Comments for Workshop on the State of the Video Marketplace

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Background

- Massive growth in television content diversity and quality
- Improvements on both content and distribution sides (and hardware)
- New business models, old questions.

1990: 2016:
Topic Areas

- Bundling
  - Retail
  - Wholesale

- Programming Costs
  - Size differences
    - Implications for merger policy
    - Effects on entrants

- Vertical Integration
  - Content
  - Hardware

- Program Diversity
  - The special role of media and entertainment
Consumers choose a bundle of channels provided by a cable or satellite or OTT distributor.

Content providers paid linear per-subscriber-per-month fees, or directly by consumers.

Content providers invest in content quality and diversity.

Distributors invest in network quality, assemble content for sale to consumers.
Bundling versus Unbundling

- Retail vs Wholesale

- Focus on retail:
  - Limited direct evidence. Will be interesting to see what happens in Canada.

- Our approach (AER 2012): Estimate a model of the industry and simulate unbundling.

- Model features:
  - Consumer choosing what channels to watch
  - Consumers choosing which package to subscribe to
  - Distributors choosing prices and packages
  - Distributors and channel conglomerates negotiating over carriage fees.
What we predict about retail unbundling:

- Once you take into account how carriage fees would re-equilibrate to such a policy, the average consumer ends up being about indifferent between bundling and a la carte.

- Some consumers are way better off: those who watch few channels, especially if they don’t include sports.

- Consumers who watch many channels are worse off: either they pay more, or they don’t receive some channels they would watch.

- On balance, about equal.

- Some new subscribers enter the market (“cord-nevers”).
## Table 8—Baseline Counterfactual Results: Full À La Carte

<table>
<thead>
<tr>
<th></th>
<th>Bundling</th>
<th>ALC No Reneg</th>
<th>Percent Change</th>
<th>ALC With Reneg</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-welfare outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable &amp; sat penetration</td>
<td>0.880</td>
<td>0.998</td>
<td>13.3%</td>
<td>0.993</td>
<td>12.8%</td>
</tr>
<tr>
<td>Total affiliate fees</td>
<td>$18.22</td>
<td>$18.22</td>
<td>0.0%</td>
<td>$36.98</td>
<td>103.0%</td>
</tr>
<tr>
<td>Mean consumer expn</td>
<td>$27.63</td>
<td>$21.07</td>
<td>-23.8%</td>
<td>$28.24</td>
<td>2.2%</td>
</tr>
<tr>
<td>Number channels received</td>
<td>42.8</td>
<td>22.0</td>
<td>-48.5%</td>
<td>19.3</td>
<td>-54.9%</td>
</tr>
<tr>
<td>Number channels watched</td>
<td>22.2</td>
<td>22.0</td>
<td>-0.5%</td>
<td>19.3</td>
<td>-12.8%</td>
</tr>
<tr>
<td><strong>Welfare outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel profits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total license fee rev</td>
<td>$16.03</td>
<td>$7.95</td>
<td>-50.4%</td>
<td>$15.44</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Total advertising rev</td>
<td>$13.38</td>
<td>$14.71</td>
<td>10.0%</td>
<td>$14.73</td>
<td>10.1%</td>
</tr>
<tr>
<td>Total channel revenue</td>
<td>$29.41</td>
<td>$22.67</td>
<td>-22.9%</td>
<td>$30.16</td>
<td>2.6%</td>
</tr>
<tr>
<td>Distributor profits</td>
<td>$11.59</td>
<td>$13.11</td>
<td>13.1%</td>
<td>$12.81</td>
<td>10.4%</td>
</tr>
<tr>
<td>Total industry profits</td>
<td>$41.00</td>
<td>$35.78</td>
<td>-12.7%</td>
<td>$42.97</td>
<td>4.8%</td>
</tr>
<tr>
<td>Mean consumers surplus</td>
<td>$45.82</td>
<td>$54.59</td>
<td>19.2%</td>
<td>$45.91</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total surplus</td>
<td>$86.82</td>
<td>$90.37</td>
<td>4.1%</td>
<td>$88.88</td>
<td>2.4%</td>
</tr>
</tbody>
</table>
Bundling

- Competition has existed in video markets for quite some time.

- It is not an extremely competitive industry, but two satellite competitors have been around for almost twenty years.

- Competition hadn’t driven firms to unbundle.

- Suggests that there are efficiency reasons for bundling - at least not obvious gains.

- Netflix, Amazon Prime, Youtube, Sling TV, Playstation Vue: these are all bundles.

