

BASIC CONCEPTS OF COMPETITION IN THE DIGITAL ECONOMY



Basic Concepts of Competition in the Digital Economy

General Directorate of Digital Markets



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GLOSSARY

Algorithm

A sequence of clear and precise instructions that must be followed in a specific order, mechanically and systematically, to complete a task or an activity. Instruction manuals for objects (furniture, toys, among others) and cooking recipes are examples of algorithms.

In the digital environment, algorithms are fed with data and transform it into a response or output, through a sequence of computational steps. For example, Google uses algorithms to display information of a user's search or query.

Source: OECD (2017), *Algorithms and Collusion: Competition Policy in the Digital Age*, p. 8. Available [here](#).
OECD (2023), *Algorithmic Competition*, *OECD Competition Policy Roundtable Background Note*, p. 8. Available [here](#).

Apps

Computer programs or software designed for a particular purpose, that can be downloaded to a phone or any other device.

Source: Cambridge Dictionary, *App*. Disponible [here](#).

Artificial Intelligence (AI)

A broad definition refers to AI as a broad branch of computer science that studies and designs computers capable of performing specific tasks in a way that's perceived as "intelligent". A narrow definition views AI as the discipline of creating algorithms that can learn. Virtual assistants like Siri are an example of AI.

Sources: OECD (2017), *Algorithms and Collusion: Competition Policy in the Digital Age*, p. 9. Available [here](#).
OECD (2019), *Hello World: Artificial Intelligence and its use in the public sector*, p. 11. Available [here](#).

Blockchain

Technology that enables the secure sharing of information using databases that are shared across a network of participants. It works as a public ledger where transactions are recorded chronologically in interconnected "blocks". Each block contains a list of transactions and is linked to the previous block, creating a chain. This structure prevents data from being retroactively altered without modifying all subsequent blocks, providing robust security.

Source: McKinsey & Company (2022), *What is blockchain?* Available [here](#).

Competition policy

The set of laws, economic principles, rules, regulations, institutions and other tools that the Mexican State has at its disposal to ensure that companies compete, which benefits consumers.

Through its enforcement, authorities prevent, deter, correct, regulate and/or sanction behaviors by economic agents that reduce or eliminate competition, such as collusion or abuse of dominance.

Source: Cofece (2020) *¿Qué es la política de competencia?* Available [here](#).

Cookies

A file saved in a computers' memory to help store preferences and other relevant information from visited webpages. Cookies can save user's settings on certain websites and can sometimes be used to track how visitors access to and interact with websites.

Source: Glossary from the Help Center, Google Ads Help, available [here](#).

Digital economy

All economic activities that depend on digital resources or significantly benefit from them. These resources include technologies, infrastructure, digital services, and data. The digital economy encompasses both traditional markets that have adopted digital technologies and markets that operate entirely in a digital environment.

Sources: OECD (2020) *A roadmap toward a common framework for measuring the Digital Economy*, p. 35. Available [here](#). OECD (2022), *OECD Handbook on Competition Policy in the Digital Age*, p. 8. Available [here](#).

Digital ecosystems

A digital ecosystem is an integrated and dynamic network of products and services operated by one or more large companies, which have an active presence in multiple interlinked markets. These links can come in the form of vertically integrated products or services or extend beyond a specific value chain. For instance, the Windows operating system, the cloud computing service OneDrive, and basic office suite services such as Word, Excel, and PowerPoint, are all part of Microsoft's digital ecosystem.

Source: G7 (2023), *2023 Updated compendium of approaches to improving competition in digital markets*, p. 9. Available [here](#).

Digital markets

The environment in which producers and consumers interact to exchange goods and services within the digital economy, accessible via websites or applications.

OECD (2022), *Handbook on Competition Policy in the Digital Age*, p. 8. Available [here](#).

Digital platforms

Services or infrastructures that facilitate interaction between two or more interdependent user groups through services or applications, adding economic and social value. The user groups connected by the platform are often referred to as the platforms' "sides".

Source: OECD (2019), *An Introduction to Online platforms and their role in the Digital Transformation*, p. 22. Available [here](#).

E-commerce

The activities of buying and selling products online. A narrower definition encompasses the provision of consumer goods and services through online sales channels.

Source: OECD (2019), *Implications of e-commerce for Competition Policy*, p. 8. Available [here](#).

Economic competition

The effort made by two or more individuals, businesses or companies to increase their market share by offering a greater variety of higher-quality product and services at better prices. Competition enhances purchasing power and consumer welfare, while also allowing companies to access inputs under competitive conditions, encouraging innovation and boosting productivity.

Source: Cofece (2016) *Herramientas de Competencia Económica*, p. 5. Available [here](#).

Envelopment

Envelopment refers to a strategy employed by a platform with dominance in one market to enter another platform market -which is usually related to the former market, whether the corresponding platforms offer complementary or substitute goods or services- by bundling or tying both platform products. As a result of network effects (stemming from the dominant platform's existing user base) and economies of scope (due to shared technology and data), competing platforms in the second market would be unable to effectively compete.

Source: OECD (2020), *Roundtable on conglomerate effects of mergers - Background Note*, pp. 26-27. Available [here](#).

Generative AI

A type of AI that, based on existing data, can generate content such as text, videos, images, among others, in real-time, making it difficult to distinguish from content created by humans. An example of this is ChatGPT.

Sources: CAF (2023), *Inteligencia Artificial generativa: ¿Qué deben hacer los gobiernos de América Latina?* Available [here](#). Granieri Marcelo (2023), *¿Qué es la Inteligencia Artificial Generativa?* Available [here](#).

IP Address

An IP (Internet Protocol) address is a set of numbers that uniquely identify each device connected to a network using the Internet to communicate. This system ensures that information sent over the network reaches its intended destination, much like how postal addresses ensure letters and packages are delivered to the correct location.

Source: Fortinet (s.f.), *What Is an IP Address? How Does It Work?* Available [here](#).

Marketplaces

Digital platforms that intermediate in the sales of goods and services between customers and multiple retailers. Unlike a traditional online store where only one company sells its products, a marketplace acts as an intermediary, connecting various sellers with potential buyers in one place. The platform operator does not necessarily own any inventory, as their business may only involve presenting third-party inventory to users and facilitate transactions.

Source: Forbes (2017), *What are Online Marketplaces and What Is Their Future?* Available [here](#).

Ride-Sharing platform

A ride-sharing platform is an online service that connects private vehicle drivers with passengers seeking transportation from an origin to a destination via a mobile app or website. This system enables sharing rides, helping to reduce costs, traffic and pollution. Users can choose from various ride options, view driver ratings and pay directly through the app, making the process both convenient and secure.

Source: Cofece (2015), *Opinión OPN-008-2015*, p. 2. Available [here](#).

Start-up

A start-up is a newly established company that leverages Information and Communication Technologies (ICTs) and typically adopts business models designed to facilitate their growth.

Source: OECD (2015), *Start-Up América Latina: Construyendo un futuro innovador*, pp. 7-8, Available [here](#).

Streaming

Streaming is a type of technology that sends audio and video content over the Internet. Streaming provides access to a wide range of digital content (such as TV shows, movies, music, video games, etc.) at any time, on any device that can connect to the Internet.

Source: Poor, A. (2019), *¿Qué es el streaming y cómo funciona?* Available [here](#).

Take-it-or-leave-it policy

It refers to the terms and conditions imposed on users of a digital platform (including data sharing), in exchange for granting them access to the service it provides.

Source: Competition Commission of India (2021), *In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users*, p. 16, Available [here](#).

INTRODUCTION

You've likely noticed how digital markets are becoming increasingly relevant in our lives. A growing number of activities have been digitized, while others have been native to the digital environment. The COVID-19 pandemic accelerated the digitalization and adoption of the digital economy by both businesses and users.

Just as quickly as technologies evolve, digital markets emerge often bringing benefits with each technological advancement. In 2008, Apple introduced the App Store on its devices¹ and Google launched the Android Market, the direct precursor to Google Play, marking the beginning of our access to apps through smartphones.²

1. Apple Newsroom (2018), *The App Store turns 10*. Available [here](#).

2. Android Authority (2017) *From Android Market to Google Play: a brief story of the Play Store*. Available [here](#).

Evolution of smartphones, app stores and apps



*App Store is a trademark of Apple Inc.
**Google Play is a trademark of Google LLC.

More recently, blockchain and its effects have affected diverse markets, including digital financial services, digital art and security systems. Today, it's still difficult to fully gauge the impact of the various applications of AI, one of the most significant upcoming challenges for society.

In the context of the digital economy, competition plays a crucial role in driving innovation, the emergence of new business models and improved digital services. A pro-competitive digital environment directly benefits startups and other participating companies by reducing their costs. This fosters the creation of an organizational culture focused on efficiency and encourages an environment that maximizes the benefits of compe-

3. Data from the Apple App Store website, available [here](#).

4. Statista: number of available applications in the Google Play Store from December 2009 to December 2023, available [here](#).

tition.⁵ As a result, you are benefitted by more and better products and services.

Understanding the concepts of competition related to the digital economy is essential for grasping the dynamics of digital markets and platforms and serves as a valuable tool for you as a user and consumer.

Therefore, the aim of this notebook is to provide you with these tools, so you can understand what makes digital markets different from brick-and-mortar markets and the implications these differences have on competition. The concepts covered in this notebook, along with the benefits and risks of the digital economy, will equip you to understand activities such as browsing the Internet, using platforms, shopping online, interacting on social media, and many others, from a competition perspective.

5. See Burke, A. y Hussels, S. (2013), *How Competition Strengthens Start-ups*, Harvard Business Review. Available [here](#).

1. Why pay attention to digital markets? Characteristics of the digital economy.

By browsing the Internet, shopping online or using an app to travel, you are part of the digital economy. In these markets, certain conditions coexist that differentiate these business models from those of companies that only operate through brick-and-mortar channels. Key characteristics include the prevalence of multi-sided platforms, network effects, economies of scale and scope, low distribution costs and intensive use of data.

For instance, network economies are present in services like landline telephony and public transportation, economies of scale can be observed in airline operations and economies of scope are seen in supermarkets, which typically reduce costs by offering a variety of products in one location.

However, the coexistence and simultaneity of these characteristics in the digital realm amplify their impact, driving exponential growth.⁶ Similarly, not all these characteristics are present or equally relevant across all markets or platforms in the digital economy.⁷

6. See the OECD document, *An Introduction to Online platforms and their role in the Digital Transformation* from 2019, p. 27. Available [here](#).

7. See the *Compendium of approaches to improving competition in digital markets* by the G7, in *Hiroshima Summit* from 2023, p. 7. Available [here](#).

