Economists lend insight into antitrust risk

Sumanth Addanki of NERA Economic Consulting explains how econometric analysis can take some of the guesswork out of assessing antitrust risk

Antitrust problems can compromise or even derail an otherwise well-conceived merger or acquisition. An unanticipated challenge from antitrust enforcers can send an acquirer scrambling for remedies. Often, this leads to divestitures at fire-sale prices and a serious erosion of shareholder value. If no acceptable remedies can be devised, the transaction may even have to be abandoned.

Yet serious as it is, antitrust risk is being managed with growing success. Antitrust enforcement is no longer a realm of ill-defined standards and unpredictable outcomes. Spurred by advances in analytic methods as well as computing power, economists both inside and outside the enforcement agencies have brought considerable science to bear in analyzing the competitive impact of proposed transactions. Thanks to the increasing use of econometrics – the application of sophisticated statistical techniques to analyzing economic data – questions once debated using qualitative information and even pure rhetoric can now be answered on the basis of hard statistical evidence.

The development of objective methods for addressing antitrust issues has taken much of the guesswork out of the assessment of antitrust risk. Rather than waiting for the Department of Justice, the Federal Trade Commission or the European Commission's Merger Task Force to review a transaction, senior business leaders can have their legal and economic consultants pre-screen it early in the planning process. This pre-screening can provide some confidence that the deal is likely to sail through antitrust review or attract close scrutiny.

Pre-deal screening provides business leaders with critical insights. In some cases, senior executives may be willing to accept a relatively high level of antitrust risk because a deal has the potential to provide correspondingly high rewards. In other cases, alternative transactions that offer lower financial returns may actually make better strategic sense after antitrust risk has been taken into account. Pre-deal screening gives senior executives the chance to make these strategic choices with open eyes.

Econometrics comes of age

Antitrust laws have existed in the US for more than 100 years. Under the terms of the Sherman Act (1890): "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal." The Clayton Act (1914) prohibits mergers and acquisitions where the effect "may be substantially to lessen competition, or to tend to create a monopoly." Under the Hart-Scott-Rodino Act, a 1976 amendment to the Clayton Act, anyone considering a large acquisition must notify both the Federal Trade Commission and the Department of Justice in advance of the transaction. In Europe, the Merger Task Force conducts enforcement procedures under merger regulations passed in 1990.

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In the US, the explicit purpose of antitrust enforcement is to protect consumers. In the words of the Federal Trade Commission, practices that significantly restrict competition and that have no overriding business justification are likely to harm consumers by "increasing prices, reducing availability of goods or services, lowering quality or service, or significantly stifling innovation."

For decades, anyone in the US contemplating a merger that might arouse antitrust concerns could be certain of review by the Federal government and, possibly, by individual states, too. Before the mid-1990s, however, antitrust enforcement had much in common with the enforcement of pornography and decency laws: the standards were largely in the eyes of the beholder. This made it very difficult to predict whether a given transaction would trigger antitrust suspicions or, in fact, actually be proscribed.

A decade ago, antitrust analysis was essentially qualitative. If company A wanted to merge with company B, economists looked at their shares of some market and tried to decide whether the combined share would be too big. While nominally a numerical calculation, the quantitative aspects of the analysis were actually trivial. A much more important question was how to define the relevant market. If companies A and B were in the auto business, was the relevant market all cars in the US, all cars worldwide, small cars, big cars, cars plus trucks? And once the shares were added up, what did it mean? Is a 40% market share too much? Is 50% too much? Why? And, more particularly, why might 40% be too much in one industry and 50% be acceptable in another?

Answering such questions was traditionally a matter of argument. The parties to the transaction brought one set of evidence, the enforcers brought a different set, and the two sides fought it out. As often as not, the outcome depended more on the relative persuasiveness of the two sides than on market realities. Competitive questions were posed in a way that was not susceptible to quantification. And even if they had been, the available computing power would have been inadequate to answer them. Resolving an antitrust issue empirically typically involves truly complicated calculations. It is only in the last 10 years that technological advances have made this kind of analysis feasible.

Today, it is practical to determine how prices in a given market are actually set at a nuts-and-bolts quantitative level. Computing power is just one of the prerequisites for such analysis. Equally important is the availability of relevant

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Sumanth Addanki specializes in antitrust, intellectual property, and the evaluation of commercial damages.

