Economists Ink

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Philip B. Nelson and Gloria J. Hurdle comment on the use of retail scanner data when analyzing mergers of manufacturers. Scanner data are prices charged by retailers, but wholesale prices are the relevant prices when considering the effects of a merger between manufacturers. While retail prices are related to wholesale prices, the relationship may not be straightforward. Assessing a merger of manufacturers calls for the use of wholesale pricing data, when such data are available. If retail price data are used, steps must be taken to ensure the data are not misleading.

China's Draft Antimonopoly Law

Bruce M. Owen and Su Sun review China's efforts to enact an antitrust law. They discuss issues related to the the proposed law and its likely effects given the unique economic, legal and regulatory contexts in which it may be enforced. They argue that it is important to establish a substantive and procedural legal framework that is incentive-compatible with economic efficiency and to pursue a policy of consistent enforcement.

Using Simulation and Econometric Models to Estimate the Effects of a Trade Restraint

Robert D. Stoner, Henry B. McFarland, and Stuart D. Gurrea describe quantitative techniques they used to estimate the effects of the Softwood Lumber Agreement (SLA) between the United States and Canada. The issue arose in a proceeding of the U.S. International Trade Commission. Stoner, McFarland, and Gurrea used simulation models to estimate the SLA's effects. They also used three separate econometric techniques: a reduced form model, a simultaneous equations model, and cointegration analysis. These methods all found that the SLA had a significant impact on Canadian lumber imports, with resulting effects in the U.S. lumber market.

What Pricing Data Should Be Used to Analyze a Merger Between Two Manufacturers?

By Philip B. Nelson and Gloria J. Hurdle

Scanner data are often used by antitrust economists to evaluate demand elasticities and cross-elasticities. Scanner data, however, are far from ideal when analyzing mergers between manufacturers. Economists should be aware of scanner data's limitations. In particular, researchers should be cautious when they try to infer elasticities at the manufacturing level from data collected at the retail level.

In merger analysis, scanner data often are used to estimate demand elasticities. These elasticities are used in market definition and in determining the likelihood of anticompetitive effects. They also may be used in simulation models to predict post-merger prices.

Scanner data, however, are prices charged by retailers, and those are not the relevant prices when considering the effects of a merger between manufacturers. The Horizontal Merger Guidelines state that the price effects of a merger generally will be considered in reference to "the price of the product at the stage of the industry being examined." (§ 1.11) If the merger is between manufacturers, the analysis should focus on wholesale prices, those charged by manufacturers to their distributors or retailer customers. While retail prices are related to wholesale prices, the relationship varies and may not be straightforward.

Similarly, the relationship between estimates of demand elasticities at retail and wholesale may be complex. These elasticities will be the same only if percentage retail mark-ups are constant as wholesale prices change. As a result, it often will be necessary to use additional information to derive the wholesale elasticity from the retail elasticity.

A number of factors may complicate the derivation of demand elasticities faced by manufacturers from those faced by retailers. Wholesale prices often are non-linear; that is, the price per unit depends on the total volume purchased. Wholesale prices may include fixed fees, quantity discounts, minimum or maximum purchase commitments, and special loyalty-contractors terms. In addition, retailers often engage in sophisticated bargaining, charging manufacturers slotting allowances or requiring "free goods." Supermarkets' forward purchasing and inventory practices may further distort the relationship between sales at wholesale and sales at retail.

The relationship between retail and manufacturer demand elasticities becomes more complex when retailers offer multiple products and multiple brands within product lines. The consumer may be lured to the retailer by a low price for one product but buy other products at the same time, making demand elasticity estimates of those other products less meaningful.

Even when these estimation issues are not serious, a manufacturer's post-merger price increase has different impacts on retailers and final consumers because the share of the price increase that retailers pass through to consumers is not always 100%. The pass-through rate will depend on retailers' pricing strategies, which in turn will be affected by the degree of competition in retail and by the cost and demand conditions that retailers face.

