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# Digital Platforms and Online Advertising: A Guide for Competition Policy

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*Ensuring businesses compete and consumers benefit*

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## EXECUTIVE SUMMARY

This sector brief aims to augment the existing literature and stimulate policy debates on whether a country needs to enact separate laws specific to anti-competitive practices in digital market—with particular emphasis on online advertising. More advanced jurisdictions are at the forefront of going after erring big tech companies in several competition cases, ranging from abuse of dominance in online shopping to manipulation of bids in ad space auctions. Developing countries keep an eye on the best antitrust practices, hoping to replicate them in their domestic markets.

Digital platforms have notable technical features that set them apart from traditional markets. Foremost of these features is the ability of players to engage in zero-pricing strategies in which they offer services for free to some users. Another is the ability to take advantage of the growing number of users who may be attracted to avail of premium services or serve as an audience for paid advertisements.

The scale and scope to which most successful platforms grow are heavily influenced by the platform's ability to capitalize on network effects. This notion causes a seemingly persistent growth in the platform ecosystem by creating more excellent value for user interdependence. Network effects also propel more extensive data collection to enhance the platform's services and algorithm. However, possession of large amounts of data is believed to further protect existing players from outside competition.

Most platforms monetize their services by offering ad spaces to advertisers. While other platforms (e.g., marketplaces) may collect placement and convenience fees directly from online retailers, others may need to be better equipped to serve e-commerce transactions. Hence, some platforms recoup investments upon attracting enough consumer attention by turning their spaces into advertisement channels. With this setup, they need to think of strategies to maximize profits in the market for digital advertising.

Digital advertising involves a complex process that can be summarized using the ad tech stack. This concept is the value chain of digital advertising, composed of demand- and supply-side technology tools. The ad exchange, located in the middle of the ad tech stack, is where ad inventory is bought and sold. Currently, Google dominates virtually all segments of the ad tech stack, resulting from its business actions and acquisitions in the last few decades.

A crucial element of the ad tech stack is the auction for ad spaces. Naturally, sellers or publishers want to maximize profits by offering their ad spaces at the highest possible price. Conversely, buyers or advertisers aim to avail themselves of the most favorable and visible ad space at the lowest possible price. Given these contrasting objectives, the auction is a sophisticated yet established mechanism to solicit agents' truthful valuation of the ad space.

With its technical characteristics and intricate effects on the competition landscape, the digital sector has attracted regulatory scrutiny among antitrust authorities. The nature of digital platforms challenges the conventional approaches to investigating anti-competitive practices. Unlike traditional markets, the digital economy exhibits peculiar characteristics that may not be captured by standard market definition and abuse of dominance determination employed by competition authorities.

As extensively discussed in this sector brief, Google has faced numerous antitrust complaints, especially those involving self-preferencing in and monopolizing the digital

advertising market. The recent complaint filed by the US Department of Justice (US DOJ) and eight state governments against the big tech firm for dominating multiple digital advertising technology products is notable. It is alleged that Google has engaged in anti-competitive and exclusionary conduct that consisted of acquiring actual and potential ad tech competitors and wielding its dominance across digital advertising markets to lock in publishers and advertisers to use their products.

The Digital Markets Act (DMA) is considered to be the most recent model in crafting laws to address anti-competitive practices specific to the digital economy. The DMA seeks to strip away considerable market power of tech firms—the so-called gatekeepers of the digital economy—and prevent them from imposing further exclusivity arrangements with relevant agents. However, some reports highlight that the DMA is believed to primarily target US-based companies, unduly favoring Chinese firms in the European market. The US has not yet produced a national regulatory policy with the same breadth as the DMA.

There is no encompassing and binding antitrust law in the digital sector for all Southeast Asian countries. While this may be an ambitious goal, the ASEAN Experts Group on Competition (AEGC) is gradually implementing efforts to resolve competition issues involving cross-border digital trade. These efforts are evident in developing an unpublished investigation manual in 2022 and enhancing competition authorities' capacity through bilateral agreements and consultations.

There is danger in not developing domestic capacities to deal with issues in the digital sector. This stems from the fact that firms found guilty of violating antitrust laws in mature jurisdictions are the same firms operating in developing economies like the Philippines. Ultimately, a successful intervention depends on internal capacities developed by the agency over time. These capacities refer to the readiness of the competition authority's workforce to investigate and deal with technical matters in the digital sector and the ability to render sound decisions on cases.

The PCC can pursue multiple tracks in developing a more serious approach to competition policy implementation. It can continue building relationships with more advanced jurisdictions to deal with cross-border competition issues effectively. The PCC can also consider enacting a separate law to tackle competition cases in the digital economy. This signals that the country is one with other jurisdictions in stripping away global dominant players' market power. Lastly, it can further explore and strengthen the implementation of the PCA by developing a comprehensive guideline for investigating competition cases in the digital sector.

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## I. INTRODUCTION

Advertising today is a multi-billion-peso industry. Nielsen data indicates that the ad expenditure of the top ten sectors in the Philippines alone is valued at almost PHP 93 billion in 2018 (as cited in Manala-O and Atienza, 2020)<sup>1</sup>—2.52% of the value of the total services as a GDP output. In 2023, digital advertising expenditure is estimated at PHP 101.45 billion (Balita, 2024), dominated by online search (33%) and digital banner (24%) ads. The internet has genuinely changed the advertising landscape by revolutionizing consumers' ad viewing experience, resulting in a multifold increase in ad spending since the 1990s. With over 85 million internet users in the Philippines, businesses can easily reach their target market using digital advertising.

According to Amazon Ads ("What is digital advertising," n.d.), digital advertising refers to marketing through online channels such as websites, streaming content, and other digital platforms. Digital ads take various media formats, including text, image, audio, and video. They help a business spread brand awareness, boost customer engagement, and drive repeat sales. The first of its kind appeared in October 1994 when AT&T released an online banner<sup>2</sup> on Hotwired.com, attracting clicks from about 44% of the people who saw it (LaFrance, 2017). More recently, nearly all large companies have begun using digital marketing while 58% of small businesses have begun using it to promote their products and services (The Manifest, 2019).

Unlike traditional advertising (i.e., any kind of marketing that is not online),<sup>3</sup> digital advertising allows one to scale up marketing efforts in an efficient, targeted, and real-time manner. This is made possible by online behavioral advertising (OBA), which is monitoring people's online behavior and using a collection of information set to show them individually targeted advertisements via desktop browsers. Likewise, since consumers have shifted to a broader range of devices to access online services besides personal computers, more advanced digital advertising service providers employ probabilistic methods. These are done by inferring a consumer's identity using IP address, geolocation, device fingerprinting, and general usage patterns (Boerman et al., 2017).

These developments powered the rise of *programmatic advertising*. This notion refers to automated technology for media buying—the process of buying advertising space ("Adjust", n.d.-c). More technically, programmatic advertising involves automated decision-making using dedicated software and complex algorithms. This method is fueled by various categories of user data (e.g., behavioral, demographic) to sell and purchase ad inventory<sup>4</sup> within fragments of a second, avoiding "human" negotiation between publishers and advertisers (OECD, 2020). This paved the way for the electronic trading of digital ad inventory, bypassing human interaction and opening a new market primarily characterized by real-time bidding.

Given the enduring popularity and inherent technical peculiarities of digital advertising, several observers have raised concerns about the conduct of some players in the market (OECD, 2020). The issues range from self-preferencing, which results from conflicts of interest in a vertically integrated seller of ad inventory, to the collection of user data, which could further strengthen a players' market power in targeted advertising.

Such concerns are not only founded on conceptual bases but have been committed by prominent market players, causing them to pay hefty penalties to competition authorities. For example, the European Commission (EC) fined Google EUR 2.42 billion (or USD 2.8 billion) in 2017 for abusing its dominance in the general search market by favoring its in-

<sup>1</sup> Includes both traditional and digital means.

<sup>2</sup> Interestingly, the banner says, "Have you ever clicked your mouse right here? You will."

<sup>3</sup> This includes print, broadcast, direct mail, phone, and outdoor advertising like billboards (HubSpot).

<sup>4</sup> Ad inventory is the total amount of space that a publisher has available for advertisements at any given time ("Adjust", n.d.-a).

house comparison-shopping service on its search results page. Through its algorithm, the EC found that Google granted undue advantage to its comparison-shopping service by “demoting” rivals and presenting its service in a more favorable position.

