APPLIED ECONOMICS FOR MANAGERS SESSION 16—

I. REVIEW: INFORMATION AND MARKET EFFICIENCY

A. THE CONUNDRUM OF INFORMATIONAL EFFICIENCY

1. EFFICIENCY REQUIRES THAT CURRENT PRICES REFLECT INFORMATION AS SOON AS IT IS KNOWN
   a. INFORMATION ABOUT ASSET FUTURE INCOME & RISK
   b. INFORMATION ABOUT GOODS AND SERVICES QUALITY
2. MARKETS MAY BE INFORMATIONALLY EFFICIENT BECAUSE IT'S HARD TO EXCLUDE THOSE WHO DON'T PAY
3. IN ANY CASE, WE WAN'T EFFICIENT MARKETS SINCE INFORMATION IS NON-RIVALROUS IN CONSUMPTION
4. MARKETS TEND TO UNDERPRODUCE PUBLIC GOODS

B. POSSIBLE EXAMPLES:

1. RETAIL SERVICES
2. FINANCIAL/ECONOMIC DATA
3. NEW MEDICINES

C. POSSIBLE SOLUTIONS TO INFORMATION SUPPLY PROBLEM

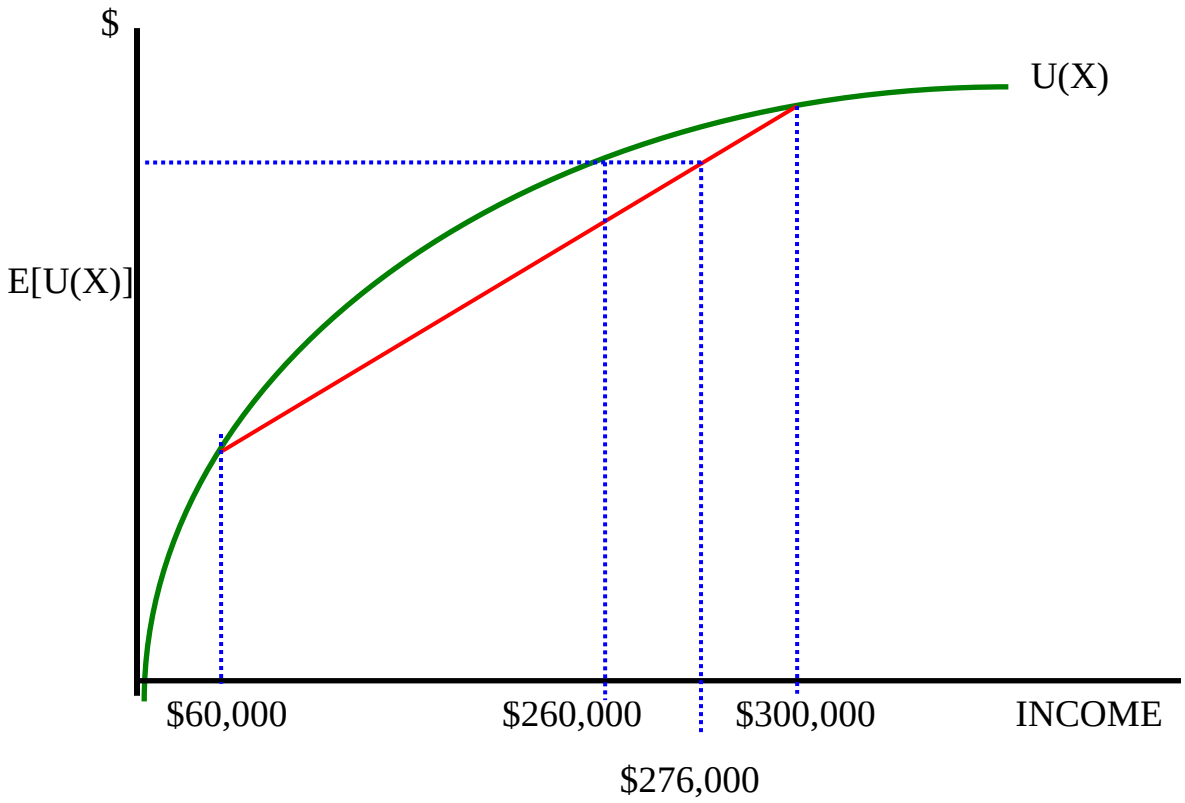
1. PATENTS/COPYRIGHTS—TEMPORARY MONOPOLY
2. SUBSIDIZE PRODUCTION—PUBLIC RESEARCH FUNDS
3. LIVE WITH IT

II. ASYMMETRIC INFORMATION

A. SOMETIMES AGENTS CAN KEEP INFORMATION PRIVATE—CAN THEY EXPLOIT IT THEN? HOW? IMPLICATIONS?

B. BACKGROUND: RISK AVERSION & INSURANCE MARKETS

1. CONSIDER EARLIER EXAMPLE WITH WEALTH $300,000 BUT A 10% CHANCE THAT IT WILL FALL IN VALUE TO $60,000
2. INSURANCE DEMAND:
   a. POSSIBLE LOSS = $240,000 WITH PROBABILITY = $P_L = 0.1$
   b. WOULD PAY $40,000, TO AVOID RISK (CERTAIN $260,000)