1.1. Multi-sided platforms in digital markets: intermediaries between user groups

Many people order food delivery, download an app or share posts on social media. All these services have something in common: they are digital platforms that serve as a meeting point for different interdependent user groups. This meeting point adds value that users from both groups would not have without the platform,⁸ and it's generally leveraged to generate revenue and serve as a differentiating factor for the digital company.⁹

Nonetheless, the concept of multi-sided platform is not exclusive to the digital environment, being even possible to talk about multi-sided strategies.¹⁰ An example of a platform in brick-and-mortar markets is the newspaper. It is a physical space that connects readers interested in getting information with advertisers who use ad spaces to communicate the features, benefits and price of their products or services. Other examples include stock exchanges and travel agencies.

Examples of multi-sided platforms in brick-and-mortar markets



8. See the *Compendium of approaches to improving competition in digital markets* by the G7, in *Hiroshima Summit* from 2023, p. 8. Available [here](#).

9. The description of the most common digital platforms and their relation to competition would be further developed in an upcoming Digital Notebook.

10. See Rysman (2009) *The Economics of Two-Sided Markets*, *Journal of Economic Perspectives*, p.126.

On the other hand, not all businesses (digital or traditional) are multi-sided platforms. For instance, clothing companies with physical stores represent a traditional business model. When these companies decide to sell their products through their own websites or apps, we are only dealing with online sales channels. In this model, the company retains full control over the inventory, sets the prices of its goods or services, and directly manages all logistics and marketing with the end consumer. A similar case occurs with pizza restaurants that manage their delivery service with their own drivers. Regardless of whether the order is placed by phone or through their app, these operations do not constitute a multi-sided platform, as they are simply an additional sales channel.

Example of businesses which aren't multi-sided platforms

Traditional business



Physical store of a clothing company

Digital business



Online store of a clothing company (website or app)



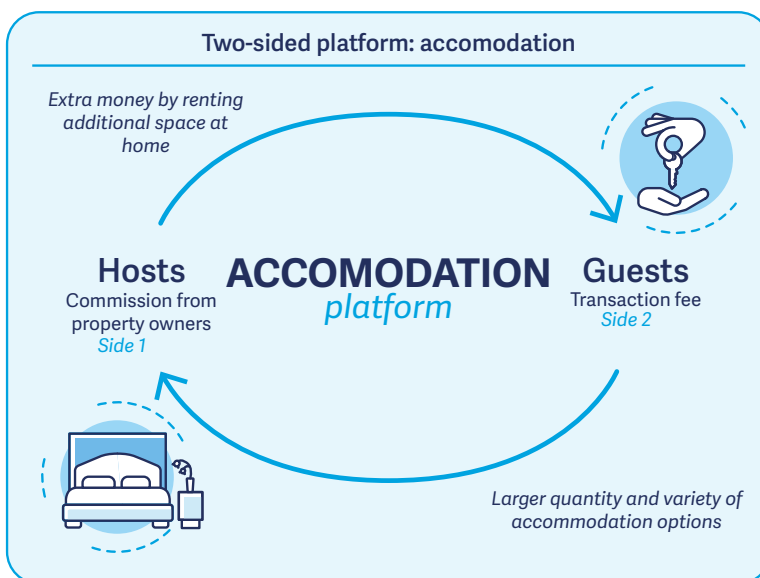
Restaurant and its physical food pickup point



Home delivery through its own app or website

The expansion of brick-and-mortar businesses involves a significant investment in physical infrastructure, employees, machinery, among other things. In contrast, the digital environment reduces some of these costs¹¹ and eliminates geographical barriers, allowing businesses to grow faster. Additionally, it enables the use of data to enhance user experience and leverage efficiencies. Furthermore, due to these advantages, the use of multi-sided platforms has become more common among different user groups, making it easier for them to create connections. This largely explains why there is a greater presence of platforms in the digital economy. Online marketplaces like Amazon, Ali Baba or Mercado Libre¹² are examples of multi-sided digital platforms, where sellers, buyers, and service providers converge on each side. Rappi and Uber Eats place restaurants or convenience stores on one side, delivery drivers and personal shoppers on another, and users requesting food or groceries through the app on yet another. Search engines like Google are another example of a platform that connect searchers, content creators and advertisers.¹³

Examples of multi-sided digital platforms

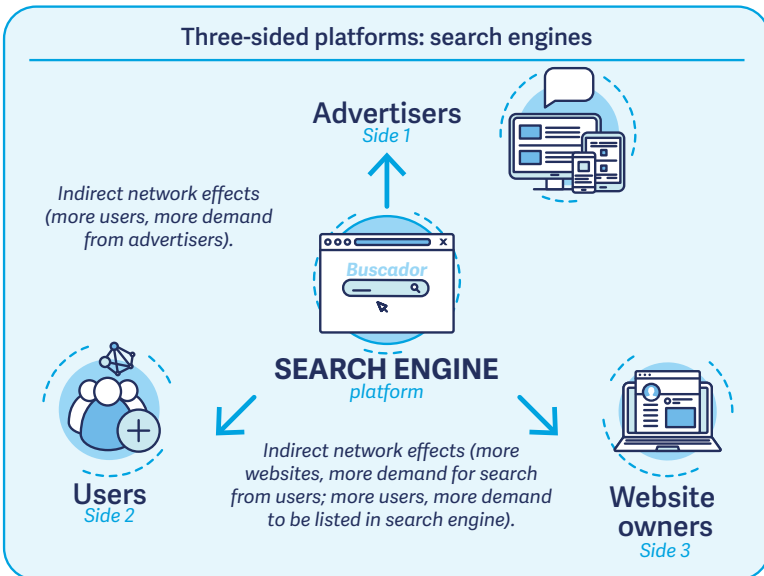
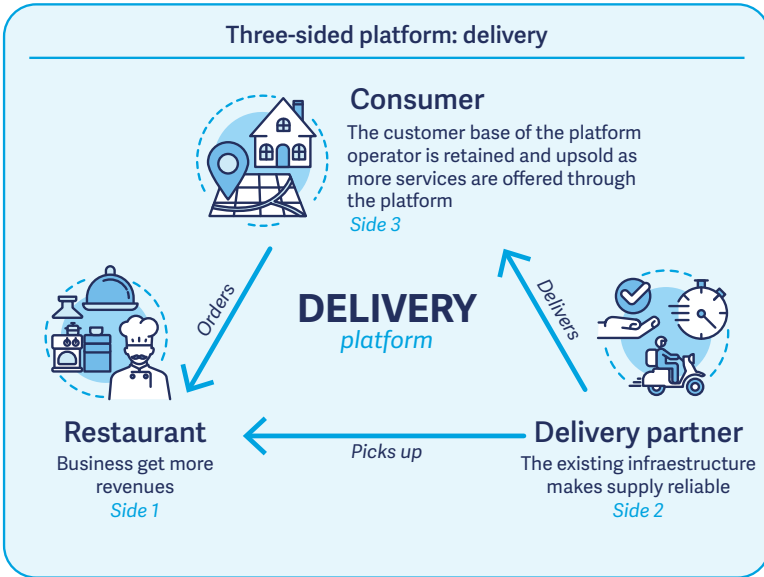


11. See Belleflamme, P. & Peitz, M. *Economía de las plataformas: Conceptos y Estrategia*, p. 11. Cambridge University Press.

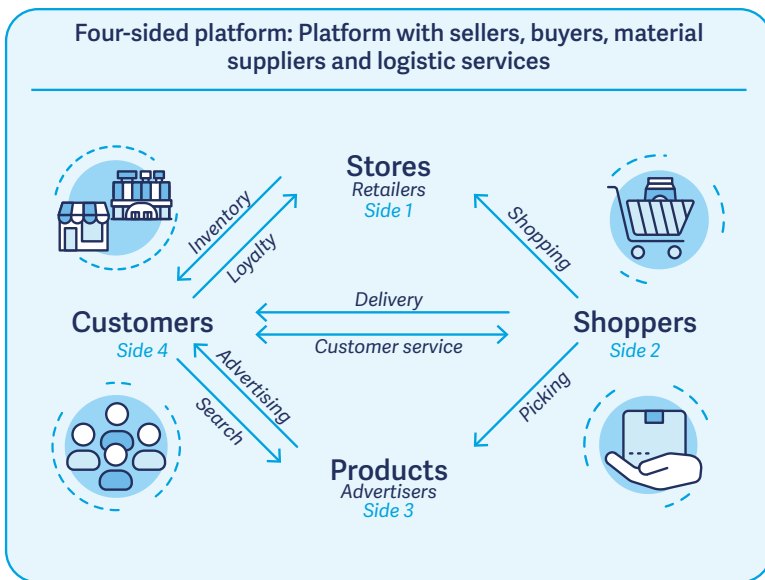
12. Online marketplaces can also sell their own products on their respective multi-sided digital platforms.

13. See OECD (2018), *Plataformas digitales y competencia en México*, p. 7. Available [here](#).

Examples of multi-sided digital platforms







Examples of multi-sided digital platforms



All these digital platforms are built upon different business models that define how they generate value for both their users and themselves, as well as the strategies they will use to monetize the provision of their services.

Examples of digital platform business models¹⁴

			
Advertisement-based	Subscription-based	Access model	Multiple matching
Suelen ser “gratuitas” para el usuario e incorporan anuncios	A periodic fee is charged for the digital good or service	The creator of a digital good or service pays the platform to reach end users	These often charge a fee per transaction or interaction that occurs on the platform

Note: the categories aren't mutually exclusive.

14. The European Parliament considered three different types of platform based business models: the subscription model, the advertisement model and the access model in which manufacturers, developers and users all can be charged. See the European Parliament document from 2016, *Challenges for Competition Policy in a Digitalized Economy*, p. 21-23, available [here](#). Additionally, the German competition authority also consider the existence of *matching* platforms. See the German competition authority document from 2016, *The Market Power of Platforms and Networks*, p. 3, available [here](#).

These business strategies highlight the versatility and adaptability of multi-sided digital platforms in fostering interaction between supply and demand. By offering spaces that facilitate the meeting of different user groups, these platforms not only stimulate the market but also enrich the digital experience by providing us with more alternatives.

Another characteristic that arises in multi-sided digital markets or platforms is single-homing and multi-homing, both of which are user-centric. You engage in multi-homing when you have the ability to use multiple platforms simultaneously to offer or access a digital good or service.¹⁵ For instance, to access music streaming services, you have several subscription options such as Spotify, Tidal, Deezer, Apple Music and Amazon Music, among others.

On the other hand, single-homing occurs when you are limited to only one platform to access certain services.¹⁶ An example of this is the current setup of Apple and Google app stores, where, in order to download an app (as a consumer) or offer an app as an app developer, you must use the App Store or Google Play, depending on the platform.