This paper aims to introduce the technicalities of digital advertising and stimulate policy debates for competition guidance in the Philippines. Specifically, the study seeks to (i) survey the economics of an analytical framework for dealing with advertising done in digital platforms, (ii) explore existing and potential competition issues in digital platforms advertising, and (iii) scan for areas in the digital space with policy reform potentials.

This document complements the Organisation for Economic Co-operation and Development’s (OECD) publication on competition in digital advertising markets where various jurisdictions consider whether competition laws must be better enforced, or new tools or regulations are required to address emerging issues. While the literature has already provided an extensive discussion of digital platform advertising, this paper offers a distilled review of the literature that may serve as a basis for crafting a comprehensive monitoring and review framework for competition in the Philippine digital economy.

This research dives into the mechanics of programmatic advertising by focusing on the auction market for ad spaces in which publishers and advertisers participate. These ad spaces appear in digital platforms or online channels<sup>5</sup> where an active exchange of products, services, and information between producers and customers takes place. For clarity on the scope, the study does not cover advertising done in TV networks and other channels that seem to be digital but not online. It also excludes programmatic direct arrangements where publishers bypass auctions, selling media inventory at a fixed cost to an individual or group of advertisers (“Adjust”, n.d.-c). As this work only focuses on the economic and competition policy nature of digital platform advertising, it excludes ongoing debates in competition analysis, such as market definition and determination of dominance.

First, it is crucial to focus on digital platforms to understand the underlying infrastructure for displaying digital advertisements. The following section introduces the technical features of digital platforms, while Section III explores digital advertising in the context of auctions. Section IV presents examples of actual and potential competition issues observed in Google’s ecosystem centered on bidding and self-preferencing. Section V reevaluates existing competition policy frameworks in light of these potential issues, and Section VI concludes.

## II. NATURE OF DIGITAL PLATFORMS

### A. Working Definition

In a nutshell, an online platform or intermediary describes a range of services available on the internet to satisfy one’s needs or wants. Examples of online platforms are marketplaces, search engines, social media, creative content outlets, application (app) stores, communications services, payment systems, and more. More specifically, the OECD defines an *online platform* as a digital service that facilitates interactions between two or more distinct but interdependent sets of users (whether firms or individuals) who interact through the service via the Internet. **Table 1** presents the leading technology firms in the Philippines’ services.

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<sup>5</sup> Digital platform and online platform are used interchangeably in this document.



**Table 1: Leading Digital Platforms in the Philippines**

Category	Leading Players
Marketplace	Shopee, Lazada, Zalora
Search engine	Google
Social media	Facebook, Tiktok, Instagram
Creative content outlet	YouTube
Video streaming	Netflix
Music streaming	Spotify
App store	Google Play Store, App Store
Payment system	GCash, Maya, Dragonpay

The increasing number of users and the interaction among these users through the platform create value for the products and services they offer—this phenomenon is often called *network effects*. In other words, the network effect refers to any situation in which the value of a product, service, or platform depends on the number of buyers, sellers, or users who leverage it (Stobierski, 2020). The more users the platform attracts, the greater the network effects and value created.

Based on the definition, there are two requirements for which an intermediary is considered an online platform (Belleflamme & Peitz, 2021): (i) the platform should facilitate the interaction between users linked by some form of network effects, and (ii) the platform should manage the network effects actively. For example, Facebook is considered an online platform because it facilitates virtual interaction between and among its users—individual and advertiser accounts. It actively attracts users by upgrading the platform’s media-sharing capabilities and communication tools, creating greater value in its ecosystem.

On the other hand, an academic’s website—though considered digital and accessed through the internet—cannot be counted as a digital platform. This website may provide information about the person and be updated regularly to reflect his or her latest research publication. However, the author does not *per se* attract new visitors to increase the value of his research findings. The website merely informs existing and potential employers of his or her academic work. The visitors do not benefit from the increased number of visits, and the author does not actively manage the interactions among these visitors.

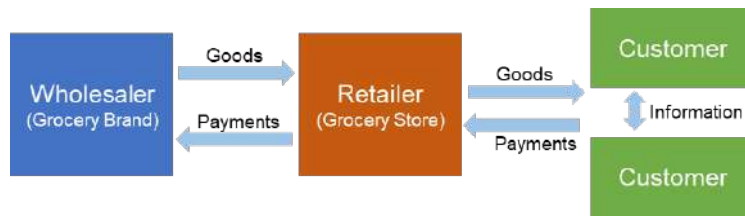
This section introduces the economic and technical features of digital platforms and expounds on the platform types and business models.

## B. Technical Features

### 1. Multi-sided Markets and Network Externalities

Digital platforms have two or more “sides” or groups of users. This feature is absent in many traditional markets where only one group patronizes the product or service. In a one-sided market, there is no interdependence across user groups from which the intermediary has to serve or benefit. For example, consider a retail grocery store owned and managed by a single proprietor (**Figure 1A**): the products are sold to the retailer by a wholesaler, and the former takes complete possession of the goods purchased. Unlike in a consignment arrangement where the wholesaler rents a space on the store’s shelf, the retailer has complete disposal of the products and the wholesaler is not concerned about how many units the store can sell.

**Figure 1A: One-Sided Market**

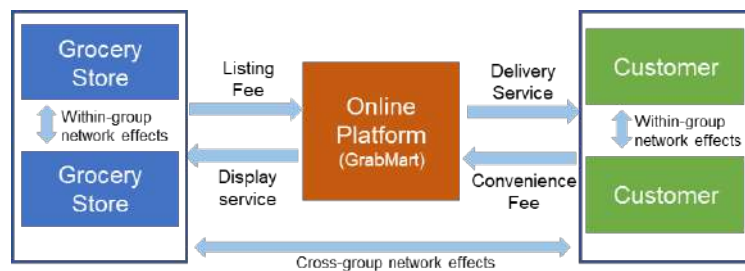


Source: Author’s illustration based on Rysman (2009)

In this case, there is only one side of the grocery market.<sup>6</sup> Subject to competition and other market forces in its area of operation, the store sets the price for each of the grocery products at which the buyer group will be charged. The buyers will naturally accept the price as given, with little room for haggling. Prices do not change as quickly as possible, resulting from the increased number of buyers. There is no value in buyer interaction besides sharing information about the store (e.g., product selection, location, prices). There is also no relationship between the wholesaler and the buyers in which the grocery store can monetize. In contrast, digital platforms may engage multiple user groups and leverage on their relationships to create more excellent value for products and services offered.

Take GrabMart as a local example to drive a sharp divergence between a traditional grocery store’s one-sided nature and an online grocery platform’s multi-sidedness (**Figure 1B**). GrabMart is a platform that delivers on-demand grocery items. It offers services to two main user groups in its ecosystem, namely buyers and grocery stores.<sup>7</sup> On one side, the buyers order goods on the app in exchange for a fee customarily composed of delivery and convenience charges, plus grocery price. Conversely, grocery stores enlist themselves as “merchant partners” on the app to access a more significant number of potential consumers. Merchant partners typically pay for placement or commission fees charged by the platform. With this structure, GrabMart exhibits multi-sidedness since at least two groups interact through the app and are tied by some form of mechanism that feeds into a continuous value creation called network externalities.

**Figure 2B: Two-Sided Market**



Source: Author’s illustration based on Rysman (2009)

In economics, there are costs and benefits incurred and received by third-party agents arising from producing goods and services; these are often referred to as externalities. As seen above, many products in which the utility (or disutility) a consumer derives from the good increases with the number of other agents consuming the same good.<sup>8</sup> In the context of the digital economy, these are called *network externalities* or network effects.

<sup>6</sup> See Rysman (2009) for the same example and arguments as to when a grocery market could be multi-sided.  
<sup>7</sup> In fact, the group of riders is also a non-negligible side of GrabMart. This group has been omitted to simplify the illustration.  
<sup>8</sup> See Katz and Shapiro (1985) for an earlier discussion and treatment of network externalities.

Network effects crucially determine the success of a platform in the digital economy as they dictate the scale and scope to which the platform may grow. Recall that network effects create value for the products and services, propelling demand growth. If these externalities are weak, the demand for the service is limited, resulting in an even lower benefit a potential consumer may derive from the service. If these externalities are strong, the demand growth trajectory will be exponential because as more consumers avail of the service, the higher the benefit a potential consumer may get from the same service. Belleflamme & Peitz (2021) classified network effects as direct (within-group) or indirect (cross-side),<sup>9</sup> and they both influence value and demand creation.

