



The Value of Personalized Advertising in Europe

By Benjamin Mueller and Daniel Castro | November 22, 2021

Banning personalized ads would threaten about €6 billion of income for the European app economy—a sector that employs 1.5 million people in the EU.

Online advertising, particularly targeted advertising, is a fundamental enabler of the Internet economy. Not only do targeted ads allow marketers efficient access to specific audiences, but the higher revenue from these ads helps pay for the vast array of apps, content, and services that consumers access for free online. Some European lawmakers are pushing to ban personalized online ads, claiming that they harm consumer privacy. Given the EU's extensive existing data privacy framework, consumer privacy is not at risk. However, banning targeted ads would hurt advertisers, app developers, media companies, content creators, and consumers by making online advertising less effective. A ban on targeted ads would reduce the €16 billion of spending on data-driven ads in the EU, threatening about €6 billion of advertising income for app developers. As a result, European consumers would face the prospect of a radically different Internet: more ads that are less relevant, lower quality online content and services, and more paywalls.

INTRODUCTION

Online advertising has played a key role in the development of the Internet. It was unclear in the early days of the Internet which business model would prevail. Some businesses tried to monetize their online services by charging subscription fees, but most found that offering free access supported by advertising revenue was more sustainable. Initially, Internet advertising consisted of simple banner ads displayed across the top of websites. Soon after, companies like Yahoo realized that they could offer more relevant ads based on keywords in user online searches. However, it was not until the introduction of cookies (small text files placed by a website in a user's browser) that the potential of targeted advertising became clear. Cookies enabled websites to recognize users across multiple sessions and therefore

websites could begin offering users a personalized experience. Not only could e-commerce sites use cookies to promote products that returning users had looked at or purchased before, but advertising platforms could use cookies to develop profiles about users based on their browsing history, for instance, understanding if someone is likely to be interested in travel or sports or gardening, and serving ads to these users based on their profiles. Because targeted ads are more relevant to users, people are more likely to engage with them, and thus advertisers are willing to pay more for those ads and publishers can earn more revenue. The click-through rate (the ratio of users who click on an ad to the number who visit a webpage) for personalized advertising is 5.3 times higher than for non-personalized advertising. For re-targeted consumers (those who have previously shown an interest in a product) the click-through rate is 10.8 times higher.¹

Over the past two decades, targeted online advertising has grown rapidly and evolved for both desktop and mobile users as Internet usage patterns have changed. For example, the share of advertising on social media has increased steadily, as have digital video and audio ads, as streaming and podcasting have become more popular among Internet users. At every stage, revenue from targeted online advertising has supported the development of innovative and no-cost online products and services, including social media platforms, mobile apps, games, news media, and more.

Thus, proposals to ban or restrict targeted advertising would significantly harm the EU Internet ecosystem by cutting off an important source of revenue for ad publishers—a group that includes app developers, media companies, and content creators. Banning targeted ads in the EU would make it more expensive for advertisers to reach their target audiences, reduce revenues for publishers, and limit the availability of free and low-cost content for users. Not only are these proposals harmful, they are also unnecessary to protect consumers and uphold European values: targeted online advertising is already subject to a wide-ranging and well-entrenched set of laws that address everything from the content of ads to the protection of personal data. These rules ensure that advertising platforms respect that rights of European consumers when they collect and use personal data for advertising and that advertising platforms do not sell copies of consumer data to advertisers.

OVERVIEW OF ONLINE ADVERTISING

There are two primary methods of online advertising: contextual and personalized ads.

In contextual advertising, ads are placed on websites based on the content on those sites. For instance, a company that sells kitchen appliances may pay to display ads on a food blog or a search engine when users search for certain products. In personalized advertising, advertisers use ad networks to show content to users based on characteristics such as their online behavior, physical location, or demographics. Behavioral targeting shows ads to users based on their online activity, such as past searches or browsing history. Location-based ads target users based on where they live or when they visit a

specific location. Demographic targeting shows ads to users based on specific social categories like race, gender, income, or age. Some ad networks also allow advertisers to target ads to specific individuals, such as previous customers.