1.2. Network effects and their importance in digital markets

You have probably noticed that certain apps, services or technologies become more important as more people start using them. Think of an instant messaging service or social media. An app with only a few users would be of little use, as you would not be able to communicate with anyone. This is why most of us use the most popular messaging services, as they allow us to communicate and share information with as many people as possible.¹⁷

This phenomenon is driven by network effects, which cause a product or service to become more valuable as the number of users increase.

Network effects are not exclusive to digital markets, as they also occur in brick-and-mortar markets. For instance, when people used fax machines to send and receive documents, its usefulness depended on how many people had a fax machine.

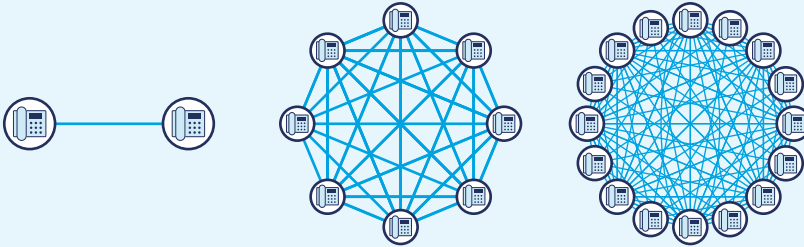
15. See the note by Sebastian Wismer & Arno Rasek to OECD (2017), *Market definition in multi-sided markets*, p. 9, available [here](#) and the Background Note by the OECD (2019) *Practical approaches to Assessing digital platform markets for competition law enforcement*, available [here](#).

16. See Padilla, J. Dryden, N & Vasconcelos, H. (2021), *On the competitive effects of single-homing: the case of hybrid marketplaces*, in *Antitrust Chronicle* Vol 2(1). Available [here](#).

17. However, this surge in popularity may also result in challenges such as network congestion, where the high volume of messages and concurrent activity could affect the speed and efficiency of the service.

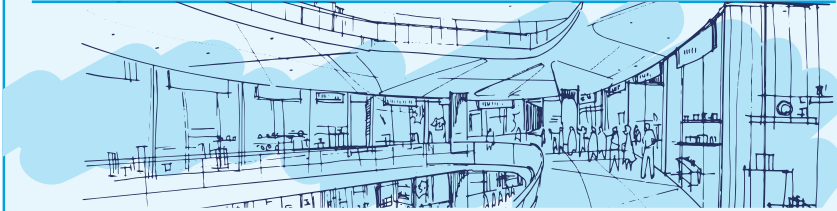
Examples of network effects on brick-and-mortar markets¹⁸

Network effects on brick-and-mortar markets: phone landlines



The usefulness of a landline phone increases with the number of people you can communicate with by that mean.

Network effects on brick-and-mortar markets: malls



Malls with a broader range of stores and services tend to attract more visitors. This increases the value of the mall for each of its tenants or stores, as a higher foot traffic translates into more sales opportunities.

Network effects on brick-and-mortar markets: public transportation



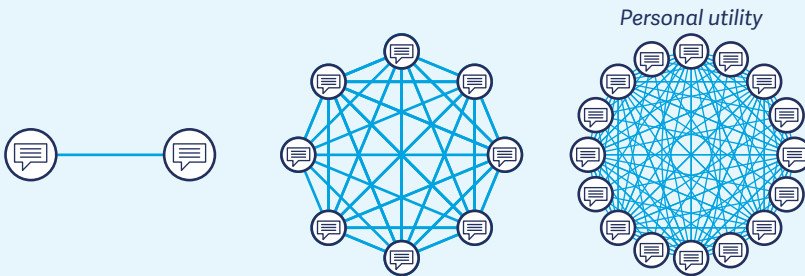
Public transportation services exhibit network effects by connecting different geographic areas, attracting more users as long as they can reach their desired destination through the connections it offers.¹⁸

18. See Badia, H., Argote-Cabanero, J., & Daganzo, C. F. (2016). *Network Effects in Bus Transit: Evidence from Barcelona's Nova Xarxa*. Available here.

In multi-sided platforms like social media networks, users who are members of the network and advertisers promoting their products converge on the users' "wall" or feed. The interaction between these user groups can produce direct or indirect network effects.

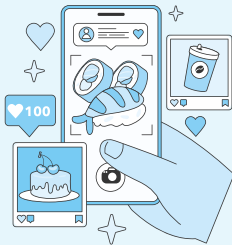
Examples of network effects on digital markets

Network effects on digital markets: messaging apps



The value of a messaging app increases with each new user, as more available contacts lead to a broader and more effective communication.

Network effects on digital markets: social networks



The more users join, the more valuable the connections and shared content become, increasing the network's appeal for both users and advertisers.

Network effects on digital markets: music streaming



As more users subscribe, more artists share their music, and more podcast join, the platform becomes more valuable for everyone.

We observe **direct network effects** when the value that a user on one side of the platform places on it increases with the rise of users participating on the same side. In our example, the value of the social network for the user will increase as more people become members and are allowed to interact with each other.

If the increase in users on one side of the platform adds more value for the group on the other side, this is an example of **indirect network effects**. In this case, as the number of users grows, the social network will become more valuable for advertisers, who will be willing to pay more to reach profiles with a higher likelihood of making a purchase.

In multi-sided platforms, such as social media, users who are members of the network and advertisers promoting their products converge on the users' "wall" or feed. The interaction between these user groups can generate direct or indirect network effects, which in turn can positively or negatively influence users. **Positive direct network effects** occur when the addition of a new user to the platform improves the situation for all participants as it encourages interaction between more people.¹⁹ For instance, if you use an online videogame streaming platform and your friends subscribe to the same platform, your situation improves because now you can all play and interact with each other.²⁰

Positive indirect network effects happen when people on one side of the platform benefit from an increase in participants on the other side.²¹ For instance, when a new restaurant joins a food delivery platform, it grows the platform's size and increases the number of users who will want to join and place orders.

Negative direct network effects occur when the addition of a new participant causes other participants on the same side of the platform to be in a worse situation due to congestion.²² A case illustrating these negative effects occurs in ride-sharing platforms. When many users request the

19. Evans, D. S., & Schmalensee, R. (2016), *Matchmakers: The new economics of multisided platforms*, p. 207, Harvard Business Review Press.

20. Koss, H. (2022), *What are Network Effects and Why Are They Important?* Available [here](#).

21. See the OECD note by Shelanski, Knox and Dhilla from 2017, *Network effects and efficiencies in Multisided Markets*, pp. 2-3. Available [here](#).

22. Evans, D. S., & Schmalensee, R. (2016), *Matchmakers: The new economics of multisided platforms*, p. 207, Harvard Business Review Press.

service at the same time, the network becomes congested, resulting in higher prices or longer wait times to be matched with a driver.

Negative indirect network effects are present when many users on one side of the platform create problems for users on the other side. For instance, if you use a streaming service to watch series and movies that are interrupted by ads every so often, you might eventually stop using the platform.²³

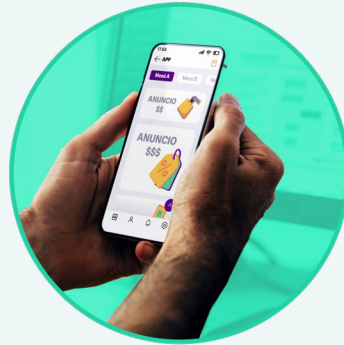
Direct and indirect network effects

Direct network effects



The value of a social network increases for the user as more people join and are allowed to interact with each other.

Indirect network effects



With a large number of users, the social network will become more valuable for advertisers, who will be willing to pay more to reach profiles with a higher likelihood of making a purchase.

23. Koss, H. (2022), *What are Network Effects and Why Are They Important?* Available [here](#).

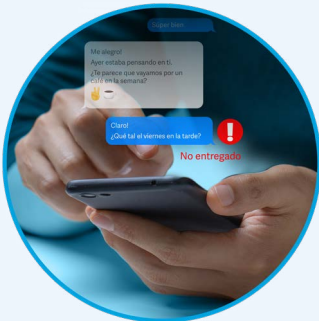
Positive and negative network effects

Direct network effects



Positive

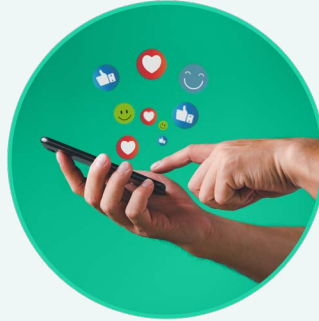
In videogame streaming platforms: the more players join, the better the experience becomes, with more matches, greater competition, and improved matchmaking options.



Negative

In instant messaging: as more people use the service, quality may decline due to server overload, resulting in delayed messages and unstable connections. This failure is generated by users on the same side of the platform.

Indirect network effects



Positive

On social media: a larger user base increases the platform's value for advertisers, who will be willing to pay more to reach profiles with a higher likelihood to make a purchase.



Negative

In review platforms: as more fake or paid reviews emerge, the value for users decreases, as it becomes difficult to distinguish between genuine and manipulated opinions.

The network effects of a multi-sided platform create interdependencies between the user groups that utilize it, which can lead to a **feedback loop** if the number of members on one side increases or decreases.

For instance, imagine an app store that raises the fees that app developers must pay to list and offer their apps. If some developers leave the platform, it loses value for users who download apps, creating an incentive for them to leave as well and download apps directly from the browser. If customers abandon the platform, it loses value for the remaining app developers. This can also happen the other way around: if the app store lowers the fees developers must pay to offer their apps, the app store becomes more attractive to customers, and a larger user base becomes more appealing to app developers.²⁴

Network effects are crucial in digital markets because the success of a platform is often directly related to the number of users it has. Additionally, they enable companies in the digital economy to rapidly expand their business to a larger user base, which, as we will see later, can have significant implications for competition in digital markets.

1.3. Economies of scale: when increased production lowers business costs

Economies of scale arise when producing a larger quantity of goods or services lowers the average cost of production. For some companies already in operation, the cost of producing more goods or services does not increase, even as the number of users or customers grows.²⁵ This enables them to scale quickly and offer more options to new users without a proportional increase in production costs.²⁶

Economies of scale are not exclusive to digital markets, as they can also occur in brick-and-mortar markets.

24. See the note by Shelanski, Knox and Dhilla from 2017, *Network effects and efficiencies in Multisided Markets*, p. 3. Available [here](#).

25. Digital goods and services are produced at a high fixed cost, but with little or no cost related to the quantity produced. This means that the increase in costs for producing additional units is less than proportional to the increase in the number of customers attended.

26. See the note by Petropoulos, G. to a document from the OECD (2020), *Competition Economics of Digital Ecosystems*, p. 3. Available [here](#).

