Welcome to Econ 21 – Summer Term 2007

Intermediate Microeconomics

http://www.dartmouth.edu/~econ21wg

What we do in Econ21

Text: Hal Varian (2006, 7th ed.) Intermediate Microeconomics, ISBN 0-393-16711-9 .

Material covered:

- Consumer Theory (until 1st midterm)

- Applications: Buying and Selling, Labor-leisure decision, Monopoly I (until 2nd midterm)

- Topics in Industrial Organization: Monopoly II (exclusive dealing, platform markets. (final exam).

Prereqs: Math, use of graphs

What we do today

1 **Speaking a bit about "fundamental principles" in Econ**

Mankiw's 10 principles that should tell us how things are

Slembeck's 10 principles about Economics as a science

Reason: our goals are different from Econ 1, and we want to use a more accurate framework.

2 **Relatedly: Varian's idea of Microeconomic's 4 basic categories: actors, behavior, institutional framework, equilibrium analysis.**

3 **Starbucks Economics (Article).**

N. Gregory Mankiw: Economic Principles

=> Not a textbook title, rather an explanation, how the economy works..

Group I: How People Make Decisions - Individuals

1. People Face Tradeoffs. To get one thing, you have to give up something else. Making decisions requires trading off one goal against another.

2. The Cost of Something is What You Give Up to Get It. Decision-makers have to consider both the obvious and implicit costs of their actions.

3. Rational People Think at the Margin. A rational decision-maker takes action if and only if the marginal benefit of the action exceeds the marginal cost.

4. People Respond to Incentives. Behavior changes when costs or benefits change.

N. Gregory Mankiw: Economic Principles

Group II: How People Interact

5. Trade Can Make Everyone Better Off. Trade allows each person to specialize in the activities he or she does best. By trading with others, people can buy a greater variety of goods or services.

6. Markets Are Usually a Good Way to Organize Economic Activity. Households and firms that interact in market economies act as if they are guided by an "invisible hand" that leads the market to allocate resources efficiently. The opposite of this is economic activity that is organized by a central planner within the government.

7. Governments Can Sometimes Improve Market Outcomes. When a market fails to allocate resources efficiently, the government can change the outcome through public policy. Examples are regulations against monopolies and pollution.

N. Gregory Mankiw: Economic Principles

Group III: How The Economy Works As A Whole

8. A Country's Standard of Living Depends on Its Ability to Produce Goods and Services. Countries whose workers produce a large quantity of goods and services per unit of time enjoy a high standard of living. Similarly, as a nation's productivity grows, so does its average income.

9. Prices Rise When the Government Prints Too Much Money. When a government creates large quantities of the nation's money, the value of the money falls. As a result, prices increase, requiring more of the same money to buy goods and services.

10. Society Faces a Short-Run Tradeoff Between Inflation and Unemployment. Reducing inflation often causes a temporary rise in unemployment. This tradeoff is crucial for understanding the short-run effects of changes in taxes, government spending and monetary policy.

Macro vs. Micro

What's micro?

⇒**First 2 groups: how people make decisions and how they interact.**

What's macro?

⇒**Last group: Economy as a whole.**

Can everybody build his "own" Economics?

From Mankiw's Ten Principles (how the economy works) ...

.... to the Ten Principles of Economics as a Discipline (T. Slembeck)

Intuition 1: Why not, this is just a matter of setting different topics on the economic(s) agenda

Intuition 2: Mankiw tells how things are in general, Slembeck tells how economics as a science deals with these issues.

Slembeck's 10 Principles of Economics as a Discipline

Principles #1- 4: Rational Choice

Scarcity: Economists study situations where needs or wants exceed means. Therefore, people have to make choices.

Rationality is assumed to guide people's choices or decisions. They systematically gauge all pros (benefit or "utility") and cons ("cost") of all alternatives or options they are facing when deciding.

Preferences: People are equipped with fixed and given preferences that allow them to assign utilities to all options, and to choose the option that maximizes (net) utility.

Restrictions: People face constrains that they cannot change themselves, and thus have to take as given (such as budgets, input cost etc.). Maximization is always constrained by restrictions.

Slembeck's 10 Principles of Economics as a Discipline

Principles #5 - 6

5. **Opportunity Cost** is induced by scarcity, and by the need to make choices. All choices always involve opportunity cost because deciding in favor of one option always means deciding against some other option(s). There are two main aspects of opportunity cost:
1) Utility maximizing choices induce opportunity cost to be minimal (static aspect).
2) Choices may be revised when opportunity cost rises (dynamic aspect).

6. **The Economic Principle** is the application of rationality to situations of scarcity: Minimize cost with regard to a given goal (e.g., level of utility) *OR* maximize utility for a given level of cost or input.

Hence the "economic principle" frames situations as a minimizing or a maximizing problem, and allows to assess efficiency. Applying the principle avoids wasting valuable resources.

Slembeck's 10 Principles of Economics as a Discipline

Principles #7 - 8

7. Efficiency of activities, rules, transactions or distributions is a basic theme in economic analysis. Efficiency is most often assessed either in terms of the economic principle (minimize cost or maximize utility) or the Pareto criterion (with regard to transactions and distributions).
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Marginal thinking is rather uncommon among non-economists, however.

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Slembeck's 10 Principles of Economics as a Discipline

Principles #9 - 10

9. Equilibrium is a fundamental notion in economic analysis. Basic economic models deal with the comparison of two (or possibly more) equilibria (*comparative statics*). Economist think in terms of equilibria, which are situations where no one has an incentive to change his or her behavior. The Nash equilibrium is the most fundamental formulation of the concept of equilibrium as used in economics.

