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EQUITABLE GROWTH, FINANCE & INSTITUTIONS INSIGHT

Antitrust and Digital Platforms: An analysis of global patterns and approaches by competition authorities

Part of the *Levelling Up* series



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Foreword

This report forms part of the *Levelling Up* series of the World Bank Group. The series highlights how the approaches of governments to nurture and protect competition and contestability around the world are evolving in light of rapidly changing markets and emerging areas of concern. These approaches go beyond the traditional enforcement actions of competition authorities, and are topics where sharing new evidence and research are crucial to developing future practice. This evolution in practice is needed to ensure developing countries can support competitive market outcomes for the benefit of their citizens and their growth potential in light of global economic and technological trends. The series aims to highlight key differences in approaches across regions – but maintains a focus on the fundamental institutions and capacities that are needed to implement these policies effectively and independently to help achieve development outcomes.



Definitions used in this report



Competition case:

This refers to a specific case of conduct by a firm or a transaction entered into by a firm that has been analyzed by a competition authority, which was derived from an ex-officio investigation, or initiated by a complaint or a notification made by economic agents in a market. There are three types of competition case: 1) abuses of dominant position; 2) anticompetitive agreements divided between collusion and vertical restraints; and 3) mergers.



Digital economy:

For the purposes of this report, we will refer to markets and economic activities in which digital platforms are involved as the “digital economy”.



Digital market:

For the purposes of this report, we will refer to markets in which digital platforms participate as “digital markets”.



Digital platform:

A digital platform is an economic agent with a business model that permits interactions and exchanges of information, goods, and/or services between multiple types of users, which can be producers, consumers, or a community, through digital means. A platform is fundamentally a product that enables the existence of other products or services through the connections and interactions of multiple participants to create and exchange value.



Executive Summary

The pace at which markets are evolving, thanks to the accelerated adoption of digital technologies, poses important challenges to competition law and its enforcement. In the face of market dynamics and behaviors brought about by digital firms, competition authorities need to adapt their approaches to new business models to ensure that markets remain competitive. This work aims to support this process by building an understanding of the experiences of competition authorities in deciding on competition enforcement cases in the digital economy.

This note analyzes the Global Digital Antitrust Database of the Markets, Competition and Technology Unit (the MCT DAD or “the database”) and provides a summary of key patterns and trends in antitrust in the digital economy (and specifically in relation to digital platforms firms).¹ This database aims to be a holistic source of information on abuse of dominance, anticompetitive agreements, and merger cases involving digital platforms, which have been finalized by antitrust authorities worldwide (herein referred to as “digital antitrust cases”). The database has been generated by collecting publicly available information on all finalized antitrust cases in all countries globally as at January 2020. The trends presented in this note highlight key commonalities and differences in the ways that antitrust activities, targeted at digital platforms, have been conducted in different regions. It also identifies some risks to competition arising from various digital platform business models in different sectors and generates learnings for antitrust authorities globally on the approach to assessing such cases. The analysis contributes to the discussion and learning on competition assessments in the digital economy.

While large digital platforms have helped countries to weather the crisis in the current COVID-19 context, they may also have become further entrenched in their market positions. Digital platforms, particularly those platforms offering e-commerce, social media, search, work solutions, and cloud services, could have benefited from shifts in consumption patterns toward online business during the crisis. These recent developments may have long-term implications. With the market positions of some digital platforms being strengthened through the crisis, there may be consequences for competition, especially as digital firms accumulate greater amounts of data over time. Nonetheless, strong antitrust enforcement could help policy makers mitigate the risks to fully harness the benefits of the positive work done by digital platforms during the crisis.

The MCT DAD shows that digital antitrust cases have been investigated in all regions of the world; however, there have not yet been any cases finalized by authorities in low-income countries. There are two potential reasons for this status quo. These cases may not be prioritized because digital markets are less developed in low-income countries, and there-

¹ The Global Digital Antitrust Database (the MCT DAD) aims to be a comprehensive source of information on antitrust cases involving digital platforms, which have been finalized by competition authorities worldwide. The database has been generated by collecting publicly available information on all finalized antitrust cases (regardless of the ultimate findings of the case) in all countries globally as at January 2020. The information included has been taken from decisions published by competition authorities, or else alternative sources with the most comprehensive information when a decision was not available.

fore, the potential scale of harm of anticompetitive practices is perceived to be relatively lower than in developed economies, or focused on a narrow section of society. This reality could change in the coming years, as digital markets develop, and particularly, as more merger transactions start to occur in these markets. However, the low prioritization of these cases may also be due to the fact that bringing cases against well-resourced global digital firms is a daunting prospect for young and capacity-constrained competition authorities in lower-income countries, even when there is significant harm.

