COURSE OUTLINE

BMA5001 - MANAGERIAL ECONOMICS

Lecturer: Jo Seung-Gyu, Department of Strategy and Policy
Office: Room 6-5, BIZ 1 (Tel: 6516-6469, Email: bizjosg@nus.edu.sg)
Office Hours: To be announced later.

COURSE OVERVIEW

Managerial Economics as the first year MBA core course aims to expose the students to a rigorous foundation in microeconomics, game theory and industrial organization. Its main objective is to develop students’ capacity to analyze the economic environments in which business entities operate and understand how managerial decisions can vary under different constraints that each economic environment places on a manager’s pursuit of his/her goals. Its focus will be on analyzing the functioning of markets, the economic behavior of firms and other economic agents under various market structures, and the economic and social implications of the outcomes.

Some motivating examples may better describe than long words and phrases.

Motivation 1: The cost of a (thick) Sunday paper ranges around $1.00 - $2.00. And we all agree that it is a good investment to pick up one, which allows us an access to hundreds of dollars worth of coupons. Coupons (and rebates) are devices to reduce the price of products. But if so, lowering the prices and running an ad on sale would be a lot simpler. Plus, the coupon strategy creates extra work with extra cost for financial officers, cashiers and store managers. Then questions follow:

- Why coupon, while marking down the price is simpler and, seemingly, less costly? That is, what net benefits does a coupon strategy bring to a firm?
- Why are some products heavily relying on coupons/rebates and others not?
- If a coupon strategy is to be introduced, how much of coupon value should a firm recommend for its $30 shampoo?
- If you are one of those Sunday coupon clippers, how would you perceive spot discounts and rebates as alternatives?

Motivation 2: Many times, one’s ideal decision depends on the choice of others. To take examples:

- Why are there few successful cartels in reality although firms may have strong incentive to behave collusively? What are the factors that affect the firms’ ability to maintain a cartel?
- Some OPEC countries – like Venezuela – often cheat by exporting more than the agreed quota. However, it may still be in the best interest of big member countries – like Saudi Arabia – not to follow suit. Your strength may turn into a weakness and vice versa. How would you get out of such dilemma? Also, how does the new shale oil boom change the global oil industry competition, and what are the real key strategic aspects of this new dynamics?
- Building an extra plant and idling it; a man walking into a bank and showing the teller that he’s strapped with dynamite; burning his ships by Cortés after he landed on the Yucatan Peninsula - Aztec Empire. Which strategic feature do these episodes share in common and why are they called smart moves?

Students’ appreciation of the analytic strength and practical applicability of microeconomic theory being the main objective, the course accordingly is concerned with both theory and applications. The theory serves to construct a rigorous framework of principles and techniques, and the applications bring real aspects into the classroom through multiple cases and examples from various sources. Students are expected to develop intuitions behind each economic concept and understand the theory to formalize it. More importantly, students are encouraged to build ability to apply their learning to the complex business realities.

Knowledge of basic algebra and calculus skills are assumed throughout the course.
TEACHING/LEARNING MATERIALS

- **Lecture Notes prepared by the instructors**
  The lecture notes will be uploaded in IVLE weekly, before each class. Students are expected to visit the site regularly, download and preview the materials before they come to the classes.

- **Textbooks**
  Lecture notes have been created by the lecturer and did not follow a particular textbook. However, the following two books are recommended although not required.
  

- **Miscellaneous Readings**
  Various reading materials about how economics can be useful in practice and applied to the reality will be introduced through the IVLE site. These additional readings are important supplementary learning aids and the students are expected to take the materials seriously. Many of them, if not all, will be discussed during the classes.

- **Case Discussion**
  Students are expected to apply their learning to the real situations through the case studies. Cases, designed by the lecturer to fit with the major economic topics, are composed of the news/articles/reports from academic journals, newspapers, professional magazines and internet sites etc. Each case comes with a set of discussion questions prepared by the lecturer to guide students, who will be asked to challenge these cases as a team and present their work in classes. The case materials will be made available through the IVLE site as well.

5. **Problem Sets**
   Problems sets comprise comprehensive questions which will require a solid understanding of the course materials and an ability to reshape them. Problem Sets are not solely for an assessing of your knowledge but should rather be taken as an independent learning vehicle.

