The Use of Experimental Evidence in Competition Policy –

The Magna-Karmann Case

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1. Experiments have been used in Competition Policy


- DG Comp referred to experimental studies regarding the Non-Horizontal Merger Guidelines (2008) and in the 2009 merger Associated British Food – Gilde Bakery Ingredients (ABF - GBI).

- Further, experiments are regularly used for the design of auctions and other institutions (spectrum, CO₂ markets, eBay, Yahoo, irrigation systems etc.).
2. Why were experimental data used?

- Hong and Plott (1982):
  “Theoretical arguments could be made both in favour of and against the policy, and previous experience with the policy was not available. The regulator was skeptical and ordered an experimental investigation”

  “The application of experimental economics is significant because of the absence of formal economic theory”
3. What are the advantages of experiments?

A. Experiments study in isolation and under known conditions the forces we are interested in

- One can study the forces of interest in all else equal environments, and we can unambiguously interpret the data

B. The experimental conditions can be manipulated according to the relevant questions—keeping all other factors constant

- One can study the impact several possible policy decisions, including some that cannot be observed in the field
4. The Magna-Karman Case

Webasto – Edscha 4 $\rightarrow$ 3 merger in 01/2010

Magna – Karmann 3 $\rightarrow$ 2 merger in 05/2010

Magna-Karmann Merger would have had two effects:

1. reduce number of firms 3 $\rightarrow$ 2

2. create a symmetric market structure
Experimental evidence on “numbers effects”

Huck, Normann and Oechssler (2004): “Two are few and four are many”

Dolbear et al. (1968): observe the same numbers effect, keeping incentives to collude constant
Experimental evidence on the 3 $\rightarrow$ 2 merger

- In the 3 $\rightarrow$ 2 merger, how does the reduction of # of firms interact with the change in symmetry?

- Conventional wisdom:
  
  **Asymmetries hinder collusion**


- However, this is in contrast to concentration indices (HHI). **In asymmetric markets, concentration is higher ceteris paribus**
Experimental evidence on the 3 → 2 merger

**Fonseca and Normann (2008) experiment:** Bertrand-Edgeworth competition with inelastic demand and constant marginal cost

<table>
<thead>
<tr>
<th>Market</th>
<th>HHI in the experiment</th>
<th>predicted Nash price</th>
<th>observed average price</th>
<th>minimum discount factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>symmetric 3 firms</td>
<td>3333</td>
<td>32.0</td>
<td>62.1 (18.3)</td>
<td>0.33</td>
</tr>
<tr>
<td>asymmetric 3 firms</td>
<td>3417</td>
<td>47.9</td>
<td>42.4 (19.2)</td>
<td>0.40</td>
</tr>
<tr>
<td>symmetric 2 firms</td>
<td>5000</td>
<td>66.0</td>
<td>77.9 (12.0)</td>
<td>0.50</td>
</tr>
<tr>
<td>asymmetric 2 firms</td>
<td>5555</td>
<td>83.0</td>
<td>73.9 (12.3)</td>
<td>0.67</td>
</tr>
</tbody>
</table>
5. Objections against experiments

1. Possible objections against *this* experiment:
   - no buyers present in the experiment
   - how severe are the capacity constraints in the CRT market?

2. Mainly students as participants
   - no professional experience → professionals do not play differently
   - low monetary incentives → high incentives do not change much
   - little time to familiarize with the framework → learning effects should be checked

3. Too simplistic: the experiments does not account for the richness of the market in the field → simplicity is a key advantage

4. Too much emphasis on irrationality and fairness → not so much in market games
6. Conclusions

- **Davies and Olczak’s (2008)** study of DG COMP’s merger decisions found much consistency with experimental results, and confirms the decision of the Bundeskartellamt (FCO).

- Experimental methods provide a **reliable, easy, cheap and (relatively) fast data generating method for policy cases**, specifically when there is a lack of experience in a market and if (unambiguous) economic predictions are absent.

- With the growth in experimental research and the increased teaching of experimental economics, trust in this method’s use in policy cases will rise.