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Cartel Formation with Differentiated Products, Asymmetric Cost, and Quantity Competition: The Case of Three Firms

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Abstract : In this paper, we analyze the formation of cartels along with the stability of the cartel for the case of three firms that produce differentiated products and differ in their cost of production. Both cost and demand are linear, and firms compete in quantities once a cartel has been formed (or not). It turns out that the degree of product differentiation has a direct effect on the incentive to form a cartel. Firstly, when goods are complements or close substitutes, firms form a grand coalition. Secondly, for weak and medium substitutes, the firm with the lowest cost prefers to remain independent, while both other firms form a coalition. We also find that the producer profit of the stable coalition structure is nonmonotonic in the degree of product differentiation.

Keywords : collusion, cartel formation, cartel stability, differentiated market, quantity competition, oligopolies
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