Developing countries may have had a more reactive approach to analyzing cases in the digital economy, while high-income authorities have been more proactive. The data also suggest that authorities in developing jurisdictions have focused relatively more on mergers in the digital economy, and relatively less active in pursuing cases against anticompetitive practices, than authorities in developed jurisdictions. This is likely related to the fact that practice cases often require a more proactive investigatory approach, while merger cases must be reviewed once they have been notified to a competition authority. The precise drivers for the geographic distribution of cases is a topic that deserves further research.

The sectors where digital antitrust cases have been investigated reflect regional variations. The sectors investigated by authorities seem to reflect the relative importance of certain sectors in the economy, a harmonization of approaches between authorities in the same region, and regional merger waves. In the case of passenger transport, the high proportion of cases in developing economies seems to also reflect complaints by traditional taxi companies and associations that have been disrupted by digital platforms in the sector. There could be opportunities for authorities to learn from what other jurisdictions have, or have not, assessed when analyzing specific sectors. It may also help authorities to consider sectors into which they had not previously ventured. For example, developing jurisdictions have very few cases in tourism and social media/communications; yet, these sectors are likely to be of significance to their economies and populations. Since developed jurisdictions have seen several cases in these sectors, there are opportunities here for learning and knowledge sharing between high- and middle-income countries.

The data also show how different sectors may be prone to different types of anticompetitive behavior, depending on the typical business models of digital platforms. Authorities should focus their efforts on developing a sound understanding of the characteristics of different business models, as well as identifying the incentives and avenues for anticompetitive behavior that these models create. While previous

behavior should not unduly bias future judgements, they do represent patterns that could help in the development of common theories of harm for certain types of business models.

Authorities in less-developed jurisdictions should ensure that they are adequately accounting for emerging economic features, theories of harm, and efficiencies associated with digital markets. Characteristics of digital markets and platform business models, like multihoming, winner-takes-most dynamics, zero-price behavior, and the use of algorithms, need to be analyzed more frequently by authorities in developing countries. Our findings suggest that developed countries more frequently assess new features associated with the digital economy, while developing countries rely more on traditional means of assessing competition (for example, inter-platform competition and prices).

In particular, there are very few cases investigating data-related issues in developing countries, even though data are an important part of the production process for digital platforms. The absence of data-related factors being raised in case decisions in sectors, such as e-commerce, could signify a gap in understanding how market dominance could be abused or the types of anticompetitive agreements that could exist in digital markets. Developing jurisdictions may need to assess data issues (data as an essential facility/barrier to entry and data protection/privacy) more frequently in the future, particularly in abuse of dominance cases.

Building more capacity on these topics will be important, along with taking advantage of analyses conducted in developed economies. New features associated with the digital economy appear to be more frequently assessed in developed jurisdictions, while developing jurisdictions seem to rely more on traditional means of assessing competition.

Antitrust authorities in less developed countries should be encouraged to participate more actively in the debate on data protection and privacy as a dimension of competition. Data protection has not been commonly raised by authorities in antitrust cases according to public documents. A greater awareness of the preferences and valuations of users toward data protection could help generate a better understanding on the extent to which firms compete in the data protection dimension and the extent to which behavior that reduces data protection constitutes anticompetitive harm. Competition authorities in developing countries have been less engaged in this debate than those in developed jurisdictions. Higher participation of development countries in the discussions is relevant because competition issues regarding data use will become increasingly important as their economies digitalize.

The proportion of cases (in which wrongdoing was found), where fines were imposed, is low, and even when they were imposed, they might have been insufficient as a deterrent of anticompetitive behavior by large firms. Only 34 percent of practice cases where wrongdoing was found had fines imposed. Additionally, the magnitude of most of the fines imposed represents a very low proportion of the revenues of the firms that usually generate billions of dollars of income worldwide (based on the figures available, imposed fines are often only a fraction of the 10 percent of turnover cap typically allowed under competition regimes). The data also point to a potential issue: fines determined on the basis of national turnovers may not be a significant deterrent in the context of global firms with substantial turnover from a wide range of jurisdictions.

More evidence on the efficacy of antitrust remedies and conditions involving digital platforms is needed and authorities would benefit from capacity building in their design. Although remedies, both structural and behavioral, are imposed more frequently in developed jurisdictions, they remain notoriously difficult to design and implement, even for mature competition authorities. Evidence on their efficacy remains scarce. As experience in this area builds, developing jurisdictions will also need to develop the capacities to target remedies more effectively to alleviate competition concerns without unduly raising costs for firms. The design of remedies also needs to consider the budgets and institutional capacities required to monitor these remedies (or to facilitate them, such as in the case of orders to share data). Even where relatively straightforward remedies are used, such as “cease and desist orders”, the analysis should thoroughly consider both efficiencies and harms, so that behavior that may be pro-competitive on balance is not unnecessarily restricted. Reviewing compliance with cease orders and their impact could be an area for further research. Finally, it would be interesting to conduct analyses on how remedies and conditions imposed

have impacted market dynamics and outcomes, and if there have been improvements. This could be a difficult task due to the lack of counterfactual situations to compare with, but such analyses would be relevant to pursue in order to improve the design and implementation of remedies imposed.

