

Challenges to the Enforcement of Predatory Pricing Practices in Online Marketplaces*

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Abstract

This work reflects the multifaceted difficulties competition authorities likely face when analysing predatory strategies in e-commerce platforms. As we can see from academic discussions, the platform's particular characteristics make the assessment of predatory pricing more complex. In the face of these challenges, this work proposes a review of the legal test for analysing predatory strategies by online marketplaces, exploring the possibility of waiving the price-cost test while focusing on looking for *additional factors* that show there is a strategy to exclude rivals by platform providers. To this end, competition authorities must consider theories of harm that assess the characteristics and economic models underlying online marketplaces.

This essay is structured as follows. The first section introduces the discussion. Chapter I will outline key platform characteristics, including multi-sided markets and network externalities, significant economies of scale and scope, multi-market presence, and the critical role of data. Chapter II will explore the challenges facing the application of the legal test for assessing predatory strategies by marketplace providers. Chapter III discusses excluding a price-cost test in analysing online marketplaces' predatory strategies and evaluates potential harm theories to analyse this practice from online marketplace providers.

Introduction

The emergence of the digital economy has exacerbated the challenges in investigating, prosecuting and sanctioning anti-competitive unilateral practices.¹ These challenges are diverse and can be related, on the one hand, to specific characteristics of digital markets that make them more prone to dominance and tipping.² On the other hand, the analysis of unilateral conduct in these markets can be particularly complex. Each case can give rise to several discussions,³ depending on the definition of relevant markets,⁴ the

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¹ OECD, *Abuse of dominance in digital markets* (2020) 3.

² Stigler Center, *Stigler Committee on Digital Platforms, Final Report* (2019) 7-8.

³ OECD [n 1] 3.

⁴ OECD, *Rethinking Antitrust Tools for Multi-Sided Platforms* (2018) 12-21.

establishment of market power, the identification of the type of unilateral behaviour and theories of harm⁵ that may apply.

In the context of these academic discussions, this work aims to analyse the challenges of enforcing unilateral conduct, considering the potential use of predatory strategies to exclude rivals by online marketplace platform providers.

This is without prejudice to the fact that, beyond the scope of this work, relevant challenges also arise regarding coordinated behaviour and vertical restraints in different digital markets. This essay analyses the specific difficulties of predatory pricing in online marketplaces, but some of its conclusions could be extended to other digital platforms.

A predatory strategy is a practice whereby an incumbent online marketplace provider sets prices very aggressively to exclude a rival from the market -forcing the competitor to leave the market or discourage it from entering- or marginalising the rival and relegating it to a niche role.⁶

Predatory practices have not been the focus of enforcement in recent digital market cases; however, we must acknowledge that such behaviour is significantly pertinent within digital platforms. Also, predatory strategies have recently been subject to theoretical discussion and judicial consideration.

A notable example of such consideration regarding a specific online marketplace was the year-long price war that ended with Amazon's acquisition of Quidsi in the United States ("US").⁷ In 2008, Quidsi was poised as a burgeoning global e-commerce company. At that time, Amazon expressed interest in buying it, but the company's founders declined Amazon's offer.⁸

Shortly following Quidsi's rejection, Amazon reduced their prices for diapers and other baby products -constituting the primary merchandise within Quidsi's sales inventory- by up to 30%. Quidsi executives observed that Amazon's automated pricing algorithms were closely monitoring Quidsi's prices. Any alteration Quidsi made to its prices led promptly to Amazon adjusting its prices.⁹

Under heavy pressure, the executives of Quidsi ultimately accepted Amazon's proposition to acquire Quidsi. Although this behaviour appears to qualify as predatory pricing in theory, the US Federal Trade Commission ("FTC") did not find anti-competitive concerns

⁵ Massimo Motta, 'Self-preferencing and Foreclosure in Digital Markets: Theories of Harm for Abuse Cases' (2023) *International Journal of Industrial Organization*.

⁶ Chiara Fumagalli and others, *Exclusionary Practices. The Economics of Monopolisation and Abuse of Dominance* (Cambridge University Press 2018) 14.

⁷ Committee on the Judiciary of the House of Representatives, *Investigation of Competition in Digital Markets. Major Staff Report and Recommendations* (2020) 252.

⁸ Lina M. Khan, 'Amazon's Antitrust Paradox' (2017) 126 (3) *The Yale Law Journal* 710, 768-769.

⁹ *Ibid* 769.

when it reviewed the transaction.¹⁰⁻¹¹ However, as a result of the deal, Amazon had eliminated a leading competitor in the online sale of baby products. Some argue that Amazon accomplished this by significantly reducing prices, even if it meant operating at a financial loss.¹²

More generally, some digital platforms, such as Uber, have faced accusations of predatory practices in different jurisdictions.¹³

However, it can be difficult to analyse predatory strategies by digital platforms using current legal tests and theories of harm. These difficulties were highlighted in the Google Maps case in the French courts. In this case, Bottin Cartographes accused Google of engaging in predatory pricing by offering a version of its Google Maps API (application programming interfaces) for free.¹⁴ The plaintiff's theory was that Google adopted a strategy of providing these services free to users, with the ultimate objective of removing its rivals from the market, after which it could increase prices.¹⁵

During the first instance in 2012, the Paris Commercial Tribunal found that Google had abused its dominant position in maps, foreclosing the market.¹⁶⁻¹⁷ In 2015, the Paris Court of Appeals overruled the lower court, arguing that the irrationality of the economic model of Google Maps API had not been established. It argues that, for multi-sided markets, "it may be rational (...) to provide free products or services in a market, not to foreclosure competitors but to increase the number of users on the other market (...)." ¹⁸

The original decision of the first instance has been criticised for applying an analytical framework developed for traditional markets. Some reports have argued that Google's digital mapping API services were part of a broader business model based on advertising sales. As a result, the scrutiny of the revenues and costs on one side of the market (API services) alone could lead to the erroneous finding of predatory pricing even though positive prices in advertising remunerated the zero price on one side of the market.¹⁹

¹⁰ FTC, 'Decision about Proposed Acquisition of Quidsi, Inc by Amazon.com, Inc, File No 1110031' (*FTC Website*, 23 March 2011) <https://www.ftc.gov/sites/default/files/documents/closing_letters/amazon.com-inc./quidsi-inc./110323amazonthomas.pdf> accessed 21 August 2023.

¹¹ Frantz Rowe and M. Lynne Markus, 'Taking the measure of digital giants: Amazon and the Social Welfare Computing research agenda' (*Springer Link Website*, 19 April 2022) <<https://link.springer.com/article/10.1007/s12525-022-00544-0>> accessed 21 August 2023.

¹² Khan [n 8] 770.

¹³ Jonathan Stempel, 'Uber must face lawsuit claiming it stifled competition, drove out rival Sidecar' (*Reuters Website*, 1 May 2020) <<https://www.reuters.com/article/us-uber-sidecar-idUSKBN22D6AT>> accessed 21 August 2023.

¹⁴ Jean Tirole, 'The Emerging High-Court Jurisprudence on the Antitrust Analysis of Multisided Platforms' (2017), *CPI Antitrust Chronicle*, 7 <<https://www.competitionpolicyinternational.com/wp-content/uploads/2017/02/CPI-Evans.pdf>> accessed by 26 June 2023.

¹⁵ OECD, *Practical approaches to assessing digital platform markets for competition law enforcement: Background note by the Secretariat for the Latin American and Caribbean Competition Forum* (2019) 32.

¹⁶ Tirole [n 14] 7.

¹⁷ OECD [n 15] 32.

¹⁸ Tirole [n 14] 7.

¹⁹ OECD [n 15] 32.

As this case shows, there are several challenges in applying the predatory practices test within the context of digital platforms. This work will focus on the online marketplaces.

Chapter I. Online Marketplaces: main features and pricing structure

I.1 The notion of online marketplace platforms

In a broad context, e-commerce platforms refer to activities of buying and selling products online.²⁰ This general notion encompasses different activities, including, but not limited to, trading goods and services, transferring funds, online marketing activities, and gathering and processing data.²¹ Despite variations in their business models, these platforms frequently function as *gatekeepers*, meaning they control access to key distribution channels, giving them the power to dictate commercial conditions.²²

This work focuses on a particular type of e-commerce platform: the online retail marketplaces where sellers offer products for consumption to final consumers.²³ These platforms bring together numerous retailers, allowing customer access and facilitating transactions between buyers and sellers.²⁴

Online marketplaces can be categorised as matching platforms because they introduce different groups (buyers, sellers and, in some cases, advertisers) to each other. At the same time, marketplaces can be considered transaction platforms because they can observe a transaction -for example, when the e-commerce platform accepts payment on behalf of the seller or processes a buyer's order and then charges a per-transaction price to consumers-.²⁵

I.2. Main features of online marketplace

Online marketplaces possess distinct attributes that hold significance when scrutinising their business model and pricing structure. These elements impact the evaluation of potential anti-competitive conduct, particularly in the assessment of predatory strategies by platform providers. Four of them deserve attention.

