Industrial Economics B: Games & Strategies – P13318

Nottingham University Business School

UNITED KINGDOM · CHINA · MALAYSIA

An Overview of the module and the looming *fun* called the *Exam*

What you need to know?

- Topic 1: Simple Games & Industrial Organisation
- Topic 2: Extensive Form Games, Market Entry & Strategic Commitment
- Topic 3: Oligopoly I – Traditional Models
- Topic 4: Oligopoly II – Spatial Models & Product Differentiation
- Topic 5: Repeated Games, Dynamic Oligopoly & Collusion
- Topic 6: Corporate Strategy, Competition and Cooperation
- Topic 7: Strategic Entry Deterrence: Pricing and Non-Pricing Strategies
- Topic 8: Antitrust & Competition Policy

What you need to know?

This is of course *not* an exhaustive list

- Topic 1: Simple Games & Industrial Organisation
  - Classic Normal Form Games – Prisoners' Dilemma, Pure Coordination, Assurance, Battle of Sexes, Chicken, Matching Pennies;
  - Equilibrium concepts – dominant strategy, IEDS, Nash equilibrium;
  - *Applications and lessons* from Prisoners' Dilemma and Coordination games; More complicated games – games with more than 2 strategies.
- Topic 2: Extensive Form Games, Market Entry & Strategic Commitment
  - Extensive Form of *Classic* Games; Market Entry game – basic, game with commitment of capacity expansion type, lessons, Applications (Alcoa, DuPont and Starbucks capacity expansion);
  - Entry into China & First-mover advantages; Ultimatum & Dictator Games.
- Topic 3: Oligopoly I – Traditional Models
  - Cournot and Stackelberg Oligopoly models; Bertrand models – models with identical products and differentiated products;
  - Experimental evidence on Oligopoly models.
- Topic 4: Oligopoly II – Spatial Models & Product Differentiation
  - Hotelling's Location model (location and price choices); Clustering in geographic space – Strategic Complementarity, three sources (Agglomeration Economies, Information Herding, Oligopolistic Reaction).

What you need to know?

- Topic 5: Repeated Games, Dynamic Oligopoly & Collusion
  - Repeated Prisoners' Dilemma – one-shot vs. infinitely repeated games (grim-trigger & tit-for-tat strategies, and when will players sustain cooperation)
  - Backward Induction Paradox and ways to avoid it in: multiple Nash equilibria, uncertainty about the future, uncertainty about players (incomplete information);
  - Experimental Evidence on the Prisoners' Dilemma;
  - *IO application*: Dynamic Oligopoly, Collusion and Cartels; Factors affecting sustainability & enforcement of a collusion and cartel.
- Topic 6: Corporate Strategy, Competition and Cooperation
  - Co-opetition (competition & cooperation) and shaping business strategy; How can the game be changed by changing the PARTS;
  - Network effects and Technology Adoption
- Topic 7: Strategic Entry Deterrence: Pricing & Non-Pricing Strategies
  - Barriers to Entry; Limit Pricing; Predatory Pricing; Raising Rivals' Costs; Investments to Lower Production Costs; Empirical Evidence; Strategic Commitment
- Topic 8: Antitrust & Competition Policy
  - Antitrust Laws & their rationale; Antitrust Issues; Antitrust Case (Microsoft); Antitrust Detection Strategies (Corporate Leniency Programs)

Module Assessment & Exam Issues

- Exam Structure (100%):
  - 2 hour exam
- Section A: 50%
  - 5 compulsory questions worth 10% each
  - Problem solving OR conceptual
- Section B: 50%
  - Choose ONE out of TWO essay questions
    - Hypothetical business case (analyse *with* theoretical tools)
    - Empirical example(s) (analyse *with* theoretical tools)
    - Typical essay Q (apply concepts from industrial organisation)

- How much should I write?
  - How much can you write in **10** minutes for Section A questions and **50** minutes in essay?
- What should I write?
  - Be selective *not* everything on a particular topic will be relevant

Which material could be useful?

- Outline {esp. **content & reading list for each topic**}
- Lecture Handout {with ppt **notes**}
- Readings
- Seminar Activities
- Question Bank + Past Exam paper/Feedback
- Contact your module convenor if you have queries!!

All the Best for the exam!

Sailesh