In *direct network effects*, an additional user on one side increases the number of users on the same side. For example, WhatsApp's social media platform offers services that allow instant messaging, video and voice calling, and media sharing. There is a direct network effect if more and more people use the platform. Likely, more individuals will also use the platform. This is so because one can only maximize the features of the platform if others have downloaded and actively used it. This relationship among users (belonging to a single group) is easily tied to the ability of the platform to claim a larger market share—the more robust the direct network effects, the more individuals in a group mean a higher share in the market for online messaging and calling services.

In *indirect network effects*, an additional user increases the number of users on the other side. Building on the previous example, the relationship between the consumer and grocery store groups under GrabMart's ecosystem generates indirect network externalities. If more individuals have downloaded and ordered through the app, more grocery stores will likely be enlisting as merchant partners with the knowledge that more people will buy from them. Similarly, if more merchants participate and display their products on the app, more users will likely use the app since they know there will be a broader range of products.

The indirect relationship between consumers and grocery stores is linked to market share. The stronger the indirect network effects, the more individuals on either side of the ecosystem, which means a higher market share in one or more markets. The cross-group interdependence fuels the overall demand for online delivery services.

Network effects can also be seen as positive or negative, similar to externalities with costs and benefits. The discussions so far mainly focused on *positive network effects* where value is created and the increased number of users. There are *negative network effects* if more participation in one group causes less involvement in the same or other group. Alternatively, the value created shrinks as the platform grows in usage and scale. Users in one group become worse off due to a decreased value induced by a user in the other group. These externalities may result from (i) network congestion, where data traffic is possible due to increased usage, or (ii) network pollution, where more irrelevant contents are shown due to increased scale. For example, YouTube users will be worse off if more advertisers display ads before and in between videos.

## 2. Economies of Scale and Scope, Learning-by-Doing

There are *economies of scale* if a firm enjoys decreasing costs when it scales up production. The firm reaps cost advantages as it becomes more efficient since production costs (especially fixed costs) can be spread over a larger volume of goods. This view is associated with the supply side of economies of scale. However, this original notion is contextualized at the heyday of the Industrial Revolution when production was largely done using mechanical means. The digital age, however, led to the genesis of a whole new perspective on economies of scale.

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<sup>9</sup> In other literature, these are also respectively called one-sided and two-sided network effects.

Success in the digital economy depends on the demand side of economies of scale or the proportion of user base attracted by a platform. The platform must accumulate a critical number of subscribers that is large enough to create a self-perpetuating attraction loop (Belleflamme & Peitz, 2021),<sup>10</sup> as the benefit that each additional user derives from the platform's service is more significant when more users have already enjoyed the same service (Varian, 2019). Economies of scale are then achieved if the platform has aggregated massive amounts of demand with a few lines of code (Rethans, 2016). This is the general trend for leading social media platforms in the world today: Facebook, YouTube, and Instagram experienced exponential, rather than linear, growth in subscription (Hagiu & Rothman, 2016).

While the "volume" of demand determines economies of scale, "variety" affects a firm's ability to benefit from *economies of scope*. There are economies of scope if a firm's unit cost for a product declines as the variety of its products increases. This means that a business may save on production expenses by diversifying its products.

A single digital platform can offer multiple products and services. For example, while Google is known to be an internet search engine, it also provides navigation services (Google Maps), emailing services (Gmail), application distribution services (Google Play), and advertising services (Google Ads). There are economies of scope when Google's total cost of producing two or more services is lower than the total cost when multiple firms singly produce separate product lines (Baye & Prince, 2020). Google has put up data centers<sup>11</sup> and runs its multiple services on the same storage infrastructure, operating at virtually zero marginal cost of storage.

Another integral element for success among high-tech firms is *learning-by-doing*. Network effects are hinged on the firm's market (and vice versa) but learning-by-doing refers to the experience of the platform. While economies of scale are significant economic forces that drive a platform's survival, Varian (2019) considers learning-by-doing as the primary source of competitive advantage in technological industries. A firm is said to have benefitted from its experience if the unit production cost decreases (or if there is an incremental improvement in service quality) as the firm overcomes a higher learning curve.

The difference between economies of scale and learning-by-doing is on the timing. The former relates to the production levels at a certain period, while the latter refers to the accumulated output or investments. Learning is crucial for competition, necessitating investments in data gathering, analysis, and testing.

Search engines are an example where economies of scale are less relevant than learning-by-doing in the long run. For instance, if one has to search for information on the internet today, there would no longer be the need to know how many others use the same search engine. Still, the primary consideration would be the quality and relevance of search results. Quality search results are possible if the engine has invested in data gathering and testing technologies and leveraged its experience to improve performance.

### 3. Zero and Shadow Pricing

Business models linked to zero-price goods provision have long existed, even before the advent of digital platforms. Media companies such as radio, television, and newspapers offer content for free to consumers. This is also true for digital platforms where one group

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<sup>10</sup> Belleflamme & Peitz (2021) explains the mechanism that occurs in an attraction loop. The higher the activity level of the group, the more attractive it becomes for each group member to increase their activity level, feeding back into the group's overall activity level.

<sup>11</sup> A data center is a facility that centralizes an organization's IT operations and equipment for the purposes of storing, processing, and disseminating data and applications ("Palto networks", n.d.)

consumes the service free of charge.<sup>12</sup> While the marginal cost of production for these firms tends to be very low (e.g., the additional expenses of making entertainment content for an additional viewer is close to zero), their services are not produced at zero marginal cost. So, why are they willing to provide the product without receiving money?

The rationale for a zero-priced good is usually centered around several factors (OECD, 2018). First is data acquisition, where user data collection can further improve the digital firm's operation by enhancing service quality, calibrating targeted advertising, and developing new products and platform features. In some instances, the platform can also monetize the user data collected by selling the same to data brokers and other interested firms. Second is providing an advertising channel by offering free content and attracting a large audience. This can then be monetized as the primary source of platform revenue.

Along with attracting consumers' attention, the third reason is accumulating a solid consumer base that will eventually charge them a favorable price. For example, offering a free trial for a limited time may capture a sufficient number of following that will subscribe to a premium account. Offering a paid option signals to consumers that such an alternative has higher quality and greater functionality—this is often called *premiumization*. Lastly, since some technologies are considered open source and available at zero price, altruism and other long-term objectives motivate platform developers. These goals may include community participation, knowledge sharing, and dissemination. For instance, Mozilla Firefox is a web browser that offers privacy protection and other free features, relative to Google Chrome.

The standard economic principle dictates that more demand for the good will follow as prices decrease. How much more for a zero-priced good? Firms employ zero pricing to accumulate a large consumer base and, eventually, a higher market share. Microsoft's Internet Explorer and Google's Android were distributed under zero-price strategies—both of which not only achieved higher market shares but also displaced early movers (Barnett, 2017).

Accordingly, many observers have raised concerns that while free goods may be welfare-enhancing, many digital firms often create an illusion that a product is indeed free of charge (de la Mano, 2016). In reality, consumers pay for zero-price goods with personal data and suffer deterioration in the product's non-price attributes, such as quality and privacy. This leads to the debate as to a firm's ability, especially those with market power, to impose shadow prices (Baye & Prince, 2020).

Market power is the ability of a firm to price above marginal cost or sustain a price above competitive level. When a firm has market power, it could influence product quality, control distribution, and exercise predatory practices.

One of the least known welfare-reducing practices among dominant firms is the power to impose a shadow price above marginal cost. A *shadow price* is the amount consumers would pay for a marginal improvement in a non-price attribute of a good or service. Since quality is not readily measurable in monetary terms, shadow price is used to assign an inherent value to changes in quality. For example, the shadow price of an internet search service is the amount users have to pay for an additional improvement in the quality of search results. A firm is said to have exercised its market power if the shadow price of the marginal quality improvement is more than the actual marginal cost incurred by the firm.

As a concrete example, there is an increase in shadow price if a user is still required to supply the same amount of personal information to access a markedly reduced quality service.

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<sup>12</sup> For example, one can slack on their chair all day watching YouTube videos without spending a single dime, aside from internet costs and premium subscription fees.

This could be seen as an increase in the opportunity cost of personal data. This is a reduction of consumer welfare since the consumer is not receiving any economic value for their data.

