

CPI's North America Column Presents:

Pricing Algorithms: Conscious Parallelism or Conscious Commitment?

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Background

Headline after headline has proclaimed the demise of bricks-and-mortar retail and the rise of the online merchant. Recent studies show that 8 out of 10 Americans now shop online, with almost half of US adults shopping online either weekly or a few times a month.¹ The online retail environment, in addition to reshaping the physical retail landscape, also may be fundamentally changing merchant pricing behavior. Using algorithms, competitors can now identify and “scrape” pricing information and pricing deviations. In particular, pricing algorithms—which are set by computers—can be programmed to react to certain programmed parameters (e.g., competitor pricing) in setting a price. The question for antitrust enforcers has become whether these programs can cross the line from benign conscious parallelism to something more.

The global enforcement community recently has taken notice of pricing algorithms and begun the debate over their antitrust implications. A background note by the OECD Secretariat, for example, states that “the increasing reliance of big online companies on secret algorithms poses a concern that the organization of the world’s information is, to some extent, controlled by automated systems in the hands of a few market players.”² One of the main concerns discussed in connection with pricing algorithms is whether they can facilitate collusion by monitoring competitor information to enforce or implement an anticompetitive agreement.³ Moreover, there is a concern that self-learning algorithms could possibly enable a monopoly even if they’re not expressly programmed to do so.⁴ The Secretariat also identifies three market failures that suggest that the market cannot address these anticompetitive concerns: (1) imperfect information because of lack of transparency in how algorithms are programmed and operate; (2) barriers to entry in “complementary assets” (e.g., advanced machine learning and data-mining software); and (3) the effect that algorithms might have on reducing innovation because they do not “internalize the spill-overs that a variety of knowledge and multi-disciplinary approaches” often associated with discoveries and human creativity.⁵

The US agencies advanced a more nuanced approach in a recently submitted paper to the OECD.⁶ As recognized in the background note by the OECD, the agencies took the position that pricing algorithms can lead to anticompetitive behavior when they facilitate collusion but that they can also have procompetitive benefits. The dynamic approach of pricing algorithms, for example, can enhance competition by responding to consumer demand.⁷ Ultimately, the agencies suggest that, without evidence of concerted action, independent adoption of an algorithm—even if it is the same or similar to other algorithms used and “even if it makes interdependent pricing more likely”—is unlikely to result in antitrust liability.⁸ Further, on a policy level, the agencies note that the purpose behind the antitrust laws is to “safeguard the competitive process.”⁹ The laws were not enacted to be used as a price regulating mechanism.¹⁰ Moreover, as the Federal Trade Commission cautioned in its 2013 statement closing the

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¹ PEW RESEARCH CENTER, Online Shopping and E-Commerce (2016), <http://www.pewinternet.org/2016/12/19/online-shopping-and-e-commerce/>.

² Org. for Econ. Co-operation and Dev. [OECD], *Algorithms and Collusion - Background Note by the Secretariat* § 6.1, OECD Doc. DAF/COMP(2017)4 (June 21-23, 2017), [https://one.oecd.org/document/DAF/COMP\(2017\)4/en/pdf](https://one.oecd.org/document/DAF/COMP(2017)4/en/pdf) [hereinafter “Background Note”].

³ See *Id.* at § 4; OECD, *Algorithms and Collusion – Note by the United States*, OECD Doc. DAF/COMP/WD(2017)41 § 4.1 (June 21-23, 2017), [https://one.oecd.org/document/DAF/COMP/WD\(2017\)41/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2017)41/en/pdf) [hereinafter “U.S. Note”].

⁴ *Background Note*, *supra* note 2, at § 4.3.4. Whether computers can collude using algorithms is still debated, as exemplified by recent statements by the European Commission’s chief economist that cast doubt on the idea.

⁵ *Id.* at § 6.1.2.

⁶ *U.S. Note*, *supra* note 3.

⁷ *Id.* at § 2.

⁸ *Id.* at § 4.1.

⁹ *Id.* at § 3.

¹⁰ *Id.*

Google search investigation: “Product design is an important dimension of competition and condemning legitimate product improvements risks harming consumers. Reasonable minds may differ as to the best way to design a search results page and the best way to allocate space among organic links, paid advertisements, and other features. And reasonable search algorithms may differ as to how best to rank any given website.”¹¹ Taken as a whole, these statements suggest that the US antitrust agencies are concerned about harm to the competitive process and, without evidence of collusion, are weary of regulating or second guessing product design decisions.