6. **Free Topic Presentation**
   Each team is to select a topic and give a presentation during the second half of the semester. For the details, refer to the assessment category below.

7. **For Those Who Need Help**
   In addition to the consultation through office hours, review/Q&A sessions would be scheduled before the exams. I will be ready to help you and you don’t be hesitant to ask for help when you need it.
ASIDE: Informal Economics Books to Recommend

The books listed below are not required materials for the module but are recommended. Students will find each and every book insightful and fun to read.

- Tim Harford, *The Undercover Economist*, Abacus
- Avinash Dixit and Barry Nalebuff, *Thinking Strategically*, Norton
- Steven Levitt and Stephen Dubner, *Freakonomics*, Harper Perennial
- Steven Levitt and Stephen Dubner, *SuperFreakonomics*, William Morrow
- Dan Ariely, *Predictably Irrational*, HarperCollins
- Daniel Kahneman, *Thinking Fast and Slow*, Farrar Strauss and Giroux
ASSESSMENT

1. Problem Sets: 15%
2. (a) Case Discussion and (b) Free Topic Presentation Project: 20%
3. Class Participation: 10%
4. Midterm Exam: 20%
5. Final Exam: 35%

Note on the Assessment Category 1 & 2:
The assessment categories 1 and 2 in the above – problem sets, case discussion, and free topic presentation – will be based on team-work. Students will be asked to form their own team, the details of which are to be announced later. All the team members are expected to work cooperatively as a group, all of whom would receive the same evaluation for their work regardless of the individual variation in their contribution. You all are possibly subject to a ‘Morally Hazardous’ situation and will be practicing how to overcome such an economic problem.

DETAILS ON ASSESSMENT

1. PROBLEM SETS

(1) Three to four comprehensive problem sets will be given throughout the semester.

(2) Each team is encouraged to work on the problem set jointly yet submit one common answer for which the team members receive the same evaluation.

(3) Each answer will be carefully – and with effort – marked, commented and returned. Therefore a typed submission will be greatly appreciated. However, do not bother to type your work unless you are an expert at it. (Your marginal productivity may be much higher at other work and so is the opportunity cost.) Though, a good pen-personship is strongly expected.

Note: Late submissions are not accepted.

2a. CASE DISCUSSION

(1) Case discussions will start from Week 3 or 4. Case pack containing all cases will be uploaded in IVLE in due course and case assignment will be determined on a first-come first-served base.

(2) Students will be asked to challenge the cases as a team for in-class discussions. Although everyone is expected to come to the classes being prepared for discussion, the assigned teams are to formally present its analysis and lead a discussion. After presentation, each team is to upload its presentation materials on the designated folder of the IVLE site for other students’ view.

(3) Evaluation will be based on the overall quality of the presentation – how rigorous, disciplined, creative and how much it is to the points in issue. Time management (25 minutes including Q&A) will be strictly enforced.
2b. FREE TOPIC PROJECT

Whereas typical economics course may stop after giving you the intuition and the proof, we want to see if we can put the concepts into actual practice and application. For this, each team is required to do an independent project – Free Topic Presentation.

(1) Each team picks an issue/case/observation that they believe is a challenging economic phenomenon.

(2) Each team meets regularly to bond, discuss, debate and finally come up with an economic interpretation/analysis of the issue it chose.

(3) The team leader is to submit via email a one-page proposal containing the followings by Week 10 (23 October).
   - Names of the team members
   - Tentative title of the presentation
   - Brief sketch on the idea/plan of the presentation
   - First and second preferred presentation weeks between Week 12 and Week 13. The lecturer will then finalize the presentation schedules based on the students’ preferences and the topics of their projects. (When in conflict, it will be randomly determined.)

(4) Each team gives a 25 minute long presentation including Q&A. No written report is required.

(5) Evaluation will be based on how rigorous, disciplined, and creative the analytical idea is from economics perspective. Time-management will also be an important assessment factor. All team members receive the same evaluation for the project regardless of the individual variation in their contribution.

3. CLASS PARTICIPATION

Students are encouraged and expected to actively and voluntarily participate during the classes. Participation in discussing/questioning/answering will all be counted as an important part of the assessment criteria.

