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Is There a 'Change in Efficiency Theory'?

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ABSTRACT *A standard result in oligopoly models is that the more efficient firms have larger market shares. The main question being answered in this paper is: 'if a firm increases (decreases) its relative efficiency does it increase (decrease) its market share?'. We show that, in two widely used models where more efficient firms have larger equilibrium market shares, it is possible to have a firm getting relatively less (more) efficient than its rivals and, at the same time, increasing (decreasing) its market share.*

Key words: Efficiency Hypothesis; Market Share; Dominant Firm.

JEL classifications: L11, L13.

1. Introduction

A standard result in oligopoly models is that the more efficient firms have larger market shares. The central question this article poses is the following: 'if a firm increases (decreases) its relative efficiency does it necessarily increase (decrease) its market share?'. We answer this by considering two standard oligopoly models and allowing the costs of all firms to change in different magnitudes.

This question is important for at least two reasons. First, if the answer is yes, one can then extend the standard result in oligopoly models that more efficient firms have larger market shares (sometimes referred to as the 'Demsetz efficiency hypothesis'), to variations in efficiency.

The second reason is that the idea that increases (decreases) in market share can be explained by increases (decreases) in relative efficiency, has long been used in interpreting market shares' evolution. Let us see one example where the 'change in efficiency theory' has been implicitly used. There is some empirical evidence that market leadership positions decline over time (see, for example, Geroski *et al.* (1992),