic efficiency.

The 5<sup>th</sup> class will be spent on different pricing strategies.

The 6<sup>th</sup> and 7<sup>th</sup> will be miscellaneous topics.

- The Principle of diminishing marginal utility

This principle basically has to do with consumer satiation.

The idea is that if individuals are consuming some good or service, each unit of the good will give the individual less and less satisfaction or utility.

\* assumes that each unit of the good is of constant quality.

Simple idea is with food – take an example where you are eating units of food and each unit is the same – say slices of pizza – according to the principle of diminishing marginal utility, the first unit will give you the most satisfaction and each subsequent unit will give you less satisfaction than the previous unit.

The principle of course extends to other goods as well – cars for example – your first car gives you the most satisfaction – having an additional car gives you less – the third car, at the margin, may be relatively useless.

CDs – my brother had a CD collection that was amazing. Some 600 CDs – the marginal CD doesn't give him much utility at the margin, because he doesn't have enough time to listen.

So consider a graphical representation of this idea.

if we were to graph satisfaction in total – the total benefits of units of some good – against quantity in units. – what would this graph look like?

What about marginal benefits?

Notice the relationship between total and marginal.

- The Principle of increasing opportunity costs

This principle has to do with the scarcity of resources in production.

the law of increasing opportunity cost.

if inputs are specialized, the opportunity cost of producing a particular good will rise as more of that good is produced.

The basic idea stems from the fact that resources – inputs like land labor and capital – are typically specialized or better suited for the production of some goods, but not especially well suited for the production of others.

When resources are specialized, as we take resources away from the production of one good and put them toward the production of another good, the amount of the good we gain goes down and the amount of the good we're giving up goes up – so in other words, opportunity cost increases.

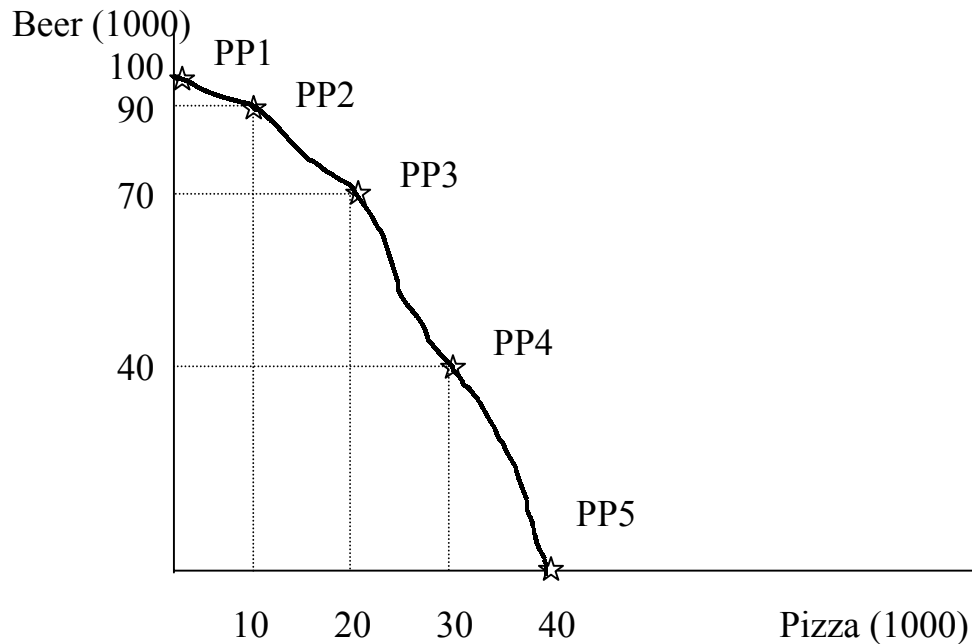
Perhaps the best way to illustrate this principle is with the production possibilities curve model (PPC)

\* PPC shows all the combinations of 2 goods that can be produced in a nation with available resources and technology.