Those seeking to ban personalized ads argue that contextual ads offer a suitable privacy-protecting alternative to targeted ads, but these two forms of online advertising are not interchangeable.² Contextual ads are useful in certain scenarios. For example, contextual ads work well for search engines where ads can be tied to a user's search keywords, for niche websites that have a homogenous audience (e.g., a wine connoisseur blog), or for certain large publishers who cater to valuable demographics, such as high-income individuals whom luxury brands may wish to target. However, contextual ads are less useful for many other applications where the app developer, media company, or content creator does not have detailed information about its audience. In these cases, targeted advertising is much more useful because ad networks can act as an intermediary that delivers relevant ads to users and allows publishers to earn more revenue. Even the Greens/European Free Alliance (Greens/EFA), which opposes targeted ads, acknowledged in a recent report the limits of contextual ads, citing news publishers who "pointed out that not all context is equal and that in fact news and sports coverage does not perform well for context driven marketing." For many of the best-known publishers, the report goes on, "this sort of content represents the bulk of the advertising inventory," adding "that there is currently very little demand for context-based advertising and that therefore they may struggle to fill their inventory."³

Similarly, contextual advertising does not meet the needs of many advertisers because they cannot target audiences as selectively with contextual ads as with personalized ads. Companies advertising niche products and services or building smaller brands are at a significant disadvantage when using contextual advertising compared to companies with larger brands and marketing budgets because smaller advertisers, such as SMEs and startups, do not have the budget for mass advertising campaigns and therefore depend on using precisely tailored campaigns to reach the most relevant audience.

The recent debate over personalized advertising has focused on concerns that technology companies buy and sell consumer data without regard to user privacy. This ignores the reality that commercial advertising, both online and offline, is subject to a wide array of statutory and regulatory measures in Europe that amply safeguard users' data and privacy.

PROPOSAL TO BAN PERSONALIZED ONLINE ADVERTISING

Some members of the European Parliament (MEPs) have proposed amendments to the Digital Services Act (DSA) that would ban targeted advertising (Table 1).⁴

Table 1: Proposed DSA amendments to ban or restrict personalized ads

Amendment	Text
Amendment 505	“Distributing advertisements on the basis of targeting recipients of the service on the basis of their behaviour data or using profiling techniques shall be prohibited. Personalised advertisements may be based on the content the recipient is viewing on the online platform only, with due information. Tracking the user beyond the platform itself, through other services or on the wider web, shall be prohibited. Online platforms shall not be allowed to resort to cross-device and cross-site combination of data processed inside or outside the platform.” ⁵
Amendment 746	“Providers of information society services shall only deliver and display advertising that is based on contextual information such as keywords, language context, or the approximate geographical region of the recipient of the service to whom an advertisement is delivered or displayed.” ⁶
Amendment 1019	“Providers of intermediary services shall not collect or use personal data of a service recipient for the purpose of targeting or tailoring digital advertising.” ⁷

Supporters of a ban are vocal in their view that advertisers should not be allowed to harness the precision that data-driven ads permit. The European Parliament’s Rapporteur for the DSA, Christel Schaldemose MEP (S&D, Denmark), has advocated for “a new article aiming to allow consumers to navigate through online platforms without being subject to targeted advertising.”⁸ She has argued that “targeted advertisements that are based on your behaviour on Facebook, for instance, that should not be allowed.”⁹ Similarly, a recent report by the Greens/EFA also clearly calls for “a ban on the use of personal data to target adverts online.”¹⁰ In addition, around twenty MEPs have joined the Tracking-Free Ads Coalition, which pledges to eliminate targeted ads.¹¹

Proponents of a ban argue that collecting and using data to serve ads to specific audiences is a form of intrusive surveillance at odds with European values.¹² But these arguments reflect a lack of understanding about the technology that enables targeted advertising, the existing technical and legal protections in place for consumer data, and the motivation of advertisers, which is to improve the effectiveness of their marketing efforts by showing audiences relevant ads. The fact that digital technology allows advertisers to pinpoint their target market with greater accuracy is a boon to the entire marketing ecosystem. The UK’s Competition and Market Authority’s comprehensive review of the online ads market plainly states: “Overall, more relevant and better-targeted adverts, through personalisation, can be

expected to result in more purchases, increasing consumer and producer welfare as a result.”¹³

