

Executive Education: Mini MBA Program

# Economics

Markets, Organizations, and Management Strategy

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# Managerial Economics

## Course overview

- Supply and Demand
- Opportunity Costs
- Marginal Thinking About Decision Making
- Elasticity of Demand
- Game Theory for Strategy
- Moral Hazard
- Adverse Selection
- Organizational Architecture
  - decision rights (empowerment)
  - compensation practices
  - performance evaluation



# **We will start with a double-oral auction trading game**

- Half of you will be buyers
- Half of you will be sellers
- Open outcry trading
- Trading pit –Double Oral Auction

# OPEN OUTCRY

## Sample Record Sheet

### Buyer 3

Unit#	Value	Counterparty	Price	Profit
1	\$ 90			
2	\$ 70			
3	\$ 45			
4	\$ 21			
5	\$ 8			
Total Profit				

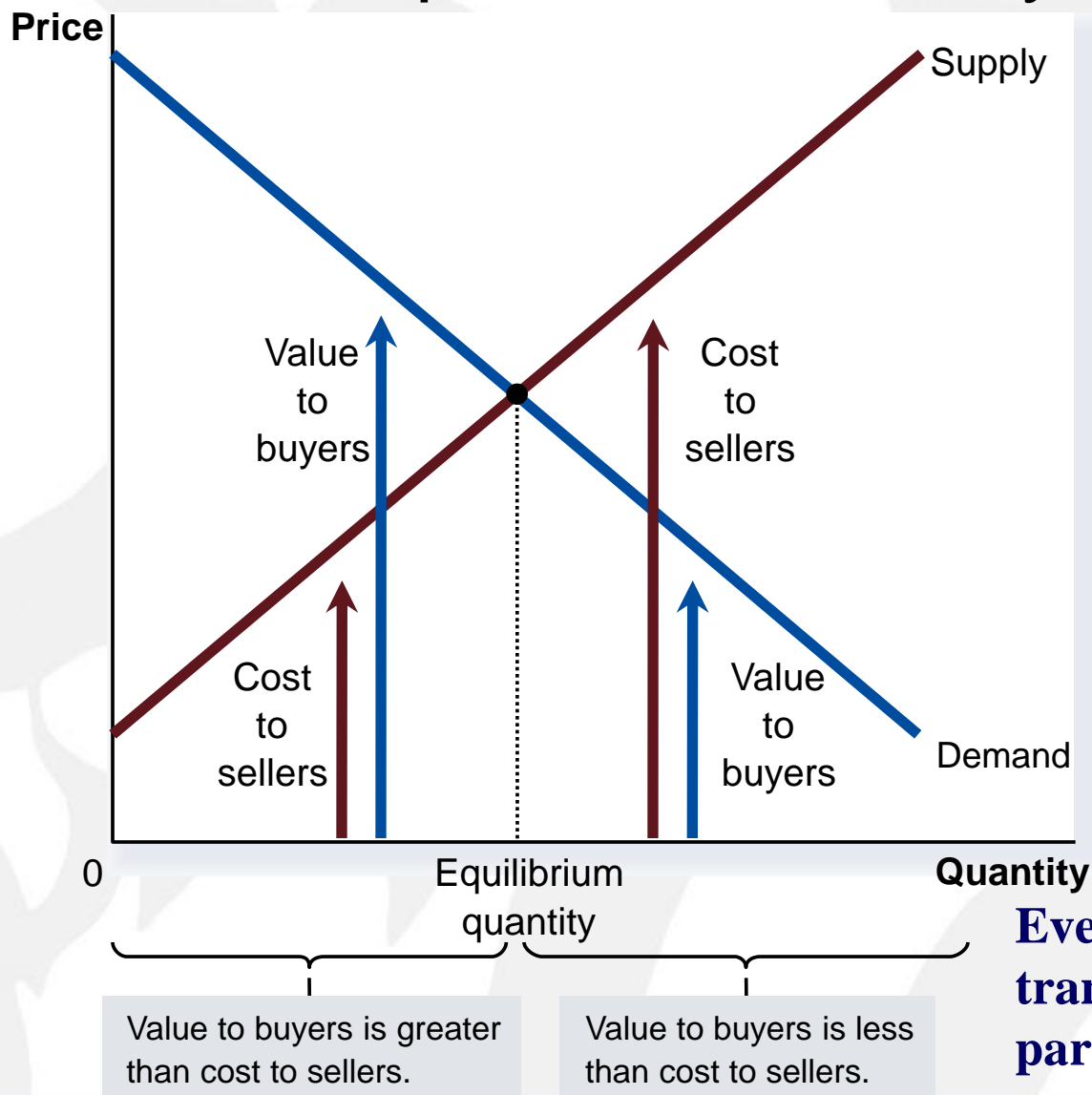
# OPEN OUTCRY

## Sample Record Sheet

### Seller 1

Unit#	Cost	Counterparty	Price	Profit
1	\$ 7			
2	\$ 40			
3	\$ 60			
4	\$ 80			
5	\$ 95			
Total Profit				

# Market Efficiency of the Equilibrium Quantity



**Every market transaction makes parties better off**

# Gains from trade

- Buyer places higher value on item than the seller's cost of parting with the item
- *Voluntary trade* is mutually advantageous
- Source of trade gains
  - Comparative advantage
  - Specialization
- *Adam Smith's Invisible Hand of the Market:*  
*Competitive markets allocate goods efficiently*
  - Competitive markets allocate the supply of goods to the buyers who value them most highly, as measured by their willingness to pay.
  - Competitive markets allocate the demand for goods to the sellers who can produce them at least cost.
  - Competitive markets produce the quantity of goods that maximizes the gains to trade.