#### 4. Data as a Barrier to Entry

With economies of scale and scope fueled by strong network effects in a platform's ecosystem, data could also play a massive role in barring entry of potential competitors in the digital market. As *The Economist* (2017) puts it, the data economy demands a new approach to antitrust rules as vast pools of data can act as "protective moats," safeguarding insiders from outside competition. In essence, there are barriers to entry in data collection when new entrants are unable to either collect the data or access the same volume and variety of data as established companies do (Todorovic, 2021). Depending on the structure of markets, these concerns are centered around the uniqueness, non-replicability, and competitive significance of data that could further add up to a firm's existing market power.

A big tech company can accumulate a big data pool as a source of competitive advantage in many ways. The first is to leverage network effects wherein a greater value created in the platform's ecosystem will attract more users, resulting in even bigger volume of data collected. This means that network effects may enhance data collection, and data itself may boost network effects, leading to a seemingly relentless platform growth. The second is to merge with another company owning large datasets or acquire a small start-up with a promising and quickly growing user base. This strategy may not only pose competition issues but also attract strong opposition from regulators and stakeholders.

For example, various consumer groups raised concerns about privacy and competition when Google announced in November 2019 its plan to acquire Fitbit, a fitness tracking company, to bolster its wearable capabilities (Landi, 2020). The groups urged regulators to be wary of the transaction since it may provide Google the ability to exploit Fitbit's valuable health and location datasets and establish a commanding position in digital and related health markets, depriving competitors the ability to compete effectively.

This was a legitimate concern that resulted in more than a year of regulatory scrutiny focusing on data. However, Google quickly insisted that the acquisition was only on improving wearables and devices. The transaction was completed in January 2021 with a series of binding commitments that ensure Fitbit users' health and wellness data will not be used for Google ads (Osterloh, 2021).

#### C. Practical Features

Aside from these technical features, there are essential aspects of digital platforms that may command many users. Like any other product or service, the platform must be attractive and user-friendly. First, the ease of use and general appeal of the platform through its user interface (UI) set it apart from the competition. A platform's UI is the point of human-computer interaction and communication. It is often discussed in conjunction with a user experience, which may include the aesthetic appearance, response time, and content presentation. In a 2020 survey, over 60% of respondents said that they would be unlikely to continue shopping with a company after a single poor experience on a website, mobile app, or platform (Heslop, 2020).

The second is on trustworthiness and security, in which the platform provides clear terms and conditions and assurances for intellectual property and data ownership. Data security is essential for users as they provide personal information to the platform, including their bank and digital payment accounts. If sensitive information leaks into unauthorized users, the trustworthiness of the platform may be compromised, resulting in bad user experience. This implies that the platform has to invest in IT security and observe applicable data privacy laws.



Lastly, there is value in ensuring the connectivity and interoperability of a platform. There is connectivity if third parties can extend the platform's ecosystem and capabilities through Application Programming Interfaces or APIs.<sup>13</sup> Multiple third-party payment options for shoppers when they check out their order on a digital marketplace is an example of platform connectivity. Interoperability is the ability of different systems, devices, applications, or products to connect and communicate in a coordinated way without effort on the part of the end user. In other words, there is interoperability if users can seamlessly switch devices without losing the continuity of current activity on the app. For example, a user using a mobile device to play music should still be able to play the same music on their personal computer.

#### D. Platform Types

The growing digital economy calls for a transparent platform vocabulary that is useful in business modeling, policymaking, and competition analysis. Platforms can be classified according to use (Watts, 2020), or the services offered by the app. There are (i) social media platforms like Facebook and YouTube which are used to share media, create social networks, and consume entertainment content; (ii) knowledge platforms like Stack Overflow and Quora which provide answers to questions about a wide-ranging topic such as travel and IT programming; and (iii) service-oriented platforms like Lazada and Grab which deliver products and services to satisfy customers' economic needs.

While digital platforms create value that benefits every user in the ecosystem, they fund their operations by engaging in various business models. As to source of revenue, some platforms collect (i) advertising and affiliate marketing fees by offering ad inventory to advertisers, (ii) subscription fees by charging users who want to access more content and functionality, (iii) commission and convenience fees by imposing a pro-rated or fixed amount on users whenever a transaction is made on the app, (iv) pay-as-you-go fees by charging users based on the volume of consumption, and (v) a combination of two or many of these business models.

For example, most digital marketplaces derive revenue from commissions paid by users and third-party online sellers whenever a transaction is completed and delivered through the app. The commission mainly comprises fees for displaying the product and convenience fees for using mobile payment and delivery channels. Further, while Quora claims it is not a profitable company, its business model is primarily based on advertising and partnerships. The company generates revenue by displaying ads on its website and mobile app and through affiliate marketing partnerships with other companies.

### III. ADVERTISING IN DIGITAL PLATFORMS

As seen in previous discussions, platforms mainly adopt advertising as the primary source of revenue. This section details the basic market mechanism between sellers and buyers in digital advertising platforms. The sellers or publishers include any digital platform that offers advertising space (or ad inventory) for those who wish to display their products or services online. A publisher is typically a website owner or an app developer. The buyers or advertisers refer to any firm that wants to promote their products or services.

Traditional advertising has fallen out of favor with many businesses in the digital age. Its drawbacks include higher costs, lower flexibility, and slower turnaround time (Johnson, n.d.) relative to digital advertising. In terms of cost, a digital ad is generally cheaper than a traditional ad as it does not involve printing ad materials or paying radio and television networks for commercials (Indeed, 2023). A digital ad is also more flexible since it guarantees the certainty of targeting a specific consumer group and may be customized

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<sup>13</sup> Application programming interface (API) which refers to a software intermediary that allows two applications to talk to each other by extracting and sharing data.

according to the user's changing needs. This is opposed to physical ad material, which requires significant repositioning when consumer behaviors change.

In digital marketing, the response is also easy to observe as users are monitored based on impressions and clicks, whereas reactions are less transparent and unobservable in traditional marketing. The immediate response given to digital ads contributes to faster turnaround time. The expected return on investment among digital advertisers is 5:1—a profit of USD 5 for every USD 1 spent on a marketing campaign. This is considered slightly above average of the expected return on investment (ROI) in the advertising industry (Sendoso, 2022).

In a survey among 1,440 digital advertisers (Muhammad, n.d.), Google and Facebook are the top digital advertising platforms of choice. About 87% of respondents use both platforms, while 44% identified Google as a top-performing channel delivering the highest return on ad spending. Facebook and Google are ranked top because they empower advertisers to reach potential consumers during high-intent moments. This means that these platforms can display the most relevant advertisement when consumers are likely to buy a product. In these moments, the algorithm that utilizes the user's personal and preference data is optimized, leading to higher customer engagement.

Sentiments toward digital advertisements vary widely depending on the platform and the consumer's age bracket. For example, in a survey that asked US consumers to rate the ads they experience on entertainment platforms (Mazumder et al., 2021), Generation Z (ages 12-27) and Millennials (ages 28-43) express positive sentiments on ads that occur on social media and those that are advertised by social media influencers. Conversely, Boomers (ages 60-69) are generally least satisfied with ads that appear on all platforms in the survey. Those that pop up while streaming music or video content received the lowest score (most negative) on the sentiment scale.

More locally, a 2011 Nielsen Survey showed that Southeast Asian consumers generally expressed (73% of respondents) trust and positive sentiment toward online advertisements and targeted content. The poll also revealed that 83% of Filipino consumers are highly or somewhat influenced by ads on social media sites, mainly if their friends have also engaged with the product or brand (Manala-O and Atienza, 2020). More recently, in 2017, about 60% of Filipinos perceive the content they see on Facebook, Instagram, and Twitter as reliable (Kantar, 2017). These trends suggest the general receptiveness of digital platform advertisements among Filipinos.

#### A. Ad Inventory and Useful Metrics

Ad inventory generally refers to the total advertising space available on a digital platform. Much like physical goods, ad spaces are sold in a market. Traditionally, advertisers manually contact publishing companies and negotiate prices and how the advertisement is displayed. However, with new technologies, ad inventory is increasingly being offered programmatically, using ad exchange and real-time bidding (RTB). Ad inventory is generally limited and it is allocated among advertisers through a competitive selection process.

Ad inventory is commonly divided into two categories according to price: (i) premium advertising inventory, which is the most expensive, yet it has the most visible position (e.g., banner ads) in the ad space; and (ii) remnant advertising inventory which is the total spaces net of premium inventory. The latter is offered at a discounted rate and can be availed by advertisers on a tight budget. These two categories may influence a publisher's pricing decision. Hence, the publisher needs to know its ad inventory's fill-in rate—the difference between rented and vacant ad space.