Economies of scale

Brick-and-mortar markets



Airlines: For airlines, the fixed cost of operating a plane, whether it is half- empty or full, remains almost the same.



Postal service: The postal service can reduce its per-unit costs by increasing the volume of shipments. By processing more letters and packages, it can spread fixed costs -such as infrastructure, transportation and personnel- across a larger volume, thereby reducing the average cost per shipment. Additionally, with a higher volumes, delivery routes can be optimized, and automation technologies can be used to process shipments more efficiently.

Digital markets



Online learning platforms: These platforms offer a wide variety of courses, ranging from technical skills to personal development. The platform invests in creating the courses and can offer them to any number of students, meaning the cost per additional user is either negligible or close to zero.



Cloud storage: As these platforms expand their user base, they can invest in more efficient infrastructure, reducing operational costs per user while improving service speed and security.

The growth of a company is typically accompanied by significant investments in infrastructure, human capital, distribution systems, just to name a few. However, once a company reaches sufficient scale, it can produce more units at a lower cost.²⁷ For instance, a large factory that produces and sells packaged food may have made considerable investments to start operating, but thanks to its growth, it can now offer large volumes of food without requiring significant new investments, as it is already in operation.

This happens much more frequently in digital markets and platforms, as after substantial initial investments in developing an app, a website or a marketplace, among others, the cost of adding a new user and providing them with a service or digital product decreases.²⁸

An example of economies of scale in the digital environment is the Google Calendar service, which incurs design, development, maintenance, and update costs, regardless the number of users. If improvements are made to Google Calendar, the costs associated with those upgrades are virtually the same, regardless of the user base size. Economies of scale allow companies to benefit many users without incurring significant average costs.²⁹

In the digital economy, economies of scale present an opportunity for companies and start-ups to grow and reduce their average costs as they expand, which enables them to offer better prices, invest in creating new products or services, improve customer service or participate in other markets.³⁰

1.4. Economies of scope and expansion into new markets

Economies of scope occur when it is cheaper for a company to produce two or more different products or services jointly, rather than separately.³¹ This usually happens when there are shared inputs between these products.

27. See Perez, A., *Economies of scale*, *Global Dictionary of Competition Law, Concurrences*, Art. N° 12226. Available [here](#).

28. See Varian, H. R., Farrell, J., & Shapiro, C. (2004), *The economics of information technology: An introduction*. Cambridge University Press, p. 25. Available [here](#).

29. See the Stigler Report by the Chicago Booth (2019), *Stigler committee on Digital Platforms Final Report*, p. 36. Available [here](#).

30. See OECD (2022), *The Evolving Concept of Market Power in the Digital Economy – Note by Brazil*, p. 4. Available [here](#).

31. See Baye, M. y Prince, J. (2020), *The Economics of Digital Platforms: A Guide for Regulators*. Available [here](#).

Economies of scope can be found in both brick-and-mortar and digital markets.

Economies of scope

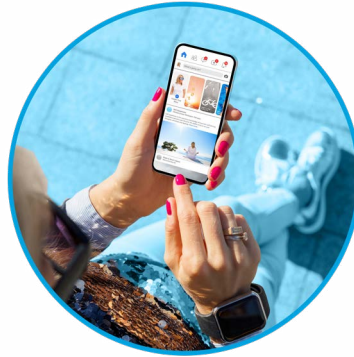
Brick-and-mortar markets



Supermarkets

A supermarket sells a wide variety of products, ranging from food and beverages to cleaning supplies and pharmaceuticals. By offering all these products in one place, the supermarket can share common resources such as space, staff and inventory systems, thereby reducing its overall operating costs compared to a specialized store that only sells one type of product.

Digital markets



Social media

Social media like Facebook use their infrastructure to offer multiple services, such as messaging and news, maximizing resource utilization and increasing value for users.

In digital markets, owning certain inputs (such as data) enables them to be used for multiple purposes, even simultaneously.³² Some companies take advantage of this by leveraging their infrastructure (such as app development, algorithms, software, among others) or data generated by their operations to offer complementary services.³³

32. This doesn't happen in brick-and-mortar markets, where, typically, the inputs of a product are consumed in its manufacture and can't be used for anything else.

33. See the note by Brazil from 2022 to an OECD document, *The Evolving Concept of Market Power in the Digital Economy*, p. 4. Available [here](#).

In the digital economy, companies like Google and Meta leverage data, infrastructure, or systems to create and offer new products or services.³⁴ For instance, Meta entered the dating market with Facebook Dating, a matchmaking service designed to help users find a partner, which relies on data collected from Facebook users.³⁵ This is an example of how business growth and the leverage of data can enable expansion into other markets.

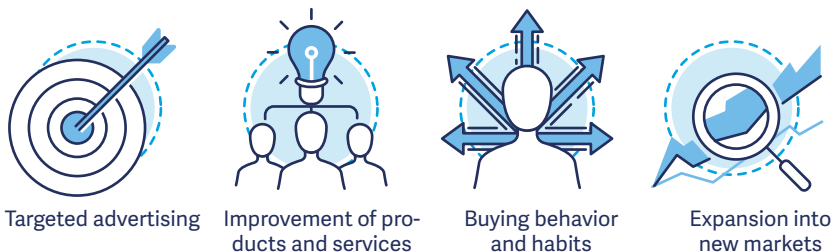
The interconnected goods and services offered by a company through economies of scope can give rise to what we know as a digital ecosystem.

1.5. The role of data in digital markets

Data is especially important in the digital economy. New technologies, with their vast storage and analytical capabilities, have placed data at the core of markets.³⁶

Information about users and their interactions with the platform has become an invaluable input for businesses models in the digital economy. With this data, it is possible to modify and improve the quality of products and services, as well as create new applications based on customer preferences and needs,³⁷ such as delivering targeted or personalized advertising.³⁸

Importance of data in the digital economy



34. See the *Compendium of approaches to improving competition in digital markets*, by the G7, in *Hiroshima Summit* from 2023, p. 9. Available [here](#).

35. See OECD (2020), *Some Economics of Digital Ecosystems – Note by Marc Bourreau*, p. 4. Available [here](#).

36. The role of data in the digital economy and its competitive implications will be further developed in an upcoming Digital Notebook.

37. Evans, D. S., y Schmalensee, R. (2016). *Matchmakers: The new economics of multisided platforms*. Harvard Business Review Press.

38. See BRICS (2019), *Digital Era Competition BRICS Report*, p. 129. Available [here](#).

For data to be useful within a market, it must be processed and analyzed in such a way that it generates information that can be applied for new purposes.³⁹

In many cases, the volume and quality of the data collected and analyzed are closely related to positive outcomes for a company in the digital economy. Effective data management enhances products and services, which attracts more users and, in turn, facilitates the generation, collection, and processing of even more data.⁴⁰ For instance, Google and Meta gather data from multiple sources, enabling them to improve their services and attract more users and advertisers, creating a feedback loop.⁴¹

Access to different data sources

Data from different Google apps



Data from different Meta apps



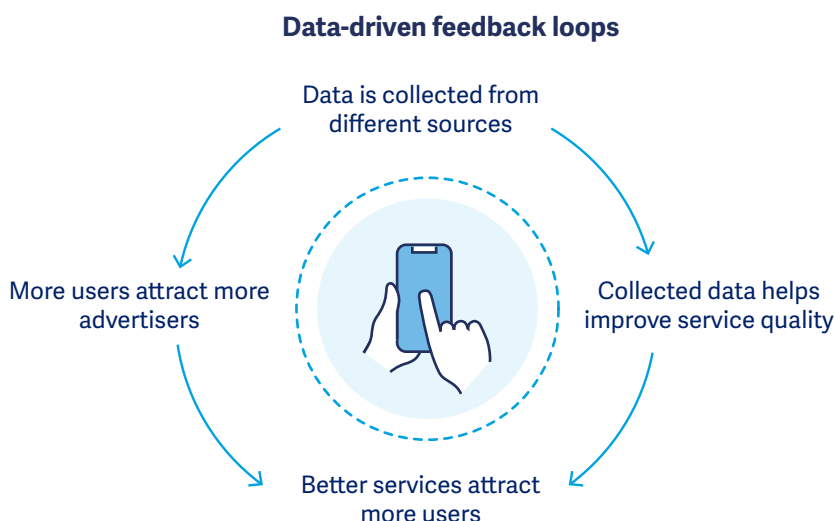
As previously mentioned, feedback loops can arise due to network effects. However, another way to trigger these cycles is through data management and processing. The value of data and information can be enhanced through algorithms and artificial intelligence, which improve their performance based on the quality and quantity of the collected data. This, in turn, drives value creation in the following ways:

39. Rubinfeld, D. y Gal, M. (2017), *Access Barriers to Big Data*, p. 342. Available [here](#).

40. Colangelo, G. y Maggolino, M. (2018). *Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and the US*. (febrero 17, 2018). Available [here](#).

41. ACCC (2019), *Digital Platforms Inquiry. Final Report*, p. 58. Available [here](#).

- Larger and higher-quality datasets allow algorithms to make more accurate predictions, improving the products and services offered.
- The quality of algorithms can be enhanced through learning derived from experience. That is, data not only feeds but also trains algorithmic systems to improve their effectiveness.⁴²



In digital markets, companies typically rely on timely access to data, as well as the ability to use it to develop innovative applications, products, and services. For instance, Generative AI is a service powered by vast amounts of data, highlighting the importance of timely accessing information for innovating and competing.⁴³

The use of data is so relevant in the digital economy that many platforms allow end users to access their services without requiring monetary payment in exchange for their data. Typically, the cost of services provided to this user group is subsidized by another user group that generates reve-

42. See the note by Petropoulos, G. to a document from the OECD (2020), *Competition Economics of Digital Ecosystems*, p. 3-5, available [here](#), so as the paper by Hagiu, A. & Wright, J (2023), *To get better customers data, build feedback loop into your products*, Harvard Business Review, available [here](#).

43. See the *Compendium of approaches to improving competition in digital markets*, by G7, in *Hiroshima Summit* from 2023, p. 8. Available [here](#).

nue for the platform.⁴⁴ This is known as zero-price markets, and examples include social networks and search engines.

1.6. Effects on competition

In digital markets and platforms, network effects, economies of scale and scope, the role of data and the prevalence of multi-sided platforms are interconnected and have a significant impact on competitive conditions. The incentives for companies to scale up their platforms can lead to “winner-takes-all” situations, where only a few companies are able to challenge the dominant player,⁴⁵ making it common for a few competitors to control the market.⁴⁶ These are some of the key factors that influence competition in the digital economy:

1. **Barriers to entry.** Network effects can create barriers to entry for new competitors, who must offer significantly superior value to attract users from established platforms. Additionally, they increase the minimum number of users needed for a new company to effectively compete in the market.⁴⁷
2. **Economies of scale and scope.** Companies that have reached a critical mass of users and data can expand rapidly, benefiting from reduced costs as their user base grows and demands more products, while also diversifying their services. This poses a challenge for new competitors, who cannot match the low unit costs or the variety of services offered by established companies.
3. **Ability to leverage data.** Companies with access to vast datasets have a significant advantage over new entrants,⁴⁸ who may struggle to access the information necessary to compete effectively.

