Econ 100B: Microeconomic Theory
Winter 2010

Class Information (read the syllabus 0

- Web: `http://econ.ucsb.edu/~grossman/Econ100BW10.html`
- Instructor: Zack Grossman: grossman[at]econ.ucsb.edu
- Office hours: Wednesday 12-2pm or by appt., NH 3049
- Materials:
  1. *Intermediate Microeconomics* by Hal Varian
  2. *Workouts in Intermediate Economics* by Ted Bergstrom and Hal Varian (*recommended*)
  3. iClicker
- Waitlist: `https://waitlist.ucsb.edu/`

Exams & Grading

- Midterm 1 (20%): Jan. 26, in class
- Midterm 2 (20%): Feb. 18, in class
- Final (50%): Tues., March 16 (here)
- Diagnostic quizzes (in section), section participation (10%): see syllabus for dates, first one next week!

Recipe for Success

- Attend the class, and ask questions that will help you understand better
- Practice all assigned problems
- Attend and participate in section
- Come to office hours whenever you have questions, and do not wait until a week before an exam

Teaching Assistants

Name	Email	OH in NH
Emmon Chu	echu[at]econ	2041, W 10-12
Stefanie Fischer	stefaniejfischer[at]hotmail	2039, F 3:30-5:30
James Green-Armytage	armytage[at]econ	2015, TBA
Julian Neira	neira[at]econ	2041, W 2-4
Bonnie Queen	queen[at]econ	2047, M 9-11
Kevin Welding	welding[at]econ	2043, M 10-12

Econ 100A vs. Econ 100 B

- Things you studied in Econ 100A
  - An individual's consumption decision
  - A firm's production decision
- What you will study in Econ 100B
  - Trade between consumers and producers in markets
  - Requires: aggregating behavior of many consumers, producers

Regulation: Good or Bad?

- Should government regulate economic activity?
- Politicians love to talk about this:
  - "I'm always for less regulation." –John McCain (*WSJ*, March 3, 2008)
  - "...I do believe that there is a role for oversight." –John McCain (same interview)
  - "A lot of the problems that are going on in our country now appear to have been related to lax regulation." –Texas State Senator Steve Ogden (March 21, 2009)
  - Ogden is a Republican

Regulation: Good or Bad?

Clicker Vote

- A) We need more regulation
- B) We need less regulation
- C) Don't know
- D) It's complicated

This is an economic question. . . how do economists think about it?

Regulation

How do economists think about it?

Let's rephrase the question:

- Under what conditions is government regulation of markets unneccesary/harmful?
- When is it needed/helpful?
- What kind of regulation is helpful and why/how?

More generally, what are markets supposed to do?

Under what conditions do they perform well and under what conditions do they fail?

Your goals for this course

- Understand basic theoretical framework we use to think about
  - If/how/when markets do & don't "work"
  - What happens when they don't & what should we do
- Develop analytic tools you can apply to specific economic questions, for example:
  - Does the health insurance industry need more or less regulation?
  - How will health care reform, e.g. the taxation of employer provided health benefits affect the labor market? Who bears the cost– employers or employees?
  - How can we save money by insuring more people?
  - What can we do to lower health care costs?
  - If there are things that can be done to save money, lower health care costs, why haven't they already been done?
  - Who stands to gain/lose from various reform measures?

Structure

- Equilibrium in well-functioning (competitive) markets ($\sim 1/3$)
- Market failure ($\sim 2/3$)
  - Monopoly & oligopoly
  - Externalities (missing markets)
  - Public goods
  - Imperfect/Asymmetric Information (covered in Econ 100C)
- Today and Thursday:
  - Whirlwind recap of Econ 100A
  - Uncertainty

Key questions from 100a

How do we think about rational choice?

- Utility function represent preferences
- Limited resources: budget imposes constraint
- Maximize utility subject to constraint.