There is also a variety of (revenue) models that publishers can adopt in charging advertisers. First, the cost per action (CPA) is a payment model in which the advertiser only pays a fee when the user performs meaningful activities that can lead to a successful transaction. An example is when the user subscribes to a marketing email blast.

Second, the cost per *mille* (CPM or per thousand impressions) is calculated based on the number of views or impressions. This contrasts with other payment models, such as the cost per click or CPC, where the number of clicks is the basis for calculating impressions. In CPC, a page impression is simply the number of users viewing the ad. The ad value is then calculated as page impressions multiplied by the average number of ads placed by the advertiser on a page. The CPM is best if the only objective is to spread brand awareness and if there is no need for immediate customer engagement. Third, the CPC—often called pay-per-click (PPC) requires advertisers to pay the platform for every click made by customers. CPC is the most competitive payment model since it guarantees high transaction rates.

## B. Demand and Supply of Ad Inventory

In a purely competitive market, the shapes of the supply and demand curves reflect the market condition of the good in question. The demand line is downward sloping, so lower prices attract buyers to buy more, but higher prices discourage them from obtaining more of the product (negative relationship between price and quantity). On the other hand, the supply line is upward sloping such that higher price levels encourage sellers to supply more. Still, lower prices discourage them from providing the product (positive relationship between price and quantity). The intersection of the demand and supply lines determines the equilibrium or market-clearing price and quantity.

The equilibrium price and quantity are acceptable to both buyers and sellers: buyers who are willing and able to get the quantity of product they intend to buy at a price level equally acceptable for sellers to supply the same quantity. In general, the price signals a product's relative scarcity or abundance. If the product is highly priced, the product is likely limited. Conversely, if the price is low, an abundant supply of the product may be observed.

Is this the case in digital advertising? In essence, publishers want to sell their ad space at the highest price. In contrast, advertisers want to buy the best ad space at the lowest price. Interestingly, the abundance of ad inventory depends on the payment model adopted by the online publisher because it affects advertisers' cost accountability. The unit of impression accounting can determine whether scarcity in the online advertising market exists (Abraham, 2012).

In a CPM setting, advertisers are accountable for every ad displayed on a platform. This is so because they compensate the publisher for the views made. However, in CPA and CPC settings, advertisers must be more accountable. Since they only have to pay for every meaningful user engagement with the displayed advertisement (e.g., clicks or email subscription), advertisers are incentivized to increase the number of ad spaces acquired. This may lead to an abundant ad inventory regardless of the price per click. A glut of digital advertising inventory may cause users to ignore or even dislike online ads, crowding their view of critical digital contents. An example is an interruptive pop-up ad that appears during content consumption.<sup>14</sup>

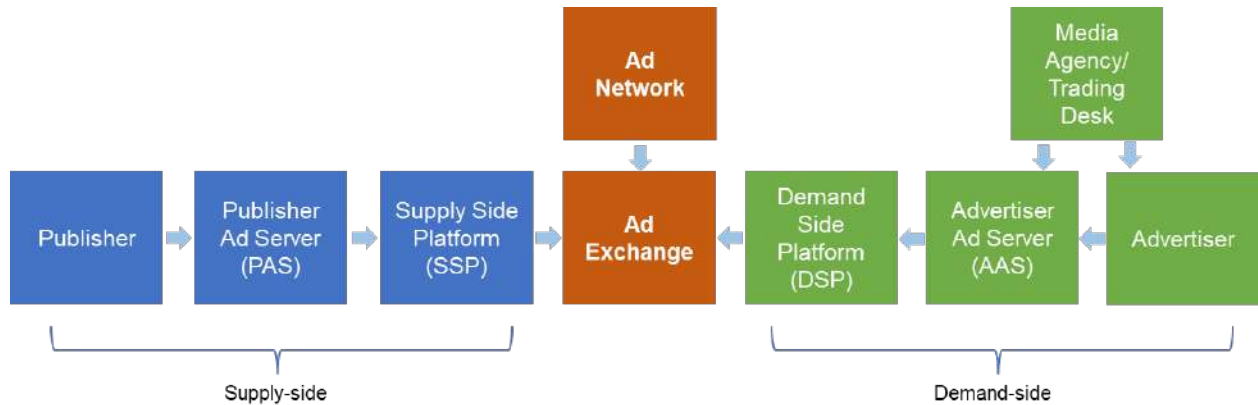
## C. Supply Chain

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<sup>14</sup> A similar situation can be gleaned from the case of excessive mail advertising in the United States. Mailboxes have grown crowded with direct mail letters and catalogues making consumers ignore important mails (Abraham, 2012).

In tracing the flow of transactions in an online advertising environment, it is crucial to understand the advertising technology stack or the *ad tech stack*—the supply chain of digital advertising. **Figure 2** shows a simplified version of the supply chain.

**Figure 2: The Ad-Tech Stack**



Source: OECD (2020)

### 1. Supply-side Tech

Publishers are the leading suppliers in the ad tech stack. They monetize available ad inventory by selling them to interested advertisers. Between publishers and advertisers, there is a variety of ad tech tools that automate and facilitate their transactions.

On the supply side, publisher ad servers (PAS) provide the technology to manage, store, prepare, and display ads on a publisher's website. An ad server dictates how and when the ad content is displayed through comprehensive data analytics on the number of impressions and clicks. This means that publishers can selectively display ads to site visitors based on predefined criteria (Munro, 2024a).<sup>15</sup>

Supply-side platforms (SSP) provide the technology to automate selling publisher's ad inventory. SSPs offer flexible options for publishers to control the selling of ad spaces. These options include setting price floors in an auction, determining which advertisers can bid on ad space, and assigning which ad spaces display specific ad content.

A publisher may have a unified supply side infrastructure integrating PAS and SSP into one ecosystem, but it can also engage multiple third-party providers. DoubleClick for Publishers (also known as Google Ad Manager)<sup>16</sup>—with over 90% market share in the supply-side—is one of the leading players with integrated PAS and SSP for premium publishers. It offers features like an exciting user interface, simple reporting, and management tools.

### 2. Demand-side Tech

On the demand side, advertisers include businesses that aim to promote their products through digital advertising. The traditional ad-serving workflow involves around 40 steps in placing an ad on a publisher's website (Munro, 2024a). However, much like PAS, advertiser ad servers (AAS) automate this process, and they provide technology services for storage, tracking, and delivery of ads onto a publisher's site on behalf of the advertiser. In other words, AAS offers services to help advertisers manage their ad campaigns. On the other

<sup>15</sup> These criteria may include the ad's features, the geolocation, and the IP address of the user's device.

<sup>16</sup> Interestingly, Google Ad Manager was conceived from Google's acquisition of DoubleClick—an internet advertising company—in March 2008 for over USD 3 billion. This amount is almost double that of what Google paid when it acquired YouTube in 2006.

hand, demand-side platforms (DSPs), tend to purchase ad inventory from publishers via an ad exchange. DSP services include bidding on the ad exchange and providing data analytics to the advertiser.

### 3. Ad Exchange and Ad Network

An ad exchange is a virtual marketplace where publishers and advertisers connect to buy and sell digital ad space without an intermediary (Munro, 2024b). A programmatic auction or RTB facilitates trading in an ad exchange. The major ad exchange player is Google AdX, with at least 50% market share (US DOJ, 2023a).<sup>17</sup> It allows publishers to sell their ad inventory to multiple ad networks and advertisers.

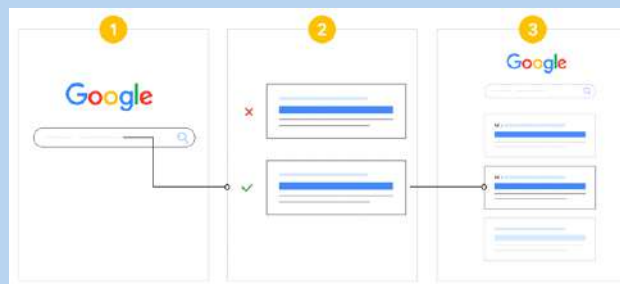
Because these processes may be too complex and require a dedicated marketing team in an advertiser's workforce, smaller businesses directly engage the services of either a media agency or an ad network. A media agency is a third-party marketing management firm that takes charge of planning and operationalizing ad strategies for advertisers. Ad networks aggregate ad inventory from the supply side and match it with the demand for ad slots on the demand side of an ad exchange. Ad networks work as the matchmakers of the app marketing world ("Adjust", n.d.-b).

