**RESEARCH BRIEF** • JANUARY 2026

# Time-Based Competition Defines Digital Markets: Field Experiments Show Breaking Up Meta Would Harm Users

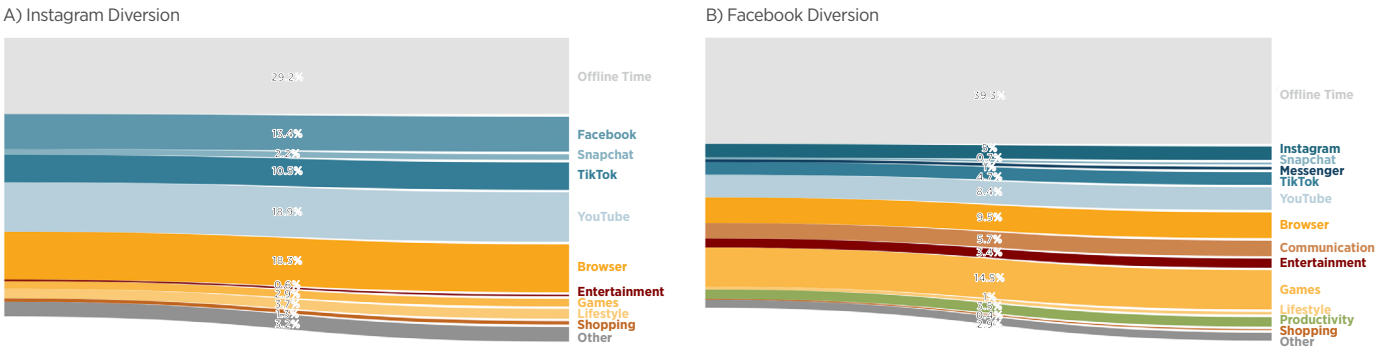
*Based on BFI Working Paper No. 2026-01, "Consumer Demand and Market Competition with Time-Intensive Goods," by Joseph Goodman, Compass Lexecon; Lancelot Henry de Frahan, University of Chicago; Justin Holz, University of Michigan; John A. List, University of Chicago; Evan McKay, Compass Lexecon; Niall McMenamin, Compass Lexecon; Magne Mogstad, University of Chicago; Sally Sadoff, UC San Diego; and Hal Sider, Compass Lexecon*

Field experiments reveal that Facebook and Instagram compete broadly for user time, not narrowly with Snapchat for social networking. When platform usage drops, only 6-16% of diverted time shifts to other social networks; the rest scatters across gaming, YouTube, TikTok, and offline activities. This challenges conventional antitrust market definitions based on functional similarity and shows that breaking up Meta would likely harm users by increasing advertisements.

In 2020, the Federal Trade Commission (FTC) sued to break up Meta, arguing that Facebook and Instagram represent an illegal monopoly. According to the FTC, Facebook and Instagram compete in a narrow market for "personal social networking" where their only competitor is Snapchat. Meta's (winning) rebuttal? Gary Becker's 1965 theory of time allocation.

Antitrust cases like FTC v. Meta hinge on defining a product's market; in other words, determining who its competitors are. If Facebook's and Instagram's only competitor in the market

**Figure 1** · Share of Time Reallocated to Each Activity




Note: These figures show diversion ratios, the share of reduced platform time reallocated to each activity, for Instagram (A) and Facebook (B). Offline time captures the largest share for both platforms (29% and 39%), while other social networks capture relatively small shares (16% and 6%).

for connecting online is Snapchat, then Meta would likely represent an anticompetitive monopolist. But what if Instagram and Facebook compete not solely with Snapchat for our social networking, but with a wide array of other activities, for our *time*?

To identify their products' **substitutes**—what consumers would turn to in lieu of Facebook or Instagram—Meta commissioned the first **field experiment** ever conducted for a major federal antitrust case. This paper is the result of that research.

