

## Session 3.2

# The Enemy of my Enemy is my Friend

This session derives the strategic form for a game that is displayed in extensive form. After giving a general definition, we illustrate the concept with an example.

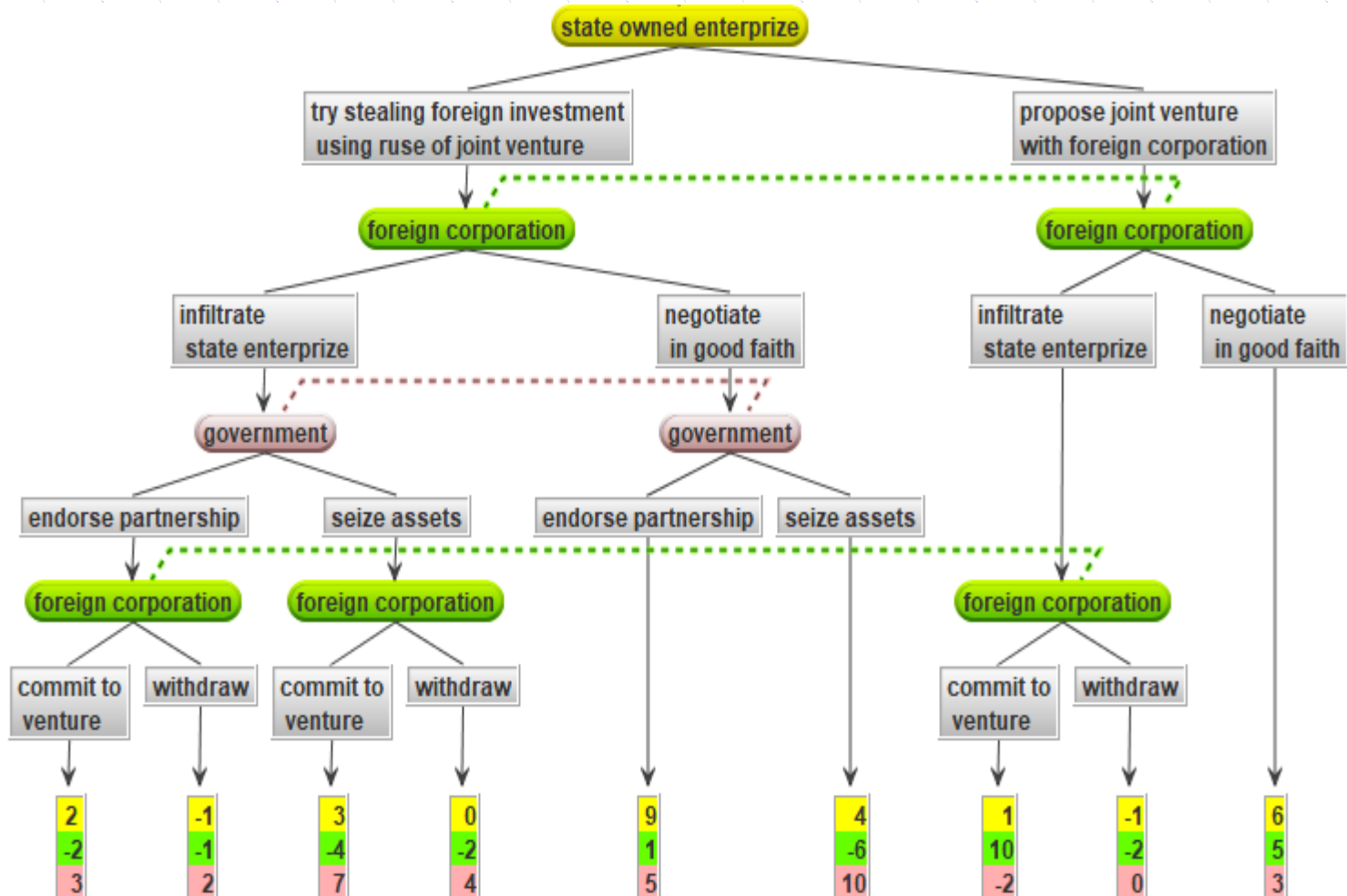
# Three basic steps

◆ There are three basic steps:

1. Write down the strategies available to each player. Recall that a strategy is a complete set of instructions what to do throughout the game.
2. Create a multi leveled matrix that contains a cell for each possible combination of strategies. For example, if there are four players labelled 1, 2, 3 and 4, and player  $i$  has  $(i + 1)$  possible strategies then the total number of cells is  $2 * 3 * 4 * 5 = 120$ .
3. Fill in the expected payoffs to all the players in each of the cells when a specific combination of strategies is played.

# Predators

This game features a **corrupt government**, a poorly run **state enterprise** and an opportunistic **foreign investor** wrestling for mineral and oil wealth.



# Strategy Space of the Players

- ◆ The enterprise has two strategies:
  1. Propose joint venture
  2. Steal foreign expertise
  
- ◆ The government has two strategies:
  1. Endorse partnership
  2. Seize assets
  
- ◆ The corporation has five strategies:
  1. Infiltrate and commit
  2. Infiltrate and withdraw
  3. Infiltrate and commit unless government seizes
  4. Infiltrate and withdraw unless government seizes
  5. Negotiate in good faith

# Matrix Representation

	try stealing foreign expertise using ruse of joint venture		propose joint venture with foreign corporation	
	endorse	seize	endorse	seize
infiltrate and commit	1 -2, 3, 2	2 -4, 7, 3	11 10, -2, 1	12 10, -2, 1
infiltrate and withdraw	3 -1, 2, -1	4 -2, 4, 0	13 -2, 0, -1	14 -2, 0, -1
infiltrate and commit unless government seizes	5 -2, 3, 2	6 -2, 4, 0	15 10, -2, 1	16 10, -2, 1
infiltrate and withdraw unless government seizes	7 -1, 2, -1	8 -4, 7, 3	17 -2, 0, -1	18 -2, 0, -1
negotiate in good faith	9 1, 5, 9	10 -6, 10, 4	19 5, 3, 6	20 5, 3, 6