Monsanto and Matsushita

Debate about the role of pricing algorithms in facilitating collusion necessarily begs the question—where is the line between the lawful observation and use of publicly available information, e.g., conscious parallelism and the kind of “plus factors” needed to prove a “conscious commitment to a common scheme designed to achieve an unlawful objective,” *i.e.*, an unlawful conspiracy?¹² The antitrust agencies’ recent submission suggests that liability is limited to contexts involving more than mere implementation of a pricing algorithm drawing inferences from publicly available prices. The US agencies have been clear that simply using an algorithm is not enough to create antitrust liability; instead, the focus is on whether that algorithm was used knowingly to establish or implement an unlawful agreement to fix prices or limit output, whether horizontally or through a “hub-and-spoke” conspiracy.¹³

Supreme Court precedent firmly supports the US agencies’ view. In *Monsanto*, a wholesale distributor sued Monsanto after Monsanto declined to renew its distributorship agreement, alleging that Monsanto conspired with other distributors to fix their resale prices and had taken action against the plaintiff for undercutting the others on price.¹⁴ The Court ruled that plaintiffs must present evidence when alleging a conspiracy that “tends to exclude” the possibility that defendants acted independently.¹⁵ In reaching its holding, the Court reasoned that, when ambiguous evidence is presented, conduct that is as consistent with lawful competitive activity as not is therefore not sufficient proof, on its own, to show a conspiracy.¹⁶ Applied to the facts in the case, the Court made clear in *Monsanto* that “constant communication about prices and marketing strategy does not alone show that” actors are not making independent pricing decisions.¹⁷ The Supreme Court later expanded its conspiracy analysis in *Matsushita*, setting out factors that US courts typically consider today, including the defendant’s motive (e.g., where the behavior is economically rational) and whether the defendant’s behavior is consistent with an independent interest.¹⁸

Applied to algorithms, it remains an open question as to how the use of pricing algorithms standing alone would overcome the standard set forth in *Monsanto*. On one hand, algorithms can enable reactions to pricing information to be much more efficient and frequent. And some may argue that they can make implementing or enforcing unlawful agreements easier, in that they can serve as a mechanism to monitor the behavior of competitors, which can go to motive. However, it is difficult to see how pricing algorithms alone are more than software that enables competitors to constantly monitor and react to competitor pricing information; behavior that *Monsanto* suggests would be insufficient on its own to prove a

¹¹ Statement of the Fed. Trade Comm’n Regarding Google’s Search Practices, *In re Google Inc.*, FTC File No. 111-0163 (F.T.C. Jan. 3, 2013), https://www.ftc.gov/system/files/documents/public_statements/295971/130103googlesearchstmtofcomm.pdf.

¹² *Monsanto Co. v. Spray-Rite Service Corp.*, 465 U.S. 752, 764 (1984) (citations omitted).

¹³ *U.S. Note*, *supra* note 3, at § 4.1.

¹⁴ *Monsanto Co.*, 465 U.S. at 756-57, 765.

¹⁵ *Id.* at 764.

¹⁶ *Id.*

¹⁷ *Id.* at 762.

¹⁸ See *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986).

conspiracy.¹⁹ The use of a pricing algorithm, without more, is also consistent with a competitor's independent interest because it enables the competitor to react nimbly to new pricing information in the market, which can facilitate more efficient competition.

Despite the agencies' recent submission, it remains to be seen what type of conduct plaintiffs will allege in suits to prove conspiracies involving pricing algorithms. Under Supreme Court precedent, plaintiffs will likely need to allege more than the use of a pricing algorithm alone; where the line is drawn with the type of conduct alleged, however, remains open to debate.

¹⁹ A recent decision by the UK's Competition and Markets Authority also focused on how a pricing algorithm was used to implement a price fixing arrangement by adjusting so as to not undercut the actors' prices. See Online sales of posters and frames, Case 50223, Decision of the CMA, dated 12 August 2016, <https://assets.publishing.service.gov.uk/media/57ee7c2740f0b606dc000018/case-50223-final-non-confidential-infringement-decision.pdf>.