Since a number of digital platforms are global in nature, experience in understanding, monitoring, investigating, and remedying anticompetitive practices and mergers by digital platforms lends itself to cross-border knowledge sharing. For example, some mergers involving platforms affect several jurisdictions concurrently, including those in developing countries. Cooperation in their review can help ensure consistent decisions, while building capacities in lower-income jurisdictions. More generally, authorities can share information on their experiences in digital economy cases across countries, especially because some platform behaviors are seen in several countries. Moreover, remedies imposed by competition authorities on a digital platform firm with a global or a regional presence may also impact practices in other countries, which could indirectly affect individuals in developing countries.

Finally, authorities should continue to strive to make their decisions public and provide clarity about the factors justifying their decisions. Since the MCT DAD is entirely reliant on public information, the database is also a reflection of the efforts of authorities to foster transparency in their decisions. Apart from being a good practice in general, transparency about decisions made would also be useful for joint learning and capacity development. Such a practice is also relevant, since these decisions may have effects on both the behavior of firms and the market at the regional level in some cases. Finally, to the extent that there are cases and factors of analysis, which are not completely captured in the MCT DAD, such a reality would also be illuminating that there may be room to further bolster the accessibility of decisions in some cases.



Background

The pace at which business models and markets are evolving due to digitalization poses important challenges to competition law and its enforcement. Competition authorities around the world need to adapt to the new market realities along with business models and dynamics to ensure that markets remain competitive (See Box 1). In order to do so, it is helpful to understand the past experiences of competition authorities in deciding on competition cases in the digital economy. Antitrust enforcement is key to detecting firms engaging in anticompetitive practices and deterring them from doing so, as well as preventing anticompetitive mergers that could exclude smaller rivals, raise prices, reduce quality for consumers, and hinder innovation. A primer on antitrust cases and a brief summary of their specificities in the context of digital platforms is provided in Table 1.



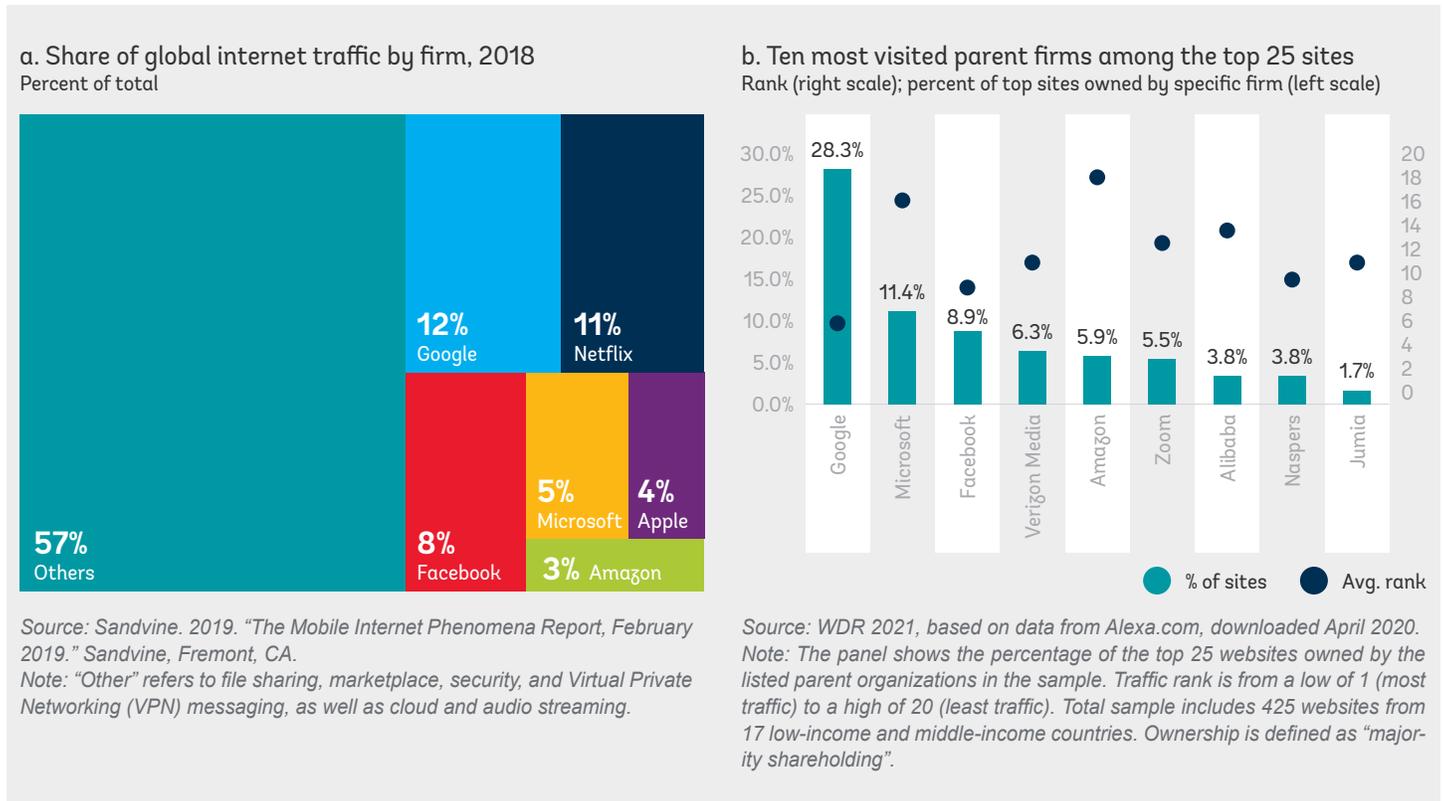
BOX 1 - Some traditional antitrust tools require adaptation when it comes to digital markets.

