Discussant’s Notes on N. Pavlova’s and A. Shastitko’s Paper:
«Leniency Programs, Enforcement Errors and Effects for Cooperation Agreements»

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Main Remarks for the Paper

Focus:
• The deterrence and desistence effects of LP’s on firm’s competitive strategies, in the presence of type I (conviction of innocent) errors of Antitrust Authorities.

Firm Strategies:
• Competing, colluding, deviating from collusion, and cooperating (cost reducing non-collusive agreements).
• Because of the LP, revelation strategy is also integrated to all these alternatives, once the inquiry is opened.

AA’s policy parameters and enforcement
• Setting policy parameters: fines,
• Probabilities of opening an inquiry and ending it in conviction, which are not equal according to the experience of AA.
• Subject to Type 1 errors: Possible to punish competing and cooperating strategies whether they are revealed or not
The model:
- Inclusion of three further factors to the conventional models, compete or collude: Cooperation agreements, LP and type I errors.
  - A quite realistic approach particularly from the strand of law enforcement authorities:
    - We are aware of type I errors which we try to abstain but sometimes are tripped up due to insufficient legal powers and resources to collect evidences.

Analysis
- The effect of the interaction of type I errors and LP programs to the equilibrium towards colluding, competing or cooperating.

The finding:
- As extending the previous works (Motta and Polo (2003) and Ghebrihiwet and Motchenko (2010)), social welfare enhancing cooperation becomes destabilized and prevented.

"My discussion, opinions and questions will focus on these three factors in the paper."
1. Inclusion of Cooperation Agreements to the set of alternative strategies, an improving step.

• Generally, only competition and collusion are used as a substitute in the strategy set. So, is it also an alternative to collude or compete?
  – Actually yes. As regard as increasing profit why not decreasing cost in legal ways is an alternative to increase profit via illegal ways?
  – Commonly observed enforcement challenge for AA to decide whether the accommodating behaviours of firms are illegal collusion or cooperation.

• But, the hidden assumption here: There is no clearance and exemption mechanism.
  • In TCA we have so many clearance and exemption cases for cooperating agreements as a result of application of firms before we monitor them (Type I errors dramatically decreases!!)

• This point deserves some words in the paper.
2. LP application, only one dimension is included.

- Introduced to the game as the fine reduction for self-reporting after the inquiry opened.
- In general, LP is applied in three-fold: only before, only after and both (for ex. in Turkey only before, in US and EU both).
- Would they have different effects on the solutions?
- Two suggestions:
  - This differentiation could be underlined and the reason of choosing this kind of LP could be stated clearly.
  - Further study: Analysing the effect of all LP policies on the equilibrium and welfare enhancing coorporation agreements.
3. Type I errors

- I think $\rho_0, \rho_3$ is type I, the conviction probabilities for competition and cooperation are type I. But not sure for $\rho_2$ (Deviation case):
- The timing of deviation a bit confusing;
  - If deviates just after collusion (it should be so because of timing of the game), should the firm be treated as a colluder and punishing him is fair? Or would it be an enforcement error. (In Moto and Polo (2003), not punished)
  - Question: Does this difference change the equilibrium solution?
- Could be elaborated bore what type I is.
4. Presenting the probabilities in a cardinal way

• A realistic assumption.
  – Based on AA’s experience in differentiating market behaviours, from competing to colluding and cooperating.
  – Hidden assumption: The memory of experience of the AA is reset in the next game such that the probabilities and their ranking do not change in time, thus the discounted Value function.

• Question: If not reset (more experience in every game), they would monitor the markets more where already there run many prosecution as a result of deviation or collusion. So the ranking among $\alpha$’s and $\rho$’s could change in time ($\alpha_2 = \alpha_3$ in the next game) (Like aggravating fines in case of repetition of infringement.)

• This complex issue could be handled at least verbally.

• Further study: More complex calculation in the Value fns.
5. Some words for outline and to broaden and strengthen the study.

- More details for findings of previous works
- Inclusion of solutions for four alternatives of presence LP and/or type 1 errors (since the title covers a larger scenario)
  - Case 1: LP but no type 1
  - Case 2: Type 1 but no LP...
- More to grasp the isolated and combined effect of type I’s and LP.

Last words: quite useful

- Sheds light to further theoretical studies
- Displays challenges to overcome for antitrust enforcers to implement efficient policies towards preventing illegal behaviours and also diminishing enforcement errors.
Thank you...