Large digital companies have greater capacity to collect and process information, for instance, to create profiles of user preferences. With these profiles, companies can anticipate customer needs. Compa-

44. Evans, D. S., & Schmalensee, R. (2016), *Matchmakers: The new economics of multisided platforms*, p. 208, Harvard Business Review Press; OECD (2018), *Quality considerations in digital zero-price markets*, p. 4., Available [here](#).

45. European Parliament (2015), *Challenges for Competition Policy in Digitalised Economy*, p. 8. Available [here](#)

46. OECD (2022), *The Evolving Concept of Market Power in the Digital Economy – Note by Brazil*, p. 5. Available [here](#).

47. See the *Compendium of approaches to improving competition in digital markets*, by the G7, in *Hiroshima Summit* from 2023, p. 8. Available [here](#).

48. See the note by Petropoulos, G. to a document from the OECD (2020), *Competition Economics of Digital Ecosystems*, p. 3. Available [here](#).

nies that lack this data processing capability and volume will have a hard time predicting and capitalizing on customer preferences.

4. **Switching costs for users.** Once users become accustomed to a platform, app or ecosystem, they face significant costs -both financial and in terms of time and effort- to switch to an alternative. This includes migrating personal data, rebuilding social networks, learning new interfaces, and recovering purchase history and subscriptions. The difficulty of switching platforms reduces user sensitivity to changes in price, quality, or privacy.
5. **Captive users within ecosystems.** Digital ecosystems that interconnect various services and apps, such as those offered by big techs, combine data from multiple sources (e.g. search queries, email and geolocation data). This not only facilitates the development of new products but also keeps users locked within the ecosystem. While the integration of services increases user convenience, it also complicates the transition to competing platforms,⁴⁹ thereby increasing the market power of the company.⁵⁰

Together, these factors can lead to a market dominated by a few companies, which in itself does not harm the market but opens the possibility for anticompetitive behavior. This could directly impact consumers, resulting in higher prices, fewer options, lower quality and innovation, worse privacy conditions, and users being unable to make effective decisions.⁵¹

Analyzing these effects helps us better understand the benefits for businesses and users, as well as the inherent risk to competition in the digital economy, which we will explore in the following sections.

49. See the note by Brazil from 2022 to an OECD document, *The Evolving Concept of Market Power in the Digital Economy*, p. 4. Available [here](#).

50. See OECD (2018), *Plataformas digitales y competencia en México*, p. 48. Available [here](#).

51. Japan Fair Trade Commission (2019), *Report Regarding Trade Practices on Digital Platforms*, p. 9. Available [here](#).

2. Benefits of competition in the digital economy

Just as in brick-and-mortar markets, when different platforms and companies in the digital economy compete with each other, we all benefit. This competition drives innovation in technology and business models, while also lowering prices and improving the quality of goods and services. Such competition directly benefits us as users by offering more and better options at more affordable prices.⁵²

These competitive environments not only push platforms to innovate and foster efficiency, but they can also promote market expansion and cost reduction, which directly benefits start-ups, sellers of products and services, and end users. Additionally, through the effective use of algorithms and data processing, the benefits of price targeting strategies can be realized.

2.1. Market expansion and cost reduction

Two of the main benefits of competition in the digital economy are the potential to expand the markets where goods and services can be offered and cost reduction. For start-ups and companies offering goods and services in the digital environment, these benefits can manifest in several ways: lowering barriers to expansion; data-driven growth; using the digital environment as an original distribution channel; outsourcing, remote

52. To delve into the benefits of competition, you can look up Cofece (2016) *Herramientas de Competencia Económica*, available [here](#), and Cofece (2016) *Pymes y la competencia económica*, available [here](#).

work, and improving operational efficiency. Similarly, consumers also benefit from competition in the digital economy, as we will discuss below.

Reduction of barriers to expansion. The digital economy has transformed how businesses reach more people -often on a global scope- and at a lower cost. Connectivity enables the same digital goods or services to be offered in places where it would traditionally be difficult to provide them physically. Furthermore, the barriers of distance, time, and effort for interacting with and reaching more customers have been significantly reduced, regardless of their location. On the other hand, users benefit from access to a greater number of markets, especially when it comes to digital goods and services.

Strategic use of data and expansion. In the digital economy, data is key. Increasingly, companies leverage data to better understand what users need and improve their customer experience.⁵³ Technologies like machine learning and AI make data even more valuable, helping improve products and expand into new markets.⁵⁴ In this regard, larger companies have an advantage in accessing to more data and using it more effectively, or even selling it to smaller businesses or startups.

Additionally, companies can leverage the data or insights derived from machine learning obtained through an existing service to enter an adjacent market with an improved product.⁵⁵

Expansion incentives. Economies of scale and scope facilitate the emergence of goods or services with reduced costs at large scales, as well as the possibility of entering other markets as platform's user base grows, allowing for an expanded offering.⁵⁶ Platforms such as transportation networks have diversified their services to areas like food and grocery delivery. On the other hand, companies like Google have expanded their

53. European Parliament (2015), *Challenges for Competition Policy in Digitalised Economy*, p. 8. Available [here](#).

54. OECD (2020), *Competition Economics of Digital Ecosystems – Note by Georgios Petropoulos*, p. 3. Available [here](#).

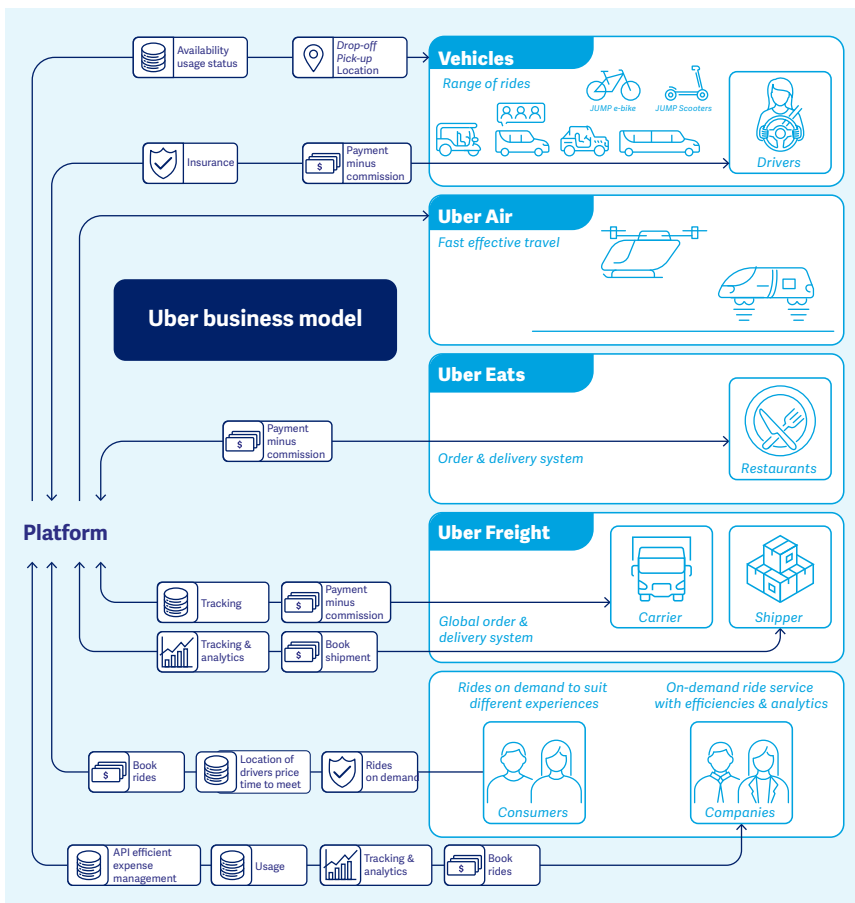
55. See the Stigler Report by the Chicago Booth (2019), *Stigler committee on Digital Platforms Final Report*, p. 36. Available [here](#).

56. See the Stigler Report by the Chicago Booth (2019), *Stigler committee on Digital Platforms Final Report*, p. 7. Available [here](#).

operations beyond their initial offerings, like search engines, to markets such as advertising and software.⁵⁷

Some platforms, such as those offering ride-sharing services, are also beginning to deliver food or groceries. This growth is made easier as they can do more at a lower cost as they scale, allowing them to offer new products and enter other markets.

Market expansion



57. See Funta, R. (2019), *Economic and legal features of digital markets*, p. 182. Available [here](#).

Reduction of distribution costs. Distribution costs refer to the expenses incurred by a producer for activities related to delivering a finished product to a customer.⁵⁸ In brick-and-mortar markets, distribution is a significant cost. However, in the digital realm this cost can be much lower. The distribution costs of digital goods and services is nearly nonexistent,⁵⁹ as all that is required is for the customer to have access to the Internet.

Digital companies offering physical products or retail services can take advantage of economies of scope and vertically integrate to reduce costs. Online retail platforms can attract sellers by offering access to large markets, efficient marketing and distribution costs, as well as the opportunity to boost sales and profits.⁶⁰

Digital environment as an additional distribution channel. Companies use the digital environment as an additional distribution channel to reach a larger audience, allowing them to grow more than could with only a physical store.

Telecommuting and operational efficiency. Digitalization has facilitated telecommuting, as seen during the COVID-19 pandemic. Companies with the right technological infrastructure were able to quickly adapt, even modifying customer service processes through tools like WhatsApp and Zoom.⁶¹

Outsourcing. The digital economy enables the outsourcing of many processes, promoting specialization and leveraging the economies of scale of service providers. Although outsourcing also occurs in brick-and-mortar markets, the speed with which it is implemented in the digital environment makes a significant difference. For instance, in some markets, it is cheaper to rent IT infrastructure in the cloud from companies that consolidate demand from multiple clients.