Cases involving digital platforms require competition authorities to tailor their analyses to multisided markets and consider the control of data in their analyses. This complicates the definition of markets as well as the assessment of market shares, market power, and the impacts of anticompetitive behavior. Most common frameworks for defining markets, which typically rely on price, such as the hypothetical monopolist test, can be more difficult to utilize in these instances. The fact that some platforms provide nominally-free products mean that price may not necessarily be an appropriate criterion for competition analysis in digital markets. Therefore, competition analysis in digital markets may need to: 1) broaden the concept of consumer welfare beyond prices; and 2) consider new dimensions of competition, such as personal data protection. In addition, platform firms typically exist in a digital ecosystem where providers of complementary digital products interconnect and regularly exchange data to provide consumer products. It is worth understanding how competition restrictions affect these complementary products alongside the direct effects on the users of a platform. Moreover, under traditional antitrust regimes, mergers involving data-driven firms may be less likely to trigger a review by the antitrust authority, because such firms typically do not have sufficient tangible assets or revenues to meet the traditional thresholds for merger notifications. The potential for firms to engage in so-called “killer” or “zombie” acquisitions may also merit consideration in merger reviews.

Concentration and entrenched market power in digital markets around the world increase the risk of anticompetitive practices by digital platforms and raise the importance of protection against anticompetitive mergers. As examples of this trend toward concentration, data traffic over the internet is highly concentrated in a few companies. Six US companies generate more than 40 percent of the world’s internet data flows (Figure 1, panel a). Across the top 25 websites (by traffic), in a sample of 17 low- and middle-income countries around the world, around 60 percent of these websites are owned by five firms headquartered in the United States (Google, Microsoft, Facebook, Verizon, Amazon, Figure 1, panel b). The key challenge for policy makers is to preserve the positive externalities that digital markets create, while ensuring that these externalities can be harnessed by all players in a competitive, vibrant ecosystem, without violating the rights of individuals.

> > >

FIGURE 1 - Internet Traffic in Low-income and Middle-income Countries is Concentrated in Several US-based Firms



This note analyzes the information in the Global Digital Antitrust Database of the Markets, Competition and Technology Unit (“the MCT DAD”) and provides a summary of key patterns and trends seen in antitrust cases focused on the digital economy. (Digital economy antitrust cases in this note refer to cases in which digital platforms are involved; therefore, whenever the digital economy is mentioned, it refers to the markets and market interactions of digital platforms). A description of the database is provided in Section 2. This note highlights key trends in the way that antitrust activities targeted at digital platforms are conducted in different regions. It also identifies some of the competition risks arising from various platform business models in different sectors and generates learnings for antitrust authorities globally on the approach to assessing such cases. Section 3.3.1 provides examples of the dimensions of platform business models and their relevance

to competition analysis. The aim is to contribute to the discussion on how competition analysis can incorporate new features emerging from the digital economy to account for new risks and efficiencies, as well as broaden the consumer welfare standard beyond price analysis to include quality dimensions, such as personal data protection and privacy.

The WBG, through this note, is not endorsing or validating the individual decisions of any antitrust authority in any of the cases included in the MCT DAD. The objective of the database and this note is to contribute to the understanding on how cases in the digital economy are being analyzed by authorities. The analyses of cases, their outcomes, and their sanctions are described and analyzed without favoring any particular approach or decision.