THE COST OF BANNING PERSONALIZED ADS

While opponents of personalized ads exaggerate the risks to consumers, they downplay the costs of a ban. They argue that advertising spend will “re-distribute itself once tracking-based advertising has been outlawed,” and that banning “tracking-based methods will equally not lead to a decrease in overall spend.”¹⁴ There are two problems with these claims. First, some business may well redistribute their advertising spending to other mediums, such as direct mail, but that would reduce online ad spend, which would negatively impact revenue available to support the EU Internet ecosystem. Second, a ban on personalized ads would close off a channel that is clearly valuable to advertisers—they would not be using it otherwise—and therefore any diversion would be to less efficient advertising channels.

IMPACT FOR ADVERTISERS

The economics of banning personalized ads are stark. In 2020, European advertisers spent about €16 billion on targeted online ads.¹⁵ A comprehensive review of studies that try to quantify the value of targeting ads suggests that a ban would decrease the effectiveness of online ads by 50 to 70 percent.¹⁶ In the absence of other technical solutions that allow ads to be served to curated audiences, advertisers would need to spend 2 to 3.3 times more on non-personalized ads to maintain the same levels of effectiveness.¹⁷ In other words, European advertisers would need to spend between €16 billion and €37 billion on non-personalized ads to get the same return as they currently do with personalized ads.¹⁸ To be clear, this figure represents the economic waste from banning personalized ads: it is not additional money that will be spent on advertising. There are three possible ways in which advertisers can respond to this loss.

Scenario 1: Increase spending to maintain the effectiveness of personalized ads

If advertisers want to match the ability of personalized ads to persuade consumers to purchase their products, they would need to double or triple their spending on digital advertising. This is the textbook definition of inefficiency—spending more to get the same result—and it is unlikely many advertisers would pursue this option. Any increase in advertising spending would divert resources from other business areas or would need to be recouped through higher prices for consumers on goods and services. Moreover, an increase in other forms of online ads would mean that EU Internet users would be subject to more advertising, and because these would be non-targeted ads with less relevant content, degrading the online experience.

Scenario 2: Shift some spending to contextual ads and the rest to other offline media

If advertisers do not increase their marketing budgets in the wake of a ban on personalized ads, they will divert their budgets for personalized ads to other

forms of advertising. Some of this may include contextual online ads, but some of this may include other forms of advertising, such as billboards, direct mail, and email marketing. Since these forms of advertising are less efficient, the cost of customer acquisition will increase, hurting many European businesses.

Indeed, Apple's recent privacy changes demonstrate how a ban on targeted advertising could affect businesses. In April 2021, Apple released an update to its mobile operating system that changed how apps can collect data about users. Unless users give permission, apps collect less data on consumers' habits and interests and advertisers can no longer effectively deliver targeted ads to iOS users. This change has made it more expensive for businesses to acquire new customers through personalized ads on iPhones.¹⁹ For example:

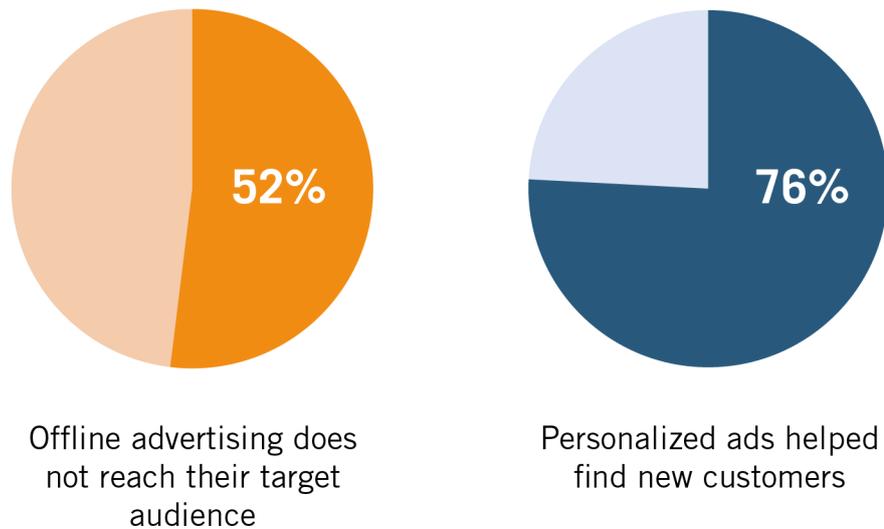
- Sozy, a clothing retailer, saw its customer acquisition cost triple from \$30 to \$90 per customer
- GetSmirk.com, a teeth-whitening company, saw its Facebook ad prices increase by 45 percent
- Steelcase, a furniture company, saw its cost-per-click on Facebook ads go up by 90 percent
- Plum Deluxe, a loose-leaf tea seller, saw its customer acquisition cost increase ten-fold.

