Referee Report on

R&D Cooperation and Industry Cartelization

by Jacek Prokop and Adam Karbowski

Is the contribution of the paper potentially significant?

The article analyzes how R&D cooperations influence the formation of cartels in the product market. Answering this question is relevant with regard to practice because R&D cooperations are particularly important, for example, in the automotive industry. In European competition policy, R&D cooperations are addressed, for example, in the R&D block exemption regulation or the guidelines on horizontal cooperation agreements.

The paper models a duopolistic industry and assumes that – absent collusion – firms enter Stackelberg-competition in the product market. The authors consider this assumption to be a major novelty in comparison to prior literature on this topic. It remains unclear why this would be a reasonable assumption because cartels are frequently formed among firms with fairly similar characteristics. A leader-follower relationship among firms is usually not considered a stylized fact that is commonly associated with cartels – neither in theory nor in practice.

When the firms compete in the output-market, the model shows that a research cooperation may in some cases harm the dominant firm (leader) by giving the dominated firm (follower) a relatively larger benefit. Unfortunately, the authors simply state this result but do not explore its implications for reality any further. When the firms collude in the product market, the authors show that the leader does not necessarily gain positive additional profits from collusion without the R&D cooperation. However, starting a R&D cooperation may change these incentives resulting in positive additional profits from collusion. In other words, a R&D cooperation may be a prerequisite for collusion in the product market.

This result matches the stance of the European Commission concerning R&D cooperations. Therefore, the outcome of the paper is not very novel. Moreover, it was derived under the assumption of Stackelberg-competition which does not suit the evidence for most cartelized markets well.

Is the analysis correct?

Technically, the model is not very challenging and follows the textbook-analysis in Pepall et al. (2008: 588). It simply replaces Cournot-competition by Stackelberg-competition in the output market. When the functional forms of, e.g., profits become somewhat lengthy, the authors resort to a numeric analysis of the model. It would be nice to show the results analytically.

It remains unclear why the authors assume the colluding firms to split profits evenly in collusion although they had been uneven in competition. In practice, one frequently observes profits to be shared unevenly in the cartel, too. For example, this could be modeled by a bargaining game.

The authors merely analyze the stage game. It would be interesting to see under what conditions the collusive agreement can be stabilized (incentive compatibility). As stability of the collusive agreement is a prerequisite for cartel formation it needs to be considered in the paper.

As a minor comment, the authors use decimal commas instead of decimal points.

Literature

Pepall, L. and Richards, D. and Norman, G. (2008). "Industrial Organization – Contemporary Theory and Empirical Applications." 4th edition. Blackwell Publishing: Malden, MA