- As a thought experiment, imagine Comcast didn’t exist and the only video was over-the-top (with all of its buffering issues and scattered content).
  - If a start up came along, say it was called Viber, which provided hundreds of HD channels of content to TV sets over a digital network, with no issues of buffering and an easy to navigate guide system, this would be the hottest start up in the world.
What we don’t know about (un-)bundling

- With net-neutrality, channels can unbundle themselves. We don’t know what the equilibrium of this will look like (though evidence so far suggests bundle will persist).

- All of this analysis was **holding the set of channels and their quality fixed**.

- If unbundling puts some channels out of business or encourages new entrants, then answers might change.

- If unbundling changes the decision to invest in quality programming, then answers might change.
  - Externality in investment suggests programming quality should increase with unbundling.
Wholesale Bundling

- Hasn’t been explored empirically in this industry as far as I know.

- The economic theory is fairly subtle to generate welfare reducing behavior.

- Has potential to be pro-competitive.
  - NBC Sports Network is a budding rival to ESPN. Easier to get NBC Sports Network going when it is bundled with NBC, Bravo, etc.

- On the other hand, if NBC Sports Network is crowding out an even better potential rival to ESPN, then the bundling is a problem.

- This is a really hard problem to work out empirically because it involves evaluating the efficiency of unknown potential entrants.
Figure 2: Downstream Markups

- Retail price increases mostly flowing to content.
- Large downstream firms pay less for content.
Programming Costs

- Suggests some benefits to downstream mergers (a la TWC-Charter).
- Bad for new entrants which don’t have scale.

“We [Google Fiber] operate at a very significant difference than incumbents we compete against. [...] We may be paying in some markets double what incumbents are paying for the same programming.”

Milo Medin  
Head of Google Fiber

- Current work-in-progress simulates downstream mergers and effect of eliminating size based effects.
- We find (preliminary) benefits of TWC-Charter merger to consumers, and increases in profits of new entrants from banning size effects.
Vertical Integration

- Vertical integration can reduce the double marginalization problem and improve investment incentives.

- However, it can also lead to raising rivals’ costs and foreclosure incentives.

- We study integration between content and distribution, in particular Regional Sports Networks (RSN’s).
  - Reduction of double marginalization is significant.
  - Policies such as program access rules help welfare.
  - Again, did not study long term effects on investment.

- Hardware
  - Set top box rule
  - Can foresee future issues regarding television sets, tablets, and similar devices.
Vertical Integration (RSN’s)

<table>
<thead>
<tr>
<th></th>
<th>(i) VI, no PARs</th>
<th>(ii) VI, PARs</th>
<th>(iii) No VI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>%Δ_{lvl}</td>
<td>%Δ_{WTP}</td>
</tr>
<tr>
<td>ALL RSNS (27)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Cable Mkt Share</td>
<td>0.63</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Avg Sat Mkt Share</td>
<td>0.19</td>
<td>-2.8%</td>
<td></td>
</tr>
<tr>
<td>Avg Cable Carriage</td>
<td>0.81</td>
<td>15.3%</td>
<td></td>
</tr>
<tr>
<td>Avg Cable Prices</td>
<td>54.49</td>
<td>-1.4%</td>
<td></td>
</tr>
<tr>
<td>Aff Fees to Rivals</td>
<td>1.96</td>
<td>36.2%</td>
<td></td>
</tr>
<tr>
<td>Cable Surplus</td>
<td>24.35</td>
<td>-2.1%</td>
<td>-14.6%</td>
</tr>
<tr>
<td>Satellite Surplus</td>
<td>5.16</td>
<td>-3.9%</td>
<td>-6.1%</td>
</tr>
<tr>
<td>RSN Surplus</td>
<td>2.35</td>
<td>50.1%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Consumer Welfare</td>
<td>33.68</td>
<td>1.7%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Total Welfare</td>
<td>65.55</td>
<td>0.9%</td>
<td>18.2%</td>
</tr>
<tr>
<td># Foreclosed to Sat</td>
<td>3.5/24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Program Diversity

- Effects on culture and socioeconomic outcomes

  Research suggests watching certain programs can shape views on issues from gender roles to teen pregnancy.

  - Effects on news and polarization.
  - Research suggests Fox News has non-negligible effects on partisan voting.
  - Potential for increased polarization.
Program Diversity

- Cable News and Polarization (from Martin and Yurukoglu)
Concluding Remarks

- New technologies, classic problems

- More competition in data delivery would help sort much of this out
  - Over-builders and wireless

- We can make coherent predictions about the short term effects of most policies.

- The **long term effects on programming quality and diversity** are more difficult, but likely more consequential than short term pricing effects.

- Answers are important: for classic competition policy reasons and because of special externalities associated with this industry.