Benefits for consumers. The digital economy also reduces costs for consumers. Shopping online eliminates the need to visit physical stores, saving both time and money. Additionally, platforms provide detailed product information and reviews from other buyers, helping consumers

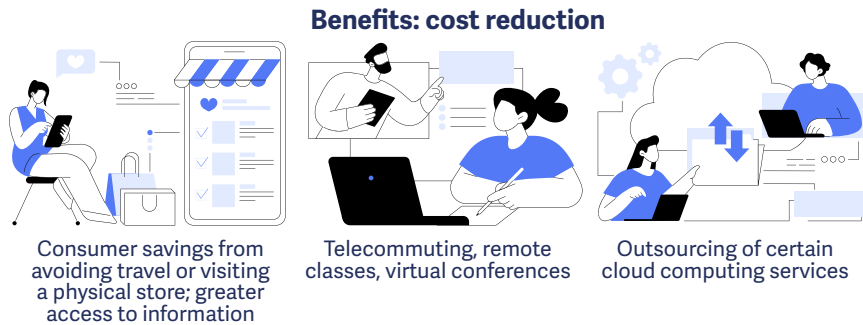
58. Meriam-Webster Dictionary. Available [here](#).

59. Chicago Booth (2019), *Stigler committee on Digital Platforms Final Report*, p. 39. Available [here](#).

60. See the Annex of an OECD document, *An Introduction to Online platforms and their role in the Digital Transformation* from 2019, Annex A. *Platform Company Profiles*, p. 168. Available [here](#).

61. See EY (2021) *Informe de Madurez Digital en México (2020-2021)*, pp. 9 and 14. Available [here](#).

make informed decisions. The ease of making returns and exchanges online adds trust and fosters customer loyalty.



On the other hand, the use of data and advanced technologies such as machine learning and AI, enables companies not only to better understand consumer needs but also to adapt and expand their products into adjacent markets. This is particularly beneficial for both large companies and start-ups, as they can leverage these data to innovate and compete vigorously.

As you can see, the benefits of competition in the digital economy are diverse and provide significant advantages not only to consumers but also to product vendors, developers of digital goods and services, and tech companies. For all of them, competition fosters development and growth.

Moreover, a competitive environment drives continuous innovation and ensures that the benefits of technology reach a broader audience, benefiting both businesses and consumers. Consumers enjoy a wider variety of products and services, an improved user experience and greater access to information that helps them make better decisions.

2.2. Personalized pricing

The digital age has transformed the way we shop, allowing companies to gather information about us in various ways, such as our browsing history, IP address, past purchases and the use of cookies.⁶² This information can enhance the quality of services offered, for instance, by providing better recommendations for your favorite music or suggesting nearby restaurants.

One way this data can be used is to set the price of a product or service. Our consumption habits, the frequency with which we purchase certain products or even a medical condition, may be factors considered when setting a price.

This approach is known as personalized pricing and involves tailoring prices for different consumers based on the specifics about their behaviors and characteristics. This information can be gathered in various ways, including direct observations, data voluntarily shared by users, analysis of online activities, or interactions across different digital platforms. The goal of this technique is to determine how much each customer is willing to pay and how sensitive they are to price fluctuations.⁶³

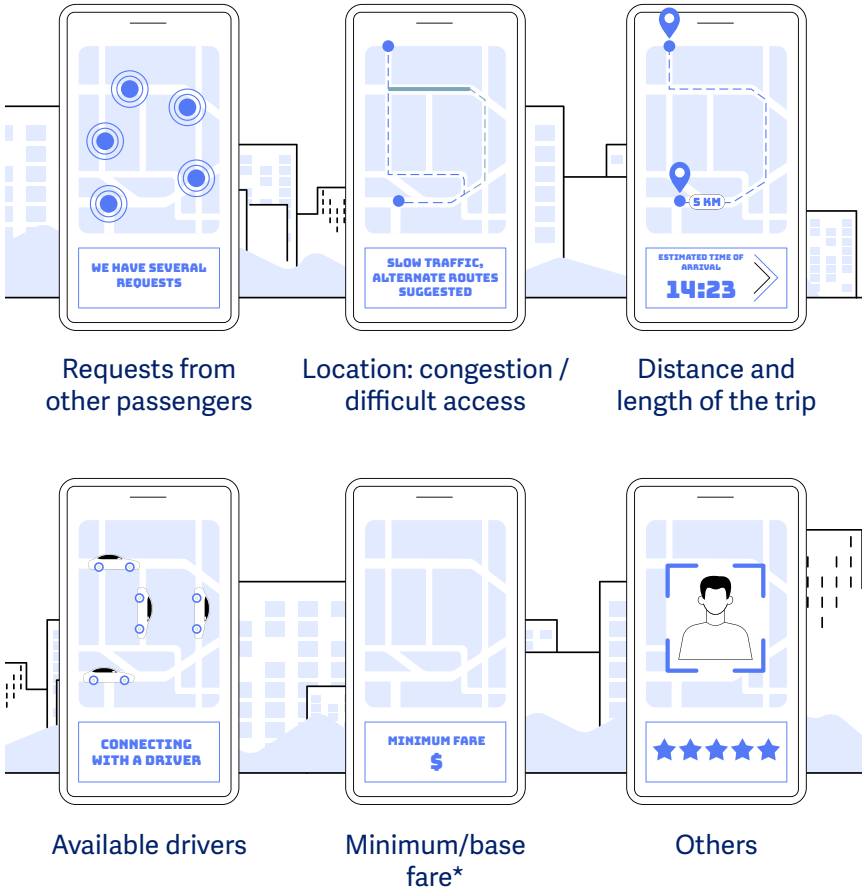
The use of personalized data to determine prices does not always have to be seen as negative.⁶⁴ For instance, ride-sharing platforms calculate the cost of a ride by considering various factors, such as your current location, the time you request the service, the demand from other users at that moment, and the availability of nearby drivers. In other services, data about your regular purchases can be used to offer personalized discounts, directly benefiting you.

62. See Da Silva, F., y Núñez, G. (2021), *La era de las plataformas digitales y el desarrollo de los mercados de datos en un contexto de libre competencia*, p. 12. Available [here](#).

63. See the document from the Competition & Markets Authority or CMA (2018), *Pricing algorithms*, pp. 36 and 55. Available [here](#).

64. See the document from the Competition & Markets Authority or CMA (2018), *Pricing algorithms*, pp. 36 and 55. Available [here](#).

Examples of personalized practices: ride-sharing apps rates

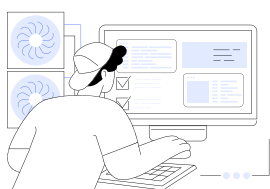


*If applicable.

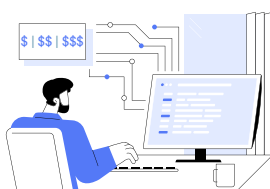
In the digital economy, companies use advanced technologies to adjust their prices without the need for direct interaction with the customer. Thanks to the development of algorithms and the analysis of large data sets, companies can more accurately estimate consumers' willingness to pay. This enables the implementation of personalized pricing more effectively and at a lower cost.

Personalized pricing is common in certain digital platforms and markets, such as e-commerce platforms, travel agencies, or financial services.⁶⁵ Digital platforms play a key role in this process, as they facilitate individualized interaction with customers. Through these platforms, companies can offer personalized deals to each user, meaning that two people may receive entirely different prices for the same product without knowing it, or be offered deals that other customers do not receive.

Steps involved in personalized pricing



The company gathers data concerning consumers' characteristics and behavior



The company uses the data gathered to estimate consumers' willingness to pay for a good or service



Based on the estimated willingness to pay, the company chooses the price for each consumer

Source: OECD (2018), *Personalised Pricing in the Digital Era*, p. 10. Available [here](#).

Personalized pricing is a common advantage in digital markets, and its implementation is on the rise, as a few traditional businesses have access to large databases that allow such precise price setting. However, there are some concerns from a competition policy perspective. Here are two of them.

The first concern is that the personalized pricing strategy could enable companies with market power to charge prices much higher than the cost of producing an additional unit⁶⁶ of their products or services,⁶⁷ based on what each consumer is willing to pay. This could not only reduce con-

65. Bourreau, M., de Streef, A., y Graef, I. (2017), *Big Data and Competition Policy: Market power, personalized pricing and advertising*, p. 41. Available [here](#).

66. Marginal cost is the cost of producing an additional unit of a product or service.

67. It's important to notice that the OECD has highlighted this as a potential concern. Furthermore, in the case of abusive of dominance, a company could argue the existence of efficiency gains, namely, pro-competitive benefits for consumers that outweigh any harm to competition.

sumer welfare but also hinder other firms' ability to compete on prices, thereby distorting competition.⁶⁸

The second concern relates to the algorithms used to personalize these prices. For instance, the UK's Competition and Markets Authority (CMA) has pointed out that advanced algorithms, capable of learning and adapting to market conditions, could facilitate coordination among companies without direct communication.⁶⁹

Despite these potential risks, personalized pricing represents a benefit for businesses, start-ups and individuals selling products online, by generating efficiencies.⁷⁰

68. See the OECD document from 2018, *Personalised Pricing in the Digital Era*, p. 26. Available [here](#).

69. See the document from the CMA (2018), *Pricing algorithms*, p. 48. Available [here](#).

70. See Haucap, J., Reinartz, W. & Wiegand, N. (2018) *When customers are and aren't – OK with personalized prices*, Harvard Business Review. Available [here](#).

3. Competition risks in digital markets

The same characteristics of digital markets that generate the benefits discussed throughout this notebook can also foster practices that seriously hinder competition. In this section, we explore the risks associated with the dominance of a few firms in the digital economy, which can abuse their market power. The main concerns we will address are:

- **Abuse of dominance.** Some companies use their market power to make it harder for new businesses or smaller competitors to succeed. The effects of these practices can include reduced quality of digital goods or services, higher prices, and stifled innovation, among others.
- **Opaque terms and conditions.** The terms and conditions of most digital platforms and services are often imposed on users as a requirement to access the service.

In this section, we will examine how these strategies can harm smaller competitors, as well negatively impact as you as a user through higher prices, lower-quality products, and less innovation.⁷¹

71. See the document from the OECD (2020), *Abuse of dominance in digital markets*, pp. 7-8, available [here](#), the *Compendium of approaches to improving competition in digital markets*, by the G7, in *Hiroshima Summit de 2023*, pp. 7, 9 and 10, available [here](#), as well as the publication by the Australian competition authority or ACCC (2022), *Digital Platforms Services Inquiry Discussion Paper for Interim Report No. 5: Updating competition and consumer law for digital platforms services*, p. 5. Available [here](#).

3.1. Abuse of dominance in the digital economy

A company's market power is generally measured by its ability to restrict the supply of goods or services or set prices above competitive levels. While many companies achieve a dominant position through innovation, effective business models, and efficient operations -benefiting consumers and the economy- using this position can lead to two outcomes: it can be an efficient business strategy, or it can harm competition.⁷²

A practice that potentially reduces competition is not automatically considered illegal. Instead, it is assessed individually under a "rule of reason" standard. This means that a conduct is only deemed illegal if the potential harm to competition outweighs the benefits in terms of efficiency and consumer welfare improvements.