3. INSURANCE SUPPLY (COMPETITION ⇒ NO PROFIT)
   a. WITH PROBABILITY 0.1, INDEMNIFY THE LOSS OF $240,000
   b. ACTUARIALLY FAIR PREMIUM = $24,000

B. ANOTHER PAPER CLIP MARKET

C. INFORMATIONAL ASYMMETRIES AND:

1. ADVERSE SELECTION
2. MORAL HAZARD

D. ASYMMETRIC INFORMATION

1. THE WAY TO EXPLOIT INFORMATION IS TO KEEP IT PRIVATE
2. IF INFORMATION IS ASYMMETRIC, ONE PARTY TO THE BARGAIN KNOWS IT IS DISADVANTAGED (UNINFORMED)

III. GAMES AND INFORMATION WITHIN AN ORGANIZATION

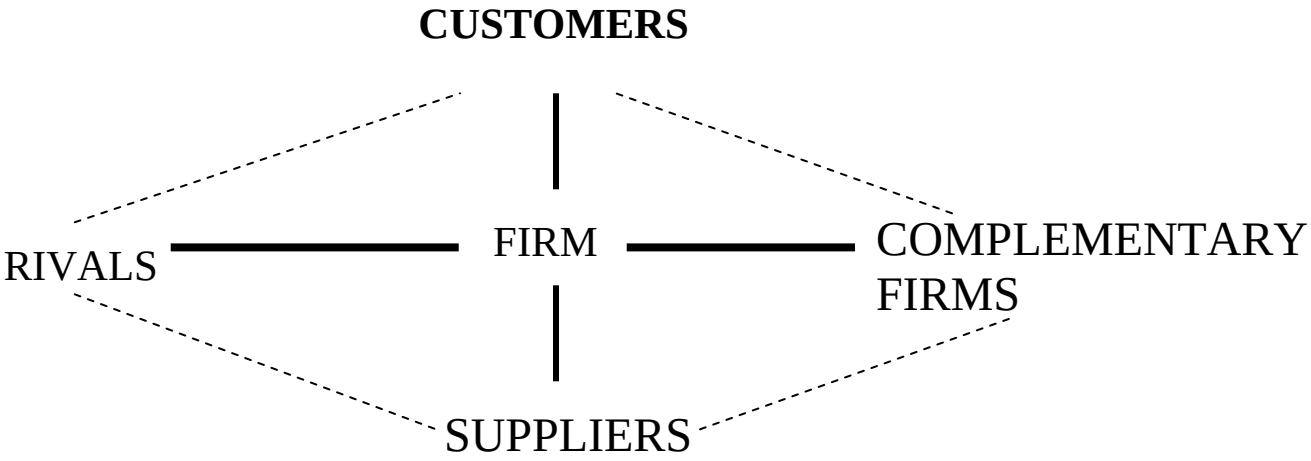
A. RULES FOR ORGANIZATIONS:

1. CLARIFY THE OBJECTIVE
2. KNOW THE GAME YOU'RE PLAYING

B. FIRM OBJECTIVES:

1. CREAT SURPLUS
2. CAPTURE SUPRLUS

C. THE SURPLUS TREE



D. POTENTIAL CONFLICTS THAT MAY HINDER SURPLUS CREATION/CAPTURE

1. PRINCIPAL/AGENT PROBLEMS
   a. OWNERS VS. MANAGERS
   b. MANAGERS VS. WORKERS
2. LET PROFIT DEPEND ON MANAGERIAL EFFORT & LUCK

		LUCK	
		BAD (P = ½)	GOOD (P = ½)
MANAGERIAL EFFORT	LOW (0)	$30,000	$60,000
	HIGH (1)	$60,000	$120,000

a. CLASSIC PROBLEM: IF PROFIT IS $60,000, CANNOT BE SURE IF IT IS DUE TO LOW EFFORT OR TO BAD LUCK

b. CONTRACT MUST SOLVE TWO PROBLEMS:

i. INCENTIVE CONSTRAINT: MUST ELICIT HIGH EFFORT FROM MANAGER

ii. PARTICIPATION CONSTRAINT: MANAGER EXPECTS TO COVER OPPORTUNITY COST

3. SUPPOSE:

a. MANAGER CAN EARN $10,000 ELSEWHERE

b. MANAGER INCURS LOSS OF $10,000 PER UNIT EFFORT

4. TRY BONUS CONTRACT:

W = 0; IF PROFIT ≤ $60,000

W = $40,000 IF PROFIT > $60,000

INCENTIVE COMPATIBILITY:

EXPECTED WAGE IF EFFORT = 1
E(W) = ½ (0) + ½ ($40,000) = $20,000

EXPECTED WAGE IF EFFORT = 0
E(W) = 0

PARTICIPATION:

EXPECTED WAGE IF EFFORT = 1 IS $20,000 JUST COVERS THE COST OF EFFORT PLUS OTHER OPPORTUNITY

5. ALTERNATIVE: PROFIT-SHARING CONTRACT

W = (1/4)PROFIT

6. TOURNAMENT

E. RISK AVERSION AND PERFORMANCE-BASED CONTRACTS

F. CONTRACTUAL RELATIONS AND FIRM-SPECIFIC INVESTMENTS: TIME CONSISTENCY ISSUES