TABLE 1 - A Primer on Antitrust Cases and How They Apply to Digital Platforms

Type of case	Behavior	Specificities to digital platforms	Examples
Anticompetitive agreements	Collusion: Agreement between competitors on market parameters, such as price, quantities, and market segmentation	<ul style="list-style-type: none"> Data and algorithms can improve pricing, customization, and market trend predictions, thereby generating efficiencies, but also facilitate collusive agreements without human interactions.² Hub and spoke cartels. When firms outsource pricing algorithms to the same third party, this may create coordination because competitors would be using the same “hub” for developing their pricing algorithms and strategies. Algorithms could lead to tacit collusion. In most cases, tacit collusion is not prohibited by competition laws, but its outcomes could lead firms to suppress output and increase prices in the same ways as explicit collusion.³ 	<ul style="list-style-type: none"> Algorithms in e-commerce can be trained to independently collude (for example, by following the behavior of a price leader), thus increasing the risk of collusion.
	Vertical restraints: Agreement between firms at different levels of a value chain, which reduce the ability of (downstream) firms to compete	<ul style="list-style-type: none"> Resale price maintenance (RPM). An upstream supplier controls or restricts the retail price of its product or service downstream by specifying a retail price. An incumbent may use RPM to protect its market position from competition by, for example, placing restrictions on low-cost online retailers’ ability to introduce price discounts. This may facilitate the exclusion of lower-cost distribution methods, such as direct online sales to consumers and collusions between downstream retailers.⁴ Most-favored-nation clauses (MFN). Restrictions imposed by platforms requiring a seller on the platform not to sell the product at a lower price through another platform. MFNs tend to raise prices charged by sellers and fees charged by platforms, discourage entry, and distort innovation.⁵ 	<ul style="list-style-type: none"> Tourism and travel digital platforms impose MFNs on hotels by not allowing them to sell their rooms at lower prices than the prices on the tourism platform (even via offline channels).
Abuse of dominance	Abusing a dominant position by excluding rivals (for example, through the refusal to deal, discrimination, tying, predatory pricing, exclusivity, and restricting access to essential inputs) or by exploiting consumers	<ul style="list-style-type: none"> Digital platforms have a greater tendency to tip towards dominance due to the prevalence of network effects, along with strong economies of scale and scope arising from high fixed costs/low variable cost structures, as well as the reliance on data and data-intensive technologies, to gain a competitive advantage. Given its multisided nature, dominance on one side of the platform can influence anticompetitive behavior on another side. Where a platform controls technology or assets that are essential to compete, there may be exclusive abuse through a refusal to deal, or exclusivity. Digital platforms that are vertically integrated into product lines, where they compete with third parties that sell on their platforms, may engage in self-preferencing, including through algorithms that are biased (intentionally or not) toward the platform. Digital platforms that have a presence in adjacent markets (as is relatively common given the economies of scope⁶ present) can also abuse their dominance, in the form of forced tying or the bundling of products. Predatory pricing can be part of the business strategy of platforms seeking to quickly leverage network effects to dominate the market. 	<ul style="list-style-type: none"> Dominance in the search markets can manifest in abuse in the shopping market. A platform refuses to give access to information, which would allow a third party to interoperate with it. A platform may rank its own products higher than others when returning a response to a consumer’s search. A supplier of operating systems (OS) obliges device manufacturers to install the supplier’s suite of apps as a condition to licensing the OS. Ride-hailing apps are accused of engaging in predatory pricing to drive taxis out of the market. There has been debate over whether the excessive collection of the personal data of users could be considered an exploitative abuse.
Mergers	Mergers and acquisitions are not an anticompetitive practice like the categories above, but they may be prohibited by a competition authority, if they appear likely to reduce competition by strengthening the market power of the merged entity or by creating conditions under which coordination between firms becomes easier.	<ul style="list-style-type: none"> Identifying anticompetitive mergers in digital markets is more challenging, since these mergers are less likely to meet the turnover or asset thresholds typically established in competition legal frameworks that signify when a merger must be notified to a competition authority. This is because digital firms, by their nature, are less likely to hold tangible assets and may not generate significant revenues, especially in their startup phases. Data and data-related assets are important intangible assets that digital firms hold, thus making them relevant to the analysis of mergers in the sector. “Small” mergers or vertical mergers, which are typically not considered to pose a risk to competition, may in fact be damaging to the competitive dynamics of digital markets where the target firm holds data or intellectual property that may provide a competitive advantage to the acquirer. Emergence of killer or zombie acquisitions as a potential theory of harm, whereby (typically cash-rich) digital platforms acquire smaller firms and put their innovations on hold before they can become a competitive threat. 	<ul style="list-style-type: none"> Social media site acquires a messaging service and other social media sites and then merges datasets to acquire a broader set of data. Platform with a map service acquires a smaller maps app partially to eliminate an independent source of mapping software

2 OECD, “Algorithms and Collusion: Competition Policy in the Digital Age,” last modified 2017, <http://www.oecd.org/daf/competition/Algorithms-and-collusion-competition-policy-in-the-digital-age.pdf>

3 William E. Kovacic, Robert C. Marshall, Leslie M. Marx, and Halbert L. White, “Plus Factors and Agreement in Antitrust Law,” *Michigan Law Review* 110, no. 3 (2011): 393–436, <https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1118&context=mlr>.

4 Australian Competition and Consumer Commission, “Online Vertical Restraints Special Project Report,” International Competition Network, last modified 2015, https://www.internationalcompetitionnetwork.org/wp-content/uploads/2019/11/SP_OnlineVR2015.pdf.

