



## VIRTUAL COMPETITION: THE PROMISE AND PERILS OF AN ALGORITHM-DRIVEN ECONOMY

BY ARIEL EZRACHI AND
MAURICE E. STUCKE
CAMBRIDGE, MASS.: HARVARD
UNIVERSITY PRESS, 2016, 248 PAGES

REVIEWED BY DAVID A. PRICE

rom its earliest days of commercial use in the 1990s until today, the web has been almost universally viewed as a boon to consumers — practically like Santa Claus. It makes the competing sellers of an item easy to find and makes comparison shopping trivial, certainly next to the old-world alternatives of schlepping from store to store or making phone calls. In the consensus view, the hypercompetitive markets that result from the web's land-scape mean more choices and lower prices. From a consumer's perspective, at least, what's not to like?

Plenty, say Ariel Ezrachi and Maurice Stucke. Ezrachi, a professor of antitrust law at Oxford University, and Stucke, a law professor at the University of Tennessee, argue in their book *Virtual Competition* that the web may giveth unto consumers, but it also taketh away. In particular, they contend, our affection for online shopping has obscured a number of latent dangers that the web poses to competitive markets and consumer welfare. Foremost among these are invisible collusion, price discrimination, behavioral discrimination, and what they call the "frenemy" dynamic.

Collusion, according to Ezrachi and Stucke, can flourish in the world of online commerce in several ways. First, intentional cartel behavior is easier among online competitors, in part because online prices are highly visible — which means conspiring firms can monitor each other reliably and automatically. Second, the rise of firms like Uber, which sets the prices of numerous independent agents, means that a swath of sellers — such as Uber's drivers — do not compete with each other on price. It's a legal form of price-fixing. (To be fair, Uber itself broke a governmentally organized cartel of sorts; the regulated taxi drivers with whom Uber drivers share the road don't compete with each other on price, either.)

Ezrachi and Stucke also foresee threats to competition from the use of increasingly sophisticated pricing algorithms, which autonomously set prices for the firm's offerings at their optimum levels. Even without any explicit direction to refrain from undercutting rivals, the algorithms might well arrive at such an outcome. "No one will be tempted to improve their products, lower prices, or enter new markets," they argue, "because others will immediately detect and punish this initiative."

## The Web Taketh Away

In addition, online commerce opens new frontiers for price discrimination, in Ezrachi and Stucke's view — that is, charging different consumers different prices for the same product based on their willingness to pay. Airfares that vary with the date of purchase are an example. Online sellers can readily use a consumer's buying history, web behavior, and other personal information to achieve more perfect price discrimination. While the authors acknowledge that price discrimination can be economically efficient, they believe it may be unfair to consumers and may enable large, established firms to erect barriers to entry.

Ezrachi and Stucke are also concerned by what they call "behavioral discrimination," by which they mean using human biases to steer consumers' buying behavior. (Others have called it "nudging.") One example they give is a travel booking site leading some users toward more expensive hotels by placing them higher in search results. Another is that of companies artificially increasing the complexity of buying options to make comparison shopping harder. Much as price discrimination has a venerable history in the brick-and-mortar world, behavioral discrimination is a descendant of the "motivational research" vilified by Vance Packard in his 1957 bestseller *The Hidden Persuaders*.

Finally, the authors warn of anti-competitive behavior among frenemies, firms that cooperate in some areas of activity and fight in others. In particular, the rise of so-called super-platforms, companies that provide platforms for other platforms — in the way that Apple and Google provide a platform for Uber's ride-sharing service within their phone operating systems, or Amazon provides a platform for third-party sellers — may lead to suppression of competition. For example, if Apple enters the ride-sharing business itself in some fashion, it may wish to use its power over its phone operating system to make Uber's life more difficult.

While Ezrachi and Stucke's account is highly readable and carefully researched, one does feel some cognitive dissonance when shifting from the pages of their book to the actual online world. Simply put, if the largest online commerce firms are in fact exercising significant market power in the economic sense, they aren't acting like it. There can be little doubt that markets with major online players have become more competitive rather than less with the advent of the web. The financials of many of these firms also seem inconsistent with the idea that they are exercising great market power. Amazon, for instance, has a lower net profit margin than Walmart.

Ezrachi and Stucke might argue that the online firms are just engaging in temporary strategic behavior. Maybe. But without a way to tell the difference, their argument remains speculative — even if it's interesting speculation. **EF**