

Ekonomi Manajerial dalam Perekonomian Global

Bab 10:

Teori Pertandingan dan Tingkaahlaku Stratregis

Bahan Kuliah

Program Pascasarjana-UHAMKA

Program Studi Magister Manajemen

Dosen : Dr. Muchdie, PhD in Economics

Jam Konsultasi : Sabtu, 10.00-12.00

Telp : 0818-0704-5737

Tingkah laku Strategis

- Keputusan-keputusan yang mempertimbangkan reaksi pesaing (yang dapat diprediksi)
 - Interdependence of outcomes
- Teori Pertandingan
 - Pemain (Players)
 - Strategi (Strategies)
 - Matrik hasil (Payoff matrix)

Tingkah laku Strategis

- Tipe Pertandingan (Types of Games)
 - Zero-sum games
 - Nonzero-sum games
- Keseimbangan Nash (Nash-Equilibrium)
 - Setiap pemain memilih strategi optimal tergantung pada strategi lawan
 - Suatu strategi disebut dominan jika strategi tersebut optimal apapun strategi yang dimainkan oleh lawannya.

Contoh-1 : Strategi Iklan

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses to advertise?

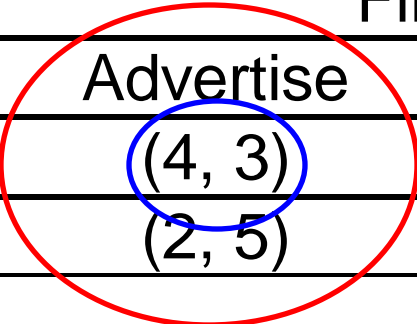
		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses to advertise?

If Firm A chooses to advertise, the payoff is 4. Otherwise, the payoff is 2. The optimal strategy is to advertise.

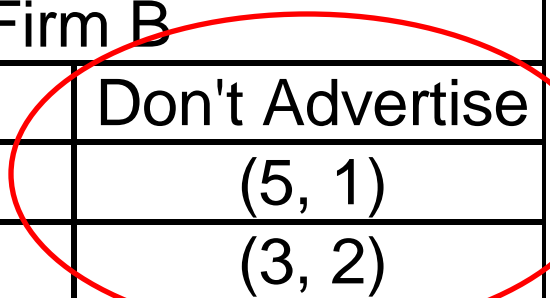
		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)



Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses not to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)



Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses not to advertise?

If Firm A chooses to advertise, the payoff is 5. Otherwise, the payoff is 3. Again, the optimal strategy is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan


Regardless of what Firm B decides to do, the optimal strategy for Firm A is to advertise. The dominant strategy for Firm A is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)



Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses to advertise?

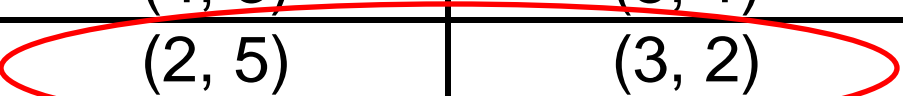
If Firm B chooses to advertise, the payoff is 3. Otherwise, the payoff is 1. The optimal strategy is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses not to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)



Contoh-1 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses not to advertise?

If Firm B chooses to advertise, the payoff is 5. Otherwise, the payoff is 2. Again, the optimal strategy is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan

Regardless of what Firm A decides to do, the optimal strategy for Firm B is to advertise. The dominant strategy for Firm B is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Contoh-1 : Strategi Iklan

The dominant strategy for Firm A is to advertise and the dominant strategy for Firm B is to advertise. The Nash equilibrium is for both firms to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

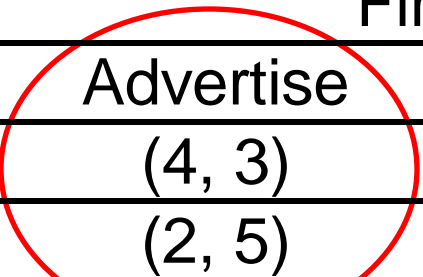
Contoh-2 : Strategi Iklan

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)



Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses to advertise?

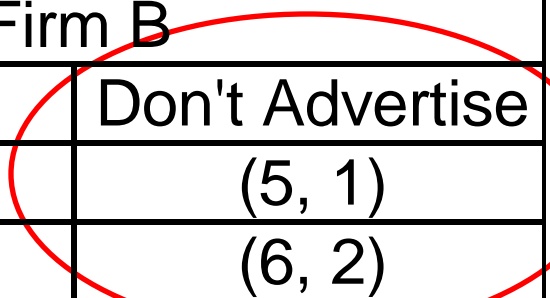
If Firm A chooses to advertise, the payoff is 4. Otherwise, the payoff is 2. The optimal strategy is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses not to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)



Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm A if Firm B chooses not to advertise?