We are dealing with abuse of dominance in situations where firms with market power displace existing competitors or prevent the entry of new ones without demonstrating clear benefits. In Mexico, this is known as a relative monopolistic practice, although it is also referred to as exclusionary practices, as they foreclose other competitors -whether current or potential- from the market.⁷³

Next, we will explore some strategies used by dominant firms that could be harmful to competition and negatively impact consumers, including examples of ongoing investigations and sanctions.

Exclusive dealing. In any market, whether digital or traditional, the relationship between producers and distributors of a particular good or service is determined through contracts. Within these contracts, exclusivity clauses may be included, requiring distributors to purchase only from a specific producer or to refrain from selling goods and services offered by the producer's competitors.⁷⁴

To compete in digital markets, it is essential for companies to have multiple channels through which they can distribute their products and services to end users. Exclusivity agreements are a strategy that may be used to restrict distribution channels. They can also prevent new competitors from entering the market, as exclusivity agreements hinder an entrant's

72. See Cofece (2016) *Herramientas de Competencia Económica*. Available [here](#).

73. OECD (2018), *Personalised Pricing in the Digital Era*, pp. 26-27. Available [here](#).

74. OECD (2018), *Plataformas digitales y competencia en México*, pp. 65-66. Available [here](#).

ability to contract with distributors and offer their goods or services, whether digital or physical.

DOJ vs. Google

On October 20, 2020, the U.S. Department of Justice (DOJ) filed a lawsuit against Google for entering into agreements that prevent mobile device manufacturers and distributors from installing competing apps to Google Search on their devices. According to the DOJ, Google is using these exclusivity agreements to maintain and abuse its dominant market position, blocking the entry of new competitors.

The trial began on September 12, 2023. In its defense, Google argued that these agreements are similar to those used by other companies to distribute their software. It acknowledged having promotional agreements that allow manufacturers to use its Android operating system for free, which, according to Google, helps reduce the cost of phones for consumers. Furthermore, Google stated that despite these agreements, device manufacturers and operators still often install multiple competing apps on their devices.

Finally, on August 5, 2024, the U.S. District Court for the District of Columbia concluded that Google was guilty and had violated antitrust laws by maintaining its monopoly in the search engine and online advertising markets through these agreements.

Sources:

DOJ (2020), *Justice Department Sues Monopolist Google for Violating Antitrust Laws*. Available [here](#).

DOJ, U.S., and Plaintiff States v. Google LLC [2020]. Available [here](#).

The New York Times (2023), *Google Goes on Trial Over Justice Dept. Claims That It Has Monopoly Power*. Available [here](#).

Nicola Agius (2023), *U.S. vs. Google Antitrust trial: Everything you need to know*. Available [here](#).

Tying. Tying or bundling occurs when a company sells one product only on the condition that the consumer also purchases a different (or tied) product.⁷⁵ This can be done by either forcing the consumer to buy the products together or by limiting the compatibility of its product with competing products.⁷⁶

This strategy can be used by companies in both brick-and-mortar and digital markets, but when implemented by a dominant firm, it poses potential risks to competition.

When a digital company with market power over one product or service ties it to another product, without demonstrating efficiencies that outweigh its anticompetitive effects, it can harm both consumers and competition.⁷⁷

In the digital economy, certain characteristics can facilitate tying, as digital products are often linked to other distinct products, whether hardware

75. DOJ (2022), *Competition and Monopoly: Single-Firm Conduct Under Section 2 of The Sherman Act: Chapter 5*. Available [here](#).

76. OECD (2020), *Roundtable on Conglomerate Effects of Mergers – Background Note by the Secretariat*, p. 10. Available [here](#).

77. OECD (2020), *Abuse of dominance in digital markets*, p. 41. Available [here](#).

(a mobile phone), software (an operating system) or web-based services (a website). These links can occur because one product complements another or because they share the same inputs (same components or programs).⁷⁸

Facebook Marketplace

On June 4, 2021, the European Commission (EC) launched a formal investigation against Facebook (now Meta). The EC suspects that Meta may be harming competition. Preliminary findings from the EC indicate that:

- Meta is the dominant player in both market personal social networks and online display advertising on social media markets.
- Meta may have abused its dominant position by tying its online classified ads service (Facebook Marketplace) to its social media platform (Facebook).
- This means that Facebook users automatically gain access to Facebook Marketplace, whether they want it or not.

The EC is concerned that competitors of Facebook Marketplace could be foreclosed, with Meta leveraging its market power in a way that competitors cannot easily replicate.

The investigation is still ongoing.

Source: EC, AT.40684 Facebook Marketplace. Available [here](#).

Microsoft Teams

On July 27, 2023, the EC opened an investigation into Microsoft's potential tying or bundling of Microsoft Teams with Office 365 and Microsoft 365.

Microsoft is a global technology company offering productivity and business software, cloud computing and personal computing. Teams is a cloud-based communication and collaboration tool that offers functionalities such as messaging, calling, video meetings, file sharing and brings together Microsoft's and third-party workplace tools and other applications. Microsoft includes Teams in its cloud-based productivity suites for business customers Office 365 and Microsoft 365. The EC is concerned that:

Microsoft may grant Teams a distribution advantage by not giving customers the choice on whether or not to include access to that product when they subscribe to their productivity suites, and

Microsoft may have limited the interoperability between its productivity suites and competing offerings.

If proven, these practices may constitute anticompetitive tying or bundling, hindering competition from alternative providers of communication and collaboration tools.

The investigation is still ongoing.

Sources:

EC (2023), *Antitrust: Commission opens investigation into possible anticompetitive practices by Microsoft regarding Teams*. Available [here](#).

EC, AT.40721 Microsoft Teams. Available [here](#).

78. OECD (2020), *Abuse of dominance in digital markets*, p. 41. Available [here](#).

Discrimination. Another strategy used by large companies to protect or increase their market power is discrimination. Generally, companies maintain business relationships with other companies, either as customers or suppliers (these companies are referred to as business partners). Discrimination involves treating business partners who are in similar conditions differently, placing them at a competitive disadvantage.⁷⁹

Through discrimination, a company offers lower prices or more favorable terms and conditions to some of its business partners. This can manifest in monetary terms (e.g. a manufacturer might have its own distributors and also hire independent distributors; if it charges independent distributors more, it would be engaging in discrimination) or in non-monetary terms (e.g. chips can be used to make both computers and cars; a chip supplier might offer less favorable terms to those buying chips for computers compared to those purchasing them for cars).

When this practice displaces competitors or prevents new entrants without producing efficiencies that result in greater positive effects, the dominant company faces less competition, allowing it to raise prices, reduce the quality of its products or services, and decrease innovation, ultimately harming consumers.⁸⁰

In the digital context, platforms act as intermediaries between business users and end users, but they sometimes compete directly with sellers on their platform by offering their own products and services. For instance, e-commerce platforms connect buyers and sellers, but within their platform, they may also offer products and services.

In these cases, there is a risk that companies will leverage their dominance on the platform to give preferential treatment to their own products and offer less favorable conditions to their competitors' products.⁸¹ This type of discrimination is commonly known as **self-preferencing**.⁸²

Self-preferencing in the digital environment has been investigated and penalized by competition authorities worldwide. Concerns about these practices have been so significant that they have contributed to the

79. Bergqvist, C. (2020), *Discrimination and Self-favoring in the Digital Economy*, p. 8. Available [here](#).

80. OECD (2020), *Abuse of dominance in digital markets*, p. 34-36. Available [here](#)

81. OECD (2020), *Abuse of dominance in digital markets*, p. 54. Available [here](#)

82. Carugati, C. (2022), *How to implement the self-preferencing ban in the European Union's Digital Markets Act*, p. 2. Available [here](#).

regulation of digital markets in the European Union through the Digital Markets Act⁸³ or the tenth amendment to the German Competition Act.

Amazon Marketplace and Amazon Buy Box

In 2019 and 2020, the EC opened two investigations against Amazon, finding that: Amazon uses private data obtained through Amazon Marketplace,⁸⁴ to feed automated systems that adjust offers and business decisions for Amazon Retail.⁸⁵

The rules and criteria for the Buy Box⁸⁶ and Prime⁸⁷ unfairly favor Amazon Retail and sellers within Amazon Marketplace who use Amazon's logistics and delivery services.

On December 20, 2022, the EC accepted a series of commitments offered by the company, in which Amazon pledged not to use data obtained as an operator of Amazon Marketplace for its own retail operations and to ensure non-discriminatory access to both the Buy Box and Prime.

Sources:

EC, AT.40462 Amazon Marketplace. Available [here](#).

EC, AT.40703 Amazon – Buy Box. Available [here](#).

Official Journal of the European Union (2022), *Summary of Commission Decision of 20 December 2022 relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement (Cases AT.40462 – Amazon Marketplace and AT.40703 – Amazon Buy Box)*. Available [here](#).

Google Shopping

On June 27, 2017, the EC fined Google €2.42 billion for abusing its dominance as a search engine by giving an illegal advantage to its own price comparison service. It also ordered Google to treat Google Shopping and competing price comparison services equally.

The EC concluded that:

Since 2008, Google prominently positioned and displayed its own price comparison service on general search results pages.

Google did not apply the same penalty system to Google Shopping that it applied to competing price comparison services.

Google Shopping grew faster as a result of systematic self-preferencing by Google, to the detriment of competing price comparison services.

Sources:

EC (2017), *Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service*. Available [here](#).

EC, AT.39740 Google Search (Shopping). Available [here](#).

83. At certain point, it was considered the possibility that third-party discrimination was deemed per se illegal, meaning that there would be no opportunity to justify the conduct on the basis of efficiency gains. See Cabral, L. et al (2021) *The EU Digital Markets Act: A Report from a Panel of Economic Experts*, p. 15. Available [here](#).

84. Amazon's online marketplace.

85. Amazon's retail business.

86. Prominently displays the offer of one single seller and allows products to be swiftly purchased by directly clicking on a buy button

87. Loyalty program that influences sellers' ability to win the Buy Box.

Abuse of dominance practices that displace competitors and new entrants also affect consumers of digital goods and services. Just as in brick-and-mortar markets, such strategies employed by dominant companies in digital environments can have several effects on consumers, not all of which are necessarily positive. Some of the potential impacts include:

1. **Limited choices.** When a dominant company establishes exclusivity agreements, it can limit the availability of alternative products or services in the market. This reduces your options as a consumer and may force you to settle for products that are not your first choice.
2. **Price increases.** The lack of competition allows dominant firms to set higher prices than they could in a more competitive market. You run the risk of paying more due to these practices.
3. **Restricted innovation.** These practices can discourage innovation, both for the dominant firm and its competitors. The dominant firm may feel no need to innovate due to the protection afforded by its practices and the consolidation of its power, while competitors may be unable to innovate or improve their products due to these and other barriers.
4. **Consumer dependence.** As a user, you may become dependent on a single provider for certain products or services, which can be problematic if the service quality declines, or if there are issues with the product and no alternatives are available.
5. **Long-term effects on competition.** In the long run, exclusivity agreements may discourage new companies from entering the market, leading to even greater market concentration and a continued reduction in the diversity and quality of available products and services.

