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Antitrust issues in international comparisons of market structure

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Abstract

The international comparison of market structure is complicated by a lack of adequate and comparable data. This paper addresses the issues encountered in the construction of international market data from financial reports, and provides a method for the comparison of market concentration and industry diversity. A firm-level data set is constructed to compute comparable measures of market concentration and industry diversity in the food industries for the U.S. and European Community. An innovation is the imputation of the distribution of sales of sub-code products by firm and the construction of nonparametric tests.

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0. Introduction

With the increasing globalization of the world's economies, antitrust concerns for industries within a given country become increasingly complex. Traditional analysis of antitrust, market definition, and market power is focused on the "structure" of industries under scrutiny. One important component of the market power puzzle is the degree of concentration within an industry.

Applied economists have understood for some time that measuring market power is not a one-dimensional issue. Even before the advent of the so-called "New Empirical

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Industrial organization" (henceforth NEIO) in the early 1980s, economists working on these matters understood well that one could not simply look at any one aspect of industrial behavior in a given industry, and draw meaningful conclusions about the level of competitiveness therein. Bresnahan (1989, 1997) refers to the traditional empirical approach to analyzing competitiveness in a given market as the structure, conduct and performance paradigm (or the SCPP). That is, the traditional approach has been to define the relevant product and geographic markets, and then to examine structure by looking at the degree of concentration in the market and to look at pricing behavior to see if the firm(s) is (are) indeed pricing their outputs close to marginal cost. The implicit assumption in this body of work is that marginal cost is observable and measurable and that a reduced form analysis of structure and performance on cross-section data is sufficient, cf. Church and Ware (1997) for an initial critique of this approach. Church and Ware (1999, p. 239) note that under the SCP strategy, knowledge of market share is an important element in ascertaining the degree of market power within a given market.

The NEIO approach emphasizes the fact that in general, economic marginal cost is not observable. In addition, each industry has its own nuances which distinguish it from others and a "conduct parameter" is an unknown to be estimated, not assumed in a cross-section model, cf. Bresnahan (1989, pp. 952–953). Bresnahan further notes that the NEIO approach focuses on the use of an econometric model for an individual industry, NOT on its reduced form and using data over time.

The NEIO approach has been applied in practice in several applications. Ellison (1994) builds on work by Porter (1983) to show that demand for a given product (they focus on railroads) can be assumed to be log-linear in price and takes the form

$$\log(Q) = \alpha_0 + \alpha_1 \log(P) + \alpha_2 \log(L).$$

In this model α_1 is the elasticity of own price demand. The supply relationship can take the form

$$P(1 + S_i w_i/\alpha_1) = MC,$$

where S_i is the market share of the ith firm and w_i is a "conduct" parameter. As in Church and Ware (1999, p. 441), let $\theta = S_i w_i$ in the expression above. Then,

$$P(1 + \theta/\alpha_1) = MC.$$

Thus, within the NEIO framework, the elasticity of demand for the product and a firm's market share are important determinants of conduct and, ultimately, of a given firm's market power within that industry. It should be clear that regardless of one's beliefs about how to econometrically ascertain market power, a firm's market share, and ultimately the degree of concentration in an industry, are important considerations in the determination of market power in that industry.

Unfortunately, the paradigm of a firm controlled locally producing one product in a single market is rarely found and would most likely never be the case for all the firms in a market in a country that is integrated into the World Economy. In addition, even if the level of concentration is determined for the market of a particular product within a