First, a look at multi-sided or two-sided markets and network externalities is imperative to comprehend the mechanisms underpinning price determination and competitive dynamics within these platforms. Secondly, digital platforms exhibit significant economies of scale. This feature, combined with network externalities, potentially facilitates market consolidation among a limited number of operators. Thirdly, online marketplaces are characterised by the presence of economies of scope, which explains the participation of these companies in different lines of business and the emergence and

²⁰ OECD, *Implications of E-Commerce for Competition Policy* (2019) 8.

²¹ Ibid 8.

²² OECD, *Abuse of dominance in digital markets. Summary of Discussion* (2020) 3.

²³ The terms “online marketplaces”, “e-commerce marketplaces”, or “e-commerce platforms” will be used as a reference to online retail marketplaces.

²⁴ OECD [n 20] 9, 11.

²⁵ OECD [n 15] 8-9.

growth of *digital ecosystems*.²⁶ Finally, it is essential to highlight the role of data as a crucial input in online marketplaces.

These attributes give rise to an unconventional pricing structure within online marketplaces. In light of these structures, anti-competitive pricing strategies of providers of e-commerce platforms must be correctly distinguished from legitimate business practices.²⁷ These characteristics and pricing structures hold significant pertinence in comprehending the critiques that can be directed towards applying conventional predatory pricing assessments to online marketplace cases.

I.2.1. Multi-sided markets and network externalities

I.2.1.a) Multi-sided markets and network externalities

Multi-sided platforms connect two or more different and well-identified groups of users,²⁸ solving a twofold problem: bringing users into contact with each other and providing a technological interface to enable such interaction.²⁹ These platforms are not unique to digital markets; they manifest their crucial importance becomes evident in important industries, such as payments, mobile phones, financial exchanges, advertising, and diverse industries reliant on the Internet.³⁰

In the context of online marketplaces, they connect sellers (retailers), buyers (retail customers) and, in some cases, advertisers.³¹ In such instances, the demand on one side of the platform relies on the interest and subsequent demand generated by the other side. The desire of retail customers to use the platform depends on the volume of retailers on the marketplace, and the demand by retailers depends on the volume of buyers using the platform.³² The interplay among distinct user categories within the platform explains the existence of network externalities or cross-platform network effects when the participation of users on at least one side of a platform affects the other side.³³

In e-commerce platforms, network externalities can be indirect. Economists recognise two types of indirect externalities: usage and membership. The former refers to the externality when two or more agents must act together to use the platform and create value. This is the case for sellers and buyers in marketplaces. The membership externality

²⁶ Jacques Crémer and others, *Competition Policy for the Digital Era. Final Report* (European Commission, 2019) 19.

²⁷ Daniel Mandrescu, 'Abusive pricing practices by online platforms: a framework review of Article 102 TFEU for future cases' (2022) 10(3) *Journal of Antitrust Enforcement* 469, 471.

²⁸ Crémer [n 26] 21.

²⁹ Jean Tirole, *Economics for the Common Good* (Princeton University Press, 2017) 379.

³⁰ David S. Evans and Richard Schmalensee, 'The Antitrust Analysis of Multi-Sided Platform Businesses' (*National Bureau of Economic Research Website*, February 2013) 2 <<https://www.nber.org/papers/w18783>> accessed 22 August 2023.

³¹ OECD [n 20] 15.

³² Tirole [n 14] 3.

³³ OECD, *Handbook on Competition Policy in the Digital Age* (2022) 7.

exists when the value received by agents on one side rises with the number of actors participating on the other side.³⁴ This type of externality can also be recognised in online marketplaces because the more buyers use the platform, the more value for sellers, increasing the number of sellers, which at the same time increases the value for consumers.³⁵

Thus, when indirect network externalities are positive, feedback effects can be generated between the different sides of the marketplace, producing a relevant competitive advantage for incumbent platforms.³⁶

Considering these externalities, critical mass could be an important challenge for platform businesses. This is known as the *chicken-and-egg* problem; in some cases, coupled products cannot come into existence without a sufficient number of users on both sides from the start. Thus, in a marketplace, there is a need for enough sellers and buyers on each side to make either side interested in the platform.³⁷

Furthermore, indirect network effects notably influence the platform's pricing structure.³⁸

I.2.1.b) The economic model of marketplaces

The presence of diverse and interdependent categories of users (such as buyers and sellers) results in fundamental differences in the economic dynamics of businesses with multi-sided markets and those without³⁹. Online marketplaces face the challenge of finding a viable economic model that ensures that sellers and buyers participate in the marketplace.⁴⁰

Traditional firms' profits depend on the product's demand, which is influenced by its price and the price of substitutes. For platforms, profit depends on the demand for the products consumed by multiple sides, with each product's demand being interconnected with the demand for the other. Consequently, economic models aiming to maximise profit differ between platforms and traditional firms.⁴¹

This consideration of multiple sides to define the price scheme is related to the embodiment of the coordination problem of trying to get separate user groups 'on board' in the platform.⁴²

³⁴ Evans [n 30] 8.

³⁵ Tirole [n 29] 397.

³⁶ Howard A. Shelanski, 'Information, Innovation, and Competition Policy for the Internet' (2013) 161(6) University of Pennsylvania Law Review 1663, 1682-1683.

³⁷ David S. Evans, 'The Antitrust Economics of Multi-Sided Platform Markets' (2003) 20(2) Yale Journal on Regulation 325, 350.

³⁸ Mandrescu [n 27] 476.

³⁹ Tirole [n 14] 3.

⁴⁰ Tirole [n 29] 383.

⁴¹ Tirole [n 14] 3.

⁴² Mandrescu [n 27] 476.

In online marketplaces, the model depends on the elasticity of demand -a metric that captures how many users the platform loses when it raises the price- and on externalities between the different sides of the market -because users benefit from the presence of those on the other side of the market-.⁴³ One side of the platform may benefit greatly from interactions with the other side. In this situation, the platform provider could charge more to one side of the platform and less to the other to make it attractive to join.⁴⁴

Hence, the platform provider needs to consider which users exhibit the keenest interest in the service or product offered (have the lowest elasticity of demand and are therefore likely to pay more without ceasing to consume) and which side brings more value to the other side.⁴⁵ This phenomenon can elucidate why platforms often charge low prices (or even zero prices) on one side of the market, which attracts users to that side and indirectly enables the platform to earn revenues on the other side.⁴⁶

Therefore, profit-maximising pricing diverges in the case of traditional firms where long-run profit-maximising prices tend to surpass marginal costs. In practice, it is unusual for traditional firms to set prices lower than marginal costs for extended periods. On the other hand, for platforms, long-run profit-maximising prices targeted at specific customer groups can be lower than marginal cost. It is commonplace to observe platforms charging below marginal cost, offering particular services for free, and incentivising customers with rewards for their participation or usage of the platform.⁴⁷

Economic literature has found that the customer group that benefits the most from the participation of the other customer group(s) should pay the fee for using the platform,⁴⁸ making a distinction between the money side and the subsidy side.⁴⁹ When indirect network effects are mutually positive, as generally is the case with buyers and sellers in online marketplaces, the side of the platform that displays a more pronounced indirect network effect will (at least partly) subsidise the participation of the other group.⁵⁰

A more significant presence of different buyers in online marketplaces is likely to make the platform more valuable to sellers (and advertisers). Thus, numerous online marketplaces charge fees to retailers and advertisers, while they do not charge additional fees to customers for purchases made through the platform.⁵¹

⁴³ Tirole [n 29] 383-384.

⁴⁴ Ibid 384.

⁴⁵ Ibid 384.

⁴⁶ Ibid 384.

⁴⁷ Tirole [n 14] 3.

⁴⁸ Mandrescu [n 27] 477.

⁴⁹ David S. Evans and Richard Schmalensee, *Matchmakers. The New Economics of Multisided Platforms* (Harvard Business Review Press, 2016) 93.

⁵⁰ Mandrescu [n 27] 477.

⁵¹ Evans and Schmalensee identify sellers as the “money side of the platform” while buyers usually are the “subsidy side”. See Evans [n 49] 34.