If Firm A chooses to advertise, the payoff is 5. Otherwise, the payoff is 6. In this case, the optimal strategy is not to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

The optimal strategy for Firm A depends on which strategy is chosen by Firms B. Firm A does not have a dominant strategy.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses to advertise?

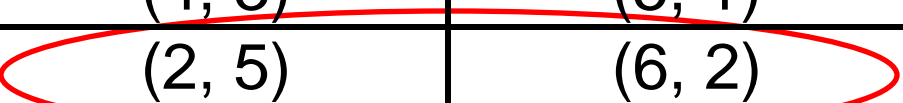
If Firm B chooses to advertise, the payoff is 3. Otherwise, the payoff is 1. The optimal strategy is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses not to advertise?

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)



Contoh-2 : Strategi Iklan

What is the optimal strategy for Firm B if Firm A chooses not to advertise?

If Firm B chooses to advertise, the payoff is 5. Otherwise, the payoff is 2. Again, the optimal strategy is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

Regardless of what Firm A decides to do, the optimal strategy for Firm B is to advertise. The dominant strategy for Firm B is to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(6, 2)

Contoh-2 : Strategi Iklan

The dominant strategy for Firm B is to advertise. If Firm B chooses to advertise, then the optimal strategy for Firm A is to advertise. The Nash equilibrium is for both firms to advertise.

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(4, 3)	(5, 1)
	Don't Advertise	(2, 5)	(3, 2)

Dilemma Tersangka

Dua tersangka ditahan karena perampokan bersenjata. Mereka ditahan secara terpisah. Jika terbukti, mereka akan dipenjara masing-masing 10 tahun. Tetapi bukti-bukti tidak cukup kecuali sebagai pencurian biasa yang hanya bisa memenjarakan 1 tahun saja.

Tersangka diberitahu : Jika mengaku, tetapi temannya tidak mengaku dia akan bebas. Tetapi jika tidak mengaku, sementara temannya mengaku, temannya akan bebas dan dia dapat 10 tahun. Jika kedua-duanya mengaku, maka mereka masing-masing akan kena 5 tahun.

Dilemma Tersangka

Payoff Matrix (negative values)

		Individual B	
		Confess	Don't Confess
Individual A	Confess	(5, 5)	(0, 10)
	Don't Confess	(10, 0)	(1, 1)

Dilemma Tersangka

Dominant Strategy
Both Individuals Confess
(Nash Equilibrium)

		Individual B	
		Confess	Don't Confess
Individual A	Confess	(5, 5)	(0, 10)
	Don't Confess	(10, 0)	(1, 1)

Dilemma Tersangka

Application: Price Competition

		Firm B	
		Low Price	High Price
Firm A	Low Price	(2, 2)	(5, 1)
	High Price	(1, 5)	(3, 3)

Dilemma Tersangka

Application: Price Competition

Dominant Strategy: Low Price

		Firm B	
		Low Price	High Price
Firm A	Low Price	(2, 2)	(5, 1)
	High Price	(1, 5)	(3, 3)

Dilemma Tersangka

Application: Nonprice Competition

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(2, 2)	(5, 1)
	Don't Advertise	(1, 5)	(3, 3)

Dilemma Tersangka

Application: Nonprice Competition

Dominant Strategy: Advertise

		Firm B	
		Advertise	Don't Advertise
Firm A	Advertise	(2, 2)	(5, 1)
	Don't Advertise	(1, 5)	(3, 3)

Dilemma Tersangka

Application: Cartel Cheating

		Firm B	
		Cheat	Don't Cheat
Firm A	Cheat	(2, 2)	(5, 1)
	Don't Cheat	(1, 5)	(3, 3)

Dilemma Tersangka

Application: Cartel Cheating

Dominant Strategy: Cheat

		Firm B	
		Cheat	Don't Cheat
Firm A	Cheat	(2, 2)	(5, 1)
	Don't Cheat	(1, 5)	(3, 3)

Perluasan Teori Pertandingan

- Repeated Games
 - Many consecutive moves and countermoves by each player
- Tit-For-Tat Strategy
 - Do to your opponent what your opponent has just done to you

Perluasan Teori Pertandingan

- Tit-For-Tat Strategy
 - Stable set of players
 - Small number of players
 - Easy detection of cheating
 - Stable demand and cost conditions
 - Game repeated a large and uncertain number of times

Perluasan Teori Pertandingan

- Threat Strategies
 - Credibility
 - Reputation
 - Commitment
 - Example: Entry deterrence