In the antitrust area, Addanki has analyzed the competitive consequences of numerous mergers in a wide range of industries, from agricultural products and chemicals through consumer products, medical devices, pharmaceuticals and semiconductors, among many others; he has frequently presented the results of his analyses to US antitrust agencies and courts. He has addressed liability and damages issues involving allegations of predatory pricing, monopolization, price discrimination, resale price maintenance, tying and other antitrust violations, again in a variety of different industries. Many of his antitrust inquiries have focused specifically on intellectual property and its unique role in the analysis of market power and competitive effects.

Addanki has testified before state and federal courts, the Federal Trade Commission and various other regulatory bodies. His articles and speeches have been invited and published by the American Bar Association, the Practicing Law Institute, European Competition Law Review and many other comparable institutions.

data. For example, if the parties to a merger produce consumer goods of the sort sold in supermarkets, retail scanner data will surely be available on the sales of these products. These data are available from vendors such as Nielsen and IRI, which track actual supermarket and convenience store checkout data on a sample of stores in each geographic area. They capture literally everything that gets scanned through the checkout aisles of these stores. This jumble of transactions is then sorted into product categories, brands, package sizes and so on, and aggregated up to the weekly level. This amounts to a mind-numbing abundance of data.

Outside the supermarket arena, there are troves of third-party data in such unexpected markets as agricultural chemicals. Even in markets where there has been no syndicated research, individual companies may have conducted their own custom-designed surveys. Often, these generate enough data to support econometric evaluation.

The empirical analysis of real economic data has already gained currency in the US, and it is gaining currency in Europe. Today, econometric analysis is persuasive and sometimes dispositive in resolving antitrust issues. This is not to suggest that complete unanimity has been achieved: we cannot yet put data into a black box, turn the crank, and read the results. Nonetheless, while reasonable people may still disagree about what the data mean, the areas of disagreement are far more circumscribed than they were as little as 10 years ago.

When a transaction involves hundred of millions, if not billions, of dollars or euros, the antitrust enforcers are certain to examine it. If anything gives them pause, they are sure to look at the relevant data. In the light of this reality, senior business leaders should arm themselves with the same capability.

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The bread market in Philadelphia

A merger in the food industry illustrates the kind of perspective pre-deal screening can provide. Weston Foods, which owned the Stroehmann and Maier brands of bread, wanted to buy Bestfoods Baking, which owned the Freihofer's and Arnold brands. The acquirer anticipated that antitrust enforcers would be concerned that the transaction would endow the merged company with the market power needed to raise prices unilaterally on its bread products. Evaluating this kind of problem is known as a unilateral effects analysis.

Philadelphia was one of four cities to be analyzed. Weston's Stroehmann and Maier brands accounted for over 40% of the white bread sold in Philadelphia, while Bestfoods' Freihofer's brand was relatively small, with about 4% of sales. With this market structure, a simple unilateral effects model based solely on market shares would predict hefty merger-induced price increases on Freihofer's bread. While such increases would undoubtedly cause the Freihofer's brand to lose some sales, the model would predict that Weston's brands, with over 40% of the market, would recapture a substantial portion of these lost sales.

Was this hypothesis correct? The answer hinged on whether the Freihofer's and Weston brands were, in fact, particularly close substitutes for one another. This is precisely the kind of question that econometric analysis is designed to answer. In economic terms, it is a question that revolves around own-price elasticities and cross-price elasticities of demand.

The result of the analysis was good news for the merging parties. After analyzing extensive supermarket sales data, NERA Economic Consulting found that the brands in question were not close substitutes for one another. In other words, if the price of the Freihofer's brand bread were to be raised, relatively few of the lost sales would go to Stroehmann or Maier. Freihofer's would lose sales to private label brands and other brands, but not to Stroehmann or Maier, their combined market share notwithstanding. The merged firm would, therefore, have little incentive to raise prices. Ultimately, the Department of Justice accepted NERA's reasoning about the transaction's potential impact on competition.

Defining a market

Today, as in the past, antitrust issues often revolve around market definition. Here, too, econometrics can play an extremely helpful role.

Several years ago, Brown & Williamson acquired American Tobacco. A key question was whether premium and discount cigarettes competed with each other. As the two companies were much more prominent in discount cigarettes than they were in the premium segment, this question had important implications for the measurement of market shares. If all cigarettes are one large market, the parties' shares were modest. On the other hand, if the discount segment were a market unto itself, the transaction would make for substantial increases in concentration. Which was the relevant market?