# Scarcity

The essential economic problem

Wants are *unlimited*...

but

...resources are *limited*!

So

we all must make decisions!



# Opportunity costs

- Decision making involves trade-offs
  - play a round of golf or make another sales call
  - spend a vacation at the beach or in the mountains
  - Give up dating Jennifer Aniston to be with Angelina Jolie
  - The value of the forgone option is the *opportunity cost* of the option selected
- benefits and costs that have preceded the decision are *sunk* and therefore irrelevant to the decision
- Sunk costs should never affect decision-making!

# Marginal Thinking

- **The equimarginal principle:** If an activity is worth doing at all, it should be pursued until the marginal benefit of the activity equals the marginal cost of the activity.
- **For businesses:** If a firm decides to produce at all, it maximizes its profits by producing a quantity for which its marginal revenue equals its marginal cost.

**Marginal Benefit = Marginal Cost!!!**

# Trump Jr.'s Manhattan Putt Putt

- Donald Trump Jr. runs a Putt Putt Golf course on 1/2 an acre in the Tribeca area of Manhattan.
- He charges \$25 for nine holes. Annual total revenue is \$1,000,000. Annual labor and supply costs are \$100,000. Annual accounting profit is \$900,000.
- Why does Donald Trump, Senior want to fire Donald Trump Junior?



# Should ACME Inc, discontinue gadget production?

Income Statement				
	Widgets	Gidgets	Gadgets	TOTAL
Sales	\$120	\$160	\$70	\$350
Less: Variable costs	\$70	\$90	\$55	\$215
Allocated overhead	\$40	\$40	\$40	\$120
Net contribution to profit	\$10	\$30	-\$25	\$15

- Overhead of \$120 is allocated equally to each product.
- On a full cost basis gadgets are sustaining a loss.