### D. Auction

Unlike in a programmatic direct arrangement, where advertisers directly approach publishers to buy ad space, an auction involves multiple advertisers bidding for ad space on a publisher's online platform. The auction occurs in the ad exchange portion of the ad tech stack. When users inquire online using mobile devices, the ad tech stack immediately

#### Box 1: Auction in Google Ads

For each user's search queries on Google, an ad auction takes place to determine which ads will appear for that specific search and in which order those ads will show on a page. The figure below illustrates this process:



1. When one searches, the Google Ads system finds all ads whose assigned keywords match that search.
2. From that set of ads with matched keywords, the system further shortens the list and ignores any ads that are not eligible. In general, an ad is not eligible if the target audience is from a different country or if the same was disapproved based on a policy violation.
3. Of the eligible ads, only those with sufficiently high Ad Rank may be displayed. Ad Rank is a combination of advertiser's bid and preferred position, the ad quality, the context of the user's search, and the ad formats.

**Source:** Google (n.d.)

<sup>17</sup> In the succeeding discussion, US-DOJ sues Google in January 2023 for monopolizing digital advertising technologies.

processes queries and displays appropriate ad content. This workflow occurs in milliseconds (Singer, 2012), often involving three simple steps. To provide a concrete illustration, **Box 1** explains how ad auctions happen in Google's search advertising service. Why do publishers turn to auctions when selling ad inventory? Unsurprisingly, publishers and advertisers, like other businesses, want to get the most out of the least possible ad investment. Economists call this cost minimization, intending profits. To do this, publishers must differentiate ad spaces within their ad inventory by charging the highest possible price for each product offered. This task is not easy since the online advertising market involves a highly heterogeneous set of goods (e.g., the vast range of possible queries in search advertising) (Devanur & Mehta, 2021). Further, advertisers are faced with budget constraints. Hence, there is a strong incentive to obtain the most visible ad space at the least possible cost. If information about these constraints and incentives is difficult to ascertain, it would also be challenging to determine the optimal price (i.e., the price at which publishers and advertisers agree) for each ad space.

To set the optimal price, publishers cannot directly ask advertisers about their willingness to pay for a particular ad space. This may be laborious, making advertisers miss every ad opportunity during users' high-intent moments. Still, even if publishers asked individual advertisers about their willingness to pay, the latter may not truthfully reveal their valuation of the ad space. On the other hand, if advertisers are honest or naive, publishers would then set the price equal to the highest valuation, extracting the entire surplus (Penta, 2022). These are against the principles of cost minimization and revenue maximization pursued by players. Auction comes in as a sophisticated way to ask advertisers to reveal their willingness to pay to solve these inconsistencies (Yale University, 2001).<sup>18</sup>

There are three basic elements of an ad auction: (i) the publisher should have an ad space to sell, (ii) advertisers express their interest in buying the same by submitting bids, and (iii) a rule determines how the ad space is assigned to which advertiser and establishes which price the winning bidder will pay.

In contrast with open-bid auctions<sup>19</sup> typically used in traditional markets, bidding in the online advertising market is characterized by sealed-bid auctions.<sup>20</sup> The most common auction formats in the online advertising world are the first-price and second-price auctions. In a second-price auction (SPA), the bids are submitted simultaneously and the highest bidder wins, paying the price equal to the second-highest bid. This arrangement reduces the risk of overspending or overestimating an ad space, resulting in an even higher bid participation rate among advertisers.

In a first-price auction (FPA), bids are placed simultaneously, and the ad space eventually gets awarded to the highest bidder, paying a price equal to the highest bid. This model reduces complexity in the ad tech environment, enabling a more accurate evaluation of the ad inventory's market value. Further, it encourages more competitive bids from advertisers, and publishers generally earn more revenue than in a second-price model (Penta, 2022).

## E. Network Effects and the Ad Exchange

It is interesting to note that the ad exchange is a digital platform. First, the network effects element is at work because the larger the number of advertisers willing to bid for an ad space, the larger the number of publishers available to supply the ad space. The two sides of the ad exchange are connected by network externalities such that increasing group

<sup>18</sup> "Rather than lie, the mechanism will lie for you."

<sup>19</sup> Other famous auction formats include (i) English auction (ascending price auction) where bidders successively raise the price until only one bidder remains and that bidder pays the item at a price equal to the final bid, and (ii) Dutch auction (descending price auction) where the auctioneer declares a very high price, incrementally lowering it until someone accepts.

<sup>20</sup> This makes sense considering the practicality of recording and observing each advertiser's bid in an instantaneous manner.

members on one side augments the value of the ad exchange's services to the other. Second, the platform actively manages these interactions by providing the infrastructure and algorithm to facilitate the successful trading of ad inventory.

These imply that the ad exchange has a strong incentive to attract as many publishers and advertisers as possible. The strategy may include increasing the scope of services and unleashing a wide range of client advertising opportunities. For example, Microsoft's advertising server provides end-to-end digital marketing solutions like search engine marketing and video ads. Some players may also alter their bidding rules by switching from SPAs to FPAs to ensure a higher bid participation rate.

## F. Recent Practices and Developments

The general trend is simplifying bidding processes to attract more players to bid on available ad spaces. Since the SPA is noted to be more complicated as the winning bidder's cost is not its bid but the bid of the second highest bidder, most platforms now turn to FPA as the prominent bid pricing rule. The FPA promises a simplified mechanism to determine the winner as participants pay for the amount they bid for. While the FPA may cause overvaluation of willingness to pay, players are expected to adjust their bids, resulting in a level playing field and an increase in publisher revenue (Cornell University, 2022). In a survey, there is a 54% net increase in revenue for publishers after six months of moving to platforms that use the FPA model (Munro, 2024c). To join the pack, Google decided to migrate their bidding rules from the SFA to FPA. The big tech company claimed that the change would make it easier for advertisers to purchase publishers' ad space sold on AdSense (Wong, 2021).

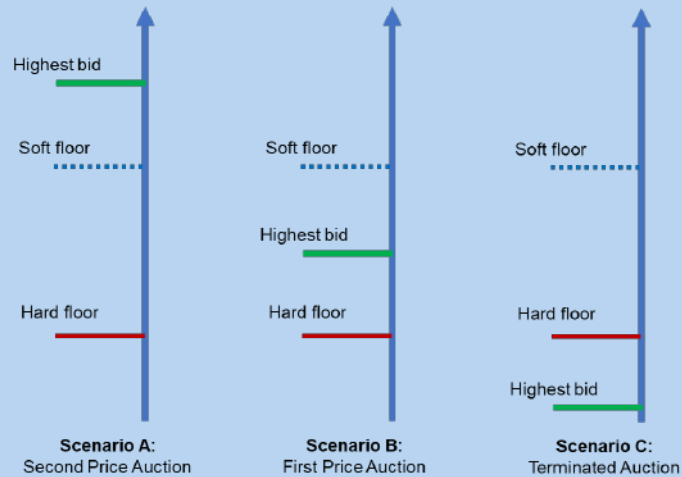
Since buying and selling in the ad exchange is simplified through the first price model, publishers needed to revisit their floor pricing strategies. Google urged their publishers and app developers to rethink their use of price floors (Cox, 2019). If a price floor is not properly set, advertisers might bid a lower price level, and publishers collect revenue lower than the actual reserve price. Among other profit maximization objectives, the goal is to retain the premium price for premium ad spaces and differentiate its quality from remnant ad inventory.

A simplified bidding process implies a more complex floor setting mechanism, and the results are unexpectedly complicated—the switch between FPA and SPA, depending on the highest bid. Some platforms have introduced “soft floors” and traditional “hard floors.” The latter refers to the minimum bid price a publisher can accept as payment for its ad inventory traded in the ad exchange. Bids below the hard floor are automatically disqualified from proceeding further in bidding (think of Step 3 in Box 1).

**Box 2** illustrates the implications of adopting a soft floor. However, soft floors were only practiced within five years after its introduction in the 2010s. Upon evaluation of the effectiveness of the strategy, Zeithammer (2019) found that while attractive in the short run, soft floors yield disappointing results in the long run due to full adjustment of player responses and the conditions under which set floors can be profitable are limited. He also noted that soft floors impose a severe complexity burden on the bidder who is trying to optimize a bidding strategy.

### Box 2: Soft Floor Mechanism

The soft floor is more than a threshold because it serves as a marker of when the bidding process will switch between FPA and SPA. There are three notable scenarios to investigate, and they all depend on the highest bid.