**The Theoretical Framework**

True to Chicago Economics tradition, the researchers were guided by theory, which they tested using real-world data. The theoretical foundation came from Gary Becker's 1965 "A Theory of the Allocation of Time" in which he argues that consumers derive value not from goods alone, but rather from the combination of goods with time. A movie ticket, for example, is worthless without two hours to watch the movie, just as is a hammer absent time to swing it. Becker goes on to show that every activity has a "full price," which combines the cost of goods and the **opportunity cost** of time. The true cost of seeing a movie is the combination of the $15 ticket with two hours of foregone earnings at $20 an hour.

For "free" platforms like Facebook and Instagram, the true cost consists of the opportunity cost of users' time (and the disutility of watching ads). Therefore, time intensive activities ranging from sleeping to scrolling all bear the same cost, in terms of foregone dollars per hour. In this way, Facebook and Instagram compete not just with social media apps like Snapchat, but with YouTube, gaming, web browsing, and even sleep.

Econ-speak aside, it makes sense: Time spent on Facebook isn't simply time that would've been spent on Snapchat, it's time that would've been spent doing literally anything else. To test whether Becker's ideas apply to Meta, and to define the company's competitive market and the impacts of a potential de-merger, the authors designed two large-scale field experiments.

**Testing the Theory: Two Field Experiments**

*Experiment 1: Revealing Meta's True Competitors*

The researchers conducted dual pricing experiments, one with roughly 3.5 thousand Facebook users and one with roughly 2.8 thousand Instagram users. Participants in each experiment were randomized between treatment and control groups. Those in the treatment group received $4 per hour (prorated for partial hours) for reducing their engagement below their baseline levels, with a maximum of $125 per week. The control group received fixed weekly compensation but no financial incentives to reduce engagement. The authors tracked all phone activity, and measured where diverted time flowed when Facebook or Instagram became more "expensive". They found the following:

- The treatment substantially reduced time on both platforms. In the Facebook experiment, treatment group usage dropped by about 30 minutes per day (58%), resulting in a 50.2-minute difference between treatment and control groups. In the Instagram experiment, treatment group usage fell by 25 minutes per day (60%), yielding a 34.3-minute difference.
- Only a small fraction of diverted time shifted to other social networks. Six percent of reduced Facebook time went to either Instagram or Snapchat, while 16% of reduced Instagram time went to either Facebook or Snapchat.
- Offline activities, by contrast, captured the largest share of diverted time. Activities including sleep, work, socializing, and other non-phone activities accounted for 39% of diverted time for Facebook, and 29% for Instagram.
- The remainder of diverted time was redistributed to other apps. Gaming apps showed the highest diversion from Facebook, despite serving completely different

**substitutes:** goods or services that consumers use interchangeably, such that when one becomes more expensive or less available, demand for the other increases

**field experiment:** a randomized controlled trial conducted in real-world settings where researchers manipulate variables to measure causal effects on actual behavior

**opportunity cost:** the value of the next best alternative foregone when making a choice, such as the earnings given up when spending time on leisure instead of work

purposes. Similarly, YouTube had the highest diversion from Instagram.

- The portion of a user's day already spent on an activity predicted where their diverted time went. In other words, users shifted more time to activities they already did frequently.
- Apps with similar time intensity attracted diverted time, even when they served different purposes. TikTok and YouTube showed high diversion from Facebook and Instagram despite their distinct features and functionality. These platforms are "time-intensive" in Becker's framework—they require the same focused, active attention as Facebook and Instagram. This time intensity, rather than functional similarity, made them strong substitutes.

The pricing experiment revealed the breadth of Facebook's and Instagram's competitors, challenging the FTC's narrow market definition. To evaluate whether breaking up Meta would benefit or harm users, however, two more questions needed to be answered: How would separated platforms behave differently? And, what would that mean for the value users receive?

*Experiment 2: Measuring Ad Sensitivity*

To model how Facebook and Instagram would operate independently, the authors needed to measure how sensitive users are to ads—the platforms' primary business lever and likely the key variable they would adjust if separated.

