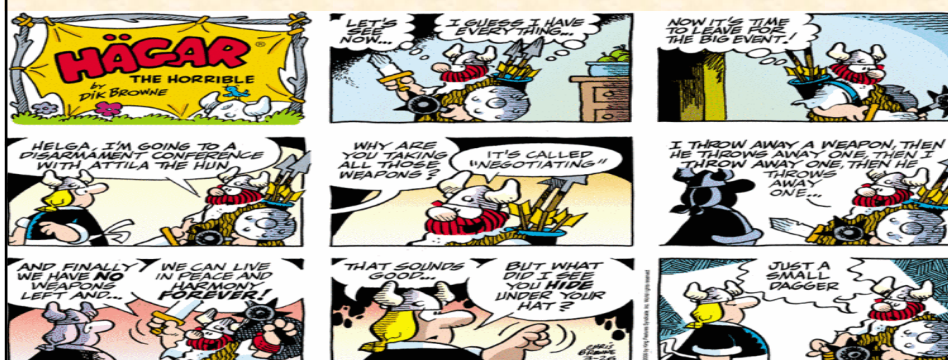


Chapter 13: Oligopoly



By Wayne Geerling
Monash University

1

Economics in *The Dark Knight*

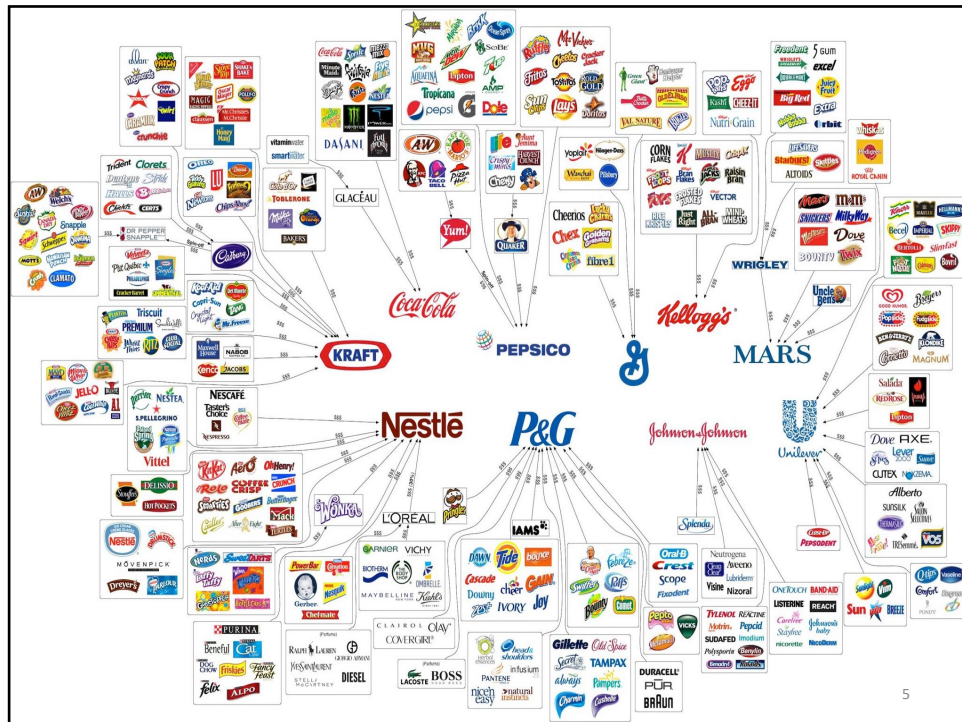
2

Perfect Competition	Oligopoly	Monopoly
Many sellers	A few sellers	One seller
Same product	Differentiated products	A unique product without close substitutes
Free entry and exit	Significant barriers to entry	Significant barriers to entry

3

Oligopoly

- Oligopoly is a market structure with the following characteristics:
 - Small number of
 - products
 - Significant entry
 - Firms interact



Negative-Sum Game

Zero-Sum Game

Positive-Sum Game

Economics in *Golden Balls*

7

The Prisoner's Dilemma – do you want to cooperate or not?

