I. REVIEW: GROUP DECISION MAKING & ECONOMIC OUTCOMES

A. COLLECTIVE CHOICE A FACT OF LIFE
   1. IN PUBLIC POLICY
   2. IN INTERNAL ORGANIZATIONAL DECISIONS
      a. MANAGEMENT/LABOR COMMITTEES
      b. CHOICE OF CEO

B. COLLECTIVE CHOICE CHARACTERIZED BY DIFFERENT LOGIC (ILLOGIC) THAN INDIVIDUAL CHOICE
   1. BIAS TOWARD THE STATUS QUO—INDIVIDUAL UNCERTAINTY MAGNIFIED AT AGGREGATE LEVEL
   2. CYCLING AND CONDORCET
   3. COLLECTIVE CHOICE TO PURSUE PRIVATE INTEREST

C. IMPLICATIONS FOR PUBLIC POLICY
   1. CAUTIOUS PUBLIC POLICY
   2. ALWAYS A LARGE GROUP OF UNHAPPY VOTERS
   3. DANGER OF “CAPTURE”

D. IMPLICATIONS FOR CORPORATIONS
   1. CAUTIOUS POLICIES
   2. ALWAYS DISGRUNTLED SPLINTER GROUP
   3. DANGER OF “CORRUPTION”

II. CORPORATE ARCHITECTURE AND VERTICAL INTEGRATION
—WHERE IS THE FIRM’S BEGINNING AND ENDING?

A. THE VERTICAL PRODUCTION CHAIN
   1. RAW MATERIALS
   2. MANUFACTURE
   3. DISTRIBUTION
   4. RETAIL
B. VERTICAL INTEGRATION VS SEPARATE FIRMS
1. SEPARATION ALLOWS
   a. COMPETITION TO SPUR EFFICIENCY
   b. SCALE ECONOMIES
2. INTEGRATION
   a. AVOIDS HOLD-UP PROBLEM OF FIRM SPECIFIC ASSETS
   b. REDUCES DOUBLE-MARGINALIZATION
   c. FACILITATES PRICE DISCRIMINATION
C. PRODUCT COMPLEMENTARY & DOUBLE MARGINALIZATION

RETAIL DEMAND: \( P = 100 - 2Q \)

RETAIL MARGINAL REVENUE: \( MR^D = 100 - 4Q \).

ASSUME MARGINAL COST = WHOLESALE PRICE = \( W \)

RETAIL PROFIT MAXIMIZATION \( W = 100 - 4Q \).

HENCE, MANUFACTURER’S DEMAND: \( W = 100 - 4Q \)

MANUFACTURER’S MARGINAL REVENUE: \( MR^U = 100 - 8Q \)

MANUFACTURES MARGINAL COST: = $12

MANUFACTURER’S PROFIT MAXIMIZATION: \( 100 - 8Q = 12 \)

FULL, DIS-INTEGRATED EQUILIBRIUM: \( Q = 11; W = $56; P = $88 \)

PROFIT: RETAILER = $242; MANUFACTURER = $484

WHAT IF FIRMS VERTICALLY INTEGRATE?

THEN DEMAND FACING INTEGRATED FIRM IS: \( P = 100 - 2Q \)

MARGINAL REVENUE FOR INTEGRATED FIRM IS: \( MR = 100 - 4Q \)

WITH MARGINAL COST = $12, EQUILIBRIUM IS: \( Q = 22; P = $56 \)

PROFIT = $968 > $242 + $484

FIRMS AND CONSUMERS GAIN FROM VERTICAL INTEGRATION
D. DOUBLE MARGINALIZATION & COMPLEMENTARY GOODS
MANUFACTURER AND RETAILER
HARDWARE AND SOFTWARE

E. VERTICAL INTEGRATION VERSUS CONTRACT
1. CONSIDER A TWO-PART TARIFF
   a. SELL TO RETAILER AT MC = $12
   b. CHARGE RETAILER A FIXED FEE FOR SALES RIGHTS
   c. RETAILER SETS: \( P = 56 \); SELLS \( Q = 22 \) UNITS; EARN OPERATING PROFIT OF $968

2. FIXED FEE: MUST BE LESS THAN $726 (SO RETAILER EARNS AT LEAST $242) BUT MORE THAN $484 (SO MANUFACTURER EARNs AT LEAST $484—BUT CAN DUPLICATE INTEGRATION OUTCOME WITH A CONTRACT

F. CHOICE BETWEEN INTEGRATION AND CONTRACT
1. NEGOTIATION COST
2. CAN CONTRACT BE COMPLETE—UNCERTAINTY
3. ENFORCEMENT COST—WHAT HAPPENS IF CONTRACT IS BROKEN?

G. VERTICAL INTEGRATION AND PRICE DISCRIMINATION
\[ P = 100 - 2Q \] IN MARKET 1—MONOPOLY PRICE (C = $12) = $56, \( Q = 22 \)
\[ P = 60 - 2Q \] IN MARKET 2—MONOPOLY PRICE (C = $12) = $36; \( Q = 12 \)
CANNOT ACHIEVE SUCH DISCRIMINATION UNLESS MARKETS SEPARATED

SOLUTION: INTEGRATE INTO LOW-PRICE (ELASTIC) MARKET AND REFUSE TO SELL TO ANY OTHER RETAILERS
MODERNIZE ROAD
SEGMENT X

COST $10,000

BENEFITS $7,000 TO FARMER X
0 TO FARMER Y
0 TO FARMER Z

MODERNIZE ROAD
SEGMENT Z

COST $10,000

BENEFITS 0 TO FARMER X
0 TO FARMER Y
$7,000 TO FARMER Z

POLITICAL SOLUTION: VOTE-BUILDING COMMISSION OR LEGISLATURE VOTES ON ROAD IMPROVEMENT BILLS PAID FOR OUT OF GENERAL REVENUES. THEN, VOTE-TRADING—REPRESENTATIVE FROM X VOTES FOR IMPROVEMENT IN ROAD TO Z IN RETURN FOR Z VOTING FOR IMPROVEMENT IN ROAD TO X. BOTH ROAD IMPROVEMENT BILLS PASS BUT COST IS SPREAD EQUALLY OVER ALL THREE REGIONS

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