Scenario 3: Decrease advertising budgets due to reduced ad effectiveness

The effectiveness of an ad is often measured as a function of how many extra customers it generates. Since the alternatives to data-driven online advertising are 2 to 3 times less effective, many advertisers may reduce their spending on online ads. The loss of targeted ads will be particularly harmful to SMEs, who are among the main beneficiaries of data-driven advertising.

The advent of personalized ads enabled small and medium-sized companies (SMEs), which make up 99 percent of European businesses and employ over 100 million people, to cheaply serve ads in a targeted manner to audiences for whom the product advertised is relevant.²⁰ Targeted ads have immense benefits for them, with three-quarters of SMEs reporting in a recent survey that personalized ads help them find new customers and over half reporting that offline ads do not reach their target audience (Figure 1).

Figure 1: In a 2021 poll by Deloitte of 30,000 SMEs in 18 countries, most found personalized ads to be much more effective than traditional ads²¹



For SMEs, advertising is essential to drive sales. In the UK, 60 percent of SMEs use digital advertising, accounting for nearly half of all online ad spending.²² Of those, 63 percent state that digital ads provide a good return on investment. It is not hard to understand why they feel this way: showing ads to customers interested in a product is much more cost-effective than showing ads to uninterested audiences. For instance, serving ads to users who have previously expressed interest in a product is almost 11 times more likely to generate a click.²³ The UK’s Competition and Markets Authority found that banning personalized ads reduces an audience’s intention to purchase the advertised product by up to 70 percent.²⁴

Removing such a potent revenue driver from the hands of SMEs is a particularly costly idea after the shift towards e-commerce sparked by the covid-19 pandemic. In Europe, online retail spending increased by 26 percent during the pandemic, which masks considerable variations—Italy, for instance, saw an increase of 50 percent.²⁵ An OECD study of the digital transformation of SMEs explains, “online advertising offers sizable opportunities to SMEs: from the global reach to the ‘targeting’ practices based on advanced analytics leveraging users’ information.”²⁶ Personalized ads are a key pillar for European SMEs to increase their online footprint and participate in the digital economy.

The nonprofit sector, too, uses personalized ads. Charities rely on targeted ads to tailor their fundraising to appropriate audiences whilst reducing the cost of their marketing. For example, Save the Children ran a campaign of targeted interactive video ads with an animated call-to-action button. The results were measured through a combined conversion and brand lift study finding that 41,000 new people were made aware of the campaign, and an increase of 29 percent in donations compared to baseline campaigns.²⁷ Similarly, Barnardos, a UK charity for vulnerable children, ran an in-house Coronavirus Crisis Appeal aimed at acquiring new supporters. Using a data-driven approach, the team tested new audiences and messages and

compare the campaign’s performance against previous efforts. Barnardo’s used audience segmentation to tailor its messages and creative assets and overshot its fundraising and new donor target three-fold.²⁸

Lastly, personalized ads represent a boon not only in terms of their ability to bring in much more extra revenue than traditional ads, but at substantially lower cost. Facebook has been a deflationary force in online advertising, offering vast quantities of highly relevant advertising inventory at much lower prices than in traditional media outlets.²⁹ A study of online advertising for the European Parliament’s Internal Market Committee confirms, “An advantage for SMEs is that online advertising is usually cheaper than placing traditional/offline ads.”³⁰

If reaching consumers becomes more expensive for advertisers, we can expect them to reduce their spending on ads. As the next section shows, this will have costly consequences for European ad publishers.

