

Effects of Entry Restriction on Free Entry General Competitive Equilibrium

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Abstract

This paper examines effects of entry restriction on an economy. The general competitive equilibrium model in this paper is based on Arrow and Debreu (1954) which assumes that a production set is convex or a convex cone. This paper assumes that a production set is non-convex and is not a convex cone. I build a two-goods one-factor general competitive equilibrium model under free entry. The number of firms is endogenously determined. Labor is only a factor endowment and fixed in the economy. This paper examines effects of policy which restricts the number of firms in one market to a certain number. This paper adopts a simulation method for this purpose.

The entry restriction in Good A market raises the price of Good A (p_a), total profits of firms in the Good A market (Π_a), an individual firm's output (q_a), profit (π_a), and employment (l_a) in the Good A market, an individual household's dividend income from profits (π_j), and (nominal) total output (or $p_a Q_a + Q_b$) evaluated current prices. On the other hand, this restriction in Good A market reduces the household utility level (u), (real) total output (or $Q_a + Q_b$) evaluated with the prices under free entry, an individual household's consumption of Good A (q_{aj}), the total output of Good A (Q_a) and the labor productivity of Good A (Q_a/l_a).

This paper suggests that the competitive equilibrium under free entry can achieve Pareto efficiency. As long as any firms have positive profits there is a room for improving the economic welfare through free entry. In other words, this paper suggests that the competitive equilibrium cannot be to Pareto efficient unless free entry is allowed. Perfect competition prevails in all markets in the sense that all economic entities are price takers. Labor can freely move between industries. This paper implies that the first fundamental theorem of welfare economics does not always hold under the conventional assumptions. If the assumption of free entry or zero profits is satisfied, then the theorem holds true.

The model adopted in this paper is a general equilibrium model and then has macroeconomic implications. The entry restriction reduces labor productivity of Good A market, labor share of total income, and (real) total output (or $Q_a + Q_b$). Since the entry restriction is shown to reduce a total output in the model, it reduces the transaction demand for money and results in inflation.

The model developed in this study can serve as a base model to tackle with many economic policy issues and give some useful insights. However, these will be left for further research.

Arrow, Kenneth.J., and Gerard Debreu (1954). Existence of an Equilibrium for a Competitive Economy, *Econometrica*, 22, 265-290.

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