Sloan School of Management Massachusetts Institute of Technology Spring 2004, H1



Real-World Application

DUE DATE: This team assignment is due by the beginning of class on March 9th.

INSTRUCTIONS

Choose one of the four options below. **<u>Provide: Two- to three-page memo</u>** (plus any supporting tables, graphs, calculations, etc..) addressed to the relevant party in the game.

1. Mixed Strategies (discussed in Lectures 3-4)

Apply one of the games of Chapter 5 to a real-world application. Choose a game without an equilibrium in pure strategies and derive the mixed strategy equilibrium. From this analysis, develop strategy advice for one of the players in the game or for a party interested in the outcome.

2. Sequential / Repeated Games (discussed in Lectures 3-6)

Apply one of the games of Chapter 3 or Chapter 8 to a real-world application. The game should have a temporal element. That is, it should either be a sequential game or a repeated game. Make sure to identify the length of the game as well as the players, strategies, and payoffs. From this analysis, develop strategy advice for one of the players in the game or for a party interested in the outcome.

3. Strategic Moves (discussed in Lectures 5-8)

Apply one of the games in Chapter 9 to a real-world application.

Discuss how the parties might benefit from making / anticipating a strategic move. If relevant, address issues of observability, irreversibility, commitment, credibility, and how these may be achieved. From this analysis, develop strategy advice for one of the players in the game or for a party interested in the outcome.

4. Information (discussed in Lectures 8-10)¹

Describe an asymmetric information problem.

Identify the source of the asymmetry and the information possessed by each party. How could signaling or screening help resolve this uncertainty? Is this a profitable strategy? Why or why not? From this analysis, develop strategy advice for one of the players in the game or for a party interested in the outcome.

¹ The assignment is due on Lecture 10. If you are working on option 4, you may turn in your assignment late (up until the last class on March 11th).