→ plot points from table 1<sup>st</sup>

→ put beer on the vertical axis and pizza on the horizontal axis

→ connect the dots



\*\* important points about the PPF:

1. all points on the PPF represent output combinations where all resources are being used in production  
→ “full employment”
2. points inside the PPF are output combinations where all resources are not being used  
→ Could produce more  
→ Inefficient  
⇒ there is some unemployment of resources or inefficient use of resources
3. Points outside the PPF are unattainable given currently available resources and technology.

Look at the shape of the PPF: its “bowed out” (unlike the budget line, which was a straight line).

The slope of the PPF is not constant. Remember with the BL, the slope tell us about opportunity cost.

With the BL we had a constant slope and therefore a constant opportunity cost.

PPF is “bowed out” because the opportunity cost of one good in terms of the other changes as we move along the curve.

\*\* show changes in slope – rise vs run in terms of trade-off

- The Principle of diminishing marginal returns

As we added units of a variable input (eg: labor) to a certain amount of fixed inputs (capital), eventually we reach a point where the extra production obtained from the variable input will decrease.

We reach a point of diminishing marginal returns - where adding more units of the variable input will no longer increase output.

Law of diminishing marginal returns → the extra production obtained from increases in a variable input will eventually diminish as more of the variable input is used with fixed inputs.

⇒ there is a limit to the extra production we can get by adding workers to fixed capital.

⇒ for a given amount of capital, there is some optimal quantity of labor.

