

FREE ENTRY AND ECONOMIC EFFICIENCY: A PARTIAL EQUILIBRIUM ANALYSIS

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Abstract Within the framework of an industry with one homogeneous good, given demand function and $0 < N \leq \infty$ identical firms, we study the non-cooperative equilibria of market mechanisms where firms compete through prices and quantities and the total quantity sold and price paid by consumers is determined in the classical efficient-market-like manner. Our work is related to Baumol-Panzar-Willig (1982) and Grossman (1981).

We show first (Proposition 1) that every equilibrium will be walrasian (hence efficient) under the following three conditions:

- A) if the price quoted by a firm is lower than the market price there is a positive probability that its sales take place at a price lower than the market price,
- B) the average cost function is convex (or $N = \infty$),
- C) at price equal to minimum average cost the demand is higher than the minimum efficient scale.

Examples for the need of (A), (B) and (C) are given.

Next we investigate the conditions for a walrasian equilibrium with market price equal to minimum average cost to be sustainable as a non-cooperative equilibrium. Under the hypotheses that the set of efficient scales is an interval and that when rationing of sales is called for then the market mechanism uses a queuing system, it turns out that the following *necessary and sufficient* condition obtains (Proposition 3): with market price equal to minimum average cost the forthcoming demand can be served by a number of firms strictly fewer than N operating at an identical efficient scale. Illustrative examples are given.