4. MIDTERM TEST

(1) Schedule: To be confirmed later
(2) There will be no make-up test in principle. (In case you miss the midterm test without approval in advance, your midterm exam score will be zero.)
(3) It is a closed book examination with one A4 size help-sheet allowed.

5. FINAL EXAMINATION

(1) Schedule: To be confirmed later
(2) There will be no make-up exam for any reason whatsoever. (This is the university policy not to offer a make-up final exam. Since the final exam schedule will be announced early in advance, students are not to plan a personal matter in conflict with the final exam schedule.)
(3) It is a closed book examination with one A4 size help-sheet allowed
(4) It is a cumulative examination, yet the materials after the midterm exam will be given a higher weight.
ACADEMIC HONESTY & PLAGIARISM

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is ‘the practice of taking someone else's work or ideas and passing them off as one's own’ (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:
http://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct

Online Module on Plagiarism:
http://emodule.nus.edu.sg/ac/
COURSE TOPICS/COVERAGE

(The details are subject to change.)

PART A: PRELIMINARIES

1. Introduction to Market Economy and Managerial Economics (PR: Ch 1 & IP: Ch 1)
   - Motivations to Study Microeconomics
   - Understanding Markets
   - Market Structure
   - Importance of Opportunity Cost

2. The Basics of Market Forces in Competitive Markets: Supply and Demand (PR: Ch2, 4, 9 & IP: Ch 2, 3, 6)
   - Supply, Demand and Market Mechanism
   - Elasticities and Applications
   - Welfare Measures and Government Intervention
     - Consumer Surplus and Producer Surplus
     - Price Controls - Price Ceilings and Price Floors
     - Economics of Tax and Subsidy/Issue of Incidence
     - Import Quotas and Tariffs
     - Deadweight Losses
   - Managerial Implications

PART B: DEMAND, SUPPLIES AND COMPETITIVE MARKETS

3. Consumer Behavior, Demand Analysis, Uncertainty and Behavioral Economics (PR: Ch 3, 4 & IP: Ch 2)
   - Consumer Behavior
     - Consumer Preferences: Utility Functions and Indifference Curves, and Marginal Rate of Substitution
     - Budget Constraints
     - Consumer Equilibrium: Utility Maximization
   - Individual Demand and Market Demand
     - Price Changes: Individual Demand Curve
     - Income Changes: Normal vs. Inferior Goods
     - Derivation of Market Demand
     - Consumer Surplus Revisited

4. Economics of Uncertainty/Risk (PR: Ch 5)
   - Expected Value vs Expected Utility
   - Attitudes toward Risk and Reducing Risk
   - Insurance Problem
   - Risk Pooling and Risk Sharing
5. A Snapshot into Behavioral Economics (PR: Ch 5, pp. 203-210)

- Motivation and Introduction
- Reference Point, Loss Aversion, Prospect Theory, and Birth of Behavioral Economics
  - Limitations of Expected Utility Theory and Importance of Reference Point
  - ‘Allais Paradox’ and ‘Certainty Effect’
  - ‘Loss Aversion’, ‘Prospect Theory’ and Birth of Behavioral Economics
  - Examples of Loss Aversion
- Applications of Prospect Theory/Behavioral Economics
  - Endowment Effect/Status Quo Bias
  - Anchoring Effect
  - Framing Effect
  - Rule-of-Thumb Bias and Small-Numbers Bias
  - Magic of Free Price
  - Sunk Cost Fallacy and Mental Accounting
  - Intrinsic vs Extrinsic Incentives
  - Goldilocks Effect
  - Nudge (or Choice Technique)

6. Cost Theory (PR: Ch 6, 7 & IP: Ch 4) and Competitive Markets (PR: Ch 8, 9 & IP: Ch 5, 6)

- Flow Chart of Goods/Services/Factors
- Cost of Production
  - Which Costs Matter?
  - Costs in SR: TC, TVC, TFC, MC, ATC, AVC AFC
  - Costs in LR and Optimal Input Choice revisited: Cost Minimization vs. Output Maximization
  - Relation between SR and LR Costs
  - Economies of Scale in terms of Cost Function
- Miscellaneous Issues
  - Economies of Scope
  - Learning Curves
- Characteristics of Perfect Competition
- Profit Maximization and Optimal Output Decision
- Derivation of Individual Firm’s Short Run Supply Curve
- Welfare Analysis of a Competitive Market: Economic Efficiency
- Managerial Implications

