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# Sector inquiry

Online advertising

Executive summary



**Sector inquiry into online advertising**  
**Report made available for discussion – Executive summary only**  
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## Executive summary

- (1) Over the past 25 years, online advertising has experienced a remarkable rise – it has grown from nothing into an industry worth billions, which has now overtaken some traditional forms of advertising, such as TV or newspaper advertising, and has left them far behind. As a business model, it presently finances large parts of online services for users or, depending on the point of view, it leads to such offers aimed at users in order to generate income from online advertising. The most prominent examples of such services include Google’s search engine and Meta’s (formerly Facebook) social network. Online advertising thus forms the economic basis of some companies which have grown into very large corporations, such as the two mentioned above. Considered in more detail, online advertising is often a highly automated and technically very complex process: The current level of development makes it possible to offer every single advertising space on any given website or smartphone app to a theoretically worldwide customer base within fractions of a second and to auction such space to the highest bidder; it is also possible to assess the adverts displayed and to measure any success in the form of users’ responses. This is made possible by an entire network of various technical services – so-called ad tech – and the companies behind such services, which have to work together for this purpose. However, even in this “engine room” of online advertising individual companies seem to hold an exceptionally prominent position not only due to their size. This has triggered considerable debates about the functioning of the online advertising system and the state of competition in this system, especially with regard to its “engine room” – given the impact it has on the actual online advertising markets connected to it.
- (2) Against this background, the aim of this sector inquiry into online advertising was to first ascertain the facts of the situation. For this purpose, the present report made available for public discussion will outline (A.) the technical development of online advertising in the past two decades and identify the players involved in today’s complex and mostly automated exchange processes. The services rendered by these players and the considerations will be described in this report, focusing on the “engine room” mentioned earlier. With a view to analysing the facts from a competition point of view, the report will in a next step discuss possible definitions of the relevant product and geographic markets and the aspects relevant in this regard (B.). Based on the data gathered, market positions

will be determined and the statements and opinions provided by market players surveyed will be analysed with regard to specific competitive problems resulting from the way in which these exchange processes are structured and which may have an impact on the position of certain players (C.). The considerations made in these two sections are not meant to provide conclusive market definitions under competition law or a final assessment of market positions and individual actions of specific market participants from an antitrust point of view – this is reserved for possible individual proceedings. This report rather focuses on describing the market conditions in a market environment characterised by ongoing technical developments and on identifying recurring patterns which might suggest that a more detailed analysis is required. However, the report will also take a look at the near future since, as a sector of the economy and a subsection of the internet economy in particular, online advertising develops comparatively quickly, just like the internet economy as a whole. This first applies to its technical development. However, with the entering into force of the GDPR and Section 19a of the German Competition Act (GWB) the legal framework has also changed and is most likely to change even further as demonstrated by the European Digital Markets Act (DMA), the almost concluded legislative process regarding the European Digital Services Act (DSA) as well as the European ePrivacy Directive complementing the GDPR, which still has to be adopted. The legislative debates reflect the change in social awareness which has occurred over the past few years. After following a “laissez faire” approach for a comparatively long period of time in which the rapid technological development and its consequences were only moderately regulated, this change has increasingly put the question on the agenda whether this period has led to undesirable developments and how they could possibly be avoided or rectified in the future. This not only applies to online offers provided to users but equally also to the side of online advertising which, as already mentioned above, forms the basis for the financing of a large part of online offers. Corrections in this regard therefore also always entail a competition dimension. Of specific interest in this context are, first of all, possible, if not even highly likely changes in the accessibility and usability of user data which, as things stand today, are of central importance to online advertising (see D.). On the other hand, in view of the upcoming changes to the legal framework brought about by the DMA, it seems necessary to discuss the methodological and practical challenges for competition regulators resulting from the identified specific features and characteristics as well as the technical environment of online advertising and ad tech in particular (see E.).

- (3) The overall key findings of the sector inquiry are as follows:
- (4) In competition law enforcement, online advertising is generally subdivided into search and non-search online advertising. With regard to non-search online advertising in particular, intermediary services play a significant role in selling such advertising space in addition to direct sales of advertising space by so-called publishers.
- (5) Such intermediary services essentially involve bundling the advertising inventory of a number of publishers and offering this advertising space at a single point of contact to buyers, i.e. advertisers and their agencies.
- (6) However, in the context of providing intermediary services the value of the advertising space is often increased through data. Such data – on internet users, the recipients of the advertising message displayed in the relevant space – play an important role in online advertising. This is because due to the data it is very or at least more likely that specific online adverts are displayed to the internet users the advertiser actually intends to address (granular targeting). The data can be obtained from various sources, including user tracking, data providers or information provided by users themselves. Data providers can also use various sources, once again including user tracking.
- (7) Initially, the intermediation of online advertising space was still shaped by procedures used in the days when analogue advertising space was marketed “manually”, but in the meantime this process has become highly or fully automated.
- (8) In simple terms, the total range of intermediary services can be divided into two blocks: Firstly, integrated intermediary services (advertising networks) and secondly, an – at least relatively – open network of players and offers grouped around digital marketplaces (ad exchanges). On these marketplaces, advertising space is traded – mostly in the form of auctions – between software systems on the supply side (referred to as supply side platforms (SSPs), largely integrated into the ad exchanges) and software systems on the demand side (demand side platforms (DSPs)). This happens in real time for every single advertising space. The system as a whole is referred to as programmatic advertising (PA), the auction process as real time bidding (RTB). The advertising material is provided via ad servers on the advertisers’ and the publishers’ side. Ad servers are software systems which (can) take on aspects of sales or campaign management as well as sales or campaign analysis. Data management platforms (DMPs) may be used optionally to manage and combine targeting data from various sources.