Using Simulation and Econometric Models To Estimate the Effects of a Trade Restraint

By Robert D. Stoner, Henry B. McFarland, and Stuart D. Gurrea

The magnitude of the effects of the Softwood Lumber Agreement (SLA) became an important issue in a recent International Trade Commission (ITC) proceeding. The SLA, which was in effect from April 1996 to March 2001, imposed additional fees on exports of lumber from the major Canadian lumber producing provinces to the United States. Soon after the expiration of the SLA, the ITC found that imports of Canadian softwood lumber threatened to injure the U.S. domestic lumber industry. One basis for that decision was the ITC's belief that the SLA had depressed lumber imports, and that with its expiration, those imports were likely to increase. The World Trade Organization (WTO) found that the ITC did not have a sufficient basis to determine that the SLA had reduced imports, and remanded the matter to the ITC.

A quantitative analysis of the SLA's effects can be performed using both simulation and econometric models. In simulation, plausible values of demand and supply elasticities and other variables are used to calculate the likely effects of a trade restraint. An example of a simulation that is used to determine the effects of restrictions on imports is COMPAS, a model that the ITC staff developed several years ago. Both the COMPAS model and another simulation model, which took the special characteristics of the SLA into account, indicated that the SLA had significantly raised the price and reduced the volume of imports of lumber.

Econometric analysis provided an alternative way to explore the effects of the SLA. Econometric analysis has an advantage over simulation because it can base all of its parameter estimates on actual data from the time that the SLA was in effect. The SLA (as well as an earlier import restraint called the MOU) has received a good deal of attention in the economics literature, and previous authors had suggested a number of different methods for measuring the SLA's (and MOU's) effects. These methods include three different econometric techniques: a reduced-form model, a simultaneous equations model, and a cointegration analysis.

A reduced-form model expresses price as a function of variables that affect demand and supply without estimating a full structural model and specific demand and supply parameters. The price of Canadian lumber imports was modeled as a function of variables including the prices of substitute products and inputs, capacity, exchange rates, and housing starts. The model also included a number of dummy variables that measured the effect of trade policy actions, including the SLA. The results indicated that the SLA caused a substantial increase in the price of Canadian lumber imports.

The reduced-form model estimated price effects, but it could not directly estimate quantity effects. Therefore, the study used a simultaneous equations model to estimate a supply curve for imports of Canadian lumber. The model was first estimated using two-stage least squares to address the endogeneity and interdependence of some of the explanatory variables. Because of the possibility that the time-series structure of the data was not appropriate for that technique, it was also estimated using the two-step feasible generalized method of moments. Using either technique, the SLA was found to have substantially reduced the volume of imports of Canadian lumber.

> "The various methods all had consistent results. The SLA had a significant impact on the volume and price of Canadian lumber imports, with resulting price and volume effects in the U.S. lumber market."

EI News and Notes

USGen-New England Sells Assets

The Federal Energy Regulatory Commission approved Dominion Resources' acquisition of USGen-New England fossil generation assets and TransCanada's acquisition of USGen-New England hydroelectric generation assets. John R. Morris worked on behalf of Dominion Resources, represented by Steptoe & Johnson, and TransCanada, represented by Andrews & Kurth. He testified that the acquisitions presented no violation of FERC's horizontal and vertical market power screens. He also testified that Dominion Resources and TransCanada passed FERC's new Pivotal Supplier Assessment and Wholesale Market Share Assessment for market-based rates in the ISO New England control area.

JamSports vs. Clear Channel

Stephen E. Siwek testified on behalf of JamSports concerning its lost profits from interference with its contract to promote the Supercross racing series. Although JamSports had no history of promoting the series, Siwek, assisted by Gale Mosteller, estimated lost profits using Clear Channel's Supercross profit summaries and revenue-sharing and other terms in JamSports' promotion agreement. The jury awarded JamSports $17 million in lost profits and $73 million in punitive damages. JamSports was represented by Segal, McCambridge, Singer, & Mahoney.

