Advertising is an Emergent Property of Successful Platforms, and a Public Wager

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Three vignettes illustrate our claim.

Brin and Page (1998) wrote that “The goals of the advertising business model do not always correspond to providing quality search to users…we expect that advertising funded search engines will be inherently biased towards the advertisers and away from the needs of the consumers.” Google booked $72.5 billion in advertising revenue in the fourth quarter of 2024, up 10.5% from 2023.

Jeff Bezos said in 2009 that “Advertising is the price you pay for having an unremarkable product or service.” In 2019 he said “I changed my mind.” Amazon booked $56 billion in advertising revenue in 2024, up 19.8% from 2023.

In 2015, Reed Hastings posted on Facebook “No advertising coming onto Netflix. Period.” Advertising came to Netflix in 2022, yielding $1.45 billion in 2024 revenue, up 118% from 2023.

We argue that advertising is an emergent property of successful platforms. In each case above, the platform initially disregarded advertising due to concerns about user experience, quality, or brand reputation. However, once the platform matured, users faced significant uncertainty and search costs in noisy digital environments, making digital prominence scarce and valuable. Selling advertising opportunities became highly profitable.

This pattern has been repeated enough times that it offers predictive power. Doctorow (2024) describes adding advertising as “stage two” in his famous process of platform “enshittification.”

ADVERTISING AS A CORE PLATFORM TOPIC

Advertisements transactions involve at least three parties.[1] Ads require money and messages from advertisers in exchange for demand generation opportunities; ads pay publishers for advertising opportunity generation and message conveyances; and ads exchange or subsidize publisher content for consumer attention. However, you can’t sign a contract for a consumer’s attention.[2] This results in a sort of “barter” between the consumer and the publisher or platform. In the middle are demand-side platforms, supply-side platforms, and ad exchanges or marketplaces.

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[1] The word “advertising” may also be interpreted to mean any commercial speech. Marketers usually view this definition as overly broad, as it fails to distinguish advertising from distinct forms of speech such as public relations, email marketing, influencer marketing, affiliate marketing, etc.

[2] There are “incentivized” or “rewarded” ads offered by firms like Google and Meta which compensate users for measurable advertising responses, such as completed views, clicks or installs. These business models are especially popular in the mobile gaming industry. However, completing such responses is not the same thing as offering attention; for example, an ad may play to completion on a screen that has been turned over.

Now, stepping back, consider how platforms evolve into advertising marketplaces. When platforms accumulate extensive product listings, consumers face increased search difficulty. Platforms initially create value by helping consumers efficiently discover products, but as listings grow, they begin monetizing the problem of search overload by selling prominence and advertising placements. This transforms the marketplace into an advertising platform: Walmart booked $4.4 billion in advertising revenue in 2024, typifying larger trends in “retail media.”

Like railroads, the advertising-supported media platform model dates back to the 1800s. When consumers actively seek commercial information, such as in business directories, classified ads, fashion magazines or search engine results pages, advertising can enhance publisher content value. Recent research has found that reducing ads in search engines can decrease user engagement, advertising can signal product quality and directly increase consumer sales, and classic research showed that magazine readers valued high-quality magazine advertisements.

However, the dynamic changes significantly when consumers do not actively seek commercial content. In this case, advertising acts as an "attentional price," can cause disruption and annoyance, and can lead some consumers to abandon the publisher’s content. Recent and classic consistently show that interruptive advertising reduces audience size. Yet, non-interruptive advertising, such as that on Facebook, can minimize consumer aversion.

The literature also shows that advertising effects on consumer behaviors are complicated. Advertisements offer experiential utility or nuisance to consumers, and may facilitate valuable transactions for consumers in the market for the advertised good. Yet consumers, advertisers, contexts, products, and messages are all heterogeneous, and timing and fit matter. Consider how differently the same consumer might respond to a mortgage ad when reached early in the home financing process versus after loan completion.