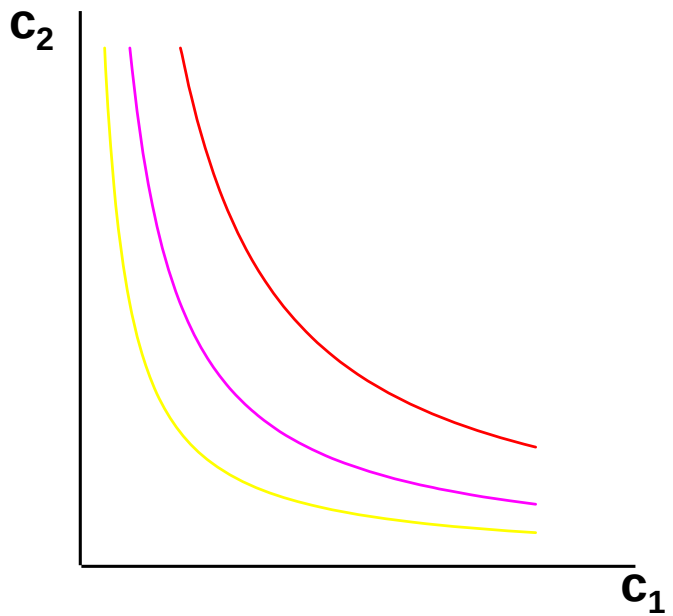
Utility Functions

Example: Cobb-Douglas

- Utility function:

$$U(c_1, c_2) = c_1^{\alpha} c_2^{1-\alpha}$$

- Indifference curves:



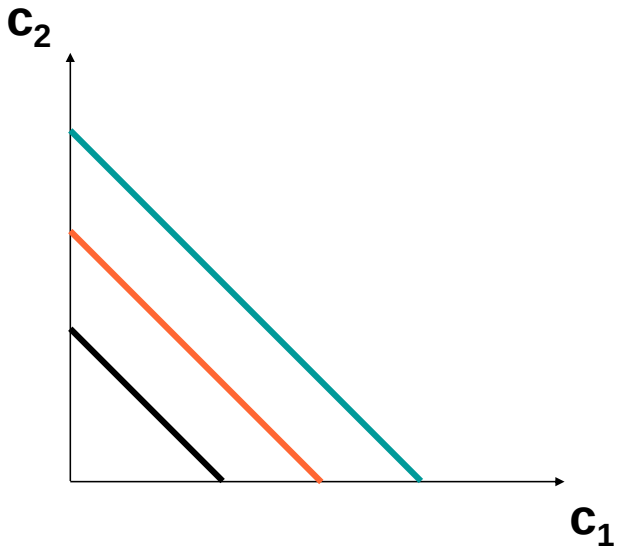
Utility Functions

Example: perfect substitutes

- Utility function:

$$U(c_1, c_2) = c_1 + c_2$$

- Indifference curves:



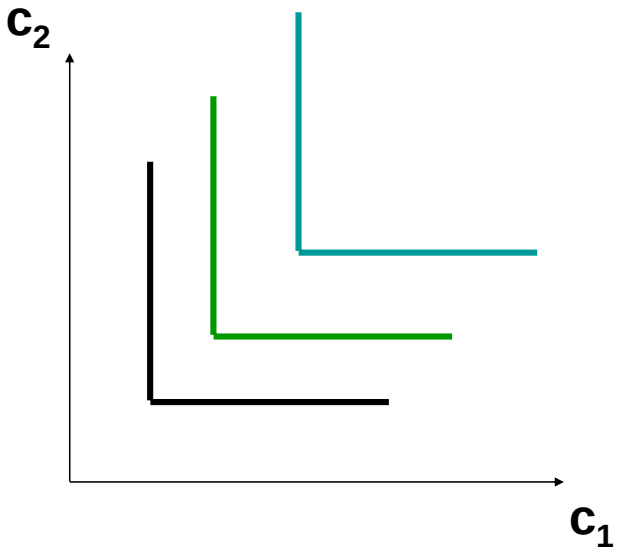
Utility Functions

Example: perfect complements

- Utility function:

$$U(c_1, c_2) = \min(c_1, c_2)$$

- Indifference curves:

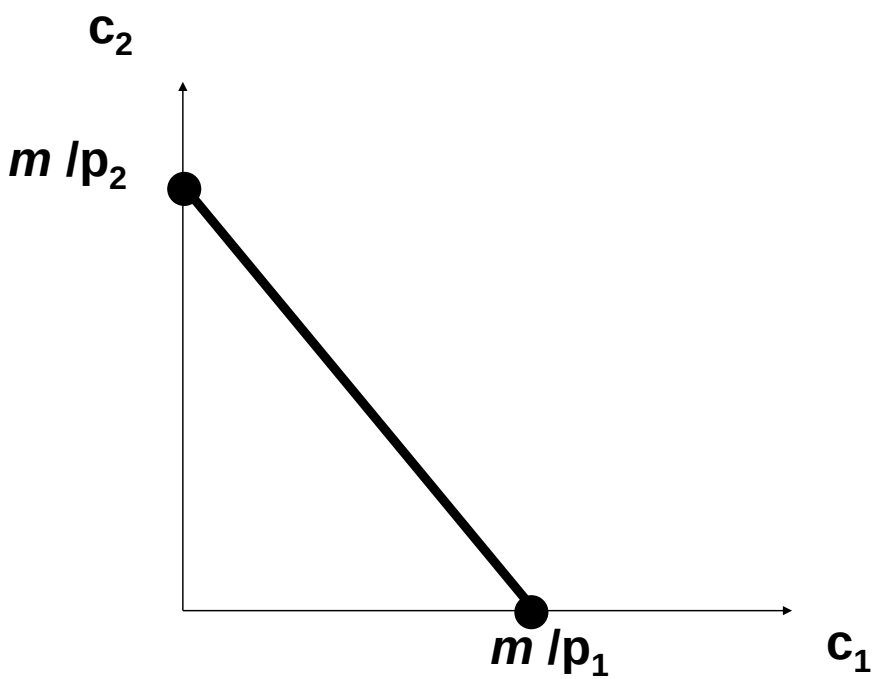


Budget Constraint

- The budget constraint represents the frontier of consumption bundles affordable with income m
- Equation:

$$p_1 c_1 + p_2 c_2 = m$$

- Graphically:



Rational Choice

- How does the consumer choose?
- The consumer chooses an affordable bundle to maximize utility:

$$\max_{(c_1,c_2)} U(c_1, c_2)$$

subject to

$$p_1 c_1 + p_2 c_2 = m$$

- Solution: demand is $c_1 = D_1(p_1, p_2, m)$ and $c_2 = D_2(p_1, p_2, m)$.

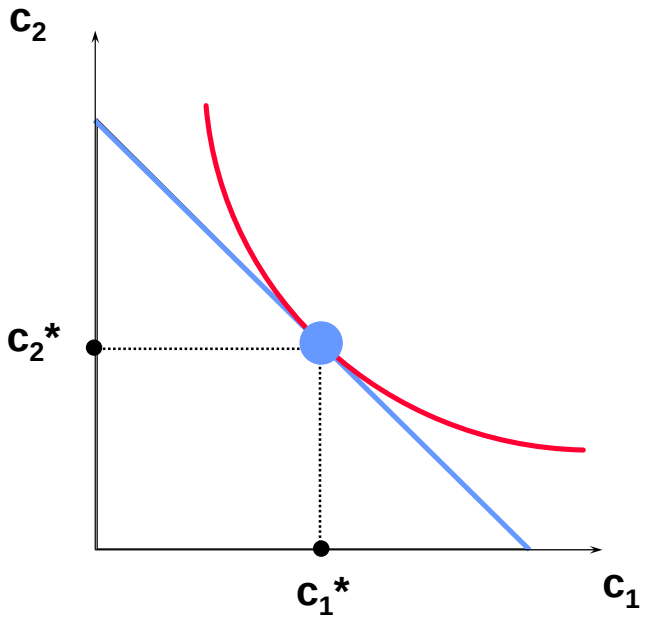
Choice: Graphical Illustration

The consumer will choose a bundle where

- Algebraically:

$$MRS = \text{price-ratio} \implies \frac{MU_2}{MU_1} = \frac{p_2}{p_1}$$

- Graphically:



Recurring Theme

We use this approach repeatedly

- Individual choosing consumption bundle
- Firm choosing production bundle (minimizes cost)
- Individual choosing consumption over time
- Ahead: choosing consumption when the future is uncertain

Uncertainty about what?

- Behavior of others, future prices, wealth
- Disasters: Will my house burn down? Earthquake?
- Will the economy recover by next year? Will I find a job? Will my customers return?
- Will I get cancer? What a car hits me and I break my leg?

Today and Thursday

- How do economists think about uncertainty?
  - Using the same set of tools: constrained optimization
  - Expected utility theory
- What are rational responses to uncertainty?
  - A portfolio of contingent consumption goods
  - Buying insurance
- Understand: some aspects of healthcare debate?

States of Nature and Contingent Plans

- States of Nature:
  - "car accident breaks leg" (a) vs. "no accident" (na)
  - Probability of: accident $= \pi_a$, no accident $= \pi_{na}$; $\pi_a + \pi_{na} = 1$
  - Accident causes loss of \$L
- Contingent Plan:
  - A state-contingent consumption plan: consumption level/bundle is different in each state (e.g. vacation only if no accident)
  - Contracts may be state-contingent (e.g. insurer pays only if there is a accident)

Next time

- State-contingent budget-constraints
- Preferences under uncertainty
- Insurance
- Diversification