These impacts highlight the importance of staying informed and vigilant regarding competition issues as digital consumers. Understanding these practices and their consequences enables us to make more informed decisions and advocate for fairer and more competitive markets. It also underscores the importance of supporting policies and regulations that promote competition and protect consumer rights in the digital realm. By doing so, we not only protect our individual interests but also contribute to a healthier and more competitive digital ecosystem.

3.2. Leveraging data in digital services – terms and conditions

The data collected by companies in the digital environment can be used to benefit consumers, for instance, by suggesting products and services that best suit their needs and interests, or by fostering innovation. However, companies may implement certain practices regarding the use of data that harm consumers and their privacy, often through terms and conditions.

In digital markets, it is common for companies to impose terms and conditions on the use of user information in exchange for granting access to their services.⁸⁸ In this scenario, users often face “take it or leave it” situations: without consenting to the collection, combination, use, and sharing of your data for various purposes, you cannot use the service.⁸⁹

The terms and conditions imposed by digital companies are often difficult to understand and change frequently. Moreover, consumers are rarely fully informed about how their data is handled: how it is collected, analyzed and marketed, as well as the security risks this entails.⁹⁰

Dominant companies or platforms in a digital market can exploit this situation to impose terms and conditions that restrict competition, using envelopment strategies and exploitative practices that negatively impact consumers.

Data collection and envelopment strategies. Data collection through abusive terms and conditions has been a subject of international analysis due to its potential anticompetitive effects. This analysis has led some experts to link the market power of certain companies to envelopment strategies that utilize unclear and excessive terms and conditions, negatively impacting both competitors and consumers.

Envelopment strategies manifest when a dominant firm in one market expands into another, whether related or completely different. In doing so, the company combines or connects its existing products or services with new ones, offering them jointly, much like a tying or bundling strate-

88. Competition Commission of India (2021), *In Re: Updated Terms of Service and Privacy Policy for WhatsApp Users*. Available [here](#).

89. Plantinga, B. (2022), *Differences in substantive application of Article 102 TFEU and the DMA concretized: ‘Privacy policy tying’ under Article 102 TFEU or the opt-in rule for data combination and cross use in article 5 (2) of the DMA*. Available [here](#).

90. European Parliament (2015), *Challenges for Competition Policy in Digitalised Economy*, p. 34. Available [here](#).

gy.⁹¹ However, due to the characteristics of the digital economy, namely, network effects arising from a large user base, and economies of scope from shared technology and data usage, participants in the new market are unable to compete effectively with the dominant firm.⁹²

In the case of “privacy policy envelopment” strategies, the company or platform extends its market power by using its privacy policy to enter new markets. This includes leveraging data collected under certain privacy conditions in one market to gain advantages in others.⁹³ The dominant firm’s advantage lies in its unique position to combine and monetize data from both the originating and target markets, resulting from its dominance in the original market and its practice of linking privacy policies across both markets.

Moreover, in these new markets, the company can offer products at low or even no cost, subsidizing these expenses with profits from the original market, which can make it difficult for other companies to compete.⁹⁴ Additionally, any new data the company collects in the new market can be used to further strengthen its position in the original market.

This strategy can be especially harmful to competition, as the digital company or platform uses its control over data to ensure its dominance in both the original and new markets.

Data collection and exploitative practices. Data collection through opaque and abusive terms and conditions has also been studied for its direct impact on consumers, through exploitative practices.

In the preceding section, we defined **exclusionary practices** as those carried out by market power holders, without efficiency gains, that aim to harm the competitive position of their rivals or exclude them from the market (referred to as relative monopolistic practices in Mexico).

In addition to these, there are **exploitative practices**, conducted by dominant companies, which directly aim to harm consumers.⁹⁵

91. Padilla and Condorelli distinguish three types of common tying strategies employed in envelopment: bundling, virtual bundling and self-preferencing. See Condorelli, D. & Padilla, J. (2019) *Harnessing Platform Envelopment in the Digital World*, pp. 35-36. Available [here](#).

92. See OECD (2020), *Roundtable on conglomerate effects of mergers - Background Note*, pp. 26-27. Available [here](#).

93. See OECD (2020), *Roundtable on conglomerate effects of mergers - Background Note*, pp. 26-27. Available [here](#).

94. See Condorelli, D. & Padilla, J. (2019) *Harnessing Platform Envelopment in the Digital World*, pp. 35-36. Available [here](#).

95. See Akman, P. (2008) *Exploitative Abuse in Article 82EC: Back to Basics?* Cambridge Yearbook of European Legal Studies, Vol. 11, 2009. Available [here](#).

In jurisdictions where such powers exist, exploitative practices in brick-and-mortar markets typically focus on the imposition of excessive prices on consumers by dominant firms, commonly referred to as exploitative pricing.⁹⁶

In the case of the Bundeskartellamt or Federal Cartel Office of Germany (FCO), the theory behind exploitative practices was linked to the extraction and collection of data in the FCO v. Meta case. In this case, it was concluded that Meta abused its dominant position by directly affecting consumers through the extensive collection of user data without proper consent.

FCO v. Meta

The FCO found that Meta, as the dominant company in the market for social media, forced users to accept terms that allowed the company to collect data not only within the Facebook platform, but also across other websites and apps, linking this information to users' accounts without clear and transparent consent.

The FCO interpreted this practice as an abuse of Meta's dominant position in the market, enabling it to gain significant competitive advantages, particularly in targeted advertising. Furthermore, the FCO considered the extensive data collection, combined with the lack of clear options for users, to be an exploitative practice. This led to an undue increase in Facebook's market power, directly harming consumers by limiting their ability to choose and control their own data. As a result, the FCO ruled initiated an investigation against Meta in 2016.

In its 2019 decision, the FCO concluded that through its terms of service, the social network was able to collect user information from websites and apps outside of its own network, even if users had opted to disable web tracking. This data collection extended beyond Facebook to other platforms within the same corporate group, such as WhatsApp and Instagram, as well as third-party websites and apps integrating Facebook APIs.

Furthermore, the FCO ruled that the consent obtained under these terms was invalid and required Meta to make significant changes in how it collects and uses data. The new regulations now require Meta to obtain explicit consent to link data collected from external services with Facebook user accounts. If such content is not obtained, the data must be kept separate.

This case highlights the importance of balancing the market power of large digital platforms with the protection of consumer rights. Although Facebook appealed this decision, the Court of Justice of the European Union upheld the FCO's ruling in July 2023.

Sources:

FCO, *Bundeskartellamt prohibits Facebook from combining user data from different sources*. Available [here](#).

FCO, *Background information on the Bundeskartellamt's Facebook proceeding*. Available [here](#).

Court of Justice of the European Union, *A national competition authority can find, in the context of the examination of an abuse of a dominant position, that the GDPR has been infringed*. Available [here](#).

96. See Akman, P. (2008) *Exploitative Abuse in Article 82EC: Back to Basics?* Cambridge Yearbook of European Legal Studies, Vol. 11, pp. 7-8. Available [here](#).

This case highlights two significant aspects: the competition authorities' concern with sanctioning the imposition of abusive terms and conditions, not only as exclusionary conduct but also, under certain circumstances, as an exploitative conduct that directly affect consumers. On the other hand, the FCO v. Meta case underscores the need for terms and conditions to be fair and transparent, ensuring that consumers have genuine control over their personal data and are not merely passive subjects of commercial practices implemented by dominant companies.

In this context, it's essential to acknowledge the growing importance of terms and conditions in the assessment of anticompetitive practices. These terms not only shape the interaction between businesses and consumers but also determine the dynamics of digital markets. Privacy policy envelopment strategies and the FCO's sanctioning of Meta for exploitative conduct in data collection highlight that terms and conditions can become tools for direct exploitation of consumers and for restricting competition. This scenario emphasizes the concern over data misuse, which occurs without the full knowledge and consent of users.

As consumers in the digital age, it is fundamental to enhance our understanding and awareness of how companies use this information. By doing so, we not only protect our privacy but also contribute to preserving a competitive and fair environment.

FINAL THOUGHTS

Throughout this notebook, we have explored how the digital economy not only transforms our lives by providing convenience and new opportunities, but also presents unique challenges that, as consumers, we must understand and carefully navigate with. Digital markets, with their fast-paced and dynamic nature, offer significant advantages such as market expansion, cost reduction and improved access to products and services. However, these benefits come along with risks that can impact not only our user experience but also the competitive structure of the market and our privacy.

1. The importance of Competition. Competition in digital markets drives innovation, improves quality, and lowers costs, directly benefiting us as consumers. It is crucial to support and promote a pro-competitive environment that prevents harmful practices which could lead to markets that are less diverse, more expensive, lower-quality and lacking innovation.
2. Relevance of the digital economy characteristics. By understanding the benefits and risks associated with digital platforms, economies of scale and scope, and the ways our data will be used, we can take a more active role in making informed and responsible choices as users. Awareness of how these dynamics shape the digital economy enables us to make smarter decisions.

3. The two sides of network effects. Network effects can make a service more valuable as more users adopt it, but they can also create high entry barriers that discourage new competitors and consolidate the dominance of a few players. As users, we must leverage the benefits of large networks while being mindful of how, under certain conditions, these networks can limit competition and reduce our ability to choose freely.
4. Surveillance of data collection and usage. As we browse online, we interact with various platforms that collect data on our activities. While this can enhance service personalization and efficiency, it also poses significant risks regarding how our data might be used. It is essential to stay vigilant and critical of the terms and conditions that we often overlook; these documents outline how our personal data is used, sometimes in ways that could harm us as users.
5. Identification of anticompetitive practices. As consumers in the digital economy, we face the risk that market-dominant players may engage in practices that manipulate prices or reduce the quality of goods and services available, without generating greater efficiency gains that outweigh the harm to competition. Strategies such as exclusivity agreements, tying, discrimination, and, as part of this, self-preferencing, can limit our choices as consumers and distort competition by favoring certain goods or services over other competitors. This could not only restrict our options but also drive up prices, degrade product quality, and stifle innovation

While we enjoy the immense benefits of the digital economy, we must also be informed and cautious consumers. By understanding both the opportunities and risks inherent in digital markets, we can make better-informed decisions that not only protect our personal interests but also promote a fairer and more competitive digital environment. Adopting an active and conscious role in how we interact with technology and digital businesses is key to ensure that these markets remain dynamic and competitive.

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