

Stability of Cartels and the Incentive for Merger in Oligopoly Situations without Transferable Technologies

Theo DRIESSEN * Holger MEINHARDT †

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Abstract

The paper studies the stability of cartels and the incentives for horizontal mergers of the class of oligopoly situations without transferable technologies. When dealing with oligopoly situations the usual prediction is that firms, which reached an explicit or implicit agreement have an incentive to cheat and to deviate from the agreement. In contrast to the predicted instability of cartels there is empirical evidence that firms stick to a cooperative arrangement on price or output decisions despite of the incentive scheme. But if we want to know why cartels operate successfully in many situations, we have to look at cooperative solution concepts which give us an answer. By doing so, we can present sufficient conditions involving the inverse demand function and the cost functions to establish the convexity for the class of oligopoly TU-games without transferable technologies. For convex TU-games it is well known that the core is relatively large with respect to the imputation set and that it is generically nonempty. Whereas the former property provides us with an answer about the stability of cartels, the latter property gives us an indication about the incentive to found a cartel. Furthermore, due to the fact that the kernel is a singleton in the core and the Shapley value is located in the center of gravity of the core for convex TU-games, there are natural solutions available to split the benefits of a cartel agreement. Therefore, one of the most difficult task in asymmetric oligopoly situations can be solved by relying on these solutions concepts.

Keywords: Cournot oligopoly situation, cooperative TU-game, oligopoly TU-game, clear TU-games, convexity, average-convexity

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*Theo S.H. Driessen, Faculty of Mathematical Sciences, University of Twente, P.O. Box 217, 7500 AE Enschede, The Netherlands. E-mail: t.s.h.driessen@math.utwente.nl

†Holger I. Meinhardt, Institute for Statistics and Economic Theory, University of Karlsruhe, P.O. Box 69 80, Zirkel 2, D-76128 Karlsruhe, Germany. E-mail: hme@vw13.wiwi.uni-karlsruhe.de