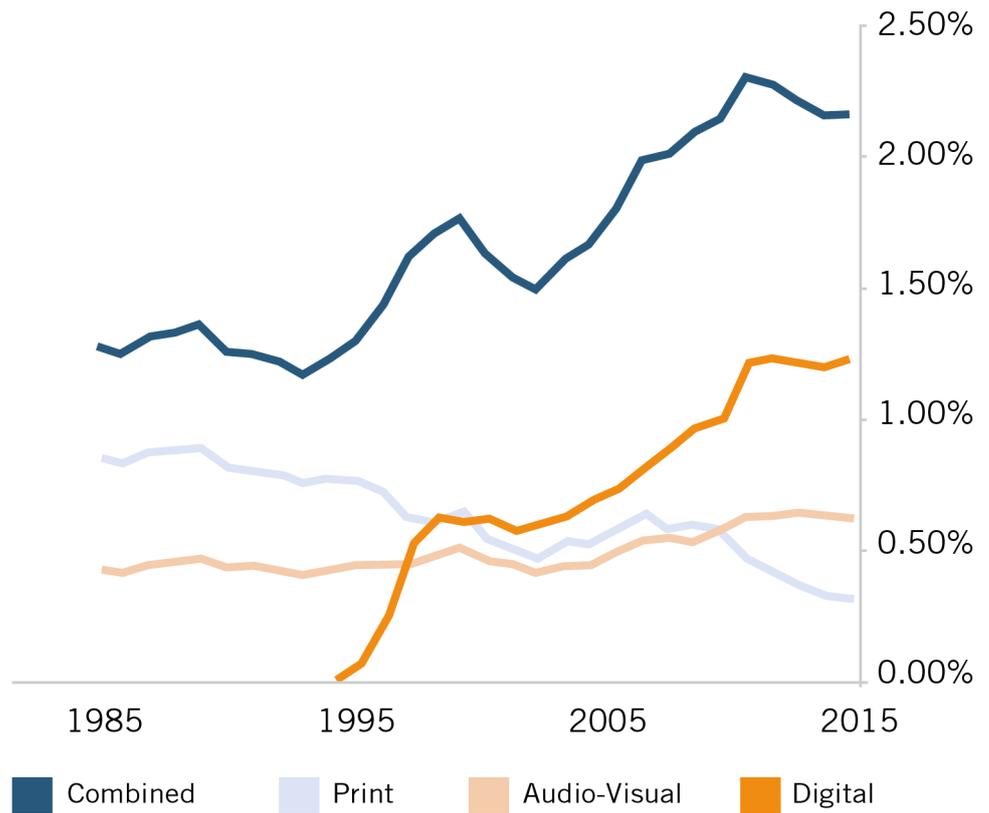
FOR AD PUBLISHERS

The growth of digital advertising over the past 30 years has changed the shape of the ad industry (Figure 2). Online ads now form a critical component of the EU digital economy. A ban on personalized ads would affect the wider ad publishing ecosystem of apps, games, content creators, and other media companies offering digital content free of charge, in exchange for showing ads to users that are tailored to their specific interests.

The ability to target ads to specific groups of users has allowed digital advertising to become a valuable source of revenue for many types of ad publishers, which threatens to disappear if the European Union bans personalized ads. Two recent industrywide studies suggest that ad publishers receive between 50 to 65 percent of the revenue advertisers spend on personalized ads.³¹

Take providers of mobile apps in Europe: in 2019 alone, they earned €12 billion in revenue from in-app advertising.³² By our estimates, banning personalized ads would threaten about €6 billion of income for the European app economy—a sector that employs 1.5 million people in the EU.³³

Figure 2: Global marketing output as share of GDP, 1985-2015³⁴



Personalized ads also create a valuable source of income for media companies, which can monetize content by supplementing it with targeted advertising. Media publishers that offer targeted ad inventory can earn almost four times more per ad than with non-targeted ads.³⁵ Most studies estimate the loss of advertising revenue to publishers from banning targeted advertising to be between 50 and 70 percent.³⁶ In the UK, research by media companies has shown that removing third-party cookies reduces ad revenue by 50 and 70 percent (Table 2).

