Summaries

Three Models of Noncooperative Oligopoly in Markets with a Continuum of Traders

Francesca Busetto, Giulio Codognato and Sayantan Ghosal

In this paper, we reconstruct the main developments of the theory of non-cooperative oligopoly in general equilibrium, by focusing on the analysis of three prototypical models for pure exchange economies: the model of Cournot-Walras equilibrium of Codognato and Gabszewicz (1991); the model of Cournot-Nash equilibrium originally proposed by Lloyd S. Shapley and known as window model; the model of Cournot-Walras equilibrium of Busetto et al. (2008). We establish, in a systematic way, the relationship between the three notions of equilibrium proposed in these models and the notion of Walras equilibrium. Then, we investigate the relationships among those three notions of equilibrium.

Keywords: Noncooperative oligopoly, Cournot-Walras equilibria, Cournot-Nash equilibria.

JEL Classification: C72, D51.

Strategic Interactions and Atoms' Power in Public Goods Economies

Hovav Perets and Benyamin Shitovitz

In this paper we study the Nash equilibrium in a smooth public goods economy, described as a non-cooperative game, where the set of players is a mixed measure space of consumers. We assume a finite number of private goods. We show that under certain conditions there exists a unique Nash equilibrium in the economy, where the public goods are produced with a linear technology. Moreover, we discuss the difference in market power between an atomless sector and an atom with the same utility function, and an atom with its split atomless sector, both in a pure exchange economy and a public goods economy.

Keywords: public goods, private provision of public goods, Nash equilibrium, mixed measure space of consumers, linear technology.

JEL Classification: C72, H41.

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Voluntary provision of a public good in a strategic market game

Somdeb Lahiri

The purpose of this paper is to investigate the mutual compatibility of voluntary provision of public good and strategic behavior of consumers in the market for private goods. We study the existence of equilibrium private provision of a public good within general strategic equilibrium framework with a finite number of players. The mechanism for the provision of public good follows the one due to Bergstrom, Blume and Varian (1986) and the trading mechanism for private goods follows the strategic market game with wash sales due to Dubey and Shubik (1986). The new result of the paper is the demonstration of existence of an equilibrium point in pure strategies for finite number of players. Due to the existence of trivial equilibria at which all markets are closed, equilibrium points are constructed as limits of sequences of ε- equilibria of perturbed games.

Noncooperative Oligopoly in Markets with a Cobb-Douglas Continuum of Traders

Giulio Codognato and Ludovic A. Julien

In this paper, we reconsider two models of noncooperative oligopoly in general equilibrium proposed by Busetto et al. ((2008), (2011)): a version of the Shapley's window model for mixed exchange economies à la Shitovitz and its reformulation à la Cournot-Walras. We introduce the assumption that preferences of the traders belonging to the atomless part are represented by Cobb-Douglas utility functions. This assumption permits us to prove the existence of a Cournot-Nash equilibrium of the Shapley's window model - called Cobb-Douglas-Cournot-Nash equilibrium - without introducing further assumptions on atoms' endowments and preferences previously used by Busetto et al. (2011). Then, we show that the set of the Cobb-Douglas-Cournot-Nash equilibrium allocations coincides with the set of the Cournot-Walras equilibrium allocations.

On Cobb-Douglas Preferences in Bilateral Oligopoly

Alex Dickson

Bilateral oligopoly is a simple model of exchange in which a finite set of sellers seek to exchange the goods they are endowed with for money with a finite set of buyers, and no price-taking assumptions are imposed. If trade takes place via a strategic market game bilateral oligopoly can be thought of as two linked proportional-sharing contests: in one the sellers share the aggregate bid from the buyers in proportion to their supply and in the other the buyers share the aggregate supply in proportion to their bids. The analysis can be separated into two 'partial games'. First, fix the aggregate bid at B; in the first partial game the sellers contest this fixed prize in proportion to their supply and the aggregate supply in the equilibrium of this game is $\tilde{X}(B)$. Next, fix the aggregate supply at X; in the second partial game the buyers contest this fixed prize in proportion to their bids and the aggregate bid in the equilibrium of this game is $\tilde{B}(X)$. The analysis of these two partial games takes into account competition *within* each side of the market. Equilibrium in bilateral oligopoly must take into account competition *between* sellers and buyers and requires, for example, $\tilde{B}(\tilde{X}(B)) = B$. When all traders have Cobb-Douglas preferences $\tilde{X}(B)$ does not depend on B and $\tilde{B}(X)$ does not depend on X: whilst there is competition within each side of the market there is no strategic interdependence *between* the sides of the market. The Cobb-Douglas assumption provides a tractable framework in which to explore the features of fully strategic trade but it misses perhaps the most interesting feature of bilateral oligopoly, the implications of which are investigated.