A central pillar of President Biden’s agenda is an expanded role for antitrust. Congress is playing along, drafting several antitrust reform bills targeting large digital platforms. At the forefront of the legislative effort is the American Innovation and Choice Online Act, which proposes a regulatory framework for digital platforms based largely on allegations of preferential treatment by platforms of their own products and services over those of independent sellers using the platform. This preference, it is often claimed, is implemented in the way search results are presented to consumers—a bias for the platform’s own products. With its size criterion, the bill covers only a handful of firms and, with little exaggeration, focuses almost directly on Amazon. In light of the motivations for the reform, it is worth studying the incentives of platforms to favor their own products and services over rivals.

In this PERSPECTIVE, we make a straightforward contribution on understanding such incentives. Specifically, we assume there is an information signal by which the platform retailer could potentially impact the purchases of consumers (e.g., a label of “Amazon’s Choice”). This signal has an adjustable bias that will marginally impact some (unsophisticated) consumer purchases in favor of the retailer’s product versus the competitor. Independent sellers pay a fee per unit of sales to the platform. We find that the bias of the platform is reduced by this fee, implying that online sellers who are not platforms have a greater bias than do digital platforms. In other words, while critics highlight an alleged incentive that platform retailers may have towards their own goods, our analysis reveals that retailers who do not offer platform services have much larger biases.

Oddly, the American Innovation and Choice Online Act does not address the bias of non-platform sellers who lack the platform’s counterbalancing incentive to be truthful. While sellers always have an incentive to promote their own products, the presence of a platform that showcases rival goods reduces this bias.

**Economic Model**

Let’s suppose there is a platform retailer that sells its own product on its platform. Further, let us assume there is a competitor that potentially utilizes the platform to sell a competing product on the platform for a fee of $t$ per unit of sales, payable to the platform in the event of a sale. The optimal signal bias is then a function of the fee paid by independent sellers to the platform.
We will also assume there is an information signal (e.g., a label of “Amazon’s Choice”) by which the platform retailer can impact the purchases of consumers. We do not address here just how such a signal comes to be effective; we just assume, with those proposing the new rules, that the signal works as claimed. Further, let us suppose that this signal has an adjustable bias \( b \) that will marginally impact a limited number of (presumably unsophisticated) consumer purchases in favor of the retailer’s product versus that of the competitor. Let \( q(b) \) denote the quantity of sales of the platform retailer and we denote the aggregate volume of sales between the retailer and the competitor as \( \Omega \), so that the quantity of sales of the competitor is just \( \Omega - q(b) \). We denote the markup on the platform seller’s product above marginal cost by \( m \), and we assume this markup is fixed due to a large and reasonably competitive aggregate retail marketplace. Further, we assume that \( m \) is significantly larger than \( t \). While this may not be true in some cases, it is a necessary condition for the platform retailer to have an incentive for the excess promotion their own product versus those of the competitors.

Our basic assumptions regarding \( q(b) \) are that \( q'(b) > 0 \), \( q''(b) < 0 \), and \( 0 < q(b) < \Omega \). That is, the bias in the information signal can increase sales at the expense of the competitor, but only at a diminishing rate.

While we assume the bias in the information signal can marginally improve sales versus the competitor, there are invariably costs associated with generating consumer preference mismatches in terms of future sales and reputation. In other words, deceiving customers, while perhaps profitable in the short term, comes at a cost of future sales and reputation. We denote the present value of these costs by \( c(b) \) and we assume \( c \) is increasing and convex in \( b \) \( [c'(b) > 0 \) and \( c''(b) > 0] \). Hence, the marginal costs associated with additional bias are rising.

Oddly, the American Innovation and Choice Online Act does not address the bias of non-platform sellers who lack the platform’s counterbalancing incentive to be truthful. While sellers always have an incentive to promote their own products, the presence of a platform that showcases rival goods reduces this bias.

The profit function of the platform retailer is thus given simply as:

\[
\pi(b) = \Omega t + (m - t)q(b) - c(b) .
\] (1)

Optimizing this expression with respect to the level of bias in the information signal, we have the first-order condition:

\[
(m - t)q'(b^*) - c'(b^*) = 0 .
\] (2)

Equation (2) implicitly defines the optimal bias level, \( b^* \), as a function of the platform fee \( t \). Differentiating with respect to \( t \) yields:

\[
-q' + [1 - t]q^* - c'' \frac{\partial b^*}{\partial t} = 0
\] (3)

\[
\frac{\partial b^*}{\partial t} = \frac{q'}{(m - t)q^* - c''} < 0
\] (4)

The diminishing return to bias in the information signal together with rising marginal costs associated with bias combine to make the optimal level of bias a decreasing function of the fees generated from platform sales of the competitor. The fees associated with competitors selling on the platform generate an additional source of marginal revenue for the platform retailer linked to the sales of the competitor. *Ceteris paribus*, this additional margin reduces the incentive for bias
in the information signals sent to consumers by the platform retailer.

In contrast to the typical story motivating such legislative efforts, a digital platform is less biased—not more biased—in the promotion of its own products and services relative to online sellers that do not permit third-party sales. Every seller has an incentive to promote its own products, but the presence of a platform component to the seller’s business reduces that incentive.

Presumably, the more valuable the platform, the greater the fees that can be charged to competitors for use of the platform. Hence, the more valuable the platform, the less bias one would expect to observe in the platform retailer’s signal. If we interpret \( t = 0 \) as the case where the competitor does not use the platform, then one could expect significantly more bias in the information provided to consumers. Competitors using the online platform and paying fees linked to the sale of their products generally reduces the incentive for signal bias.

This analysis may be summarized simply as follows: When third-party sellers use the platform, the digital platform earns an income from those sales (by fee \( t \)). Thus, diverting sales to the platform’s own products is costly; such costs are not incurred by online sellers that do not permit third-party sales on their websites. Hence, more traditional non-platform retailers have a greater incentive to engage in biased promotion of their own products and services over those of rivals.

Conclusions

In this Perspective, we offer a simple analysis of a digital platform’s incentives to bias sales toward its own products and services. Criticism of such biases forms the basis of several antitrust bills presently before Congress, particularly the American Innovation and Choice Online Act. In contrast to the typical story motivating such legislative efforts, our analysis reveals that a digital platform is less biased—not more biased—in the promotion of its own products and services relative to online sellers that do not permit third-party sales. Every seller has an incentive to promote its own products, but the presence of a platform component to the seller’s business reduces that incentive.
NOTES:

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3 Available at: https://www.congress.gov/117/bills/s2992/BILLS-117s2992is.pdf.

4 See, e.g., Prepared Statement by U.S. Senator Chuck Grassley (R-Iowa) Ranking Member, Senate Judiciary Committee Markup on American Innovation and Choice Online Act (January 20, 2022) (available at: https://www.judiciary.senate.gov/grassley-statement-at-markup-on-big-tech-competition-bill) (This legislation prevents dominant Big Tech platforms from anti-competitively preferencing their own products or discriminating against competing products. This will ensure that there is robust competition on dominant tech platforms. Our bill will help level the playing field for small businesses and entrepreneurs that rely on dominant Big Tech platforms to reach their customers.”