Strategic differentiation by business models: Free-to-air and pay-TV's

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12th Annual Conference on Media Economics
Naples, Italy, 10-11 October 2014

Summary

- Empirical fact: coexistence of FTA and pay-TV operators
  - not just TV: printed newspapers, online distribution, etc.
- Questions:
  - how does this difference in business models emerge and coexist, starting from *ex ante* identical broadcasters?
  - when do symmetric FTA equilibria exist?
  - what are the effects of merger between a FTA and a pay-TV broadcaster?
- Explanation: “principle of differentiation” driven by strategic considerations

Model

- Broadcasters
  - duopoly; symmetric *ex ante*
  - may levy a subscription fee *(f)* and/or sell advertising airtime *(a)*
- Viewers
  - may **multi-home**
  - **heterogeneous in marginal utility** of viewing time **net** of ads, θ
    - equivalent to heterogeneity in disutility from adverts
  - viewers sort in asymmetric equilibrium:
    - low-θ viewers single-home on one channel
    - higher-θ viewers multi-home on both channels

Model (2)

- Advertisers
  - may multi-home
  - diminishing marginal return from adverts, on either channel
  - **micro-foundation**: probability of informing an uninformed viewer
    - k : value of informing a viewer
    - ψ : efficiency of advertising in capturing viewer's attention
- Game gives full bargaining power to broadcasters
  - take-it-or-leave-it offer: fee t for ad. share a/N; advertisers accept or reject
  - gives broadcasters market power, to an extent:
    - extract **all** surplus generated from single-homing viewers
    - but only **part** of surplus from multi-homing viewers

Findings

- Simplified case
  - operators offer the same amount of advertising airtime
  - programmes are not substitutes
  - ads are infinitely effective (no surplus from multi-homing viewers)
  - Eqm is asymmetric whenever advertising is valuable ($k > 0$)
    - not an eqm for the broadcasters to charge the same fee
- "Fully fledged" case
  - derives conditions for existence of asymmetric equilibria with pure FTA & pure pay-TV with **no** ads (i.e. complete differentiation)
    - requires **intermediate** values of k (value of informing a viewer)
  - symmetric eqm exists if substitutes and **high** k
    - but this is **FTA only**
  - possible that both equilibria exist
- Effects of merger: differentiation maintained, higher prices

Comments: model

- An interesting and technical analysis
- Detailed micro-foundation of advertising values
  - captures relative values of single- and multi-homing viewers
- But this poses technical challenges
  - limits closed-form solutions to special cases
  - cannot characterise the full set of equilibria
- Instead, paper derives sufficient conditions for existence of symmetric and (fully) asymmetric equilibria
  - are there other equilibria, not characterised here? (more later)
  - cannot really address equilibrium selection
- Business model differentiation arises from viewer heterogeneity towards advertising airtime
  - can this be such a strong driver given increase in ad avoidance?

Comments: results

- Relatively unsurprising that providers differentiate on quality (here, presence of adverts) and charge different prices
  - viewers differ in preferences towards quality
  - Shaked & Sutton model of vertical product differentiation gives a similar outcome
- Could there also be (asym) equilibria in which the pay-TV operator includes some advertising?
  - if value of advertising airtime > marginal viewer's utility, would pay-TV do better to sell some ads and reduce subscription fee?
  - i.e. **partial** differentiation in business models
  - comparative statics on outcomes for a, f, etc.

Comments: assumptions

- Robustness to assumptions?:
  - why do viewers move (deciding station and viewing time) **before** advertisers decide whether to advertise there?
    - seems counter-factual
    - do results change if move-order is reversed?
  - unsold ad airtime is essentially lost (“recycled for self-promotion”) not used for programming (FN 5)
    - does this assumption matter? - presumably no ad space is left unused in eqm
- What about entry?
  - harder problem to address…

Comments: policy implications

- Market definition
  - competition between operators with different business models
  - but is this sufficiently intense for the "SSNIP" test?
- Practice not entirely clear cut
  - EC & Member State CAs generally treat FTA and pay-TV as separate relevant markets
  - but exceptions: BSkyB/ITV (2007)
  - also recognition of wider constraints outside defined market
  - FTA and "basic pay" probably substitutes to some extent, esp. now that DTT offers 50+ channels
- This paper: no quality (or other) differences between content
  - "premium" content: high willingness to pay
  - few if any substitutes, for many viewers

Game

Move order

1. Broadcasters set subscription fee, f, and total advertising airtime, a
2. Viewers choose broadcasters and viewing time(s), v
3. Broadcasters post advertising fee, t, for ad. share a/N; advertisers decide which offer(s) to accept (if any)

   i.e. broadcasters have all the bargaining power

- extract all surplus generated from single-homing viewers
- but only part of surplus from multi-homing viewers

Equilibrium concept: pure strategy SPE