# Price elasticity of demand

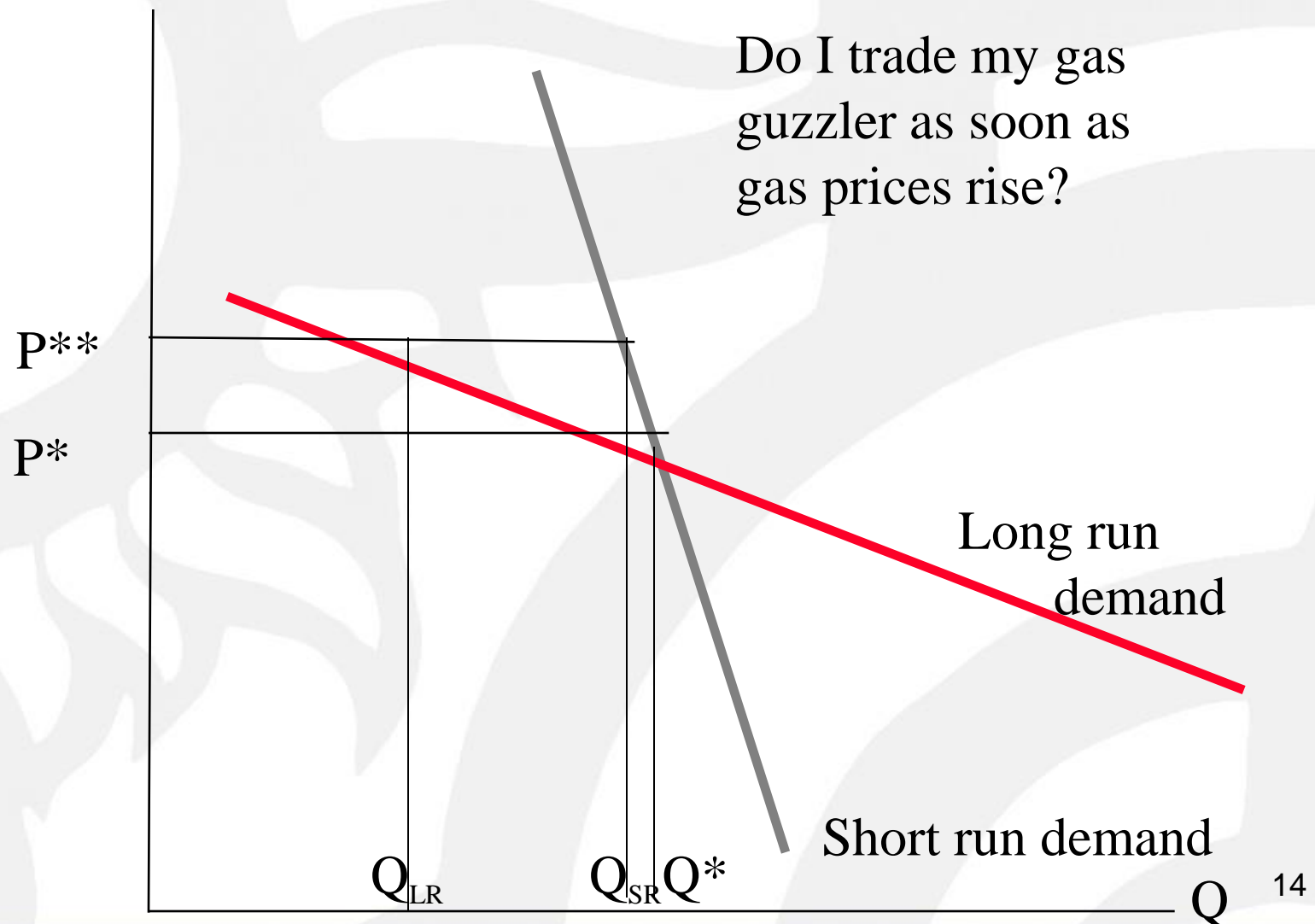
- Measures the sensitivity of sales volume to changes in demand factors
- The price elasticity of demand is given by (all else constant):

$$\text{Elasticity}^{demand} = \frac{\% \text{ Change in Sale Volume}}{\% \text{ Change in Price}}$$

Does a given (often a 1%) change in the price of the good lead to a small reduction or a huge, titanic reduction in SALES VOLUME???