For example, let us consider the seller side of the business: marketplaces usually take a cut of sales from sellers and charge fees for sales-related services like payment and advertising. On the consumer side, access to the platform is generally free, but marketplaces may also make money from the fees customers pay to participate in membership programs. For example, Amazon offers Amazon Prime as a paid membership program.⁵²

An unequal remuneration structure within online platforms serves to bolster the interdependencies among diverse cohorts of users, as the presence of “free” participants is crucial to entice for-profit participants to join the platform.⁵³

It is also important to note that sellers value online marketplaces where they can reach many potential buyers. However, such sellers may prefer to avoid being on a platform with many other sellers because this creates intensive competition to complete transactions. In such situations, negative direct network effects may make cross-subsidization between buyers and sellers more complex, resulting in the possible distribution of costs across such groups.⁵⁴

I.2.2. Economies of scale

Digital platform markets display significant economies of scale. These are defined by substantial initial investment and fixed costs required to establish a valuable service, accompanied by additional users' low or near-zero marginal costs. As these platform companies expand their user bases, their average costs decrease substantially.⁵⁵ Thus, for marketplace providers, the cost of servicing new users rises much more slowly than the number of users.⁵⁶

The phenomenon of increasing returns to scale drives companies to allocate resources to fixed costs, aiming to develop a superior product to attract customers. Subsequently, with a larger customer base, the firm achieves lower average costs per consumer.⁵⁷

This cost structure, combined with network externalities, facilitates the concentration of the market in a few operators: large platforms are more efficient than smaller ones, leaving space for only a small number of firms in the market.⁵⁸ For some, the increasing returns to scale creates barriers to entry because new firms find themselves unable to match the quality of the incumbent without the same large-scale operation, and they can only achieve large scale if the quality is high.⁵⁹

⁵² Committee on the Judiciary of the House of Representatives [n 7] 69.

⁵³ OECD [n 20] 16.

⁵⁴ Mandrescu [n 27] 478.

⁵⁵ Digital Competition Expert Panel, *Report Unlocking Digital Competition* (March 2019) 32.

⁵⁶ Crémer [n 26] 20.

⁵⁷ Stigler Center [n 2] 37.

⁵⁸ Crémer [n 26] 22, 36.

⁵⁹ Stigler Center [n 2] 37.

Some economists argue that network effects produce the *first-mover advantage* and *winner-take-all* theories.⁶⁰ Nevertheless, it is imperative to bear in mind that online marketplaces could be the type of industry where the *winner takes most* may apply. Indeed, these platforms can differentiate themselves, and participants can and often do, use several platforms through multihoming.⁶¹

I.2.3. Economies of scope and multi-market presence

Additionally, digital markets possess certain characteristics that allow for cost reduction and improved service quality through simultaneous operation in adjacent markets. These economies of scope are achieved by leveraging existing customer and supplier relationships, branding, sharing technical expertise, and, most notably, combining and analysing consumer data.⁶²⁻⁶³

These robust economies of scope are one reason why the same small number of large digital companies have successfully created ecosystems spanning various adjacent markets.⁶⁴

Thus, the providers of marketplace platforms not only offer their services in multi-sided markets but usually provide a variety of services and products, developing multiple business lines. The multi-market presence allows platforms to offer product ecosystems, having the potential to lock in consumers and create barriers to entry for potential competitors that cannot replicate the ecosystem's offerings.⁶⁵ The elements that stimulate the formation of ecosystems also pose a potential risk of tipping, affecting not just individual platform markets but entire ecosystems of markets.⁶⁶

Amazon, for example, offers products and services, among others, as a retailer, marketing platform, delivery and logistic network, and provider of cloud server space and computing power.⁶⁷ Mercado Libre, one of Latin America's most important online marketplaces, offers services such as payment solutions, logistics, financing, advertising, and software services.⁶⁸

With such a variety of products, the interaction through the platform could be multiple. For example, online marketplaces intermediate between buyers and sellers to enable

⁶⁰ Evans [n 49] 27.

⁶¹ Ibid 28.

⁶² Digital Competition Expert Panel [n 55] 32.

⁶³ Stigler Center [n 2] 37.

⁶⁴ Digital Competition Expert Panel [n 55] 32.

⁶⁵ OECD, *Theories of Harm for Digital Mergers* (2023) 8.

⁶⁶ Ibid 8.

⁶⁷ Khan [n 8] 713,754.

⁶⁸ Mercado libre, 'Ecosistema Mercado Libre: el valor de pensar todas las soluciones' (*Mercado Libre Website*) <<https://www.mercadolibre.com.ar/institucional/somos/ecosistema-mercado-libre>> accessed 21 August 2023.

product purchase: they usually offer the service of distributing the products (either directly or through third parties). The platform may charge an additional fee for this distribution service or include it in the subscription fee paid periodically by users.

I.2.4. Role of Data

Data constitutes a crucial input for marketplace platforms. While there is nothing new about companies seeking to understand consumer preferences, the magnitude of data that large digital marketplaces have been able to collect is unprecedented.⁶⁹ Today, digital platforms have much greater access to an extensive range of consumer information and can process and use this data for various purposes.⁷⁰

In e-commerce, access to data facilitates a more efficient and precise customised adaptation of shopping services according to consumer preferences.⁷¹ Through the detailed picture of the habits and preferences of customers, marketplaces can offer more effective recommendations for future purchases. Also, they can potentially charge individualised prices based on a consumer's perceived willingness to pay.⁷² Considering the multi-market presence of these platforms, data allows them to identify and exploit new business opportunities more quickly.⁷³

The accumulation of data is inherently self-reinforcing. Firms endowed with enhanced data accessibility can employ this data to target users better or improve product quality, thereby attracting a large user base and consequently generating more data, generating an advantageous feedback loop.⁷⁴

Data collection may also explain why some platforms provide valued services to consumers without charging a monetary price. In the case of online marketplaces, besides network externalities justifications, buyers may not pay the price because they instead barter their time on, and attention and data to the platforms in exchange for the services.⁷⁵

I.2.5. Conclusions

As previously indicated, various attributes differentiate online marketplaces from traditional markets.

These platforms operate in multi-sided markets where network externalities are key. The interdependence between sellers and buyers significantly shapes the pricing strategy adopted by the provider. Consequently, it is common that buyers do not pay a fee to access

⁶⁹ Digital Competition Expert Panel [n 55] 23.

⁷⁰ Shelanski [n 36] 1678.

⁷¹ OECD [n 20] 13.

⁷² Ibid 13.

⁷³ Committee on the Judiciary of the House of Representatives [n 7] 32.

⁷⁴ Ibid 32.

⁷⁵ Stigler Center [n 2] 87.

the platform, while sellers are typically subject to charges for the opportunity to sell their products on the platform.

At the same time, economies of scope explain the multi-market presence of online marketplaces. Today, platforms offer a variety of products through their ecosystems. As will be seen in the next chapter, this feature is also relevant in the analysis of the pricing structure of platforms (and, therefore, of any potential predatory strategy). This is due to the potential cross-subsidy between the different ranges of products and services.

Taking into account network externalities and increasing returns to scale, it is extremely difficult for new firms to challenge established platforms, such as Amazon, as is the case within several countries. Moreover, these platforms often exhibit a presence in multiple markets through their consolidated ecosystem.

However, unlike what might happen in other digital markets, e-commerce platforms do not necessarily respond to cases where competition in the market is no longer relevant. At least theoretically, it is possible to imagine several platforms that allow consumers to search for and purchase goods and sellers to offer their products.

Precluding competition and the potential for new entrants to challenge these markets should not be undertaken beforehand. However, it is paramount to consider the complexities engendered by these attributes in the assessment of competition cases.

As Chapter III will explore, the difficulties for new entrants to compete on the merits against dominant platforms could be a consideration for changing the test established for predatory pricing, where under-enforcement and false negative cases could constitute a significant source of concern. Competition authorities should prevent actors from foreclosing markets -including adjacent markets- at all costs and ultimately so as not to affect competition on the merits.

Finally, the relevance of data is equally fundamental to comprehending the dynamics of these markets. Given that data access is pivotal to compete and considering the advantageous feedback loop, service providers may prioritise access to that input over imposing charges upon users. This could potentially reshape the framework for assessing predatory strategies, as firms compete not only on price but also on access to consumer information.

Chapter II. Challenges for applying a cost-price test to predatory strategies by online marketplace providers

II.1. Introduction

One of the critical elements for enforcing unilateral behaviour on digital platforms is identifying the specific conduct that could be anti-competitive, the specific legal test and the subsequent theory of harm that applies in each case.

As expounded in Section II.2 below, predatory pricing practices represent a category of exclusionary abuse whose legal test demands that prices charged by the dominant firm are below a measure of costs: the *price-cost* test.

However, the apparent clarity of the price-cost test is challenged in online marketplaces. Section II.3 focuses on analysing the difficulties related to the multi-sided nature of markets, the multi-market presence of platform providers and the value of consumer data in the competition assessment.

The last section presents the main conclusions of this Chapter.

