

LAUREN S. NADLER, LAWRENCE J. STERN, AND ROBERT M. STERN

Department of Economics, University of Michigan, Ann Arbor, MI 48106-1100, U.S.A.

Received 10 March 1998; accepted 11 October 1998

ABSTRACT. This paper studies the effect of the introduction of a new technology on the market for a good produced by two firms. We show that the introduction of a new technology can increase or decrease the market price. The direction of the change depends on the nature of the new technology and the initial market conditions. In particular, we show that the introduction of a new technology can increase the market price even if it is less efficient than the existing technology. © 1999 John Wiley & Sons, Inc.
Journal of Economic Surveys (2000) 14, 1–25
Published online in *Journal of Economic Surveys* on 14 January 1999.
DOI: 10.1002/jes.10003

KEY WORDS: technology, market structure, oligopoly, market power, efficiency, market price

1. INTRODUCTION

The introduction of a new technology has been shown to have a significant impact on the market for a good produced by two firms. In this paper, we study the effect of the introduction of a new technology on the market for a good produced by two firms. We show that the introduction of a new technology can increase or decrease the market price. The direction of the change depends on the nature of the new technology and the initial market conditions. In particular, we show that the introduction of a new technology can increase the market price even if it is less efficient than the existing technology.

2. THE MODEL

We consider a market with two firms. Firm 1 is a leader and Firm 2 is a follower. The market demand is given by $D(p)$, where p is the price. The cost functions of the two firms are given by $C_1(q_1)$ and $C_2(q_2)$, respectively. The market is perfectly competitive, so the price is determined by the intersection of the demand curve and the marginal cost curves of the two firms. The market price is given by p^* . The profit functions of the two firms are given by $\pi_1(q_1)$ and $\pi_2(q_2)$, respectively. The market price is given by p^* .

3. THE EFFECT OF THE INTRODUCTION OF A NEW TECHNOLOGY

We consider the effect of the introduction of a new technology on the market price. We assume that the new technology is more efficient than the existing technology. We show that the introduction of a new technology can increase or decrease the market price. The direction of the change depends on the nature of the new technology and the initial market conditions. In particular, we show that the introduction of a new technology can increase the market price even if it is less efficient than the existing technology.

4. CONCLUSION

We have shown that the introduction of a new technology can increase or decrease the market price. The direction of the change depends on the nature of the new technology and the initial market conditions. In particular, we have shown that the introduction of a new technology can increase the market price even if it is less efficient than the existing technology.