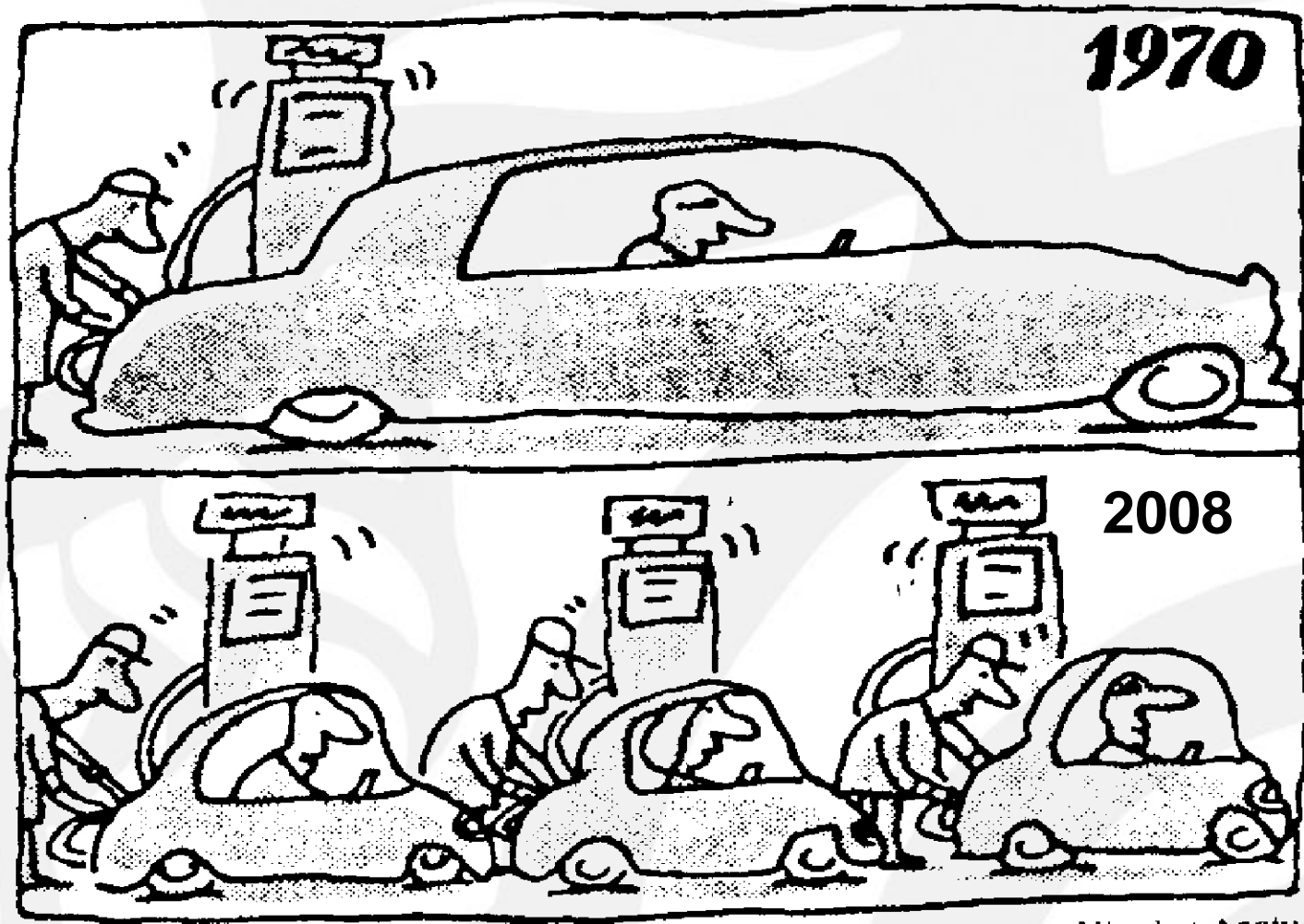
# Determinants of price elasticity:

## Elasticity and the Demand for Gasoline





In the long-run, the demand for gasoline is more elastic.



# Using Price Elasticity

- Apple used market research to learn about the price elasticity of demand for iPhones.
- First generation iPhones were \$399 upfront plus \$79.99 for the “standard” monthly plan.
- Consumers were very price sensitive to the upfront price of the iPhone.
- Consumers were less price sensitive to the monthly data plan cost.
- Apple cut the up front price of an iPhone to \$199, while raising the monthly cost of contracts by \$10 a month.
- Total “2-year” price increased by \$40, but the pricing changes increased iPhone sales!

Why does Apple give away iTunes for free?



# Moral Hazard in the Principal-Agent Problem

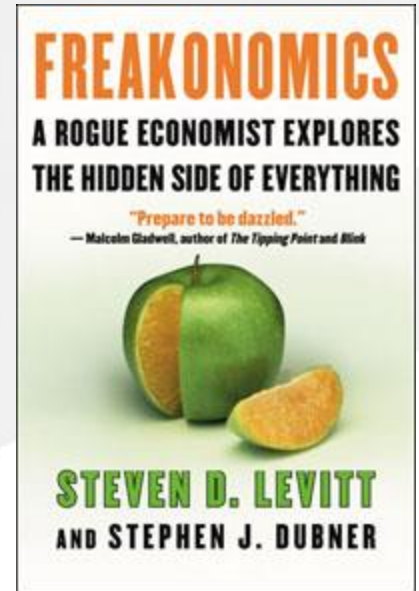
- Moral Hazard
  - *Situation where one party to a contract takes a hidden action that benefits that party at the expense of another party*
- Agent
  - *The party performing some act for another party, the principal*
- Principal
  - *The party for whom another party, the agent, is performing some act*