II.2. Predatory pricing

II.2.1. The notion of predatory pricing

Predatory pricing conduct encompasses the circumstance in which a firm with market power purposefully lowers prices to a point at which it incurs losses in response to competition from an established rival or an entrant. Subsequently, once the existing rival has been disciplined or the new entrant has been excluded, the incumbent will be able to raise its prices, thus amassing additional profits and detrimentally affecting consumers.⁷⁶⁻
77

The main concerns behind predatory prices revolve around the potential of dominant enterprises to expel financially weaker competitors from the market. Additionally, such pricing strategies may signal to (actual and potential) rivals that price wars will be costly and that market entry is not profitable.⁷⁸

The crucial aspect when examining predatory pricing lies in the ability to differentiate between pro-competitive price cuts and predatory pricing. Pro-competitive price cuts are aimed at boosting sales and overall profits, while predatory pricing is used to sacrifice short-term profits in order to force competitors out of the market, ultimately leading to increased long-term profits. Therefore, the predatory pricing law must tread a fine line

⁷⁶ Richard Whish and David Bailey, *Competition Law* (Oxford University Press, 2021) 779.

⁷⁷ Fumagalli [n 6] 14.

⁷⁸ Mandrescu [n 27] 482.

between not penalising dominant firms engaging in competitive price reductions and not endorsing anti-competitive exclusionary practices.⁷⁹

II.2.2. The test

There are several problems with applying the “traditional” legal test of predatory pricing to online marketplaces. While there is some disagreement amongst jurisdictions over the recoupment requirement as a necessary element of the legal test,⁸⁰ there is a general consensus about the need to identify a price level below a certain level of costs (typically marginal costs) to establish a predatory practice. Although the test of identifying a price below some measure of cost receives extensive application in the Courts and considerable academic acceptance, it is worth noting that the price-cost test has faced longstanding criticism within the economic literature.⁸¹

Several conceptual economic tests have been formulated to distinguish between legitimate and predatory pricing practices correctly. Among these tests are the no-economic sense test and the as-efficient-competitor test. These methodologies were subsequently complemented and, to some degree, substituted by the Areeda and Turner test.⁸²⁻⁸³

In the jurisprudence of the US and the European Union (“EU”),⁸⁴ the Areeda and Turner test appears as the leading variant of the price-cost test.⁸⁵ Marginal costs -the cost of producing an additional unit- are theoretically the correct measure of costs, but they are not easy to measure. That is the reason why courts resort to proxies.⁸⁶

In the US, since the Supreme Court decision in *Brooke Group*, plaintiffs must show that the alleged predator set a price below an appropriate measure of its rival’s costs⁸⁷ and had a sufficient likelihood of recouping its losses through post-predation profits.⁸⁸ For the first requirement, the Court required an appropriate measure of costs, yet it did not specify the

⁷⁹ Whish [n 76] 780.

⁸⁰ OECD [n 20] 39.

⁸¹ Janusz A. Ordover and Garth Saloner, ‘Predation, Monopolization, and Antitrust’ in R. Schmalensee and R.D. Willig, *Handbook of Industrial Organization* (Elsevier Science Publishers, 1989, 584, in reference to the *Williamson rule* postulated in Oliver E. Williamson, ‘Predatory pricing: A strategic and welfare analysis’ (1977) 87(2) *Yale Law Journal* 284, 284-340.

⁸² Areeda P. and Turner D. F, ‘Predatory Pricing and Related Practices under Section 2 of the Sherman Act’ (1975) 88(4) *Harvard Law Review* 697, 697–733.

⁸³ Mandrescu [n 27] 482.

⁸⁴ Both of which have influenced most of the competition law around the world. Fumagalli [n 6] 4.

⁸⁵ OECD [n 4] 108.

⁸⁶ C. Scott Hemphill and Philip J. Weiser, ‘Beyond Brooke Group: Bringing Reality to the Law of Predatory Pricing’ (2018) 127(7) *The Yale Law Journal* 2048, 2069.

⁸⁷ OECD [n 4] 107.

⁸⁸ Hemphill [n 86] 2049.

particular measure to be employed⁸⁹ and indicated both average variable costs (“AVC”) and incremental costs as plausible alternatives.⁹⁰

The EU legal framework for assessing predatory practices was established in the AKZO case, “where cost benchmarks resembling those of Areeda and Turner were introduced”.⁹¹ Since the AKZO case, there is a multi-band price-cost measure⁹²: (i) prices below AVC must be regarded as abusive; and (ii) if the firm prices between AVC and average total cost (“ATC”), the practice would be deemed abusive only if this was part of a wider strategy aimed at eliminating a competitor (if there is an *intention* to eliminate rivals).⁹³ In contrast, pricing levels exceeding the threshold of ATC are generally construed as non-abusive.⁹⁴

It is worth noting that the price-cost test reflects the avoidance of *false positives*. Price cuts are generally desirable from a competition perspective, being the way a firm stimulates competition. Thus, a false condemnation of an innocent price cut is costly because it discourages desirable price cuts.⁹⁵ Chapter III below explains why this approach may not be as correct in digital markets.

II.3. The challenges of applying the price-cost test in online marketplaces

II.3.1. Price vs. costs in multi-sided markets

The primary challenge that competition agencies trying to enforce competition law may face in the context of online marketplaces revolves around determining how to measure prices below a certain level of cost, considering the multi-sided nature of online platforms, network effects and the existence of cross-subsidies between participant groups.⁹⁶

As described in Chapter I, indirect externalities affect the pricing decisions of marketplace providers.⁹⁷ Thus, it is perfectly natural and expected for platforms to subsidise one side of the market when its presence on the platform is much appreciated by the other side.⁹⁸ Online marketplaces may price their services below marginal cost on one side of the platform to maximise profits on the other side(s).⁹⁹ Thus, for example, end-consumers using marketplaces generally do not have to pay a fee to shop on the platform (except for membership programs such as Amazon Prime).

⁸⁹ Ibid 2051.

⁹⁰ Ibid 2069.

⁹¹ Mandrescu [n 27] 483.

⁹² OECD [n 4] 107-108.

⁹³ Fumagalli [n 6] 97.

⁹⁴ Whish [n 76] 782.

⁹⁵ Hemphill [n 86] 2052, citing *Brooke Group Ltd. V. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993).

⁹⁶ OECD [n 20] 40.

⁹⁷ OECD [n 4] 144.

⁹⁸ Crémer [n 26] 22.

⁹⁹ Mandrescu [n 27] 470.

According to economic literature, a cost-based test for detecting predatory pricing generally makes no economic sense for a multi-sided platform. Those tests are motivated by the idea that profit-maximising prices are never below marginal cost. But for an online marketplace, the profit-maximising price for one side -for instance, buyers- could be lower than marginal costs or other measures of costs.¹⁰⁰ Thus, prices charged for users in online marketplaces (commonly zero prices) can easily be confused with anti-competitive behaviour. Pricing below cost on one side of the platform, considered in isolation, can be regarded as predatory conduct, while the prices charged on the other side can be perceived as excessive prices.¹⁰¹ However, this literature argues that the sole occurrence of the platform charging below marginal cost on one side cannot offer conclusive proof of predatory behaviour.¹⁰²

This paper also intends to focus on the other side of this coin. The converse aspect of this issue is that within an online marketplace, there exists the potential for employing a predatory strategy by maintaining a low price on the “subsidy” side (typically, buyers-side in marketplaces) and lowering the price on the “money” side (sellers-side or advertiser-side) so much that the platform loses money overall.¹⁰³

An example of this situation is exposed by the model of predation presented by *Fumagalli, Motta and Calcagno*. In this predatory model, a platform provider might establish reduced prices for users on one side of the market to prevent the rival from achieving scale on that side, thereby making it much less attractive for users from the other side to join a rival marketplace.¹⁰⁴

Thus, it is relevant to note that, contrary to what is often suggested in economic literature, low prices on one side of the market “are not necessarily an innocent strategy with pro-competitive effects.”¹⁰⁵

II.3.1.a) The practical challenges

Despite these criticisms, economic theory indicates that applying the legal predatory pricing test is possible. In those cases, the analysis of predatory practices needs to “consider the overall costs and price levels on all sides of a market”.¹⁰⁶

Some propose that the rule of predatory pricing “should be rephrased as requiring that the weighted average of the prices, with the weights given by the marginal network effect, is below the weighted average of the marginal costs. As in a one-sided market, given the

¹⁰⁰ Evans [n 30] 34.

¹⁰¹ Mandrescu [n 27] 470.

¹⁰² OECD [n 20] 40.

¹⁰³ Evans [n 30] 34.

¹⁰⁴ Fumagalli [n 6] 42.

¹⁰⁵ Ibid 42.

