Effects of competition policy on companies’ performance: merger approval, entry barriers removal, antitrust enforcement compared

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Motivation

• effective competition policy is one of the most important factors of successful economic development
• little evidence on the comparative effectiveness of different competition policy measures, especially in transition economies
Aim

• To apply financial event studies for the assessment of different competition policy measures in Russian metal industries 2007-2012:
  • merger control,
  • antitrust investigations on abuse of dominance,
  • changes of import tariffs
Competition policy effects: theory and empirical assessment

- market structure as number of sellers and distribution of the market between them
- entry cost influence on competition (Bain, 1956; Baumol et al., 1982; Seade, 1980):
- antitrust legislation enforcement is trying to influence competition directly through punishing the restrictions of competition (Crandall, Whinston, 2003)
Competition policy effects: theory and empirical assessment

• Financial event studies in antitrust is generally applied to the analysis of M&As influence on the value of participating firms. Empirical results depend on the type of mergers, valuation method and industry considered (Healy et al., 1992; Singal, 1996; Eckbo, Thorburn, 2000)

• There are papers estimating the reaction of stock market on antitrust investigations (Huth, MacDonald, 1989; Prager, 1992; Schumann, 1993)
Our approach

• The novelty is the application of event studies for the comparison of the effects of different competition policy measures.
  • to assess the effects of competition policy towards highly concentrated industry of the transition economy such as Russian Federation.
  • to focus on Russian metal industries dominated by large sellers where export orientation combines with relatively isolated domestic market.
Competition in Russian metal industry

After 1990s along with an increase in the competitiveness of Russian metal producers on world product markets, the position of domestic metal buyers is considerably worsening:

• high concentration
• high level of import protection

What is better?

• Not to disturb the strengthening of Russian metal producers in the global market by opposing to mergers or
• to apply tools for supporting internal buyers of metal by decreasing import duties or introducing remedies on companies?
Event studies

Estimate market model during the estimation period [-220; -30]:

\[ r_{it} = \alpha_i + \beta_i r_{mt} + e_i, \]

where \( r_{it} \) is the current return for security i at day t, \( r_{mt} \) is the return on market index at day t.

Calculate abnormal returns for security i at day t:

\[ R_{it} = r_{it} - \hat{\alpha}_i - \hat{\beta}_i r_{mt}, \]

where \( \hat{\alpha}_i \) and \( \hat{\beta}_i \) are OLS values from the estimation period.

Calculate cumulative abnormal returns:

\[ AR_i = AR_{i,t_1} + \ldots + AR_{i,t_2}, \]

where \( t_1 \) and \( t_2 \) are the boundaries for the event period.
Event studies

t-test \quad H_0: E(CAR_i) = 0

T-statistics are given by: \( G = \sqrt{N} \frac{CAAR}{s} \approx N[0,1] \),

where CAAR is the cumulative average abnormal return, s is cross-sectional variance of the abnormal returns in period \( t \):

\[
= \sqrt{\frac{1}{N-1} \sum_{i=1}^{N} [CAR_i - CAAR]^2}
\]

Standardization procedure [Brown, Warner, 1985]
Event studies

• Changes in stock valuation properly capture expected changes in the profitability of the firm and subsequent redistribution of welfare

• The main problem - identical changes in the expected profit of sellers may reflect different changes in market structure and competition

• To identify the relevant effect we take into account changes in expected profits of other types of market participants: rivals and buyers
Data

17 Russian companies in metal industry listed at MICEX-RTS stock exchange.

Data on M&As - from Thomson database (completed M&As with acquired share more than 50%).

Antitrust investigations - from the website of news agencies, FAS and the information resource of the Supreme Arbitration Court of Russia.

Changes of the import tariffs - from data of Ministry of Economic Development of the Russian Federation and the information system Consultant Plus.
## Results

### Tab. 1. M&As effects: $t$-statistics for CAR

<table>
<thead>
<tr>
<th></th>
<th>Announcement day</th>
<th>[$-5 \text{ days before}, +5 \text{ days after}$]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Horizontal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parties of a deal</td>
<td>-0.37</td>
<td>-2.14**</td>
</tr>
<tr>
<td>Competitors</td>
<td>-2.50**</td>
<td>-5.43***</td>
</tr>
<tr>
<td>Buyers</td>
<td>-0.63</td>
<td>-3.12***</td>
</tr>
<tr>
<td><strong>Vertical</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parties of a deal</td>
<td>2.22**</td>
<td>1.34</td>
</tr>
<tr>
<td>Competitors</td>
<td>3.2***</td>
<td>-2.72***</td>
</tr>
<tr>
<td>Buyers</td>
<td>3.51***</td>
<td>-1.33</td>
</tr>
</tbody>
</table>

*Notes: *, **, *** — the level of significance 10, 5, and 1% respectively.*
## Results

### Tab. 2. Antitrust investigations effects: $t$-statistics for CAR (10 events)

<table>
<thead>
<tr>
<th></th>
<th>Announcement day</th>
<th>[−5 days before, +5 days after]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>-0.97</td>
<td>-0.88</td>
</tr>
<tr>
<td>Competitors</td>
<td>0.12</td>
<td>-0.42</td>
</tr>
<tr>
<td>Buyers</td>
<td>2.05**</td>
<td>-1.15</td>
</tr>
</tbody>
</table>

*Notes*: *, **, *** — the level of significance 10, 5, and 1% respectively.
Results

<table>
<thead>
<tr>
<th></th>
<th>Announcement day</th>
<th>[–5 days before, +5 days after]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producers of metal</td>
<td>2.17**</td>
<td>1.92*</td>
</tr>
<tr>
<td>Buyers of metal</td>
<td>0.11</td>
<td>0.14</td>
</tr>
</tbody>
</table>

*Notes:* *, **, *** — the level of significance 10, 5, and 1% respectively.
Conclusions

Effects of M&As are assessed as strongest in contrast to negligible effects of import liberalization. Large horizontal mergers under imperfect competition can substantially harm consumers.

Investigations on the abuse of a dominance provide no effects on the target company and competitors, but positive effects on consumers.

Changes in rates of import duties on metal products in Russia have a positive significant impact on the price of incumbent stocks.
• Thank you for your attention!
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