Cemex's Acquisition of RMC

Philip B. Nelson, Gloria J. Hurdle, and David A. Argue recently worked on Cemex's acquisition of RMC. This merger, which was investigated by the FTC, involved overlaps in cement, ready-mix, aggregate and related businesses. EI worked with Skadden Arps (Cemex) and Jones Day (RMC). After an extensive investigation, the FTC agreed to a consent order that required only the divestiture of certain ready-mix and aggregate assets in Tucson, Arizona.

EI Client Wins $1.35 Billion Settlement

Gary Karlin Michelson and his associated company, Karlin Technology, Inc. recently settled their intellectual property and contract litigation against Medtronic, Inc. for $1.35 billion. Dr. Michelson/Karlin had previously prevailed at a jury trial in the Western District of Tennessee. The settlement, which ended the appeals process, included licensing of patents for products and methods. EI economists Philip B. Nelson, Robert D. Stoner, and Gloria J. Hurdle provided assistance to Kirkland & Ellis LLP and to Jeffer, Mangels, Butler & Marmaro, LLP who represented Dr. Michelson and Karlin.

China's Draft Antimonopoly Law: Problems and Promise

By Bruce M. Owen and Su Sun

For more than two decades, China has been making significant progress in its market-based economic reform. To ensure that the market operates to its maximum potential, China has in recent years focused on building the legal and other institutional infrastructure to support further economic reforms. As part of this endeavor, the government has been drafting an Antimonopoly Law. The hope is that such a law will help curb excessive government interference in the marketplace, protect consumers from the forming or abuse of market power by domestic or foreign firms, and improve economic efficiency through better allocation of resources under the market mechanism.

An antitrust law should help establish a framework that encourages behavior that improves consumer welfare and economic efficiency. This understanding of economic principles needed for success is not always apparent in the case of China. For example, China's draft antimonopoly law appears to outlaw agreements among business firms except those that are permitted by the review process. This provision is not based on good economic theory. The provision should condemn contracts, etc., among competitors that have the purpose or effect of raising prices or restricting output. Contracts that are vertical (between firms and their suppliers or distributors) are seldom anticompetitive. The law should treat vertical contracts more leniently to reduce the danger of deterring competitive behavior that benefits consumers.

Competition policy is not shaped by economic theory alone. The goal, scope, and nature of a country's competition policy are closely tied to the underlying industrial organization and regulatory structure of the country. The perception of the role of competition in the country's political and economic culture is also very important, particularly in the case of China, which has been undergoing a historic transformation from a centrally planned economy to a market economy. China is striving to reform its regulatory structure to reduce government meddling with microeconomic activities. Legal reform has also been under way. These simultaneous efforts are important for the effective implementation of a competition policy. The progress is slow, however, and the rule of law is yet to be established.

Scholars who follow regulatory reform have noticed that policymakers often do not fully understand or accept that government economic regulation should serve only as a control on the excesses and failures of private markets. Often, whatever

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the intent of the regulators may have been, government intervention ends up protecting incumbent sellers rather than consumers, or, more generally, favors politically influential groups. The political forces at work are essentially the same as those that produce tariffs and quotas on imports because those imports threaten domestic producers, even though the imports also benefit consumers. Further, the tools used by regulators often have unforeseen and unpleasant consequences, and regulations that turn out to have bad effects may be very difficult to change. In consequence, competition policy in developed countries has frequently been aimed as much at government itself as at private monopolies and cartels. China's draft Antimonopoly Law devotes an entire chapter to addressing the administrative monopoly problem that arises from the government's undue interference in economic activities. That chapter is probably the most important part of the draft law.