¹⁰⁶ OECD [n 1] 34.

difficulty to measure marginal costs, for most practical purposes, courts should presume as unlawful a (weighted) price level that is below the (weighted) average variable cost level.”¹⁰⁷

Hence, if the price-cost examination were to be strictly applied, one could speak of predatory pricing if the sum of the compensation, coming in from all sides of the platform, is below some measure of costs (such as AVC) of the platform.¹⁰⁸

This solution requires measuring prices on both (or multiple) sides of the platform to estimate whether these prices are sufficient to cover the costs. If it is not possible to cover costs, a competitor’s online marketplace provider may become financially unsustainable regardless of its pricing strategies, and it will exit the market.¹⁰⁹

The consideration of multi-sided markets was discussed in the US in the *Ohio v. American Express* case, where, after analysing a violation of Section 1 of the Sherman Act, the Supreme Court held that it was required to include both sides of a transactional platform in the definition of the market and the analysis of its anti-competitive effects, precisely for the significant impact of indirect network effects.¹¹⁰

Thus, theoretically, the feasibility of ascertaining whether the platform has embraced an unprofitable set of prices exists. However, that would be a more complex analysis than comparing prices and some measure of per-unit cost than it is for single-sided firms.¹¹¹

It is important to note that in order to implement this solution, the dominant firm’s competitors must offer the same package of services to the different sides of the platform. This issue arose in the case against Google Maps in the French courts, where a French mapping provider alleged that the free mapping services of Google amounted to below-cost pricing. In this case, the Paris Court of Appeal ruled that Google’s revenues from other sources, such as advertising, had to be considered,¹¹² even when *Bottin Cartographes* did not have the same business model of earning from advertising.

Thus, considering the different sides of the platform as a whole may be particularly complex when some rivals do not offer the same services as the incumbent. This could be the case for Amazon’s competitors that do not provide ad solutions for sellers. Some literature argues that this model should only be applied where market conditions reflect competition on packages of services or functionalities.¹¹³ Otherwise, firms “that only provide comparable services on a standalone basis may be unduly disadvantaged as they

¹⁰⁷ Stefan Behringer and Lapo Filistrucchi, ‘Areeda-Turner in Two-Sided Markets’ (2015) 46(3) *Review of Industrial Organization* 287, 304.

¹⁰⁸ Mandrescu [n 27] 484.

¹⁰⁹ OECD [n 4] 144.

¹¹⁰ *Ohio et al. v. American Express Co. et al.*, 585 U. S. ____ (2018) 12-13.

¹¹¹ Evans [n 30] 34.

¹¹² OECD [n 20] 40.

¹¹³ Mandrescu [n 27] 485.

may not be able to viably sustain similar price levels”.¹¹⁴ This position could be consistent with the European Commission’s vision. The Commission recently said, regarding price-based exclusionary conduct of a dominant undertaking, that it is not appropriate to only pursue as a matter of priority behaviour that may lead to the exclusion of rivals that are *as efficient* as the dominant firm in terms of their cost structure. In certain circumstances, genuine competition may also come from those undertakings that are less efficient than the dominant firm.¹¹⁵

II.3.1.b) Challenges beyond the practical difficulties

It is important to note that some economic literature criticises the price-cost test beyond its difficulties of practical implementation. *Michael L. Katz* suggests that, in the context of network effects, above-cost prices are predatory in some circumstances, and below-cost prices represent competition on the merits in others.¹¹⁶

Thus, for example, pricing above costs can be exclusionary when such prices make sense only because they weaken future competition. In the case of network effects, such a mechanism could be consistent with lower prices that can reduce the user bases of rival platforms, thus reducing their ability to offer user value.¹¹⁷ At the same time, according to the author, pricing below marginal costs can constitute competition on the merits in the context of network effects.¹¹⁸ It is worth noting that in both examples, the author refers to the no-economic-sense standard.

Thus, the fact that above-cost prices may be predatory and below-cost prices may not be exclusionary “strongly suggest that there is no good price-cost test in the presence of network effects”.¹¹⁹

II.3.2. Multi-market presence and cross-subsidies

II.3.2.a) How do we deal with the cross-subsidies problem in different products or services?

The providers of marketplace platforms not only offer their services in multi-sided markets but usually provide various services and products, developing multiple business lines. As was explained in Chapter I, the multi-sided and multi-product nature of online

¹¹⁴ Ibid 485.

¹¹⁵ Guidance on the Commission's enforcement priorities in applying Article 82 [102] of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ L 45/7 (“Guidance Enforcement Priorities”) para 24. Annex to the Communication from the Commission Amendments to the Communication from the Commission Guidance Enforcement Priorities [2023] OJ L 116/1, 1.

¹¹⁶ OECD [n 4] 109.

¹¹⁷ Ibid 108.

¹¹⁸ Ibid 108-109.

¹¹⁹ Ibid 109.

marketplaces commonly entails cross-subsidy features, where companies use “funds generated from one area of activity to fund activities in another area.”¹²⁰

The range of different products and services offered by the same company, often through a variety of separate divisions or businesses, implies the existence of an ecosystem.¹²¹

There are different economic links between these products and services. In some cases, platforms have integrated across business lines, allowing them to both run a platform and promote their own products within it.¹²² One example of this vertical integration is Amazon Basic, an Amazon label brand that offers many products, including home goods, electronics and office supplies.¹²³ Also, on the demand side, products can be substitutes, complements or even effectively inseparable.¹²⁴ In the case of online marketplaces, it is possible to identify several situations of complementarity, such as the distribution and logistics services that these platforms usually offer to their customers.

Thus, competition agencies may question how a price charged by the platform will be above a measure of costs if that price is subsidised by the platform’s profits in another market. What can be done if a platform such as Amazon subsidises its prices through the profits it earns as a cloud server space provider?

Some literature suggests that reintroducing structural separations to restrict the areas of operation in which a firm can engage is a viable approach to addressing the potential risks associated with integration by dominant platforms.¹²⁵ While this could be a solution, such a proposal may be criticised for unduly limiting efficient firms in the market, which could ultimately affect consumer welfare.¹²⁶ Such a discussion is beyond the scope of this work.

As in the case of a multi-sided platform, one way to consider these cross-subsidies between different products could be to estimate and compare the overall costs and prices charged by the platform in the various markets. However, as the US Supreme Court held, a market ought to be categorised as one-sided when the impacts of indirect network effects (externalities) in that market are minor.¹²⁷ As mentioned in the previous Chapter, the multi-market presence and the creation of ecosystems by platforms do not necessarily have to do with the existence of network externalities.

¹²⁰ Robert O’Donoghue and Jorge Padilla, *The Law and Economics of Article 102* (3rd edn, Hart Publishing, 2020) 265.

¹²¹ OECD, *Digital Competition Policy: Are Ecosystems Different? Note by Amelia Fletcher* (2020) 2.

¹²² Lina M. Khan, ‘The separation of platforms and commerce’ (2019) 119(4) *Columbia Law Review* 973, 973.

¹²³ Julie Creswell, ‘How Amazon Steers Shoppers to Its Own Products’ (*The New York Times Website*, 23 June 2018) <<https://www.nytimes.com/2018/06/23/business/amazon-the-brand-buster.html>> accessed 25 August 2023.

¹²⁴ OECD [n 121] 2.

¹²⁵ Khan [n 122] 1065-1088.

¹²⁶ OECD [n 20] 3.

¹²⁷ *Ohio et al. v. American Express Co. et al.*, 585 U. S. ____ (2018) 12.

Therefore, the analysis of Amazon's price for its marketplace should not take into consideration the price and costs of, for example, a cloud server space provider.

Additionally, as in the case of multi-sided analysis, to apply the price-cost test to the overall products of the firm, it should be necessary for the dominant firm's competitors to offer the same package of services in different markets -which usually does not happen.

Thus, when it is not possible to connect two services or products offered by the platform in the same market because there are no solid externalities or network effects, the test should try to allocate the prices and costs charged by the provider for each product and service. This presents several difficulties.

II.3.2.b) The problem of cost allocation in multi-product firms

When a firm incurs fixed and variable costs that are shared or jointly associated with two or more products, calculating average costs becomes challenging. There is no clear-cut method for determining the average costs of each product, as there is no singular output that can be used for measurement. Consequently, there is no single solution to calculating costs in the case of multi-product reality.¹²⁸

A solution to this problem could involve choosing not to take action and overlooking the existence of common costs, focusing instead only on the costs that are purely incremental to the business at issue.¹²⁹

The problem with this approach is clear when it is applied to online marketplaces such as Amazon because it creates a notable disadvantage for a competitor that is only active in one market and, therefore, must incur all the stand-alone costs of serving that market. Even if that firm was as efficient as the dominant firm in that single market, the dominant firm could eliminate its competition by exploiting the fact that certain costs can be spread over two or more lines of business.¹³⁰

An alternative solution to this issue involves compelling the dominant firm to allocate its common costs between its different operations. However, this can be highly arbitrary since there are no clear and standardised techniques for allocating common costs.¹³¹

II.3.3. Non-pricing considerations: the relevance of consumer data

In addition to the difficulties already discussed, other issues arise about how services are priced on digital platforms. Several technology platforms are distinctive due to their

¹²⁸ O'Donoghue [n 120] 260.