# Moral Hazard Examples

- Examples:
    - A real estate agent is an agent for the home seller, the principal
    - CEO is agent for the owners of a business
    - Baby doctors are agents for expecting mothers.
      - Baby doctors deliver more babies by C-sections in areas with declining birthrates (and declining business for baby doctors). – Freakonomics
    - Major league baseball players with guaranteed long term contracts might shirk compared to players in the “walk-year” of a contract.
      - Randy Moss: “I play when I want to play.”
      - “After players were signed to multiyear, guaranteed contracts with no extra pay for each game played, their incentive to play diminished. Sure enough, ...the amount of time players spent on the disabled list increased from 4.7 days in the pre-contract period to 14.4 days after—an increase of 206 percent.”
- <http://www.econlib.org/library/Enc/Sportometrics.html>

# Freakonomics Discussion Questions

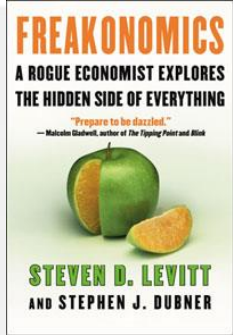
- Describe an agency conflict in one of your organizations.
- What do you think caused this conflict?
- What suggestions do you have for better controlling this conflict?



## Asymmetric Information: **Adverse Selection**

- **Adverse Selection**
  - *Situation where individuals have hidden characteristics and in which a selection process results in a pool of individuals with undesirable characteristics*
  - **Precontractual** problem
- **Adverse Selection Example**
  - The used car market suffers from the “lemons” problem
    - If this used car is so great why would you want to sell it to me?
    - Its not a “Katrina” car, is it???

# Managerial Lessons from Online Dating?



- If you don't include a photo, what does that signal to potential dates?
- “A low-income, poorly educated, unhappily employed, not-very attractive, slightly overweight, and balding man who posts his photo stands a better chance of gleaning some e-mails than a man who says he makes \$200,000 and is deadly handsome but doesn't post a photo.” - *Freakonomics*
- ***Managerial Lesson – In auctions and negotiations full disclosure increases expected revenue. Otherwise bidders will assume the worse and lower their bids.***

# Strategy & games

- Basic game theory
- Elements of games
  - players
  - payoffs
  - rules
  - strategies



