



## THE HERFINDAHL-HIRSCHMAN INDEX

**The Herfindahl-Hirschman Index (HHI) is the most well-accepted measure of market concentration. After defining the relevant market, the HHI is calculated by squaring and summing each firm's market share. An HHI near zero corresponds to "atomistic competition". An HHI of 10,000 corresponds to monopoly.<sup>1</sup>**

The HHI is a good tool for analysts, industry participants, and competition authorities around the world. But both HHI calculations and individual firm market shares depend on how the market is defined. Consider the July 29, 2020 testimony before Congress by Amazon CEO Jeff Bezos:

Amazon accounts for less than 1% of the \$25 trillion global retail market and less than 4% of US retail. There's room in retail for multiple winners. We compete against large established players like Target, Costco, Kroger and of course, Walmart, a company more than twice Amazon's size. 20 years ago, we made the decision to invite other sellers to sell in our store to share the same valuable real estate we spent billions to build, market and maintain.

Along with Bezos' proffered market definitions (retail sales globally or in US), one could measure Amazon's market share using either (i) ecommerce sales, or (ii) ecommerce sales by platforms with third party sellers. Obviously, Amazon's market share would be much higher. If we were to adopt the former and use US ecommerce sales as the denominator, then Amazon's market share has increased from 34 percent in 2016 to an estimated 50 percent in 2020.<sup>2</sup>

Does a higher market share for an individual firm mean that the firm has greater market power?  
Does a high HHI mean that firms together can exercise market power? The US antitrust guidelines use economic concepts to answer this question:

Market definition focuses solely on demand substitution factors, i.e., on customers' ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service. ... Some substitutes may be closer, and others more distant, either geographically or in terms of product attributes and perceptions.

The statement above focuses on whether an individual firm or group of firms can raise prices profitably. Whether a price increase is profitable does indeed depend on the reactions of consumers and potential entrants. While economic analysis of consumer responses to the higher

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<sup>1</sup> <https://www.investopedia.com/terms/h/hhi.asp>. According US antitrust authorities, HHIs between 1,500 and 2,500 point to be *moderately concentrated* and HHIs in excess of 2,500 point to be *highly concentrated*.

<sup>2</sup> <https://www.statista.com/statistics/788109/amazon-retail-market-share-usa/>



coffee prices is straightforward, how users of high-tech platforms respond to changes in prices and quality is not. Maybe that is why US antitrust authorities approved Facebook's acquisitions of Instagram (2012) and WhatsApp (2014).

Readings:

1. US Department of Justice & Federal Trade Commission, [Horizontal Merger Guidelines § 5.3 Market Concentration](#) (2010);
2. <https://www.investopedia.com/articles/investing/021115/facebook-most-important-acquisitions.asp>
3. Testimony of Jeff Bezos, Amazon's CEO, before the 116th Congress, Committee on the Judiciary, Subcommittee on Antitrust, Commercial and Administrative Law, "Online Platforms and Market Power, Part 6: Examining the Dominance of Amazon, Apple, Facebook, and Google", July 29, 2020,