The draft law could be improved, both to increase its clarity and to make its enforcement more consistent with the goal of improving economic efficiency. Nevertheless, there is much merit in the draft, especially its strong focus on reducing anticompetitive practices carried out or backed by government bodies. In the absence of a tradition of reliance on the rule of law, however, Chinese and foreign enterprises may find it very difficult to rely on the antitrust statute or the actions of the courts in China to predict the antitrust liability that might result from various business practices. Thus, China may lack the principal vector by which antitrust law (or indeed any law) affects economic behavior. This lack poses the potential danger that even if the law is passed, it will have little significance. That outcome would represent a significant loss for the economic welfare of the Chinese people. To avoid this scenario, the agencies that enforce the new antitrust law should actively pursue a policy of consistent enforcement based on written guidelines, stare decisis, or other sources of predictability.
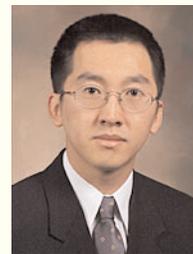
Special Consultant Bruce M. Owen has advised several foreign governments in drafting their antitrust laws. Senior Economist Su Sun has done research on China's antitrust efforts and its economic development in general. This article is based on their paper (co-authored with Wentong Zheng) "Antitrust in China: The Problem of Incentive Compatibility." The paper, which was presented at Conference on China's Policy Reforms hosted by the Stanford Center for International Development, is forthcoming in the Journal of Competition Law and Economics.

Pricing Data Used to Analyze a Merger . . . (Continued from Page 1)

Some examples can show how the pass-through rate varies with conditions. In a competitive retail market, the rate of pass through is more than 100% when marginal costs of distribution are decreasing but less than 100% when marginal costs of distribution are increasing. If the retail market is a monopoly, the rate of pass through can be more or less than 100%, depending on the shape of the demand curve. This pass-through issue makes the use of retail-level data problematic. With less than 100% pass through, the ultimate consumers see a smaller change in price for a given change in price at the manufacturing level and thus have less incentive to substitute. The converse is true with a pass through greater than 100%.

Assessing a merger between two manufacturers of consumer goods calls for the use of wholesale pricing data, rather than retail prices, when such data are available. These data should include both list prices and promotions, such as payments for displays, features, advertising, and slotting. Even when wholesale price data are not available in sufficient detail to allow econometric analysis, manufacturers' marketing documents can provide useful pricing information. For example, these data may help identify the factors considered when setting prices and provide insights into the businessmen's view of market elasticities.

Retail pricing data have serious disadvantages when examining mergers between manufacturers of consumer goods. While some economists and antitrust practitioners recognize this problem, many still uncritically embrace the use of retail data for merger analysis. Failure to recognize retail price data's potential for distortions can be a serious mistake. Analysts of mergers should be diligent at uncovering manufacturing-level data and should use them when possible. If retail price data are used, the shortcomings of these data must be recognized and steps must be taken to ensure the data are not misleading.

Principal Philip B. Nelson has worked on numerous mergers and other cases that have involved manufacturers of retail commodities, including grocery items and other consumer products. Vice President Gloria J. Hurdle has also worked on mergers in retail commodities. This piece is based on "The Implications of Robert L. Steiner's Work for Merger Analysis," written jointly with Tessie Su, which appeared in The Antitrust Bulletin, *Winter 2004.*

Simulation and Econometric Models . . . (Continued from Page 3)

Finally, the economic impact of the SLA was indirectly estimated using cointegration analysis. This method estimates the dynamic relationships among variables without imposing any structural restrictions on the model. This method simultaneously estimates short-run and long-run adjustments. A cointegration analysis can identify how excess demand factors and other macroeconomic factors affect lumber imports from Canada. This analysis showed that Canadian lumber exports grew more slowly when the U.S. demand for lumber increased if the SLA was in effect. Thus, the results of the cointegration analysis suggest that the SLA had a significant effect on the volume of Canadian softwood lumber exports to the United States.

The various methods all had consistent results. The SLA had a significant impact on the volume and price of Canadian lumber imports, with resulting price and volume effects in the U.S. lumber market. Accordingly, the expiration of the SLA in early 2001 would have been predicted to lead to a substantial increase in Canadian imports and resulting lower U.S. lumber prices. Based on this study and other evidence, the ITC affirmed its finding that Canadian lumber imports posed a threat of injury to the US industry.

EI Senior Vice President Robert D. Stoner, Vice President Henry B. McFarland, and Senior Economist Stuart D. Gurrea have worked on a number of matters involving the administration of U.S. laws affecting international trade. They also have used econometrics to address a wide variety of other issues.