A STRATEGIC APPROACH TO MARKET COMPETITION

Claude d'ASPREMONT, Alexis JACQUEMIN
and Jean Jaskold GABSZEWICZ

Catholic University of Louvain, 1348 Louvain-la-Neuve, Belgium

This special issue is a continuation of a series initiated in 1981 in the European Economic Review with the objective of gathering several approaches on the topic of *Market Competition, Conflict and Collusion*. The first issue (February 1981) was intended to illustrate the variety of approaches adopted for analyzing this general topic. The second issue (September 1982) was concentrated on an important and controversial question, namely the respective roles of market power and efficiency in explaining the organization of industry. The present issue particularly emphasizes the 'strategic approach' where firms are viewed as rational and sophisticated players.[1] The papers presented here all apply basic concepts of game theory and introduce several stages to exhibit the interdependencies among oligopolists.

The first two papers rely on the concept of subgame perfect equilibrium whereby the firms take into account rivals' likely behavior and exclude empty threats.

The paper by Fudenberg, Gilbert, Stiglitz and Tirole analyzes a series of 'patent races' where firms compete to win the premiums due to invention. The authors are interested in determining conditions under which either vigorous competition between firms or blockaded entry will prevail as the outcomes of such patent races. The results show that the main determinant of competition is the possibility that the firm which is behind in the race can change place (leapfrog) with the current leader.

The basic model analyzed by Selten is an oligopoly game in two stages with a continuum of products differing by the value of a single technological parameter. This analysis provides a theoretical explanation of several 'effects' which have been observed in empirical studies dealing with the relationship between concentration and profitability measures for an industry.

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[1]For a recent collective volume where this approach is adopted, see F. Mathewson and J. Stiglitz, eds., *New Developments in the Analysis of Market Structures* (M.I.T. Press, Cambridge, MA, 1983) forthcoming.

The two-stage approach is also taken by Osborne and Pitchik. They apply the concept of Nash variable threat bargaining solution to the problem of sharing the collusive profit between oligopolists of different sizes.

The two subsequent papers by Kawashima and by Guasch and Sobel use the notion of Nash equilibrium, the first in a model of product differentiation and the second in a model where firms compete in the labor market for optimal job training investments.

Kawashima's model belongs to the class of 'address models' recently described by Archibald, Eaton and Lipsey.[2] He examines the impact of parametric variations on equilibrium in prices and on the corresponding market shares.

In their paper, Guasch and Sobel assume an unlimited supply of untrained workers and an unlimited number of potential firms, each characterized by the same production technology and the same training technology. At the equilibrium, the firms will be partitioned into two groups: the 'breeding' firms which accept to train workers and the 'raiding' firms which do not train but bed away trained workers from others.

We feel that this third special issue represents a stimulating contribution to the study of *Market Competition, Conflict and Collusion*, by its emphasis on the logical consistency of the analysis.

[2]See their contribution to the volume mentioned in footnote 1.