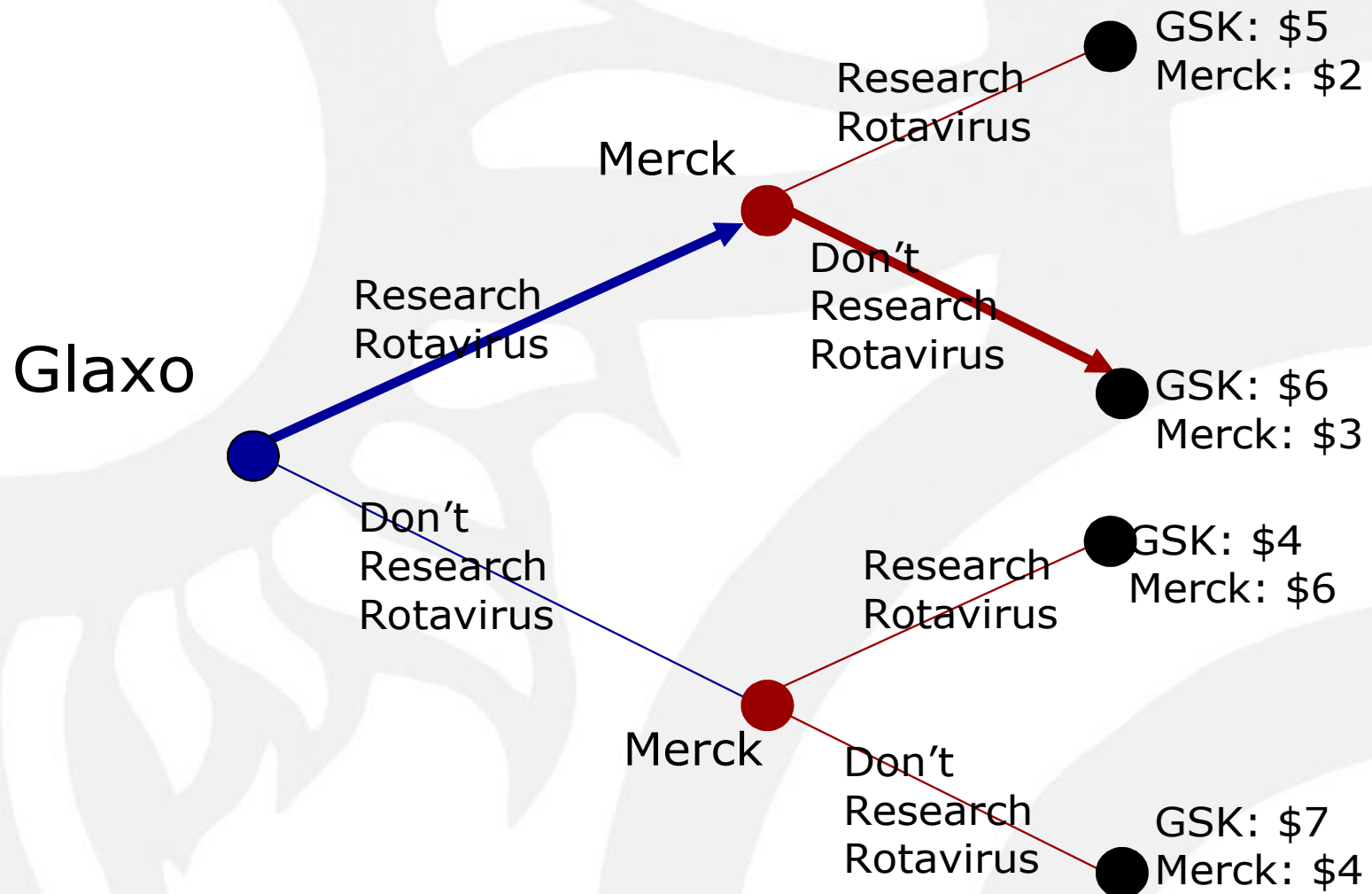
# A pricing game

Boeing—Low price	<div>\$500</div> <div>\$500</div> <div>Airbus—Low price</div>	Boeing—Low price	<div>\$1000</div> <div>\$0</div> <div>Airbus—High price</div>
Boeing—High price	<div>\$0</div> <div>\$1000</div> <div>Airbus—Low price</div>	Boeing—High price	<div>\$750</div> <div>\$750</div> <div>Airbus—High price</div>

Beware the worst possible outcome...it may be inevitable!

