Perkins Coie's Henry Hauser, Shylah Alfonso and Jon Jacobs discuss how the use of artificial intelligence and algorithms in pricing decisions can trigger antitrust concerns.

We are in the midst of a significant shift in how companies price their products and services. Instead of tasking executives and sales representatives with calculating and determining an optimal price, a "rapidly increasing" number of firms are using pricing algorithms to recommend and sometimes even determine prices.

Pricing algorithms can quickly calculate profit-maximizing prices by leveraging a litany of inputs including raw material, production, and service costs; historical and competitor pricing; market supply and demand; economies of scale; production levels and limitations; inventories; and business objectives.

Like many technological breakthroughs, the rapid advancement and widespread adoption of pricing algorithms can create both efficiency benefits and competitive concerns. It is therefore no surprise that the use of artificial intelligence and pricing algorithms was a frequent topic of discussion at the 2024 American Bar Association Antitrust Spring Meeting.

However, there was a striking lack of consensus over the nature and scope of these concerns and whether they can be addressed under Section 1 of the Sherman Antitrust Act.

A review of the case law and academic literature reveals three core competitive issues around algorithmic pricing: (1) human agreements to fix prices with algorithmic implementation, (2) common algorithms using competitively sensitive data, and (3) independent algorithms using public data. As discussed below, each scenario presents unique legal and factual considerations for businesses to understand.

Human agreement

The first scenario, which occurs when humans agree to fix prices and then leverage algorithms to do the work of implementing, monitoring, and enforcing their agreement, is plainly covered under the Sherman Act. The "agreement" that Section 1 of the Sherman Act requires exists between human actors before algorithms even enter the picture.

Specifically, a violation attaches when human actors reach a meeting of the minds or a conscious commitment to achieve an unlawful objective, such as increasing prices or decreasing output. Proving this agreement requires no technical knowledge or analysis of an algorithm.

The most prevalent example of this scenario is the Department of Justice (DOJ) Antitrust Division's prosecution of anticompetitive conduct in the market for wall posters. There, two companies had been competing aggressively for the sale of posters through an online marketplace.

What followed was a race to the bottom, with some posters listed for as little as a penny plus shipping. But instead of rearing down and competing, the sellers opted to collude. Through the exchange of emails and telephone calls, the companies agreed to work together to increase prices of posters sold online.

The Antitrust Division swiftly prosecuted the conduct. Enforcers secured two individual felony pleas and one corporate plea. The wall posters prosecution clearly shows that antitrust laws already cover concerns around algorithmic pricing where humans agree to fix prices, and then use algorithms to execute and implement that agreement.

As former U.S. Assistant Attorney General Bill Baer stated when the first guilty plea was announced, an agreement to fix prices runs afoul of the Sherman Act "whether it occurs in a smoke-filled room or over the Internet using complex pricing algorithms." From e-commerce to "brick and mortar businesses," criminal penalties are triggered under the Sherman Act when human actors agree to fix prices. The presence of pricing algorithms does not change that result.

However, it is important to recognize that pricing algorithms offer a new wrinkle in cartel law because such algorithms can quickly observe, synthesize, and respond to vast amounts of data. This could make it easier for coconspirators to detect when a company is "cheating" on its cartel partners by selling below a fixed price or by producing above an allocated quota.

Common algorithm with sensitive data

We now turn to the second concern around algorithmic pricing, which is the possibility that competitors feed competitively sensitive data into a shared pricing algorithm that results in higher prices or lower output. This conduct could potentially be prosecuted as a "hub-and-spoke" conspiracy. The Federal Trade Commission (FTC) and DOJ have prevailed against Toys "R" Us and Apple, respectively, on hub-and-spoke charges.

Further, courts have long held that plaintiffs can allege a price-fixing violation without direct evidence of an agreement between competitors.

For example, plaintiffs can allege parallel conduct and "economic actions and outcomes that are largely inconsistent with unilateral conduct but largely consistent with explicitly coordinated action." This framework could address concerns around agreements between competitors to share competitively sensitive data through a shared pricing algorithm.

Such conduct is under heavy scrutiny by enforcement agencies. FTC Chair Lina M. Khan has remarked that "[i]nstances in which companies may be signaling to each other that they're looking to engage in coordinated price hikes ... [and are] on our radar."

The DOJ's Antitrust Division, in withdrawing several safe harbors regarding the sharing of information in healthcare markets, added that "we are experiencing an inflection point in the use of algorithms, data at scale, and cloud computing."

At the Spring Meeting Agency Update with the Antitrust Division, Principal Deputy Assistant Attorney General Doha Mekki highlighted the division's several statements of interest and amicus briefs on this issue, including joint statements filed alongside the FTC.

Independent algorithm with public data

During a recent U.S. Senate hearing, the Hon. Bill Baer shared his views on a third concern around algorithmic pricing, which is that companies could deploy code that "instructs the machine to maximize profits; it gathers publicly available pricing information about its competitors; and 'learns' in nanoseconds that price competition does not get you there, stops discounting, and stabilizes prices."

The concern here is that profit-maximizing algorithms can reach collusive results, even absent (1) a human agreement to fix prices, (2) access to competitively sensitive information, or (3) competitors using the same pricing software with common algorithms. Currently, it is unclear whether the Sherman Act reaches this flavor of conduct because evidence of an agreement may be lacking.

Looking ahead

As is often the case, no single solution is fit to address all issues that can arise with new technologies and business practices. However, this is not necessarily a bad thing. Tailored solutions are often the best tool for targeting anticompetitive conduct while leaving procompetitive and efficient practices intact.

For example, the Antitrust Division's successful track record of prosecuting conspiracies where humans agree to fix prices and use algorithms to implement their agreement shows that the Sherman Act is up to the task of addressing this competitive concern.

Second, existing case law that allows plaintiffs to allege an agreement through circumstantial evidence, including parallel conduct and "plus factors," suggests that the Sherman Act is capable of covering the sharing of competitively sensitive information through a common algorithm.

Third, technical rather than legal solutions may present the most compelling solution for concerns that independent algorithms, without human involvement and without access to competitively sensitive data, could create market outcomes that harm consumers and reduce efficiency.

Businesses deploying algorithms to recommend or set prices or production should be diligent in investigating the inputs and factors that those algorithms leverage, including whether they incorporate competitively sensitive information from competitors. A lack of understanding of how your algorithms function can result in costly litigation.

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