5 Andre Boik and Kenneth Cortis, “The Effects of Platform MFNs on Competition and Entry,” *Journal of Law and Economics* 59 (2016), https://www.researchgate.net/publication/305220937_The_Effects_of_Platform_MFNs_on_Competition_and_Entry.

6 “Economies of scope refer to a situation in which average costs (unit costs) are lower when two complementary products are produced by a single enterprise (either the same facility, the same management team, the same firm or trademark owner, or the same proximate location) than when they are produced separately.” From: Martin R. Hilbert, “From Industrial Economics to Digital Economics: An Introduction to the Transition,” UN, ECLAC, Division of Production, Productivity and Management, last modified February 2001, <https://www.cepal.org/en/publications/4483-industrial-economics-digital-economics-introduction-transition>.

1.1. The Global Digital Antitrust Database

The Global Digital Antitrust Database (the MCT DAD) aims to be a comprehensive source of information on antitrust cases involving digital platforms, which have been finalized by competition authorities worldwide.⁷ The database has been generated by collecting publicly available information⁸ on all finalized antitrust cases (regardless of the ultimate findings of the case) in all jurisdictions globally as at January 2020. No start date is specified in order to catch all relevant decisions. In practice, most cases were finalized between 2010 and 2019. The information included is taken from decisions published by competition authorities, or else alternative sources with the most comprehensive information were used when a decision was not available. Those cases that did not have public information available are not part of the database. Additionally, any other analyses or considerations taking place during the assessment conducted by the authorities, which were not published in any document, are not reflected in the database.⁹

The categorization of cases in the database allows for the analysis of the sectors and practices, which have been analyzed by competition authorities, with regards to abuse of dominance, anticompetitive agreements (collusion and vertical restraints), along with merger cases, in the digital economy. The database also identifies the economic factors assessed by antitrust authorities in these cases (in relation to business models and market characteristics), as well as case outcomes and remedies.

The database is focused on cases in which the firm or firms involved primarily operate as digital platforms. Cases where digital aspects (or digital platforms specifically) are not the main concern are not included. For example, Bayer's acquisition of Monsanto, which touched on issues related to digital platforms, was not included, since neither of the firms primarily operates as a digital platform and digital issues were not the main concern of the authorities' analysis.¹⁰

In addition to the finalized cases in the database, around 30 cases worldwide have been identified as not finalized as of January 2020. Several of these cases belong to middle-income countries in the Middle East, Africa, and the Asia Pacific regions. Other cases that are still being reviewed may be made public in the future. The database will continue to grow, as competition authorities worldwide study and finalize relevant cases in the digital economy and make their decisions public.

Market inquiries, advocacy cases, and “unfair competition” cases are not included in the database, because they do not fall under the definition of antitrust activities. However, market inquiries, along with the advocacy for pro-competition policy or regulatory reform in digital markets, can be a very effective avenue for boosting competition in digital markets. Therefore, they are an important complement to antitrust activities. Given the durable nature of market power in digital markets, ex ante policies to protect against competition risks and prevent markets from slipping into entrenched dominance in the first place can be fundamental. Some examples of these advocacy approaches taken globally are discussed further under Spotlight 1.

While we have made our best efforts to collate all information on digital antitrust cases, there may be some cases that were not identified through manual searches. The authors would be happy to receive feedback from competition authorities or the public regarding information on other cases. Ultimately, the MCT DAD is intended to be a living piece of work that can be updated by third parties, as new information becomes available. The objective is to update the MCT DAD periodically to include additional finalized cases and validate existing information on the cases. New information on cases can be reported at <https://www.surveymonkey.com/r/WBG-digital-antitrust>.

7 The majority of cases in the database have been analyzed and resolved by competition authorities, governmental bodies with the mandate to enforce competition law, and/or judicial authorities with the mandate to resolve competition issues directly or as second-tier reviewers.

8 The search was conducted in English, Spanish, and Portuguese; therefore, the database only reflects information available in those languages.

9 The search was conducted primarily in English, Spanish, and Portuguese. Cases conducted by the competition authority of France are included (one relevant case was found). No other cases were found in other French-speaking countries.

10 In China, in the review of Bayer's acquisition of Monsanto, MOFCOM focused part of the analysis on the effects on digital agricultural markets, which led to commitments on granting access to the digital agricultural platform of the merged entity to agricultural software application developers. Information on the case is available at <http://fdj.mofcom.gov.cn/article/ztxx/201803/20180302719123.shtml>.

SPOTLIGHT 1 - The role of market inquiries and advocacy efforts to improve competition in digital markets

The MCT DAD includes only enforcement activity by competition authorities related to digital platforms. Nevertheless, competition authorities and other regulators¹¹ have other types of instruments at their disposal to improve competition in digital markets. These instruments and some examples are described below:¹²

I. Market studies or market inquiries:

These are research projects that aim to develop an in-depth analysis of market dynamics, in relation to concerns arising from firm behavior, market structure, market failures, consumer conduct, and government interventions in markets, among others. Market studies can help to build the capacities of competition authorities to monitor markets and promote better market outcomes. Specifically, they can lead to either, or both, of the following: (1) competition enforcement actions from competition authorities; (2) the formulation of recommendations for regulatory and public policy improvements. Below are some examples, in the case of the digital economy.