# An Research & Development Game

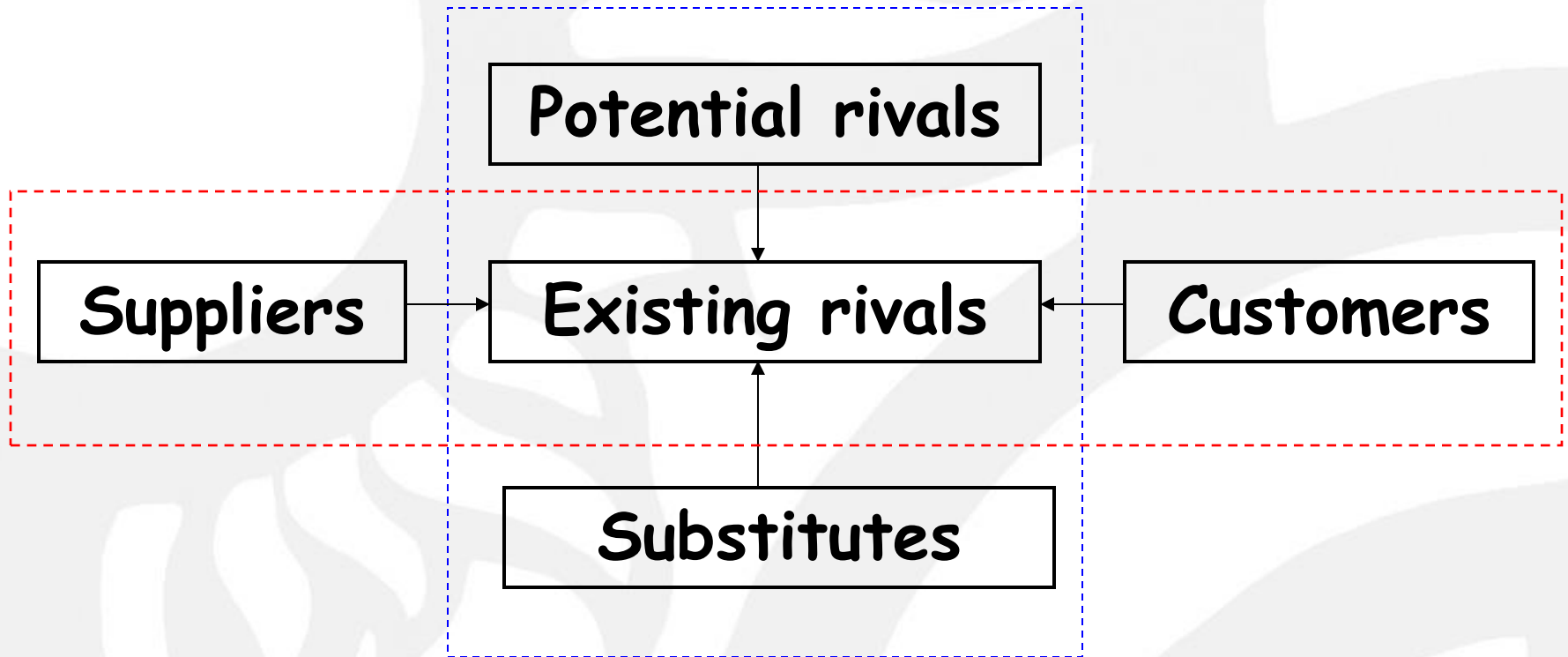
GSK should think ahead and reason backward





# Strategy and market power

## Porter's five forces



# Creating competitive advantage

## Superior factors of production

- People
  - special talents or skills
- Physical assets
  - prime real estate
  - unique equipment
- But bidding for specialized assets may erode profits

# Creating competitive advantage

## organizing production

- Team production
  - interdependencies among workers increase value beyond the "sum of the parts"
  - luck or foresight may endow firms with unique *team production capabilities*
- Rivals may be unable to pinpoint source of advantage and unable to capture equivalent value