Advertisers pay for advertising platforms. Yet quantifying advertising profits is challenging due to attribution problems. Advertisements may yield measurable responses, a correlational signal that enables direct optimization using programmatic advertising practices. Yet some observed responses would occur without the ad exposure–a classic form of selection that is exacerbated by advertiser efforts to target receptive consumers. And some advertisement responses occur outside measurable channels, implying nonrandom false negatives. These challenges may be exacerbated by internal moral hazard problems and external principal/agent problems observable in standard advertising business practices. Furthermore, advertising can indirectly influence market conditions—by affecting inventory levels, retail availability, or pricing—complicating measurement and economic evaluation further.

Gordon, Moakler and Zettelmeyer (2024) illustrate the advertising platform’s challenge in creating valuable advertiser/consumer matches. The paper studied 563 Facebook advertising experiments with over one million test-cell consumers and over five thousand test-cell conversions–some of the largest advertising experiments ever run, in a rich and sophisticated data-driven environment. Yet, their Figure 2 shows that the typical ad campaign lifted conversions by 0.0-0.25% among treated users. In other words, for each 0-3 conversions produced, at least 997 people saw ads and did not respond. If efficacy is so limited on

Facebook, how efficient might other advertising platforms be with less scale, less data or less sophistication?

ADVERTISING PLATFORM WELFARE CONSIDERATIONS

Advertising's potential Pareto improvements are clear. Effective advertising can enhance consumer welfare, improve product discovery, boost product sales, and incentivize information production. However, advertising games could become prisoners' dilemma, benefiting the platform at the expense of its customers. Welfare depends on the following platform design considerations.

1.**Consumer privacy, control and advertising load**. Personalized advertising is likely more efficient than impersonal advertising, thereby increasing potential consumer subsidies. However, advertiser data access must be weighed against applicable regulations and potential misuses like advertising addictive goods to susceptible consumers, advertising to children, and false claims and other scams. Platforms also must balance interruptive advertising experiences versus consumer control over advertising exposure. Platforms may discriminate in advertising load but have to balance against consumer multihoming.

2. **Platform/creator alignment**. Platforms that incentivize creators appropriately may maximize content production effort and reduce creators' off-platform advertising sales. Examples include platforms that compensate creators with proportions of advertising revenues generated, or enable creators to purchase organic reach for their content. Poor incentives may distort content, such as "clickbait" headlines written to maximize post-click monetization.

3. **Platform/advertiser alignment**. Platforms that directly observe advertisement responses can better optimize for efficient outcomes. Examples include Google's use of click-through rates in advertising auctions and Amazon's use of purchase rates in search engine rankings. Tiktok's success as an e-commerce seller on its own platform is a limiting case. On the other hand, research has also found that positive reviews are a strategic substitute for advertising spending.

4. **Audience measurement and attribution quality.** Advertising platforms are paid for advertisement distribution, so some platforms increase revenue by distributing advertisements to bots rather than humans. Adalytics, a small watchdog firm, has produced an impactful and embarrassing series of reports showing numerous instances of failed human-detection processes, among other allegations. There are serious questions about the accuracy of platform-provided advertising attribution tools and the neutrality of platform-enabled audience measurement firms.

5. **Advertiser competition**. Advertiser competition increases advertising outcome importance and increases optimal bids in real-time auction environments. Classic examples include highly competitive bidding on branded keywords, but serious questions about bidding on less-competitive branded keywords.

CONCLUSION, AND A PUBLIC WAGER

In conclusion, advertising is an emergent property of successful platforms. Yet that point is easy to miss, because advertising is usually absent prior to platform maturation, although it may become highly profitable afterwards.

Wilbur made Proserpio a one-sided public wager. AirBnB is one of the few successful platforms that still does not sell advertising (also, Steam). If AirBnB annual revenue growth has fallen below 5%, and if AirBnB still has not sold advertising listings, both by March 1, 2030, then Wilbur will donate $5,000 to Proserpio's charity of choice.

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