- **Australia—Digital Platforms Inquiry¹³**

The Australian Competition and Consumer Commission (ACCC) conducted a digital platform inquiry between 2017 and 2019. The ACCC determined that “(...) dominance of the leading digital platforms and their impact across Australia’s economy, media and society must be addressed with significant, holistic reform (...)” The authority concluded that there were adverse effects associated with digital platforms, many of which flow from the dominance of Google and Facebook. The ACCC noted that dominant digital platforms might be distorting the ability of businesses to compete in advertising, media, and other markets, and not adequately informing consumers about how their data are collected and used, among other concerns. Twenty-three recommendations related to competition, consumer protection, media regulation, and privacy law were formulated, such as:

- » Changes to Australia’s merger laws to expressly require the consideration of the effect of potential competition and recognize the importance of data
- » Recommending that large digital platforms agree to a notification protocol to alert the ACCC to proposed acquisitions that may impact competition in Australia
- » Calls on Google to allow Australian users of Android devices (new and existing) to choose their search engine and internet browser from a number of options
- » Strengthening protections in the Privacy Act
- » Introduction of a privacy code of practice, specifically for digital platforms

In December 2019, the Government announced that the ACCC would monitor digital platform services and their impacts on competition and consumers over the next five years.

- **UK—Online platforms and digital advertising market study¹⁴**

The Consumer and Markets Authority (CMA) launched a market study in 2019 into online platforms and the digital advertising market in the UK. The CMA’s objective was to assess three potential sources of harm to consumers:

- » Extent of digital platforms’ market power and its impact on consumers
- » Consumers’ ability and willingness to control how their data are used and collected by platforms
- » Whether competition in digital advertising may be distorted by the market power held by platforms

11 Fintech is an example of a sector, whereby the involvement of other authorities and regulators, like central banks, financial authorities, and/or telecommunications regulators, in improving competition, can be seen. Interventions by these regulators could reduce the necessity for ex-post competition enforcement by competition authorities.

12 Definitions are based on the ones used by the International Competition Network, available at: <https://www.internationalcompetitionnetwork.org/working-groups/advocacy/>

13 ACCC “Digital platforms inquiry” Available at: <https://www.accc.gov.au/media-release/holistic-dynamic-reforms-needed-to-address-dominance-of-digital-platforms>

14 CMA “Online platforms and digital advertising market study” Available at: https://assets.publishing.service.gov.uk/media/5fa557668fa815788db46efc/Final_report_Digital_ALT_TEXT.pdf Covington “UK CMA Published Recommendations for the Regulation of Digital Markets” Available at: <https://www.covcompetition.com/2020/12/uk-cma-published-recommendations-for-the-regulation-of-digital-markets/>

CMA produced a series of recommendations:

- » Establishing a new Digital Markets Unit (DMU) to become a center of sector expertise, which would be responsible for designating certain digital firms as having strategic market status (SMS), promoting competition and innovation, and regulating digital markets
- » Establishing a new pro-competition framework applicable to SMS-designated firms, which would: (1) incorporate a legally-binding code of conduct to regulate SMS firms; and (2) implement proactive targeted interventions related to data mobility, interoperability and access to data, along with specific merger rules, thereby requiring SMS firms to report all transactions to the CMA
- » Financial fines of up to 10% of worldwide turnover for firms that do not comply with the code of conduct
- » Strengthening competition and consumer protection laws, particularly focusing on, for example, data mobility and interoperability, online reviews, and the facilitation of consumer choice

- **European Commission—Sector inquiry into e-commerce¹⁵**

In May 2015, the European Competition Commission launched a sector inquiry into e-commerce to identify possible competition concerns affecting European markets (consumer goods and digital content). The sector inquiry focused particularly on potential barriers erected by companies to cross-border online trade in goods and services, with the objective of contributing to the improved enforcement of competition law in the e-commerce sector.

- » Among the main findings of the inquiry were those related to the increased recourse to vertical restraints, such as pricing restrictions, marketplace bans, restrictions on the use of price comparison tools, and the exclusion of pure online players from distribution networks, which affect competition among retailers selling the same brand (“intra-brand competition”).

- **Mexico—Study of Services and Business Models in the Digital Ecosystem¹⁶**

In December 2020, the Federal Institute of Telecommunications (IFT) published a market study on the digital ecosystem, including Big Data, Internet of Things, Artificial Intelligence, Blockchain, along with over-the-top services and platforms, to better understand the business models in these markets in Mexico and the possible competition risks associated with them.