- (9) Elements such as highly automated processes and the real-time auctioning of advertising space can partly also be found in integrated intermediary services. From the point of view of buyers, however, the advertising space is the central aspect of integrated intermediary services. Technical services such as targeting, preventing fraud, safeguarding an advertising environment that is “compatible with the brand”, monitoring the visibility of the adverts (the three latter aspects are together also referred to as ad verification) and the relevant reporting are nevertheless offered as parts of the service and are also important to buyers.
- (10) In the case of programmatic advertising in the narrower sense – as the system of networked SSPs, ad exchanges, DSPs and other services is referred to for the purpose of distinction in this report – buyers of advertising space can – generally – procure the technical services independently of the advertising space, depending on the specific configurations, and can also combine technical services from different providers with each other.
- (11) From the publishers’ point of view, both integrated intermediary services and PA in the narrower sense are options for marketing their inventory via intermediary services. There are, however, different possibilities for publishers to intervene in and control this process as well as different types of demand that can be addressed.
- (12) It follows from the above that the technical services offered in the context of PA in the narrower sense could be regarded as market activities which differ from integrated intermediary services. It is therefore possible to allocate them to separate product markets. There are, however, competitive relationships between the two activities as well as between them and the direct sales of advertising space between publishers and buyers. These relationships can be described as competition from substitutes. It must also be borne in mind that this consideration is based on the current situation. Technical developments in the ad tech sector are comparatively dynamic, so that it could prove more appropriate to define the product market differently in the future.
- (13) Within the PA sector in the narrower sense the services publisher ad server, SSP/ad exchange, DSP and advertiser ad server, possibly also DMP, are sufficiently separable. It is therefore possible to allocate each of them to a separate relevant product market. In the case of ad verification services, targeting and user tracking, this cannot be determined with such a high degree of certainty, unless a specific case is examined, as these services are often offered as parts of one of the service offers mentioned earlier.

- (14) As for the geographic market definition, it is possible to define the markets as at least Europe-wide, or even worldwide in scope. This would be different if the typically narrower definition of the actual advertising markets as national in scope or, at most, covering a certain language area were to be reflected in the definition of the ad tech markets. So far, however, there are no sufficient indications suggesting that this is the case.
- (15) With regard to the provision of services relating to publisher ad servers, SSPs/ad exchanges, DSPs and advertiser ad servers, Google is the strongest provider with a particularly strong lead in the provision of publisher ad server services. Apart from third-party advertising space, Google also sells its own advertising inventory via its own technical services. Irrespective of its key role as a publisher, Meta (formerly Facebook) currently only plays a role as an integrated intermediary in the provision of intermediary services.
- (16) When asked why many buyers prefer Google's offers, quality aspects are sometimes mentioned but also "leverage effects" emerging from Google's control over relevant advertising space, Google's control over important data and links between some individual technical services provided by Google.
- (17) In the context of the latter points, several market players surveyed stated that it would be theoretically possible in a PA system in the narrower sense to freely combine the services of several providers as needed. In reality, however, there seem to be substantial restrictions. These restrictions exist either in the form of ties between advertising space offered by certain providers and their technical services. Or they occur in the form of ties between a provider's technical services which in principle can be separated. Prima facie, this seems to restrict the scope for competitive action of providers competing with Google.
- (18) There are also cases where the SSP/ad exchange and the DSP are in the hands of the same provider. Conceptually, however, the two services cater to opposing interests, which can result in conflicts. This applies in particular to cases where the provider of the SSP/ad exchange and the DSP is also an important provider of advertising inventory.
- (19) The share of PA in trading non-search online advertising is already high (40% to 60%) and it is generally expected to increase further. Problems in the PA sector are therefore likely to become increasingly important.
- (20) Online advertising and the PA system in particular – at least in their current form – depend strongly on user data, as mentioned above. A change in and, in particular, a reduced

availability of such data can therefore also have an influence on how the market will develop in the future.