¹²⁹ Ibid 260.

¹³⁰ Ibid 260-261.

¹³¹ Ibid 261.

ability to offer valuable services without charging a monetary price.¹³² Sometimes, consumers pay by transferring their data, a valuable platform input. As was explained in Chapter I, access to such data facilitates a more efficient and precisely tailored customisation of shopping services according to consumer preferences.¹³³ The accrual of data possesses an inherent self-reinforcing nature.¹³⁴

Thus, access to data may confer a significant competitive advantage to online marketplaces, where data capabilities can be the critical element for success.¹³⁵

When analysing a predatory strategy on the part of a platform provider, these considerations should be relevant. Predation should be associated with two periods: the first, in which consumers will enjoy low prices and the incumbent will sacrifice profits; the second, in which the dominant platform will be able to increase its prices and obtain higher profits.¹³⁶ Given the value of data as a significant competitive advantage, a platform's profit strategy could translate into gaining more data rather than simply raising prices.

Thus, zero-price products do not imply that there are no benefits for the platform. Platforms can collect data or display advertising for consumers, hence the monetisation of consumer attention.¹³⁷

Despite their relevance, competition tools and legal tests, such as price-cost tests, do not usually consider the value of data and its effects to exclude rivals. Considering those features, a dominant firm may develop a pricing strategy BY incorporating the non-monetary value of access to data.

II.4. Conclusion

A central dilemma for the law on abuse of dominance revolves around the formulation of rules that are both feasible to implement and that offer sufficient clarity but do not suffer from excessive legal formalism.¹³⁸ For a long time, there was a consensus that the price-cost test established for predatory pricing was adequate as a first step in analysing this conduct. However, digital platforms challenge this consensus.

As described in this Chapter, it is not that it is impossible or entirely meaningless to apply the price-cost test to potential predatory strategies. Instead, its application requires facing a series of challenges that often appear difficult for competition authorities to overcome.

¹³² Stigler Center [n 2] 87.

¹³³ OECD [n 20] 13.

¹³⁴ Committee on the Judiciary of the House of Representatives [n 7] 32.

¹³⁵ Viktoria H.S.E. Robertson, *Final Report. Merger Review in Digital and Technology Markets: Insights from National Case Law* (2022) 9.

¹³⁶ Fumagalli [n 6] 14.

¹³⁷ Crémer [n 26] 22.

¹³⁸ Whish [n 76] 198.

First, considering its multi-sided nature, economists propose a more complex analysis by comparing overall prices and overall costs of different sides of the platform. To implement this tool, the ideal is that rivals offer similar services to the different sides of the platform.

On the other hand, when platforms have a presence in diverse markets through different services and products, as is the case of Amazon or Mercado Libre, competition agencies must consider the costs and prices of each product or service separately when there are no network externalities that justify joint consideration. Nevertheless, this presents practical challenges likely to pose considerable obstacles for an agency to surmount.

Finally, it is unclear how agencies should consider the value of data in the price-cost test.

This paper considers that these difficulties could discourage the enforcement and sanction of exclusionary abuses through predatory strategies on digital platforms. In fact, some reports argue that competition authorities should consider the degree of demonstrable economic harm and the chances of meeting legal standards when choosing and prioritising which cases to pursue.¹³⁹

Finally, it is essential to note that considering the presence of network effects, some economic literature suggests that there is no good price-cost test because, in some circumstances, above-cost prices may be predatory and below-cost prices could constitute competition on the merits.¹⁴⁰ Given the characteristics of digital platforms, there are relevant cases of exclusionary conduct that, when applying the test, may not be detected or sanctioned, creating a risk of a higher number of *false negative* cases in the context of e-commerce platforms.

These issues may explain why, to date, some of the allegations of predatory strategies by marketplace platforms have only been discussed at a theoretical level and not in the Courts. This was the case with the Quidsi transaction in the US.

To ensure that competition agencies are able to prosecute such abuses, it is essential to have legal tests that recognise the particular features of online marketplaces. Chapter III discusses and proposes new approaches to assessing predatory strategies by marketplace providers.

¹³⁹ OECD [n 15] 11.

¹⁴⁰ OECD [n 4] 109.

Chapter III. Some proposals to deal with predatory strategies by online marketplace providers

III.1. Introduction

Considering the challenges identified in Chapter II for analysing predatory strategies, it is highly probable that competition agencies will focus on other types of exclusionary abuses concerning e-commerce marketplaces. These include self-preferencing, tying, exclusive dealing or other potential abuses where digital platforms control the terms under which third parties can reach products and services owned by the platforms.¹⁴¹

The investigation and prosecution of the latter abuses is pivotal. However, this paper considers that the analysis of potential predatory strategies should not be ignored. Therefore, competition agencies and courts may need to rethink the tools, legal tests, and theories of harm to be applied to evaluate those strategies.

In that context, this chapter discusses excluding a price-cost test in analysing predatory strategies by online marketplaces, and it explores potential theories of harm to analyse this practice.

III.2. A revision of the need to use the price-cost test

III.2.1 The use of the price-cost test in a general framework

A good starting point for analysing predatory strategies is to use a general framework to identify the type of abuse being pursued and then explore its potential anti-competitive and pro-competitive effects. While there is some discussion about applying a single, consistent, and tractable economic framework for analysing exclusionary practices, some authors consider analytic unification possible and desirable.¹⁴²⁻¹⁴³

This work considers the general framework presented by *B. Douglas Bernheim and Randal Heeb*¹⁴⁴ could be a good tool when analysing exclusionary behaviour by competition agencies and courts.

This framework proposes three stages: first, the question should be whether the conduct is exclusionary. If the answer is positive, the second stage asks whether it has anti-competitive effects. Finally, the third stage asks whether the behaviour also has pro-

¹⁴¹ Motta [n 5] 2.

¹⁴² B. Douglas Bernheim and Randal Heeb 'A Framework for the Economic Analysis of Exclusionary Conduct' in Roger D. Blair and D. Daniel Sokol (eds), *The Oxford Handbook of International Antitrust Economics* (Vol 2, Oxford University Press, 2014) 4.

¹⁴³ There are different attempts to develop a unified framework for analysing abuses. See, for example, Pinar Akman, *The Concept of Abuse in EU Competition Law: Law and Economic Approaches* (Bloomsbury Publishing Plc 2015) 300-301. Also, see Fumagalli [n 6] 26.

¹⁴⁴ Bernheim [n 142].

competitive effects.¹⁴⁵ This is under the assumption that the firm has a monopoly power or a dominant position to abuse.¹⁴⁶

If a competition agency applied the general framework to traditional markets, it would likely involve the price-cost test during the initial two stages.¹⁴⁷

In the first stage, the competition agency should question whether the conduct can be categorised as exclusionary. This is a first approximation to potential exclusionary abuse. Therefore, the idea is to recognise *suspicious conduct* that may exclude competitors and that distinguishes it from innocuous behaviour involving exclusion.¹⁴⁸ It is worth noting that a positive response to this query does not necessarily indicate anti-competitive behaviour.¹⁴⁹⁻¹⁵⁰

At this stage, the price-cost test could help categorise a predatory pricing accusation as innocuous. The price-cost test would make it possible to rule out conducts as exclusionary when the price charged by the dominant firm covers certain costs.¹⁵¹⁻¹⁵²

In the *second stage*, when evaluating anti-competitive effects, predatory theory indicates that pricing below a cost level allows the dominant firm to exclude rivals by sacrificing short-run profits to reap monopoly profits later once the rivals have been forced out of the market.¹⁵³ If the test shows that prices are under a measure of costs -and considering the recoupment requirement of some jurisdictions-¹⁵⁴ it is possible to show that there are anti-competitive effects from the conduct.

III.2.2. The importance of avoiding false negatives in online marketplaces

In traditional markets, the price-cost is useful in categorising whether a behaviour is exclusionary and assessing its effects.

¹⁴⁵ Ibid 19.

¹⁴⁶ Louis Kaplow and Carl Shapiro, 'Antitrust' in Polinsky, A.M., Shavell, S. and Shavell, R.P.O.L.S. (eds), *Handbook of Law and Economics* (Elsevier Science & Technology, 2007) 1180.

¹⁴⁷ Bernheim [n 142] 21, 36.

