Equilibrium in Product Markets with Imperfect Information

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This paper is concerned with the relationship between information and market equilibrium: with the effect of information on the effective degree of competition, on the level of prices and their dispersion, on the variety and character of products produced by markets, on the one hand; and with the demand for information by consumers and the supply of information by producers, on the other. I shall argue not only that taking appropriate account of the costs of information provides an explanation of many phenomena which otherwise could not be explained, but that it also casts considerable doubt on a number of presumptions of traditional economics, for example, the efficiency of competition, and the policy prescriptions derived from those presumptions.

Traditional models of competition with perfect information obviously cannot explain the widely observed phenomena of price distributions, which seem sufficiently persistent that they cannot simply be dismissed as a disequilibrium phenomenon; nor can they explain advertising; nor can they explain why markets in which there are only a few large firms often seem more competitive than markets with many small firms. The work I am about to describe, which attempts to characterize equilibrium in product markets in which information is costly, provides considerable insight into these phenomena. At the same time, examining markets with costly information raises several important conundrums for competitive equilibrium theory: in the simplest of models formulated, no market equilibrium exists. The resolution of this paradox provides one of the foci of this paper.

It is important to recognize that market structure is itself an endogenous variable, a result (at least in many cases) of natural barriers to entry and incentives to agglomerate, some of which are related in an essential way to the cost of information. In this paper, I shall not have time to explore this set of relationships; throughout, it shall be assumed that the only barrier to entry is the fixed cost of establishing a new firm and that these are sufficiently small that markets will be characterized by a large number of firms.

I. Imperfect Information and Monopoly Power

A. *Competitive Markets with Monopoly Price*

It has long been recognized that imperfect information would result in firms having some degree of monopoly power. But it was presumed that a market equilibrium with "small" costs of search would be "very similar" to one with zero search costs; I suspect this belief is based on the presumption of continuity which seems to have been ingrained in economists at least since Alfred Marshall's famous dictum.

As Tibor Scitovsky and Peter Diamond have shown, this is not necessary; even with infinitesimal search costs and a very large number of firms, in market equilibrium *the price is the monopoly price.* To see this, assume all individuals have the same demand curve, all firms have the same cost functions, and also all charge the same price. Then if price is below the monopoly price, it would pay any firm to raise its price by an amount less than the magnitude of search costs for the individual with the lowest search cost, for it would then not pay any customer to leave the given store and go to another. But this, in

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Исследования Стиглица сосредоточены на том, что могут сделать плохо информированные люди и операторы, чтобы улучшить свое положение на рынке с асимметричной информацией. Он сделал вывод о том, что они могут косвенно извлечь информацию с помощью отбора и самоотбора.