

Chapter 14.

Strategic Moves

- Steps to Calculating Strategic Moves
- Implementation of Strategic Moves
- Market Games

Changing the Play of the Game

- Strategic moves are a means of changing the play of the game
- Popularized by Thomas Schelling, a professor of public policy
- Schelling won the Nobel prize in 2005
- Commitment is also an idea of Schelling's
- As policy analysts we must be aware of possibilities for changing the play of the game to achieve more desirable outcomes

Steps in Calculating Strategic Moves

1. Calculate the equilibrium
2. Adopt a strategizing player
3. Examine the desirability of alternative outcomes for the strategizing player.
4. There might be multiple better outcomes, although they may not be reachable.
5. Utilize this information in light of each strategic move.

Utilizing Seizing and Forcing

- Seizing “taking the first move”
 - Evaluating seizing is easy
 - What would happen if I move first?
 - Does the strategizing player prefer the outcomes?
- Forcing “avoiding the first move”
 - Evaluating forcing is also easy
 - What would happen if I moved last?
 - Do I prefer the outcomes?

Observations About Seizing and Forcing

- In zero-sum games it can only hurt you if you are forced
- In non-zero sum games it depends on the game
- In business terms
 - If the strategies are strategic complements, then if the other players do more of their strategy, I will do more of my own.
 - You prefer forcing
 - If the strategies are strategic substitutes, then if the other players do more of their strategy, I will do less of my own.
 - You prefer seizing

More on Strategic Complements and Strategic Substitutes

- **Two firms** are choosing their research and development budgets. Are the budgets strategic complements or strategic substitutes?
- **Smith** and **Jones** are both trying to be elected President of the United States. Each must decide how much he will spend on advertising in California. Are the advertising budgets strategic complements or strategic substitutes?
- **Seven firms** are each deciding whether to make their products more special, or more suited to the average consumer. Is the degree of specialness a strategic complement or a strategic substitute?
- **India** and **Pakistan** are deciding whether to make their armies larger or smaller. Is army size a strategic complement or a strategic substitute?

(Rasmussen, 2000)

Utilizing Threats

- First determine which strategy you would like for the other player to take.
- Would they take it anyway? Threats are needless.
- Then, that determines which strategies you would like for them not to take.
- These are the threats. Formulate a statement along the likes of “If you choose B, then I will choose A.”
- Does your threat make them worse off? Otherwise the threats are needless.
- Does your threat make you worse off? If so its not credible.

Utilizing Promises

- First determine which strategy you would like for the other player to take.
- Would they take it anyway? Promises are needless.
- Then, that determines which strategies you would like for them to take.
- These are the promises. Formulate a statement along the likes of “If you choose B, then I will choose A.”
- Does your promise make them better off? Otherwise the promise is useless.
- Does your promise make you worse off? If so its not credible.

Utilizing Threats and Promises

- Sometimes you need to simultaneously threaten *and* promise
- Multiple equilibria may be created by strategic moves
- Recognize that you don't need the best possible outcomes, just ones that are better than you achieved.
- The promise creates more opportunity for both players.
- The threat takes some of the additional benefit from the other player.

Foregoing Benefits

- Schelling points out that our benefits are actually threats to better outcomes
- If we can commit to reducing our benefits at certain outcomes, we gain credibility, and can persuade others to follow
- A related problem from principle agent theory involves divesting ourselves of information; often players cannot credibly convince others of what they know or do not know

Models of Strategic Moves

- Any game theory model which does not include the strategic options of the game is incomplete
- It will understandably not duplicate actual play.