First, if the highest bid is greater than the soft floor, a second price auction takes place. This means that the winning bidder for the first slot will pay for the same slot by the price offered by the second highest bidder. In this scenario, the soft floor becomes the new hard floor since the sole bidder above the soft floor will have to pay such price. Second, if the highest bid is less than the soft floor but greater than the hard floor, a first price auction takes place. The winning bidder then pays for the exact bid price. Lastly, if the highest bid is less than the hard floor, the bidding process will be terminated.

**Source:** Author's illustration based on Brown (2020)

## IV. COMPETITION ISSUES

This section presents competition issues in the digital advertising market, primarily focused on Google's previous and present practices. These cases are curated to illustrate the extent of the big tech company's presence in the digital market and the effects of a dominant position in almost all market segments of the digital economy.

### A. Google-DoubleClick Acquisition (2007)

In December 2007, the Federal Trade Commission (FTC) approved Google's acquisition of DoubleClick, an online advertising company, for USD 3.1 billion. The transaction value is almost double that of the amount Google paid for YouTube when it acquired the online video-sharing platform in 2006. The acquisition had yielded Google access to DoubleClick's successful advertising software and extensive network with a host of publishers, advertisers, and media agencies. With this network combined with Google's leading advertising platform and publisher monetization services, it was believed that the transaction would offer superior tools for targeting, serving, and analyzing online ads of all types, ultimately benefiting customers (US Securities and Exchange Commission, 2007).

In its summary of the decision published in March 2008, the European Commission (EC) identified the overall relevant product market as the market for online advertising. However, the EC maintained that even if the market is further subdivided based on various



forms of online advertising (e.g., text vs. non-text display ads, search vs. non-search, direct vs. mediated sales via ad exchanges), the exact relevant market had been left open since the transaction would not give rise to competition concerns under any possible product market definition.

At the time of the merger review, Google was active in the online advertising market as a publisher (i.e., provider of ad space with its search engine web page) and an ad intermediary (i.e., Google AdSense as the ad network). Google had a market share of at least 35%, and its main competitors were Yahoo! and Microsoft, with market shares of up to 20%. On the other hand, DoubleClick was a provider of ad-serving technology and was the leading player in the European Economic Area with at most 40% market share.

The EC concluded during the review that there is no actual competition between the two companies since DoubleClick is not present in the market for online space, and Google needs to provide ad-serving tools on a standalone basis. The decision stated that while Google and DoubleClick are currently developing ad service technology and ad exchange platforms, there appears to be no significant competition between them compared to the competitive constraints exerted by existing players in the market.

The EU decision discussed non-horizontal effects such as foreclosure concerns more extensively. Several exclusionary strategies were investigated because of DoubleClick's unique position as an ad server. Among others, concerns were raised on the possibility of (i) increasing the price of DoubleClick tools when used by publishers or advertisers with competing ad networks, (ii) degrading DoubleClick tools' quality when used with competing ad networks, and (iii) bundling these tools with Google's intermediation services. However, the decision dismissed all these concerns, citing sufficient competitive constraints for DoubleClick to exercise any significant market power.

Foreclosure effects based on (i) Google's market position in search advertising and ad intermediation services and (ii) the combination of the two companies' assets (e.g., large databases) were also investigated. Such concerns were also dismissed primarily for the same reason cited above.

More than a decade later, Google's acquisition of DoubleClick has ushered the giant tech firm to gain its reputation as an ad powerhouse (Lohr, 2020). Google's ad business is now a focus of wide-ranging investigations by the US DOJ. The studies aim to uncover whether the company choked off competitors and shortchanged advertisers and publishers to build an ad empire.

This acquisition was a classic example of why antitrust experts and lawmakers need to broadly rethink how mergers are regulated when the buyer is a tech company with strong and growing market power (Lohr, 2020). For example, William Kovacic, former commissioner of the FTC who cast one of the assenting votes for Google's acquisition, said in 2020 that he would have voted to challenge such acquisition if he had known more about the market in 2007. Ultimately, the antitrust approach should be more pre-emptive, making it much more difficult for big tech corporations to cement dominance by buying other companies.

## B. Google Shopping Case (2017)

Diving deeper into the Google shopping case, the EC released a decision in June 2017 against the big tech company, stating that it abused its dominant position in the market for online general search services in 13 European countries. The Commission found that the results of product searches made using Google's search engine platform were positioned and displayed more favorably if the result was from Google's comparison-shopping service than if the search result came from competing comparison-shopping services. The

competitor's search results were also prone to being demoted by algorithms in Google's general results pages.

Google and its parent company, Alphabet, subsequently brought an action against the Commission's decision before the General Court of the EU. However, in its decision in November 2021, the General Court dismissed the two companies' appeal and upheld the fine imposed by the Commission amounting to EUR 2.42 billion.

It is interesting to note some of the General Court's arguments on why it thinks Google's discriminatory practice is anti-competitive (European Union, 2021). First, the practice was liable to lead to a weakening of competition in the relevant market given (i) the importance of the traffic generated by Google's general search engine for comparison-shopping services, (ii) the behavior of users that typically concentrate on the first few results, and (iii) the amount of "diverted" traffic to favored comparison shopping sites and the fact that such traffic cannot be effectively replaced.

Second, a general search engine should display any possible content given its universal vocation. In principle, a search engine is an open infrastructure; its value and credibility depend on its capacity to be open to results from external (third-party) sources. Third, the General Court recognizes that the general results page has characteristics akin to those of an essential facility so long as there is currently no actual or potential substitute available that would enable it to be replaced in an economically viable manner in the market. Lastly, it was found that Google's differentiated treatment is based on the origin of the results (i.e., from its comparison-shopping service) and not on whether the result is "better than the other." This conduct has a detrimental effect on consumers since even if the competing search results are better, they do not receive the same attention as the general consumer behavior of focusing only on a few search results.

### C. Google's Monopolization of Search and Digital Advertising (2020 and 2023)

In October 2020, the US DOJ and eleven state governments filed a complaint against Google under Section 2 of the Sherman Act. Google was alleged of unlawfully maintaining monopolies in the markets for general search services, search advertising, and general search text advertising in the US through anti-competitive and exclusionary practices (US DOJ, 2020). Still under litigation, the action also sought to remedy the competitive harm brought about by such methods.

Specifically, Google was alleged to be entering into a series of exclusionary agreements that collectively lock up users by requiring Google to be the default general search engine on billions of mobile devices and computers. The agreements were also believed to include (i) exclusivity arrangements that forbid preinstallation of any competing search engine, (ii) tying and other arrangements that force the preinstallation of Google's search application in prime locations on mobile devices and make them undeletable, and (iii) entering into long-term agreements with Apple that require Google to be the default general search engine in Apple's Safari browser.

These anti-competitive practices harm competition and consumers by reducing innovative entrants' ability to develop, compete, and discipline Google's behavior. The complaint states that Google has foreclosed any meaningful search competitor from gaining vital distribution and scale, allowing it to charge advertisers higher fees. This competition restriction has caused consumer harm, such as a decrease in the number of user choices of search platforms, a reduction in search quality, and increased data privacy issues. Through the lawsuit, the US DOJ aims to stop Google from further exercising its dominance in search advertising and restore competition in the digital economy. The litigation was scheduled for trial on September 2023 (US DOJ, 2023b).



On top of Google's alleged practices in the search advertising market, Google has yet to face another complaint in the market for digital advertising.<sup>21</sup> In January 2023, the US DOJ and eight state governments filed a lawsuit against the big tech firm for monopolizing multiple digital advertising technology products or collectively referred to as ad tech stack. The recent complaint alleges that Google has engaged in anti-competitive and exclusionary conduct that consisted of acquiring actual and potential ad tech competitors and wielding its dominance across digital advertising markets to lock in publishers and advertisers in the use of their products.

Specifically, the cited anti-competitive practices committed by the big tech company include (i) engaging in acquisitions to obtain control over essential digital advertising tools, (ii) forcing the adoption of Google's newly acquired tools, (iii) distorting auction competition by impeding rival ad exchanges' ability to compete on the same terms as Google's ad exchange, and (iv) manipulating auction mechanics to insulate Google from competition and depriving rivals of the opportunity to obtain economies of scale and improve innovation.

From publisher ad servers to ad networks and ad exchanges, Google is believed to have control of digital tools that nearly all major publishers and advertisers use. On the supply side of the ad tech stack, Google's DoubleClick controls more than 90% of the ad server segment, which publishers use to sell ads on their websites. On the demand side, Google Ads—a platform that advertisers use to place ads in the results of search engines—holds roughly 80% of the ad network segment. Further, Google's Display and Video 360, a one-stop online campaign management tool, has about 40% market share in the demand side platform (DSP) segment.