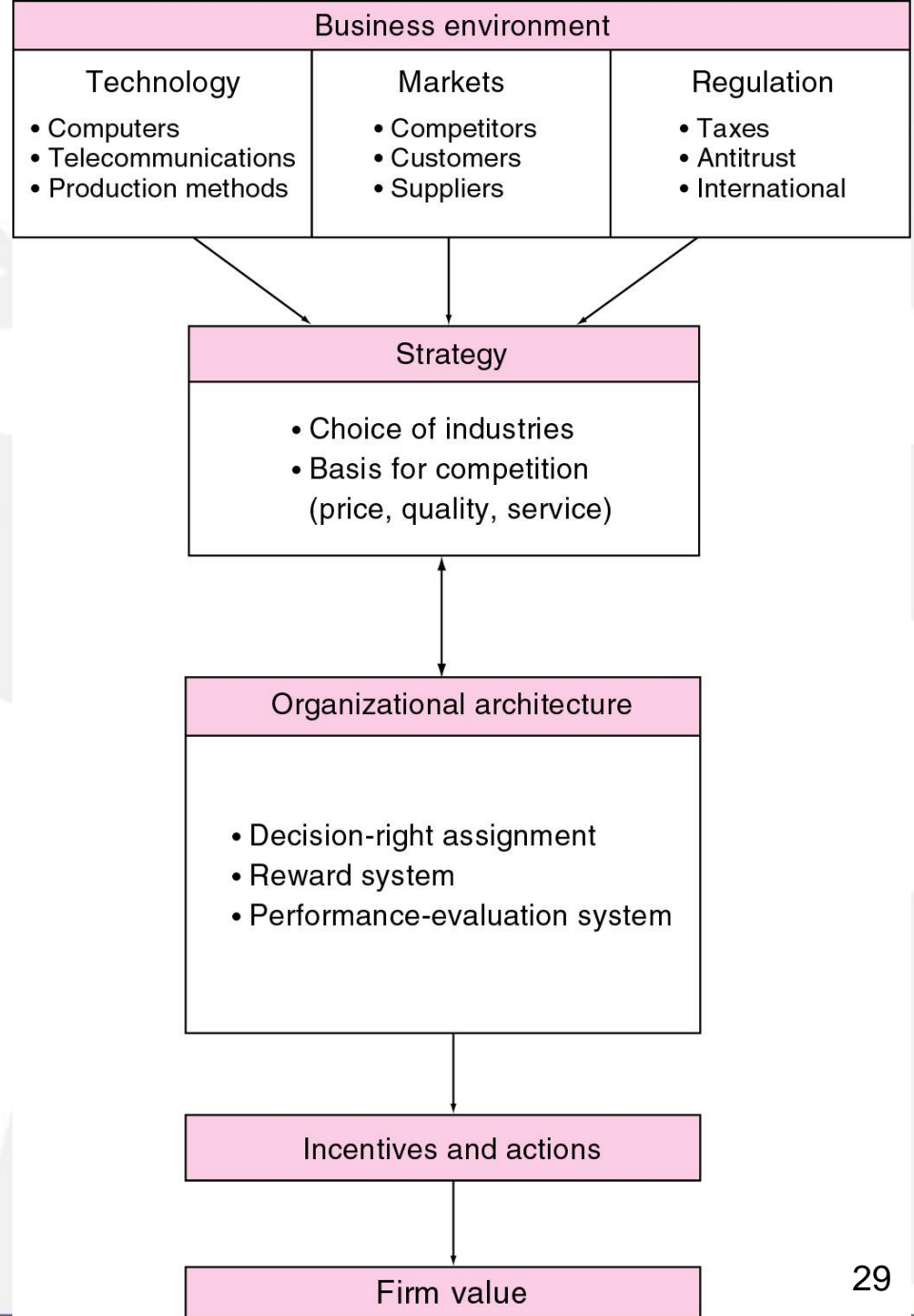
# Increasing demand

- Increase expected product quality
  - "value added" > cost increase
- Reduce price of complements
  - Give away razors to raise demand for blades
- Raise price of substitutes
  - limit entry of competitors

# Organizational Architecture

## Goals:

- link decision rights with knowledge
- motive agents to make productive decisions based on their information.
- Reward value-enhancing decisions



# Separation of Decision management and control

## The Fama-Jensen Prescription to Reduce Agency Problems

- Decision management

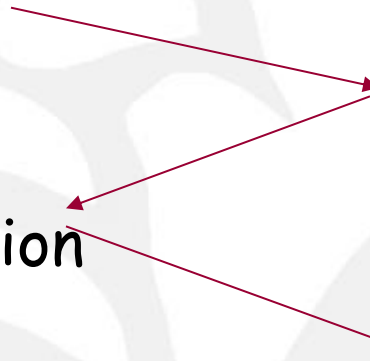
- Initiation

- Implementation

- Decision control

- Ratification

- Monitoring



# Economic Riddles

(Time permitting)

- Why do fast food places promise a free meal if you aren't given a receipt at the time of purchase?
- Why does milk come in rectangular containers, while soft drinks come in round cans?
- Why do brides often spend thousands of dollars on wedding dresses they will never wear again, while grooms often rent cheap tuxedos, even though they will attend many formal social events in the future?



Evaluate the strategies of the following management consultants. Be sure to use the concept of marginal thinking in your evaluation.

- Management consultant A suggests that your company should rank its business divisions by their growth potential. Your firm should sell the units with the lowest-growth potential and invest the proceeds of these sales in the units with higher growth potential. Sell the approximately 25% of your total business units with the lowest growth potential. Be sure to hold onto the business divisions with the highest growth potential.
- Management consultant B suggests that your company should rank its business divisions by their annual gross revenue. She urges that you should only keep the business divisions with the highest annual gross revenue. You are urged to sell all but the top 50% of business divisions ranked by annually gross revenue. Use the revenue gained by selling off business units with low annual gross revenue to expand your operations in your top gross revenue divisions.



# And that's all there is...

- Remember – demand and supply, they always apply
- Remember – strategic thinking involves
  - placing yourself behind your rivals' desk
  - strategic positioning in the industry
- Remember – incentives and asymmetric information affect behavior in the marketplace and within organizations