Econometrics is well suited to address this question. Under merger guidelines issued by the Department of Justice and the Federal Trade Commission, a market is defined as the smallest group of products for which a hypothetical monopolist could profitably impose a small but non-transitory price increase of, say, 5% or 10%.

Deciding whether discount and premium cigarettes constitute separate markets translates into a question about elasticity of demand: Do consumers respond to price changes by substituting one type of cigarette for the other? Based on the profit margin and the size of the hypothetical price increase, a relatively simple formula gives the critical elasticity of demand. In the case of discount cigarettes, this number turned out to be 1.82. If the true elasticity were greater than 1.82, discount cigarettes would not constitute a market. If the elasticity were less than 1.82, the discount segment would be a relevant market unto itself. In fact, econometric analysis found that the true elasticity was 2.5, which was substantially greater than 1.82. Discount cigarettes, we showed, should not be considered a market. This analysis helped remove a serious impediment to the acquisition.

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Developing antitrust remedies

Of course, econometric analysis does not always produce such favourable results. At times, we find that the merging firms' products do, in fact, compete head-to-head with one another. Even so, all is not necessarily lost. Econometric analysis, run in reverse, can also be used to identify suitable fixes for the problem. Identifying a divestiture or other remedy early in the planning process can contribute substantially to a merger's overall success. When divestitures take place under severe pressure, sellers are often forced to settle for disappointing prices. With advance notice and greater time to plan, they can generally achieve better results.

Some years ago, Vail Resorts Inc owned just two ski areas in Colorado – Vail itself, and Beaver Creek. When a competitor put the Breckinridge, Keystone and Arapahoe Basin ski areas on the market, Vail Resorts was eager to buy them. The company already had first-class skiing at Beaver Creek and Vail. Of the new areas, Breckinridge had decent slopes in an attractive setting, Keystone was more family-oriented, and only Arapahoe Basin had truly superlative skiing.

Skiers who fly to their vacations have a wide range of choice in Wyoming, Utah and elsewhere, so antitrust concerns were focused on Denver-area skiers who drive to slopes within some 60 miles of home. Because no more than 10 such slopes were available to these skiers, the US, Department of Justice expressed concerns that combining five of them under one roof would represent a serious concentration of ownership.

In contrast to the markets for bread and cigarettes, the ski resort market has no third-party sources of data. Therefore, we therefore conducted our own survey of Denver-area skiers. We learned that they are highly price-sensitive consumers who will choose the ski area that offers lift tickets at the lowest available price.

Our econometric analysis indicated that a single divestiture – of Arapahoe Basin – would eliminate antitrust concerns raised by the acquisition. Only Arapahoe Basin would add to Vail Resort's share in the market for truly top-level skiing. While the other resorts would broaden its portfolio, they were not the kind of close substitutes for other Vail holdings that would raise concerns about unilateral price increases. Thanks to this divestiture, Vail Resorts was able to satisfy the antitrust enforcers and reap most of the benefits of the merger.

Pre-deal uses of econometric analysis

Whether a company is a buyer or seller, knowing something about how the econometrics are going to play out is helpful in many ways, including managing the antitrust risk and choosing between alternative potential deals.

One big advantage is in timing. If data are readily available either in-house or from a third-party source, a buyer can evaluate a proposed acquisition before making a first approach to the target. Particularly in cases where the superficial facts suggest that there might be antitrust issues, econometric analysis of the marketplace data may be a prerequisite for getting the target to agree to discuss a deal.

A firm that is trying to sell assets can use econometric analysis to handicap the antitrust risks posed by a variety of alternative buyers. This handicapping can help determine which offer is, in economic terms, the best one. Depending on the seller's imperatives, a bid that is 10% higher but presents substantially more antitrust exposure may simply not be rewarding enough to compensate for the added risk.

Pre-screening does not necessarily entail the kind of full-blown analysis that precedes a presentation to an enforcement agency or court. Some of the potential transactions may raise such obvious antitrust concerns that they really have no chance of success. These can often be eliminated through a relatively brief analysis. A more feasible set of targets can then be evaluated in greater detail. Detailed analysis can ensue once the field has been narrowed further.

For many reasons, mergers and acquisitions often fail to deliver the anticipated boost to shareholder value. By using econometrics to pre-screen proposed transactions, both buyers and sellers can now approach deals with a clear view of the antitrust risks they are likely to face. Forewarned is forearmed.

This article first appeared in "Viewpoint, the Marsh & McLennan Companies journal". MMC owns the copyright for the article.

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