- (21) It is absolutely possible, or even likely, that changes in the availability of data could take place in the near future. It is clear that the general (public) awareness of the massive extent to which personal data are collected and processed and the risks associated with this has increased considerably over the last few years. This has already resulted in technical responses aiming at making it more difficult to collect data and, at the legislative level, in discussions about restrictions, most recently, for example, in the context of the discussions relating to the European Digital Services Act and the European ePrivacy Directive.
- (22) From a competition point of view, two consequences of such restrictions are particularly conceivable cumulatively or alternatively and raise interesting questions: (a) Will such restrictions result in an altogether less diverse and effective system of online (in particular non-search) advertising, and what consequences would this have for the market players and the diversity of offers, including offers provided to users? (b) Will such restrictions lead to asymmetrical options to the benefit of large providers like Google, which have independent comprehensive access to user data gathered from a variety of their own, mainly user-side services?
- (23) In the current public debate, both questions have been answered in the affirmative by various market players, above all publishers, which make use of the current business model that is financed through advertising and based on data. Consequently, many market players from this sector take political action to oppose restrictions on the collection or processing of data for advertising purposes. If we take a closer and more differentiated look at this line of argument, however, we see that any negative effects restrictions on the collection and processing of data for advertising purposes may have from a competition point of view could be less substantial than the public statements mentioned above might suggest.
- (24) Already with regard to question (a) a more exact analysis is advisable as to the actual extent of the negative effects postulated by the market players. Among other things, the analysis would have to consider which options are in fact available for companies to switch to other business models that use fewer data. Furthermore, for the question as to how services provided to users can be re-financed under new framework conditions – also through advertising – it is important to use the right comparative standard, i.e. a



situation where all or almost all market players can no longer pursue the “data-intensive” business model in its current form.

- (25) If, in the end, “almost all market players” turns out to be far from “all market players”, i.e. if, in line with question (b), an asymmetrical effect on data access is likely to arise, possible corrections of such asymmetrical effects by means of regulation must also be included in the assessment, if the asymmetry results in undesirable consequences for the functioning of competition. Asymmetry is not a natural phenomenon; it also depends to a large extent on the boundaries that data protection and competition law set for asymmetrically “preferred” companies.
- (26) If, based on the above considerations, it can in fact still be expected that restrictions on the collection and processing of data for advertising purposes will result in negative consequences from a competition point of view, such consequences would also have to be weighed against the risks to the users’ right to informational self-determination and other legal interests posed by the collection and processing of data. These risks are significant if we consider that in the present situation highly detailed personal profiles are created, which include highly sensitive information, solely for the purpose of facilitating advertising. Moreover, in view of highly complex, diverse information systems that cannot be reviewed from the outside, and in view of hundreds of participants in the programmatic system, it is realistic to conclude that it cannot be genuinely controlled how the data are used and where they are stored. Also from a competition point of view consideration can thus be given to the question as to whether, overall, it would seem advisable to move away from such a system of data-driven advertising.
- (27) Apart from the issues regarding changes in data access and the management of the consequences these changes might involve, the current situation – specifically Google’s market position – raises another, even more fundamental question. This question concerns a form of competition control which takes particular account of the special situation that can actually be observed in the area of online non-search advertising. If possible antitrust proceedings were to reach the conclusion that, based on different individual issues raised by market participants, a practice used by Google has negative effects on competition (which cannot be conclusively assessed within the framework of a sector inquiry), the question should be raised how sustainable the effects to be achieved are if the individual conduct relating to the respective individual aspect is discontinued. Individual measures might reach their limits if Google’s entire network of options for influencing the market

conditions is included in the assessment: Google can ultimately adjust a large number of parameters in the online advertising system, ranging from the user's browser and the Android operating system to the booking interfaces for advertisers. At the same time the system is highly dynamic because, among other reasons, it is in large part based on a Software-as-a-Service (SaaS) model, which means that updates can be carried out centrally on a limited number of servers. From the perspective of outside observers, the system or at least parts of it are opaque. It therefore appears plausible that it might be much easier for Google than for all other companies to economically offset any restrictions imposed by public authorities on the use of a specific element of its system because the company could make adjustments to other elements. And it might take a long time before third parties even notice the effects of such adjustments. Furthermore, as an intermediary in the sale of third-party inventory, Google finds itself in a permanent conflict of interests as the company has its own substantial advertising inventory which is marketed through the same channels. Moreover, when assessing the elements that can be adjusted, the problem that changes are actually Janus-faced arises in most cases.

- (28) This raises the overall question of whether measures which focus specifically on individual practices are sufficient or whether it would be worth discussing more fundamental, large scale, perhaps also structural interventions. This approach would certainly require complex considerations as it could reduce possible options for development and hamper innovation. The application of the current toolbox, which is still to be expanded and in particular includes Section 19a GWB and the European DMA, represents an important step towards addressing the competition concerns in the digital economy which have been identified so far. However, if the promising new regulatory and competition law approaches and the experiences gathered in the application of these are in fact considered and the individual prohibitions by competition authorities and other individual specific behavioural rules still prove to have only a limited effect on the competitive process, the option to use more comprehensive interventions should become more central to the discussion.