Table 2: Fall in online ad revenue of three largest UK newspapers after removing third-party cookies³⁷

Publisher	Estimated fall in monthly revenue
News UK	50-60%
Telegraph Media Group	50-60%
DMG Media	60-80%

Some critics of targeted ads point to one study that found that cookie-based ads added only 4 percent in incremental revenue for publishers compared to non-cookie-based ads.³⁸ They say this study implies that the benefit of targeted advertising to publishers is low and therefore the costs of ban

targeted ads would also be low. This study, however, is deeply flawed, with 70 percent of the datapoints collected coming from highly specialized publications (e.g., lifestyle, luxury fashion, autos, young women). The marginal value of targeted advertising in publications that cater to a narrow demographic is, unsurprisingly, not going to be as high as with publishers with a more heterogeneous audience. An advertiser selling automobiles, for example, will likely not pay more for a targeted ad on an auto website, since most viewers are presumably already interested in buying cars.

The impact that a ban on personalized ads would have on the bottom line for European media companies currently using this type of advertising would likely be substantial. Given the much lower effectiveness of non-targeted ads, it is highly unlikely that this revenue would be matched like-for-like. Instead, the lower return on non-targeted ads is going to reduce the amounts spent by advertisers on non-personalized digital ads.

Large publishers may try to recreate the ability to personalize ad content shown to their users by leveraging data they collect on their own. The New York Times, for instance, tracks its registered users and shows ads based on this data. This solution is not feasible for the thousands of small publishers that make up the majority of the European media landscape. Restricting targeted ads would cut off a vital revenue source for websites and news publishers that rely on ad revenue to fund journalism. Online media companies in Europe derive 80 percent of their revenue from ads, and only 28 percent of users are willing to pay for news.³⁹ If the EU bans personalized ads, the independent media sector in Europe would take a painful hit. Of course, if the use of first-party data for advertising purposes is still permitted (such as when the New York Times advertises to its users based on data it collects directly), this would favor large technology platforms and publishing companies that possess a large user base. Perversely, a ban on using third-party data to personalize ads would harm small advertisers and publishers the most, who would find an important revenue source closed off without the means to replace it with alternative advertising income. Even Greens/EFA report concedes that publishers would need to consider options like placing content behind paywalls or relying more on contextual ads—both of which would favor large platforms with larger numbers of visitors.⁴⁰

FOR CONSUMERS

Many apps and services are free to users. Providers earn money by selling space on their websites or mobile apps to advertisers who can place text, links, images, and videos. This ad-supported business model allows people to gain access to digital goods and services, which are subsidized with revenue from targeted ads. Targeted advertising therefore benefits all parties, from the consumer and user to mobile app developers, advertising networks, and firms. Restricting targeted ads would reduce the availability of free apps and services, which would be particularly harmful to lower-income Europeans as well as many Internet users in developing countries.

There is plenty of empirical evidence that most Internet users are willing to exchange data for access to a social network, digital map or online

marketplace (Figure 3).⁴¹ After all, for a consumer to see tailored ads for goods or services they actually might want to buy is in their interest.

Figure 3: European internet users are happy with personalized ads⁴²



7 out of 10 Europeans ...

- prefer to get free access to social media and mobile apps in exchange for seeing ads
- think personalized ads help local small businesses connect with customers who find their products and services useful
- think personalized ads help local small businesses attract more customers

A ban on targeting advertising would mean that consumers see more ads that are of less relevance to them. According to a recent study conducted by the Boston Consulting Group, customers prefer an easy and fast shopping experience that helps them make purchase decisions. They think less about personalization per se than they do about the benefits it can provide.⁴³ Other research demonstrates that seeing non-personalized ads increases user dissatisfaction. Encountering non-personalized ads leads to a 21 percent increase in users closing an ad because it was irrelevant or because they had seen it multiple times before.⁴⁴ A report written for the European Parliament agrees that personalized ads “enable the delivery of messages tailored to the interests of individual consumers,” provides “more useful and relevant information,” and “prevents consumers from being presented with random ads,” which is “one of the main benefits of behavioural advertising for consumers.”⁴⁵

