Horizontal Mergers Among IP Licensors and IP Licensees

GMU Nat’l Center for Tech. and Law:
MERGER ANALYSIS IN HIGH TECHNOLOGY MARKETS

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Joint Work

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- DISCLAIMER: EXPLORATORY ANALYSIS
Outline

- Motivation: merger analysis
- QUESTION 1: Are horizontal merger effects affected by upstream/downstream vertical relationships?
- QUESTION 2: What Happens when you ignore upstream and/or downstream vertical relationships?
Related Work: UPSTREAM MERGERS & DOWNSTREAM MONOPOLIST

- Monopoly retail sector can (i) amplify, (ii) attenuate, (iii) block, or (iv) pass through upstream merger price effects, depending on the vertical contract
DOWNSTREAM merger with upstream licensors

- Two downstream (exclusive) licensees, static Bertrand
- Two upstream IP licensors, set independent license fees given downstream competition
- Exogenously given vertical contract form:
  - Efficient (fixed fee) contract
  - Per unit royalty
  - % rev royalty
- Exogenous upstream or downstream merger
  - Equilibrium adjustment of royalty
  - No adjustment of royalty
EQUIL. DOWNSTREAM MERGER EFFECTS: PER UNIT ROYALTIES
NO ADJUSTMENT DOWNSTREAM MERGER EFFECTS: PER UNIT ROYALTIES

Price 1

Price 2

- FIXED FEE
- COMMON IP
- SEPARATE IP
Observations

- **DOWNSTREAM PRE MERGER PRICES:**
  - Lowest for “no IP”
  - Higher for separate IP (adding double mark up)
  - Highest for common IP (no upstream competition)
  - INTUITION: more upstream competition is better

- **DOWNSTREAM MERGER PRICE INCREASE:**
  - Biggest for no IP
  - Smaller for common IP
    - Royalty rates move *UP* post merger
    - Derived upstream aggregate demand becomes *LESS* elastic
  - Smallest for separate IP
    - Royalty rates move *DOWN* post merger
    - Derived upstream individual demand becomes *MORE* elastic
EQUIL. DOWNSTREAM MERGER EFFECTS: PER UNIT ROYALTIES, CE DEMAND
Constant Elasticity (CE) vs. Logit Demand

• Logit demand becomes more elastic as price increases.
  – Much bigger price scale (40% vs. 25%)
• Pass-through rates: CE > 1; logit < 1.
  – Royalty rate effects bigger with CE
    • Attenuates or amplifies effects of previous section
    • NEGATIVE merger effect
Remarks

• Vertical matters in horizontal mergers
  – But small upstream IP royalties probably determined by *ex-ante* negotiation.
  – Results more applicable to manufacturer-retail relationship or to franchisor/franchisee relationship

• Will vertical uncertainty “infect” horizontal policy consensus?