- You and your partner rob a bank and get caught.
- The District Attorney offers to go easy on you if you confess to the crime.
- What would you do, what should you do?

8

Presenting The Prisoner's Dilemma

Players

Strategies

Payoffs

		Thelma	
		Confess	Keep Quiet
Louise	Confess	10 years in jail 10 years in jail	25 years in jail goes free
	Keep Quiet	goes free 25 years in jail	1 year in jail 1 year in jail

9

Analyzing The Prisoner's Dilemma

- Louise
 - Best to Confess or Keep Quiet?
 - Best for Louise to no matter what Thelma does!
- Thelma
 - Best to Confess or Keep Quiet?
 - Best for Thelma to no matter what Louise does!

		Thelma	
		Confess	Keep Quiet
Louise	Confess	10 years in jail 10 years in jail	25 years in jail goes free
	Keep Quiet	goes free 25 years in jail	1 year in jail 1 year in jail

10

Interesting Result of this Game

		Thelma	
		Confess	Keep Quiet
Louise	Confess	10 years in jail 10 years in jail	25 years in jail goes free
	Keep Quiet	goes free 25 years in jail	1 year in jail 1 year in jail

11

The Nash Equilibrium

The point at which neither player can do better by his/her strategy while the other player's strategy remains

12

What is the Dominant Strategy?

- As the owner of a small restaurant should you be more concerned about the cleanliness of your restrooms or kitchen? (assume you only have the resources to clean one)

13

Advertising & the Prisoner's Dilemma

- If both firms advertise, costs go up, but each firm's campaign cancels out the other.
- Both firms would be better off
- But, if one firm agrees to _____, the other firm would.

14

Advertising & the Prisoner's Dilemma

		Coca-Cola	
		Advertises	Does Not Advertise
PepsiCo	Advertises	\$100 M \$100 M	\$75 M \$150 M
	Does Not Advertise	\$150 M \$75 M	\$125 M \$125 M

15

What Outcome Reflects the Dominant Strategy?

TEXT WORD in CAPS to		University Subs	
		Runs a 2 for 1 Promotion	Keep Price High
Savory Sandwiches	Runs a 2 for 1 Promotion	Makes \$1,000 Makes \$1,000 TOPLEFT	Loses \$5,000 Makes \$15,000 TOPRIGHT
	Keep Price High	Makes \$15,000 Loses \$5,000 LOWLEFT	Makes \$10,000 Makes \$10,000 LOWRIGHT

16

The Prisoner's Dilemma in Everyday Life

- People at concerts, even though they can see just as well when everyone else
- People at parties.

17

A Caution About Game Theory

Opportunistic Behavior:

- Actions that ignore the possible long-run benefits of cooperation and focus solely on short-run gains
- Implies a game
- Not realistic: transactions
- Not all decisions have

18

**Game Theory in the Bud Light
Commercial “Rock, Paper, Scissors”**

19

**Dominant Strategy in *The Big Bang
Theory*, “The Lizard-Spock Expansion”**

20

**Two “friends” play racquetball.
What is the dominant strategy?**

		Rachel	
		Guesses to the left	Guesses to the right
Joey	Hits to the left	Rachel wins the point Joey loses the point	Rachel loses the point Joey wins the point
	Hits to the right	Rachel loses the point Joey wins the point	Rachel wins the point Joey loses the point

21

Money Grab

22

Tit-for-Tat and the Repeated Prisoner's Dilemma

- Can limit defection by following a tit-for-tat strategy.
 - **tit-for-tat strategy:** If your opponent C , then you C . If your opponent D , then you D .

Tit-for-Tat and the Repeated Prisoner's Dilemma

- BUT tit-for-tat only works if players:
 - Can observe what their opponent did in the past.
 - Have a significant stake in what happens in the future.

Policy & Oligopoly Behavior

- Antitrust Policy: government efforts that attempt to
- Predatory Pricing: firms set prices

25

Network Externalities

- Occurs when the number of customers who purchase a good influences the quantity demanded, e.g. mobile phones.
- Make it easier for firms to attract new customers and keep customers from to a rival.
- Demand for the existing product becomes more inelastic if switching costs are , e.g. early termination fee.

26