Opponents of targeted ads dismiss or ignore these concerns. The report by the Greens/EFA, for example, claims that free apps and online services will simply use “alternative methods to deliver adverts, such as contextual [ads],” ignoring that contextual ads are not interchangeable with targeted ads and that non-targeted ads would bring in significantly less revenue for many ad publishers.⁴⁶ Or they accept that users will have to pay for previously free online services, conveniently ignoring the fact that many users would prefer not to pay.⁴⁷

Lastly, consumers are already empowered to opt-out of personalized ads on most platforms or by using ad-blocking software or other browser features, many of which are available at no cost to consumers. It is unclear why, in light of the easily available option not to receive targeted ads, a ban is necessary.

WHY EXISTING EUROPEAN REGULATIONS ARE SUFFICIENT

Online advertising is heavily regulated in the EU (Table 3). European advertisers are governed by strict rules concerning user consent, display and content rules, transparency mandates, fair practices, accuracy, and data collection connected to showing personalized digital ads. Despite this, some advocates and lawmakers have proposed that the European Parliament enact an outright ban on personalized online ads.⁴⁸ This drastic legislative step will hurt advertisers, publishers and most importantly consumers by undermining the economics of the free and open Internet.

Table 3: EU regulations covering online advertising

Regulation	Impact
E-Commerce Directive	Establishes fundamental rules for electronic commerce, with a specific section on electronic advertising (accurate information, transparency, consumer rights)
Platform-to-Business Regulation	Sets out parameters of fair algorithmic ranking of content in platforms and search engines
E-Privacy Directive	Requires informed user consent on use of cookies
Audiovisual Media Services Directive	Aligns digital and analogue advertising rules around user protection, data protection, and unlawful content
Unfair Commercial Practices Directive	Standardizes member states' legal provisions on unfair commercial practices, including misleading and aggressive advertising
Directive On Misleading and Comparative Advertising	Sets out objective minimum criteria to be used to determine whether an advertisement is misleading
Consumer Rights Directive	Establishes a right to truthful advertising
General Data Protection Regulation	Determines lawful grounds to collect and process personal data, and establishes consumer rights regarding personal data
Contracts for the Supply of Digital Content and Digital Services	Requires ads about digital content to be accurate
E-Privacy Regulation (pending)	Aligns privacy framework for electronic and analogue communications
Digital Services Act (pending)	Legal obligations for internet services including online platforms
Digital Markets Act (pending)	Rules for online advertising in the context of intermediation services (e.g., search engines, social networks, video-sharing, communication services, cloud computing or operating systems)

CONCLUSION

Personalized ads are valuable because they enable companies and organizations to promote their products and services to those people most likely to purchase them. Data-driven advertising forms a fundamental part of the Internet economy, and provides an economical means for companies and charities to tailor their marketing to the people most likely to be interested in their products and services. The use of data to deliver a more efficient service is a powerful illustration of how digital innovation improves efficiency, productivity, and consumer welfare.

Banning personalized ads will:

- Increase the cost of advertising for businesses that rely on the Internet to find new customers, especially harming European SMEs,
- Reduce the income that ad publishers like app developers, media companies, and content creators receive from digital advertising, due to its reduced effectiveness,
- Worsen the online experience of European Internet users by reducing the availability of free content while also increasing the number of ads they see and the relevancy of ads to them.

The debate around personalized ads is largely driven by hyperbole and falsehoods about online surveillance rather than a sober look at the economics of the Internet economy. Neither advertisers nor ad publishers are interested in spying on consumers—they care about delivering relevant and effective ads to users. While there is room for a legitimate debate about regulating online political ads, these discussions should take place in a self-contained legislative measure, which the Commission is due to propose, to enable a proper investigation and debate of the concerns surrounding the issue of political advertising.⁴⁹ Attaching a measure to ban personalized ads to the Digital Services Act would significantly set back the European digital economy and leave consumers worse off.

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