Graph TPL and MPL

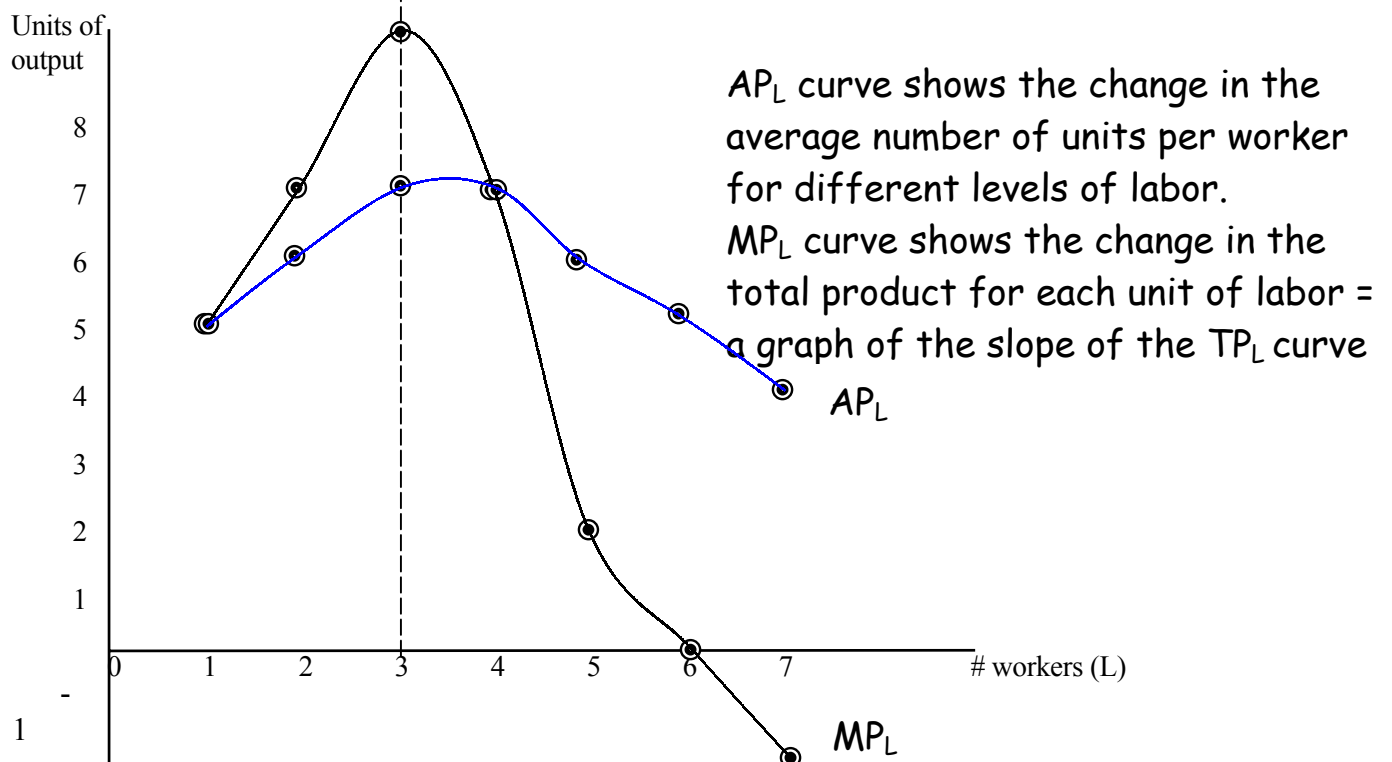
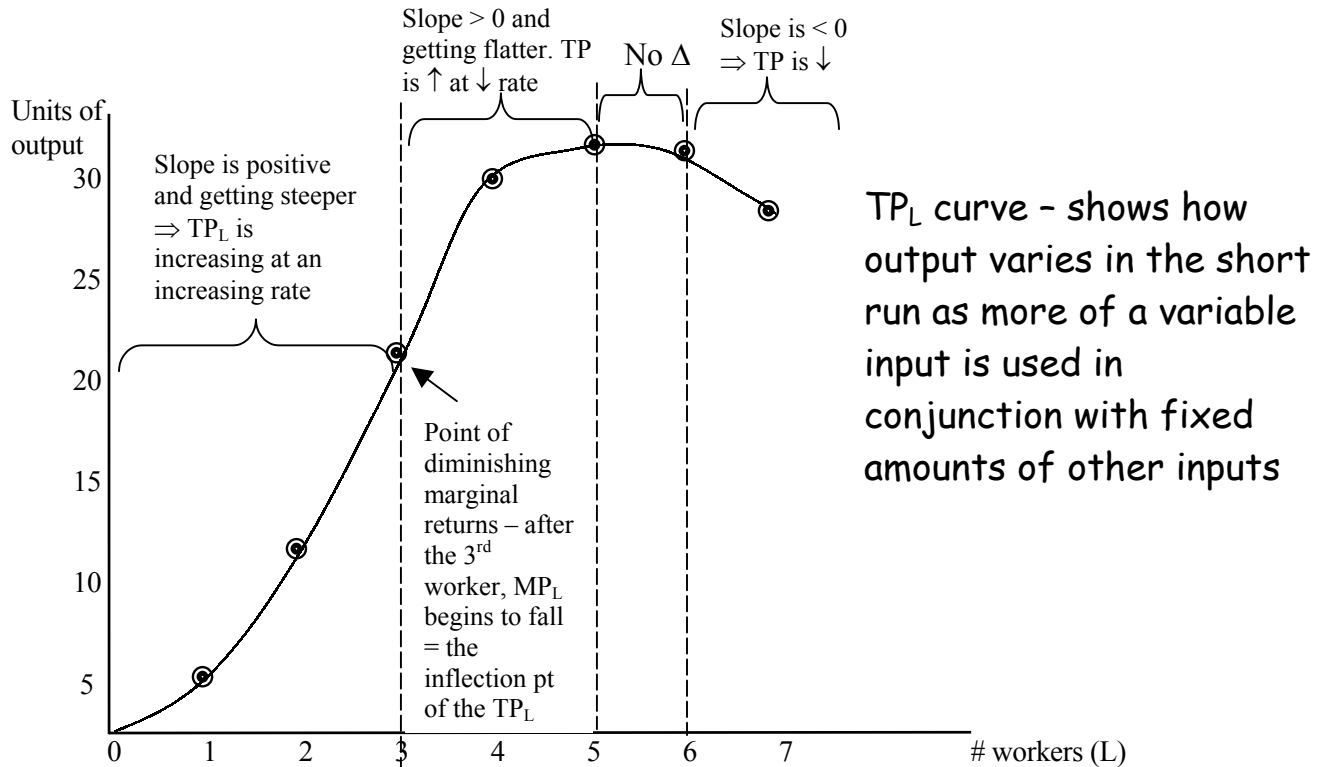
Q on vertical

L on horizontal

Let's look at these relationships graphically:  $TP_L$ ,  $MP_L$ , and  $AP_L$

→ 2 graphs to represent how output changes with labor. For each put output on the vertical axis and units of labor on the horizontal axis.

