

Introduction to EC0381

Class 1 – July 6, 2010

Goal of This Introductory Class

Help you decide whether this is the right course for you

Outline

1. Syllabus:
 - a. Meetings, office hours, e-mail policies
 - b. Evaluation
 - c. How to succeed in this course

2. 60 seconds bio

3. About this course

1. Syllabus

Meetings, Office Hours, etc.

- Meetings Tuesdays and Thursdays, 5-8pm, Room WO 20.
- Office Hours Tuesdays, 7-8pm, and by appointment
- E-mail jasmin.kantarevic@oma.org

- Course Website www.jasminkantarevic.com/eco381

- Material:

- Lectures
- Textbook readings
- Articles
- Homework



All posted on the course website

1. Syllabus

Evaluation

| | Weight | Date | Duration |
|--------------|-----------|-------------|------------|
| Midterm 1 | 10 or 30% | July 20 | 50 minutes |
| Midterm 2 | 10 or 30% | August 3 | 50 minutes |
| Assignment 1 | 5% | Due July 22 | |
| Assignment 2 | 5% | Due Aug 5 | |
| Final | 50% | TBD | 2 hours |

1. Syllabus

Pre-requisites

- ECO200Y/204Y/206Y, ECO220Y/227Y
- Two main issues:
 1. Calculus: optimization of a single variable
 2. Statistics: interpretation of regression model

1. Syllabus

How to succeed in this course?

1. Prior to the class

- Print and read lecture slides, appendices, articles, and textbook pages relevant to the class

2. After Class

- Try homework problems
- Contact me early if you have problems

3. Attend all classes

4. Allocate 6 to 8 hours per week for the course

2. 60 seconds bio

- Jasmin Kantarevic
- Education: Ph.D., University of Toronto, 2005
- Teaching: ECO381, ECO239, ECO365
- Work Experience: Ontario Medical Association
- More at www.jasminkantarevic.com

3. About this course

- Two main questions:
 1. How people get paid?
 2. What difference does it make?

3. About This Course

Principal-Agent Relationships

- The agent is a party that takes an action that influences an outcome the principal cares about.

Examples:

- Your driving speed influences safety of pedestrians.
- Your neighbor's noise level influences your sleeping.
- Your tidiness influences your roommate's happiness.
- Employee's effort influences employer's profits.

3. About This Course

Common Problem in PA Relationships

- The agent chooses the action that is in his best interest, without considering the impact of his action on the principal (externality)
- As a consequence, the outcome may be inefficient

Examples:

- People may be driving too fast
- People may be too loud
- People may not be recycling enough
- People may not be exercising enough

3. About This Course

Efficient Outcomes

- Let:
 - e_0 be the agent's privately optimal action
 - $q(e)$ be the outcome associated with action e
 - $c(e)$ be the personal cost to the agent of taking action e
- Then, action e_0 is inefficient relative to action e_1 if

$$q(e_1) - c(e_1) > q(e_0) - c(e_0)$$

3. About This Course

Example: Playing Music After 10 P.M.

- You like to play music until 11 P.M.
 - Your neighbor sleeps around 10 P.M.
 - Your neighbor values sleeping at 10 P.M. at \$100.
 - You value playing music until 11 P.M. at \$50.
- Playing music between 10 and 11 P.M. is inefficient.

3. About This Course

Window of Opportunity

- When the agent's private action is inefficient, a mutual contract can make things better:
 - The agent takes action e_1 rather than e_0
 - The principal pays the agent for altering his choice of e

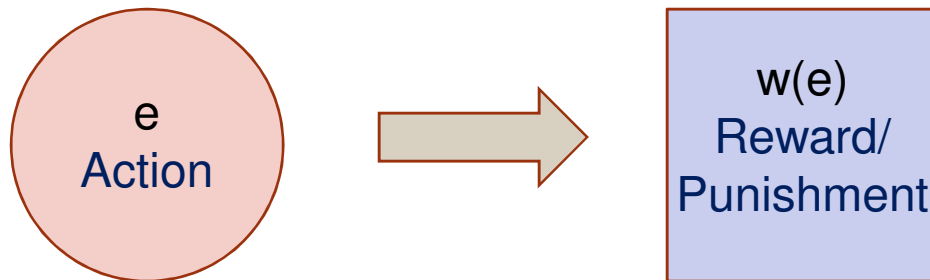
Example

- Your neighbor pays you between \$50 and \$100 to stop playing music after 10 P.M.

3. About This Course

Incentive Contracts

- Incentive problem arises when agent's private action is not efficient due to externality.
- To alter agent's private action, the principal has to provide incentives to the agent to do so.
- Incentive contract is a function $w(e)$ that ties agent's reward or punishment to his choice of action e .



3. About This Course

Examples of Incentive Contracts

- Salary
 - \$10/hour for flipping burgers at MacDonald's
- Piece Rate
 - 10% commission for each new insurance policy sold
- Team Compensation
 - \$100 bonus if the company's profit increases by 5%
- Tournaments
 - \$1 million for winning at Wimbledon

3. About This Course

Road Ahead

- Study six main types of incentive contracts:
 1. Piece Rates
 2. Team Compensation
 3. Tournaments
 4. Subjective Evaluation
 5. Dynamic Compensation
 6. Non-monetary Incentives
- For each incentive contract, three main questions:
 1. How does the contract work?
 2. When is it likely to work?
 3. Does it work in practice?

3. About This Course

Applications

- Business: CEO compensation
- Environment: recycle, use public transport
- Education: long-term, deep, critical learning
- Health: adequate and timely medical services