10. Game Theory is an approach to study situations of interdependence where people have incentives to think and behave strategically.

Course outline

- You find all the course material online at (pse bookmark)
  www.dartmouth.edu/~econ21wg

- Study groups: More information to come (flyers).

- Presentations:

Problem Set 1:	Due 7/4	(Questions will be posted this Thur)
Problem Set 2:	Due 7/11	
[7/18: Midterm exam]		
Problem Set 3:	Due 7/25	
Problem Set 4:	Due 8/1	
[8/8: Midterm exam]		
Problem Set 5:	Due 8/15	
Problem Set 6:	Due 8/22.	

- Sign-up sheet for presentations for this term will be handed out later on this week.

Micro's Four Basic Categories

Cat. 1: Actors

Microeconomic theory analyzes the behavior of individual economic actors and the aggregation of their actions in different institutional frameworks.

Who are the actors?

Standard treatment: the individual consumer and the firm.

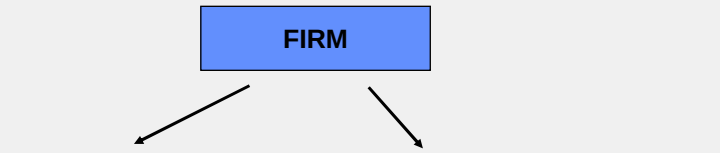
Later on: More than one firm, or one firm and 2 types of consumers (or even more players, e.g. platform markets…)

(other example: Second Degree Price Discrimination)

Micro's Basic Categories

Cat. 2: Behavior

There are two ways to understand firms:



Firm as an actor
- **Monopoly**
- **Oligopoly**

Firm as "institutions"
- **institutional framework shapes individual behavior**
- **equilibrium is attained among the constituent consumers**

Micro's Basic Categories

Cat. 2: Behavior: consumer

But how do consumers really "behave"? Rationally?

⇒**According to their *preferences* that are represented by a *utility function.***

We assume that each individual is perfectly informed about her preferences.

Q: Do I always know that a 'bundle' of 27 bananas plus 13 apples gives me the exactly same utility than a bundle of say 24 apples and 11 bananas?

Saving basic Micro: it's an 'as-if' approach

Rational behavior and the "as if" world: We don't presume that consumers actively maximize some tangible utility function, they act "as if" they would.

consumption monkey

Advanced question:

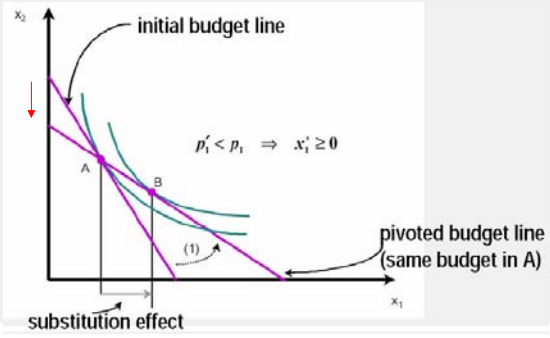
Do monkeys have convex preferences?

Consumer theory: Slutsky substition effect

Virtually all Econ01 textbooks use the Hicks Substitution effect: starting from an initial equilibrium, the consumer first gets *utility compensated along her original indifference curve.*

Slutsky: Consumer receives the additional 'money' to be able to consume the original bundle at new (=higher) prices.

Ex: a price decrease permits to take money away such that the new (flatter) budget line still goes through A.



Micro's Basic Categories

Cat. 3: Institutional framework

We of course assume it's a constrained optimization problem what the consumer solves (we're no longer in paradise)

⇒The institutional framework describes:

- the general nature of options that an individual has,

- the options available to each individual, as a function of other individuals' options.

Ex: Price system, auctions, contracts and games.

Micro's Basic Categories

Cat. 4: Equilibrium analysis

An equilibrium is a situation in which each individual agent is doing as well as it can for itself, given the actions taken by others and given the institutional framework that defines the options of individuals and links their actions.

Ch 1.2 Back To Optimization & Equilibrium

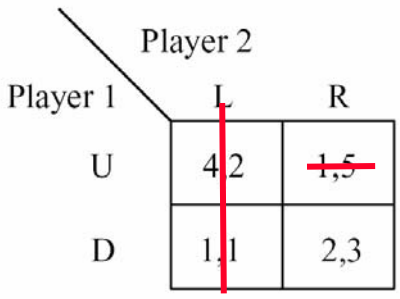
This is about individual rationality. We think individuals act that way. And we analyze this behavior in games.

Optimization principle: People try to choose the best patterns of consumption that they can afford.

Equilibrium principle: Prices adjust until the amount that people demand of something is equal to the amount that is supplied.

Ex: Game theory. Each player behaves rationally, and we check for equilibrium outcomes

Finding Equilibria in Simultaneous-Move Games



$A_1 = \{U,D\}; A_2 = \{L,R\}.$

One way to solve this game (Solution by iterated dominance):
• Player 1 looks first if there are strictly dominated strategies in his own action space (strategies that are never played, independent from the opponent's move).
There are none.
•Player 2's strategy L however is strictly dominated. Player 1 is safe to assume that 2 would never play L and thus never deviate from playing R. Player 1 thus chooses D. The equilibrium is (D,R).