For this, they turned to a second experiment that Meta initiated in 2013 and continues running today. Upon account creation, users are randomly assigned to see either zero ads (holdout group) or typical ad loads (control group). By January 2023, this included 2.2 million Facebook holdout users and 15.3 million control users, and 3.8 million Instagram holdout users and 7.6 million control users. The authors compared usage patterns between these groups to measure how ads impact usage. They found the following:

- Users are highly insensitive to ads. Compared to seeing no ads, typical ad loads reduce Facebook usage by just 2.0 minutes daily and Instagram usage by 0.62 minutes. This means doubling the number of ads would reduce usage by only 9% on Facebook and 4% on Instagram.

**Policy Implications: Modeling a De-Merger**

The two field experiments revealed who competes with whom and how users respond to ads. But predicting whether a de-merger would help or harm users requires understanding how platforms would behave differently when separated. Would they raise ad loads? Lower them? And what would that mean for the value users receive?

To answer these questions, the authors built an economic model of two-sided platforms, or markets where platforms simultaneously serve users and advertisers. The model accounts for two key forces affecting ad load decisions. On the user side, some users switch between Facebook and Instagram when ad loads change. Under joint ownership, raising ads on one platform is less risky because some diverted users flow to the sister platform. This creates incentives for higher ad loads under a merger. On the advertiser side, however, the dynamic reverses. Some advertisers switch between platforms depending on ad prices and audience reach. Under joint ownership, Meta internalizes that lowering ads on one platform can boost advertiser demand and prices on the other, creating incentives for lower ad loads. Which effect dominates determines whether separation raises or lowers ad loads.

The researchers estimated their model using experimental results for user demand along with Meta's internal data on current ad loads and revenues. Lacking data on how advertisers substitute between the platforms, they analyzed the full range of scenarios, from zero advertiser substitution to complete substitution, and generated bounds on the breakup's effects on **consumer surplus**.[1] They found the following:

[1]Consumer surplus equals approximately $3.40 daily for Facebook and $2.10 daily for Instagram under current ad loads. The pricing experiment enables calculation of consumer surplus through users' willingness to pay for access. Comparing both experiments reveals ad costs: since a $0.70 payment and typical Facebook ad loads both reduce usage by 2 minutes daily, ads effectively cost users $0.70 (and $0.20 for Instagram). Platforms thus capture only 17% and 8% of total value. This relatively low capture reflects two-sided market constraints—platforms must balance user experience, advertiser demand, and network effects.

**consumer surplus:** the difference between what consumers are willing to pay for a good or service and what they actually pay, representing the net benefit they receive

- A de-merger provides negligible benefits at best. Assuming zero advertiser substitution between platforms, consumer surplus would increase by less than 0.03%, with ad loads falling just 0.13% on Facebook and 0.25% on Instagram.
- A de-merger would likely harm users. Under a standard benchmark, separation would increase ad loads by 3.7% on Facebook and 9.8% on Instagram, reducing combined consumer surplus by approximately 1.0%.
- The FTC's market definition produces systematically wrong predictions. When the authors restricted their analysis to just Facebook, Instagram, and Snapchat, as the FTC did, the model incorrectly predicted a breakup would always benefit users. This error stems from assuming 95% of reduced Facebook time would shift to Instagram and Snapchat, versus the 6% actually observed in the authors' field experiment.

**Why it Matters**

Judge Boasberg's November 2025 ruling for Meta, citing this experimental evidence as "compelling," marked the first time field experiments played a central role in a major federal antitrust case. The case demonstrates how Becker's 1965 framework on household time allocation, originally developed for understanding labor supply and consumption choices, could illuminate competition in digital markets that wouldn't exist for another 40 years. Beyond preserving Meta's $1 billion Instagram acquisition, the research offers a clear message for regulators evaluating future tech mergers: account for time-based competition, not just functional similarity.

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