Let's graph the total product of labor on top and then the marginal and average products of labor on the bottom.



The principle of comparative advantage

- ⊗ The principle of comparative advantage – if nations (or individuals) specialize in the production of goods and services that they can produce at lower opportunity cost relative to other nations, then there can be mutual gains from trade  $\Rightarrow$  more efficient production and consumption.

The point in terms of our PPF model is that

These gains from trade allow nations to consume product mixes outside of their own PPC.

4 basic market structures...

PC, Monopolistic Competition, Oligopoly, Monopoly

Draw spectrum:

compare

# of firms (level of competition), degree of product differentiation, barriers to entry.

A perfectly competitive market exists when:

1. There are many sellers and many buyers in the market.
2. The good or service is homogenous or standardized  $\Rightarrow$  one seller's product is a perfect substitute for another firm's product.
3. Each firm has a very small share of total market sales.
4. Competitors can enter or exit the market at virtually no cost.

Example: agricultural products

Perfectly competitive firms are known as "price taking firms" because they are forced to react to market prices or "accept" market prices rather than set them themselves.

Monopoly is the polar opposite of perfect competition.

PURE MONOPOLY exists when there is only one seller of a particular good or service in a market and there are no close substitutes for the good.

With PC, we had many firms all selling the same thing.

⇒ many firms and the good had many substitutes.

How much competition will monopolists have?

→ zero

So, as we will see... a monopolist has total control over price?

→ yes, monopolists are "price makers".

Monopolistic competition is similar to the case of perfect competition in that there are many firms, and entry into the industry is not restricted by any barriers.

However, it differs from perfect competition because the products sold by different firms are differentiated from one another.

For example, there may be differences in product quality, appearance, or reputation. Essentially what we're dealing with here are industries that have a lot of different "brands" to choose from.

Examples are clothes, toothpaste, cereal, shampoo, sporting goods, most grocery store items, majority of retail goods are MC. Each firm is the sole supplier of its own brand, but other brands of the same type of product exist and are close, although not perfect, substitutes.

The following conditions prevail in a monopolistically competitive market:

1. Many firms each with a small market share (larger market share than was the case with PC firms).
2. Each firm's product is a close, though not perfect, substitute for the product of other firms => a price increase by a single firm will drive away some customers, but not all customers as in PC - some customers stay because of "brand loyalty".
3. The actions of any single firm will affect its own profitability, but will not have a significant impact on the profitability of other firms in the industry (we need this assumption to separate monopolistic competition from oligopoly, where each firm's market strategy is strongly influenced by the actions of other firms).

4. Entry into and exit from the industry are relatively easy.
5. There is no incentive to cooperate with other firms (again, this assumption is a critical difference between monopolistic competition and oligopoly).

Oligopoly exists when a few large firms dominate a market. By "a few firms", we typically mean between 3 and 10.

Note: when 2 firms control a market, we have a "duopoly".

A good rule of thumb is that if the largest 4 firms control 40% or more of the total market supply, then the industry can be considered an oligopoly.

Using this measure, approximately half of all US manufacturing industries are oligopolies.

Tons of examples: chewing gum, cigarettes, light bulbs, beer, greeting cards, airlines.

We encounter monopolistic markets for both homogenous and heterogeneous goods.

Homogenous goods examples: copper, glass, aluminum

The largest firms in oligopolistic markets have large enough market shares so that they can influence market price. Further, because market shares are so big, the actions of other firms are important to the price and output decisions of each firm.

That is, contrary to the assumptions of perfect competition and monopolistic competition, individual firms in oligopolies can threaten the profitability of other firms.

So oligopolistic firms are always watching each other, and basing their own decisions, in large part, on what other firms are doing.