With the alleged monopolization of the digital advertising market, Google is known to have enjoyed and pocketed an average of not less than 30% of advertising money that flow through its digital advertising technology products in the last 15 years. Against these backdrops, the US DOJ vigorously enforced competition laws to protect consumers and safeguard competition.

## V. COMPETITION POLICY FRAMEWORK

Digital transactions transcend geographic boundaries, and digitalization integrates all operations in an industry's value chain. Therefore, the government must establish a regulatory framework that facilitates digital trade and safeguards the competitive process. This section surveys existing international and domestic practices, including regional frameworks, that regulate competition in digital platforms and online advertising. While some jurisdictions have already enacted rules dealing with competition issues in the digital sector, most countries have yet to revisit their antitrust laws, clinging to available regional frameworks and powers vested in them in their domestic policies.

### A. International Practices

The European Parliament signed into law the Digital Markets Act (DMA) in September 2022, which seeks to prevent large online platforms—the so-called gatekeepers<sup>22</sup> of the digital economy—from abusing their market power. The core objective of the DMA is to foster a more competitive internet environment by stripping away the market powers acquired by these gatekeepers (e.g., big tech payers in social networking, web browsing, online selling, and digital advertising) over the years. The law will stop gatekeepers from enforcing

<sup>21</sup> Note that search and digital advertising are not in the same relevant market. The latter refers to the broader ad tech stack while the former solely refers to the display of ads via search.

<sup>22</sup> To qualify as a gatekeeper, the online platform should have more than 45 million monthly active users in the EU.

exclusivity arrangements (e.g., inability to remove preinstalled apps in an operating system) and make it more difficult for them to track user's digital footprint for advertising purposes. Violators may face hefty penalties of 10-20% of worldwide revenue, besides other possible sanctions such as divestments and banning further acquisitions in the EU market.

With broad and sweeping scope, the US FTC has only enforced Sections 1 and 2 of the Sherman Act (1890) to go against anti-competitive practices and monopolization in digital platform advertising markets discussed above. So far, the US still needs to produce a national regulatory policy with the same breadth as the DMA (Reinsch & Suominen, 2023). However, authorities have to deal with several reports highlighting the adverse effects of the DMA on US big tech firms, unduly favoring Chinese companies like Alibaba in the EU market. By impacting primarily US companies, the EU's digital policies are also expected to shape the global strategic and national security interests between the two regions (Suominen, 2022).

The Korea Fair Trade Commission (KFTC) is also contemplating about adopting DMA-like rules primarily targeting US companies. More recently, KFTC has issued its updated abuse of dominance guidelines that clarify competition approaches to multihoming restrictions, interlinked services, most-favored-nation clauses, self-preferencing, and bundling in digital markets (McConnell, 2023). While its competition law can be applied when there are unfair business practices in the digital sector, Indonesia Competition Commission (ICC) allows digital businesses operating in Indonesia to use the DMA as a navigation tool to identify and mitigate competition risks in digital markets.

Likewise, the Australian Competition and Consumer Commission (ACCC) launched a consultation in February 2022 on whether Australia's competition and consumer protection law regime requires digital platform-specific rules (Fountoukakos et al., 2022). If enacted, these rules may alter the competition landscape for a broad range of digital services including search, social media, and ad techs. ACCC also released in November 2022 its Digital Platform Services Inquiry report calling for ex-ante measures to tackle perceived harms brought about by digital platforms.

## B. Regional Frameworks

In 2018, the ASEAN ministers endorsed the Digital Integration Framework (DIF), which aims to advance digitalization processes in the region by facilitating a seamless flow of goods and services via digital trade and coordinating regional actions. The ASEAN Experts Group on Competition (AEGC) was tasked to develop a competition assessment framework for competition issues in the e-commerce sector.

Unlike the EU, there is not yet an encompassing and binding law for all Southeast Asian countries at the regional level. At best, the AEGC in 2022 developed the Investigation Manual on Competition Policy and Law for the Digital Economy to serve as a reference for ASEAN competition authorities in investigating competition cases in the digital sector. The Manual recognizes that the COVID-19 pandemic has forced more businesses to operate online and that digital advertising (e.g., display and search advertising) is one of the markets commonly affected by anti-competitive practices among digital players.

More recently, in 2023, the Digital Economy Framework Agreement (DEFA)—envisioned to guide and prepare ASEAN to be a leader in the digital economy—has undergone numerous consultations. The DEFA recognizes competition policy as one of its core thrusts to regulate cross-border digital trade. More specifically, it was suggested during the consultations that the DEFA should encourage (i) the internalization of competition policy in digital economy-related policies and legal frameworks and (ii) the enactment of specific laws that govern prominent platform players, like the gatekeepers in the DMA.

### C. Domestic Policies

Similar to most jurisdictions, the Philippines still has no separate laws (aside from Republic Act [RA] No. 10667) prohibiting anti-competitive practices in the digital economy. The E-Commerce Act (RA No. 8792) only provides for the legal recognition of electronic commercial and non-commercial transactions and electronic signatures. However, the Consumer Act (RA No. 7394) is the most comprehensive law that protects consumers against deceptive, unfair, and unconscionable sales acts and practices, including false advertising.

Specific to commercial transactions done over the Internet, RA No. 11967, or the Internet Transactions Act, was signed in December 2023 to promote and maintain a robust e-commerce environment in the Philippines by building trust between online sellers and consumers. The law ensures that all goods and services transacted digitally will be as advertised and that commerce transactions are reliable, secure, and accessible to all consumers (Ismael, 2023). This measure shall apply to any business-to-business (B2B) and business-to-consumer (B2C) transactions involving retail sale of consumer goods and non-financial services. The law also led to the establishment of E-Commerce Bureau under the Department of Trade and Industry.

While most of the existing pipeline regulations in the country are concerned about protecting e-commerce transactions, online sellers, and consumers, RA No. 10667 or the Philippine Competition Act (PCA) penalizes anti-competitive practices and abuses of market dominance in all types of trade and industry, including those that occur in the digital economy and online advertising markets.

The PCC collaborates with international jurisdictions and development partners in technical workshops to augment capacities in investigating competition cases in the Philippine digital economy. However, while the PCA provides ample coverage of anti-competitive practices done in the digital sector, the PCC still has to pursue a more serious approach in going against erring entities. A promising signal in merger control is the publication of guidelines for the motu proprio review of mergers and acquisitions in digital markets (Philippine Competition Commission, 2023).

## VI. CONCLUSION

The gatekeepers in the global digital economy are present in most if not all, countries in the world today. Given the scale and scope of these firms to command a dominant position, the same entities found to have violated antitrust laws in mature jurisdictions are likely to be the same entities operating in developing countries such as the Philippines. If it was found that anti-competitive practices committed by such firms were welfare-reducing, the ability of least-developed economies to absorb these harms is more worrisome. This calls for immediate and concerted government action at the local and regional levels.

While competition issues in the digital sector may be an urgent concern for antitrust authorities, a successful intervention depends on internal capacities developed by the agency over time. These capacities refer to the readiness of the competition authority's human resources to investigate and deal with technical matters in the digital sector and the ability to render sound decisions on cases.

At this point, there are three routes that PCC can take to develop its internal capabilities. First, it may continue building relationships with more advanced jurisdictions to deal with cross-border competition issues effectively. This is apparent in existing regional agreements and bilateral partnerships, including PCC's consultation with the Competition and Consumer Commission of Singapore (CCCS) during the review of the Grab-Uber Case. Second, there is a need to rethink the possibility of enacting a separate law to tackle competition cases in the digital economy. This signals that the country is one with other

jurisdictions in stripping away global dominant players' market power. Lastly, further explore and strengthen the implementation of the PCA by developing a comprehensive guideline for investigating competition cases in the digital economy. This is not only to augment existing operational processes (e.g., the horizontal and non-horizontal merger guidelines and motu proprio review of digital market acquisitions issued by its Mergers and Acquisitions Office, and other internal investigation procedures developed by the Competition Enforcement Office), but also to create a framework for more effortless transfer and retention of competition analysis tools in digital markets.<sup>23</sup>

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<sup>23</sup> It should be emphasized that conventional tools in competition analysis (e.g., market definition and determination of dominance) may not be readily applied to competition issues in digital markets.

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