An Existence Theorem for Cournot-Walras Equilibria in a Monopolistically Competitive Economy

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October 1, 2009

Abstract

We establish an existence theorem for the Cournot-Walras equilibria in the model which consists of a representative consumer and \( n \)-monopolistically competitive firms. Instead of the traditional approach which depends on Kakutani’s fixed point theorem, we employ the theory of the relationship between games with monotone best responses and potential games. We show that, under some conditions on a utility function and production technologies, the profit maximization game is the (pseudo) best reply potential game and hence, the existence of the equilibria is proved independently of the well known convex-valued assumption on best responses. The key property is the separability of the utility function. We exclude neither cost-diminishing technologies nor the existence of fixed costs. In addition, in our framework, the rationality of each monopolistically competitive firm can be alleviated in the sense that it can figure out the inverse demand curve from less information than is required in existing studies.

JEL Classification Numbers: C62, D43, D51.

Keywords: Monopolistic Competition, General equilibrium with imperfect competition, Aggregative game, Potential game, Separable utility.

*For their many helpful comments, I would like to thank T. Kunimoto, R. Nagata, Y. Nakamura, T. Oginuma, T. Sabarwal, H. Sakane, N.Sato, H. Tanaka, and audiences at the 2009 Spring Meeting of the Japan Economic Association at Kyoto University, and The Sixth Asian General Equilibrium Theory Workshop (GETA2009) at Waseda University. Needless to say, all remaining errors are mine. This work was supported by Grant-in-Aid for JSPS Fellow.

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