PART C: MARKET POWER AND PRICING STRATEGIES

7. Monopoly Power and Simple (Uniform) Pricing Strategies (PR: Ch 10 & IP: Ch 8)

- Sources and Measurement of Monopoly Power
- Monopolist’s Output Decision and Pricing Rule
- Economic Efficiency of Monopoly
  - Social Costs
  - Rent Seeking
  - Regulation and Anti-Trust Law
  - Example: Regulation in Natural Monopoly – case of electricity market
8. Sophisticated Pricing Strategies with Market Power (PR: Ch 11 & IP: Ch 9)
   - First-, Second-, and Third-Degree Price Discrimination and Applications
   - Direct and Indirect Segment Discrimination
   - Two-Part Tariffs
   - Bundling

9. Monopolistic Competition (PR: Ch 12, pp. 448-452 – likely to be skipped)
   - Characteristics of Monopolistic Competition
   - Short Run and Long Run Equilibrium in a Monopolistic Competition
   - Economic Efficiency of Monopolistic Competition
   - Applications

PART D: GAME THEORY AND STRATEGIC THINKING

10. Game Theory and Strategic Thinking I: Concepts and Game Equilibrium in Static Games
    (PR: Ch 13 & IP: Ch 10)
    - Introduction
      - Components of a Game, Mutual knowledge vs Common Knowledge
      - Non-cooperative vs. Cooperative Games
      - Normal Form (or Strategic Form) Form vs Extensive Form (or Sequential) Games
    - Equilibrium Concepts and Role of Rationality
      - Prisoners’ Dilemma and Equilibrium in Dominant Strategy
      - Maximin Strategy
      - Mixed Strategy (Randomized Strategy)
      - Nash Equilibrium and Refinements – payoff/risk dominance and focal points
    - Applications

11. Game Theory and Competitive Strategy II: Games in Dynamic Settings (PR:Ch 13 & IP: Ch 10)
    - Equilibrium Selection in Sequential Games
      - Hijacking Game
      - Backward Induction and Subgame Perfection
      - Applications: Centipede Game, Sequential Bargaining etc
    - Strategic Moves
      - First/Last Move Advantage, Commitment, Brinkmanship
      - Chicken Games
      - Entry Deterring Game
    - Strategic Moves to Get Around the Prisoners’ Dilemma
      - Cross-shareholding
      - Most Favored Customer Clause
      - Price Matching Guarantee Clause
    - ‘To Commit or Not To’
      - Strategic Substitutes vs Strategic Complements and Commitment
    - Repeated Games and Folk Theorems
    - Examples and Managerial Implications

- Characteristics of Oligopoly
- Strategic Interaction and Importance of ‘Conjectures’
- Oligopoly in Static Setting
  - Price Competition: Bertrand Model
  - Quantity Competition: Cournot Model
  - Collusive Outcome
- Oligopoly in Dynamic Setting
  - Quantity Competition: Cournot-Stackelberg Model
  - Price Competition: Bertrand-Stackelberg Model
- Competition vs. Collusion
  - Prisoner’s Dilemma and Implicit Collusion
  - Price Rigidity in an Oligopoly
  - Price Signaling and Price Leadership
  - The Dominant Firm Model
  - Cartels

PART E: UNCERTAINTY AND INFORMATION

13. Markets with Asymmetric Information (PR: Ch 17 & IP: Ch 13-Ch 14)

- Adverse Selection Problem (Hidden Information)
  - Lemon Markets/Insurance
  - Other Applications
- Moral Hazard Problem (Hidden Actions)
  - Principal-Agent Problem
  - Applications
- Incentive Scheme/Mechanism Design: Signaling and Screening
- Managerial Implications

PART F: MARKET FAILURES

14. Market Failure (PR: Ch 18 & IP: Ch 12, Ch 15)

- Why Markets Fail ( PR Ch 16, pp. 591-593 of the 7th ed. Or pp. 625-626 of the 8th ed.)
- Externalities
  - Positive vs. Negative Externalities
  - Why Externalities lead to a Market Failure
  - Correcting Market Failure due to Externalities
  - Property Rights
- Common Property Resources
- Public Goods
  - Characteristics of Public Goods
  - Free-Riding Problem
  - Efficient Provision of a Public Good