¹⁴⁸ Ibid.

¹⁴⁹ Ibid 4-5.

¹⁵⁰ Exclusionary conditions refer to "any practice that renders aspects of transactions between a company and any one of its customers or suppliers effectively contingent upon that party's dealings with the company's rival(s)" (Bernheim [n 142] 5). Predatory strategies typically do not include *exclusionary conditions* as defined by *B. Douglas Bernheim and Randal Heeb*. Thus, determining if the strategy serves exclusionary purposes is more challenging. Bernheim [n 142] 5.

¹⁵¹ Ibid 6-7.

¹⁵² Hemphill [n 86] 2069. This, in turn, is consistent with the criteria formulated in the AKZO case described in Chapter II, where pricing levels exceeding the threshold of ATC are generally considered non-abusive.

¹⁵³ Gunnar Niels and others, *Economics for Competition Lawyers* (2nd Edition Oxford University Press 2016)172.

¹⁵⁴ Whish [n 76] 784.

Using the price-cost test in these markets reflects the intuition that a simple price cut benefits consumer welfare.¹⁵⁵⁻¹⁵⁶ Thus, the particular price-cost test established for predatory pricing reflects the avoidance of one type of error cost: false positives.¹⁵⁷ Indeed, predatory pricing is defined under such a test to reduce the risk of broadly chilling price competition and promoting aggressive competition, even at the cost of false negatives -such as anti-competitive above-cost price cuts-.¹⁵⁸⁻¹⁵⁹

However, as discussed in Chapter II, when a dominant marketplace develops a predatory strategy to exclude rivals, competition authorities may face multiple difficulties in applying the test, discouraging effective enforcement. Also, prices over costs should not automatically indicate that the predatory pricing accusation is innocuous and has no anti-competitive effects. Thus, there is an important risk of having false negative cases.

In the context of digital platforms, the risk of under-enforcement (or false negatives) can be particularly complex, given the fast evolution of online marketplaces and the potential consolidation of dominance over different markets within ecosystems.¹⁶⁰⁻¹⁶¹

Even before the existence of digital markets, economic literature criticised the price-cost test on the grounds that there were exclusionary predatory cases that the test might not cover.¹⁶² As some literature said, a predatory pricing strategy may undertake a complex sequence of price changes, where the relationship between prices and cost is not enough to measure the impact of this strategy on competition.¹⁶³

However, for test advocates, the cases not covered would probably be few and occur only in exceptional circumstances. At the same time, the absence of such a rule would introduce an element of legal uncertainty and arbitrariness.¹⁶⁴

This work agrees with the latter view: precisely because special circumstances exist in online marketplaces, waiving the test in particular cases may be justified. These special circumstances relate to multi-sided markets and strong indirect network effects, cross-subsidies by the dominant firm given the multi-market presence and data's relevance as a critical competitive input.

¹⁵⁵ Hemphill [n 86] 2076.

¹⁵⁶ The legal test to be applied to each type of exclusionary conduct depends on the decision to be made about how much the risk of over-enforcement or under-enforcement will be reduced. Mark. S. Popofsky, 'Defining Exclusionary Conduct: Section 2, the Rule of Reason, and the Unifying Principle Underlying Antitrust Rules' (2006) 73(2) *Antitrust Law Journal* 435, 460.

¹⁵⁷ Massimo Motta, *Competition Policy: Theory and Practice* (Cambridge University Press 2004) 446.

¹⁵⁸ Bernheim [n 142] 21.

¹⁵⁹ Hemphill [n 86] 2052-2053, 2076.

¹⁶⁰ OECD [n 1] 10.

¹⁶¹ OECD [n 22] 5.

¹⁶² Williamson [n 81] 284-340. Ordoover [n 81] 582.

¹⁶³ William J. Baumol, 'Quasi-Permanence of Price Reductions: A Policy for Prevention of Predatory Pricing' (1979) 89(1) *The Yale Law Journal* 1, 3.

¹⁶⁴ Motta [n 157] 446-447.

III.2.3. The price-cost test is useful but not necessary in the context of dominant marketplaces

It is important to stress that we are not arguing about removing this rule. This work does not detract from the critical value of the price-cost test for predatory pricing analysis. In many cases, it is a reasonable and administrable manner to identify anti-competitive pricing practices. However, in some cases, the test should not be applied to more complex strategies,¹⁶⁵ such as some of the strategies that a provider could develop in an online marketplace.

Even for online marketplaces, whenever the circumstances of the case under consideration make it possible for the competition agencies to apply such a test, it should be used as a first approximation to measure the effects of a predatory strategy.

However, while the test may be a reasonable first approximation to prove anti-competitive effects,¹⁶⁶ it should not always be considered a *necessary* test¹⁶⁷ to implement in order to prove a case of predatory abuse by marketplace providers. Particularly, a practice should not be considered innocuous just because prices are above a certain cost measure. As discussed in Chapter II, in the context of network effects, above-cost prices may be predatory in some circumstances.¹⁶⁸

III.3. Online marketplaces: In search of a legal test that focuses on exclusionary effects

In light of the above, this paper does not consider it unusual if competition agencies or judges decide to depart from the price-cost test in exceptional circumstances.¹⁶⁹

In addition to the characteristics and challenges mentioned in Chapters I and II concerning the online marketplace, the analysis should include a check to verify that the dominant platform provider sets prices very aggressively, with *additional factors* that make it clear that there is a strategy of excluding rivals.¹⁷⁰ In other words, evidence could be sought to show that the platform's strategy uses methods other than those which come within the scope of competition on the merits.¹⁷¹

One example of this circumstance could be the matching strategy developed by a platform to match or follow the price of competitors for a set period, with the goal of eliminating the rival, no matter the cost.¹⁷² This kind of situation has been discussed in the literature

¹⁶⁵ Hemphill [n 86] 2050.

¹⁶⁶ In terms of the *first and second stages* of the general framework.

¹⁶⁷ Kaplow [n 146] 1198.

¹⁶⁸ OECD [n 4] 109.

¹⁶⁹ Fumagalli [n 6] 83.

¹⁷⁰ *Ibid* 83-84.

¹⁷¹ Case C-280/08 P *Deutsche Telekom v Commission* [2010] ECR I-9601, para 177.

¹⁷² Committee on the Judiciary of the House of Representatives [n 7] 252.

considering the Quidsi acquisition by Amazon in the US. In this regard, it is argued that when a platform provider uses a pricing algorithm to undercut a downstream product market rival and then purchase the weakened rival, that strategy could suggest the existence of a predatory strategy in nature.¹⁷³

The OECD proposes that a predatory pricing theory of harm may apply in the context of digital markets when a firm is charging very low prices and a “dominant firm is sacrificing profits in order to force competitors to exit the market, without other business justifications and with the likelihood that losses will be recouped through higher prices after the exit of competitors”¹⁷⁴ or when a “dominant firm is setting prices at a level that will generate profitability solely due to denying rivals scale or network effects, or a vertically integrated firm is charging low prices downstream and high prices upstream to foreclose competitors”.¹⁷⁵

The aim of this work is not to propose all the potential *additional factors* that might justify waiving the application of the test. Instead, the focus is to introduce into the discussion and emphasise that what is relevant should be a visualisation of the potential anti-competitive effects of the conduct. To this end, the following sections show some possible theories of harm that can apply in the context of online marketplaces.

At this point, it is relevant to remember that predatory strategy refers to a practice where an online marketplace provider sets prices very aggressively to exclude rivals. Providers may develop this strategy by *foreclosing the primary market*, excluding other platform providers in some way by limiting multi-homing.¹⁷⁶ Also, providers may develop the strategy by *foreclosing secondary or adjacent markets* through the development of a predatory strategy by leveraging their market power from the platform to adjacent markets.

III.1.3.1. Foreclosing the primary market: discouraging multi-homing

As described in Chapter I, online marketplaces are the type of industry where the *winner takes most* may apply. Although the market might exhibit concentration within a small number of firms, there should be room for competitors to engage in product differentiation.

Generally, buyers and sellers can choose among different online marketplaces, using them simultaneously, which is known as multi-homing.

¹⁷³ OECD [n 1] 32.

¹⁷⁴ Ibid 25.

¹⁷⁵ Ibid 25.

¹⁷⁶ OECD [n 4] 114-121.

However, platforms may want to discourage multi-homing since it facilitates switching - one user abandons one platform in favour of another.¹⁷⁷ At the same time, entry by new providers may be easier when multi-homing is an option.¹⁷⁸ Limiting multi-homing is thus a cardinal competitive tactic for platforms,¹⁷⁹ and they can resort to competition on the merits or anti-competitive conduct to achieve this.

These considerations are very relevant in multi-sided markets because the extent to which users from one side decide to single- or multi-home affects the single- or multi-homing choice on the other side of the market.¹⁸⁰

Thus, the strategy here might be that a provider with substantial market power may seek to weaken competition by demanding that some or all user groups refrain from using competing platforms. There are diverse anti-competitive means by which a provider might limit multi-homing, one of which consists of utilising price structures that make it economically unattractive for a platform user to multi-home.¹⁸¹ Some of these behaviours could include the use of quantity discounts and discounts based on the percentage of users' patronage over a given platform (loyalty discounts).¹⁸²⁻¹⁸³

Also, a platform provider may set very low prices to users on one side of the market (for example, the sellers-side) to prevent the rival from achieving scale on that side, thereby making it much less attractive for end-consumers to join and use the rival platform.¹⁸⁴⁻¹⁸⁵

The same could be implemented at the buyer level through predatory membership strategies for end-consumers. For example, if a membership such as Amazon Prime allows access to considerably lower preferential prices, coupled with the loyalty factor that comes with using the membership, this could lead to significant disincentives to use other platforms.

In this regard, the Committee of the Judiciary in the US discusses whether Amazon has adopted a predatory pricing strategy through its membership program, Amazon Prime. According to the Report, Amazon developed a strategy of offering membership at prices below a certain level of cost with the aim of locking customers into Amazon's full marketplace ecosystem, raising prices later and assuming a lower elasticity in the future.¹⁸⁶

¹⁷⁷ Geoffrey G. Parker and others, *Platform Revolution: How Networked Markets are Transforming the Economy and How to Make them Work for You* (W. W. Norton & Company 2017) 212.

¹⁷⁸ OECD [n 15] 10.

¹⁷⁹ Parker [n 177] 212.

¹⁸⁰ OECD [n 4] 76.

¹⁸¹ *Ibid* 114.

¹⁸² *Ibid* 114-115.

¹⁸³ Stigler Center [n 2] 17.

¹⁸⁴ Fumagalli [n 6] 42.

¹⁸⁵ OECD [n 15] 10.

¹⁸⁶ Committee on the Judiciary of the House of Representatives [n 7] 250.

If the facts described in the Report were true, this could be an example of a predatory strategy to exclude rival online marketplaces by discouraging multi-homing and excluding horizontal competitors of the platform. Basically, the strategy consists of charging a yearly fee for Amazon Prime to consumers, incentivising them to use it as much as possible to maximise return on their investment, whereas they might otherwise multi-home.¹⁸⁷ According to the Report, some of Amazon’s rivals view this dynamic as harmful to competition, saying that Amazon was under-pricing its membership program to capture a significant portion of the e-commerce market demand.¹⁸⁸ As is described below, this strategy, in turn, can affect adjacent markets.

III.1.3.2. Leveraging market power from the platform to adjacent markets

Platform providers usually develop different lines of business and create ecosystems that operate in multiple markets. The fact that some platforms have multi-market presence has raised concerns about the possible risks of leveraging a dominant position from one market to adjacent markets. The leveraging theory of harm consists in that the dominant provider in the online marketplace could leverage its dominant position in one market to disadvantage or foreclose rivals in another more competitive market.¹⁸⁹

Thus, if a provider observes that a seller is earning high profits in the sale of its products, the platform may seek to enter that “complementary” market. In those situations, the platform has the incentive -and, often, the ability- to foreclose those “now” horizontal competitors.¹⁹⁰

Traditionally, leveraging theories of harm are related to bundling or tying conducts,¹⁹¹ but in certain circumstances, large platforms can adopt a pricing strategy to leverage their market power to adjacent markets.

While no decision -at least from the EU and US authorities or courts- has applied a theory of leveraging through predatory pricing in an online marketplace, analysing the dominant position’s leveraging is not a new topic in those platforms.

In the Google Shopping case in 2017, the Commission’s decision described Google’s conduct in similar terms to abusive leveraging, arguing that Article 102 of the Treaty prohibits “not only practices by an undertaking in a dominant position which tends to strengthen that position but also the conduct (...) that tends to extend that position to a neighbouring but separate market by distorting competition”.¹⁹² According to some, the Commission was ambiguous as to the legal qualification of Google’s practices, oscillating

¹⁸⁷ Ibid 251.

¹⁸⁸ Ibid 251.

¹⁸⁹ OECD [n 65] 19.

¹⁹⁰ This could take different forms, such as banning rival sellers from the platform or raising costs. Stigler Center [n 2] 89.

¹⁹¹ OECD [n 65] 20.

¹⁹² *Google Search (Shopping)* (Case AT.39740) Commission Decision C(2017) 4444 final [2017], para 334.

between leveraging and favouring. However, the General Court apparently resolved this vagueness by choosing favouring over leveraging.¹⁹³

In 2021, the Italian Competition Authority “fined Amazon for having leveraged its dominant position in the market for intermediation services on e-commerce platforms to the market for logistics services for e-commerce”. The conduct consisted of third-party sellers exclusive benefits on Amazon Marketplace only if they adopted the logistic services provided by Amazon. The competition authority rationalises this conduct as a rising rival costs theory of harm: through the incentives associated with utilising Amazon’s logistic services, sellers were induced not to rely on competing logistic services.¹⁹⁴

The Italian Authority found that Amazon’s conduct led to significant anti-competitive effects for actual and potential logistical rivals. Because of this, some argue that the behaviour led to anti-competitive impacts for sellers, consumers, and alternative e-commerce marketplaces: reducing the scale of operation of alternative logistics suppliers not only harms such suppliers but also makes alternative marketplaces less competitive since logistics services are very important for the success of a platform.¹⁹⁵

This shows that potentially exclusionary practices in adjacent markets could, in turn, affect the market where e-commerce platform providers compete.

More recently, a potential theory of harm of leveraging through predatory pricing emerged in the Amazon/iRobot transaction announced in 2022. This merger is currently under examination by the FTC. During this investigation, third parties have proposed to the competition agency that Amazon offer iRobot’s Roomba smart vacuums at a price that is at or just above its costs, potentially using Amazon’s Prime subscription service for this purpose, which would allow it to foreclose other smart vacuum makers and to strengthen its position in smart home technology services.¹⁹⁶

It is important to note that leveraging and predatory strategies can have a complex structure, as platforms may use the profits in certain markets to subsidise predatory strategies in others. For example, one Report held that, recently, Amazon began to leverage its profits from its cloud computing business to subsidise its international retail business, which is currently incurring losses.¹⁹⁷

Thus, it is possible that through a combination of fees charged in membership programs such as Amazon Prime and prices of products or services in adjacent markets, predatory

¹⁹³ Friso Bostoën, ‘The General Court’s Google Shopping Judgment Finetuning the Legal Qualifications and Test for Platform Abuse’ (2022) 13(2) *Journal of European Competition Law & Practice* 75, 75.

¹⁹⁴ Motta [n 5] 18.

¹⁹⁵ *Ibid* 19.

¹⁹⁶ OECD [n 65] 21.

¹⁹⁷ Désirée Klingler and others, *Amazon’s Theory of Harm* (2020) Thurman Arnold Project. Digital Platform Theories of Harm Paper Series 1, 30.

strategies are used to increase the power of the provider in different markets, expanding its power through its ecosystem.

III.4. Conclusions

A general framework of analysis that focuses on the anti-competitive and pro-competitive effects of the conduct can be helpful when analysing predatory strategies by online marketplaces.

Even if there is a general framework of analysis, the specific legal test to be applied to each type of exclusionary conduct depends on the decision to be made about how much the risk of over-enforcement or under-enforcement will be reduced.¹⁹⁸ In traditional markets, the cost-price test was justified by the decision to avoid false positives.

However, the particular circumstances that exist in online marketplaces justify waiving the test in some cases. These special circumstances relate to multi-sided markets and strong indirect network effects, cross-subsidies by the dominant firm given the multi-market presence and data's relevance as a critical competitive input.

Thus, competition agencies should focus on looking for *additional factors* that clearly show there is a strategy to exclude rivals. To this end, competition authorities must consider theories of harm that assess the characteristics and economic models underlying online marketplaces.

This work reviews two possible theories of harm that could affect the evaluation of the anti-competitive effects of a predatory strategy. The first concerns *horizontal market foreclosure theory*, where a platform could develop a predatory strategy to exclude other platform providers by creating barriers to multi-homing.

On the other hand, based on the presence of platform providers in multiple markets, a *foreclosure theory in adjacent markets* through leveraging the platform's market power may be applied.

These theories of harm are not new. However, they should be adapted to comprehensively capture the features and potential harms arising from e-commerce platforms.¹⁹⁹

¹⁹⁸ Popofsky [n 156] 460.

¹⁹⁹ OECD [n 65] 2.