- **South Africa—Online Intermediation Platforms Market Inquiry¹⁷**

In 2021, South Africa’s Competition Commission launched a market inquiry to examine and potentially address the features of online intermediation platform markets that may be hindering competition. Online intermediation platforms include e-commerce marketplaces, online classified marketplaces, software application stores, and intermediated services, such as accommodation, travel, transport, and food delivery. The inquiry that is ongoing is focused on market features that may: prevent competition amongst the platforms themselves, give rise to discriminatory or exploitative treatment of business users, and negatively impact the participation of small and medium enterprises.

II. Advocacy

Through competition advocacy, authorities seek the dissemination of competition principles and the promotion of a competition culture, by means of non-enforcement mechanisms. Such efforts aim to underscore the value of competition by informing citizens, firms, and policy makers about the benefits that competition brings to consumer welfare and the economy as a whole. At the same time, advocacy also supports the efforts of competition agencies in tackling private anti-competitive behavior. Usually conducted through relationships between competition authorities and other governmental entities, competition advocacy can, sometimes, be a result of either a market inquiry or a follow-up to an enforcement case.

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¹⁵ European Commission “Sector inquiry into e-commerce” Available at: https://ec.europa.eu/competition/antitrust/sector_inquiries_e_commerce.html

¹⁶ IFT “Servicios y Modelos de Negocio en el Ecosistema Digital” Available at: <http://www.ift.org.mx/sites/default/files/contenidogeneral/competencia-economica/servicio-y-modelos-de-negocio-en-el-ecosistema-digital.pdf>

¹⁷ South Africa’s Competition Commission “Online Intermediation Platforms Market Inquiry” Available at: https://www.compcom.co.za/wp-content/uploads/2021/05/OIP-MI-Statement-of-Issues_May-2021.pdf

Examples:

- **Mexico—Digital Economy**¹⁸

The Federal Economic Competition Commission's (COFECE) advocacy initiative sought to outline the questions and challenges that had arisen in relation to competition policy implementation in the context of the digital economy. It also endeavored to outline the relationships between regulation and competition law enforcement, as well as advocacy efforts in the sector. COFECE interacted with businesses and regulators from these digital markets in order to consider and include their points of view and concerns.

- **Turkey—Big Data**¹⁹

The Turkish Competition Authority (TCA) used advocacy tools to explore the impact of the use and collection of digital data in commercial activities. It established a series of fora to engage in dialogues with different stakeholders, including business associations. Its advocacy efforts regarding big data were aimed at preparing the authority for potential future competition cases as well as establishing contacts and relationships between relevant stakeholders.

- **Portugal—Pricing algorithms**²⁰

The Portuguese Competition Authority published the “Issues Paper on Digital Ecosystems, Big Data and Algorithms”. The paper raises awareness on the impact of the digitalization of the economy on competition enforcement and aims to deter anti-competitive behavior in the digital space. It also highlights how simple rule-based pricing algorithms may foster tacit and explicit collusion, as well as reminds firms of their responsibility for the algorithms they use. Following this initiative, the Authority announced the creation of a task force for the digital economy in 2020.

- **Spain—Accommodation platforms**²¹

A municipal regulation in Madrid established a minimum of five nights for tourist accommodations in private homes and apartments, typically offered via digital platforms, thus preventing them from competing with traditional hotels and hostels. The Spanish National Authority for Market and Competition (CNMC) successfully challenged this anticompetitive regulation. Eliminating this rule allowed for the entry of at least 6,000 non-hotel establishments, while establishing a precedent for other municipalities in Spain to void similar anticompetitive restrictions.

- **Mexico—Fintech**²²

For the Mexican competition authority (COFECE), it was crucial for a new piece of legislation on fintech to be designed to promote innovation and competition in the sector. COFECE provided the Senate with its opinion on a draft law for regulating financial services. Several proposals from COFECE's efforts were adopted in the Fintech Law, such as the facilitation of access to user data and the prohibition of charges exceeding the costs associated with the collection, storage, maintenance, and transmission of data. Ninety-six new fintech firms were established in the country.

- **Kenya—Digital financial products**²³

The Competition Authority of Kenya (CAK) undertook an advocacy initiative to reduce concentration in the mobile/digital financial products market in Kenya and foster competitive market structures in 2019. A key issue identified was a lack of disclosures and transparency in the cost of transactions, leading to inadequate awareness of the total cost of credit along with the unfair terms and conditions of lending set by commercial banks and digital/mobile lenders. The CAK engaged mobile phone operators, banking institutions, and micro-finance institutions to advocate for increased transparency in the market. It produced recommendations that were implemented through the Central Bank of Kenya and the Communications Authority of Kenya, which improved the transparency of costs and prices

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18 COFECE “Rethinking competition in the Digital Economy” Available at: https://www.cofece.mx/wp-content/uploads/2018/03/EC-EconomiaDigital_web_ENG_letter.pdf
19 ICN “ICN Members’ Recent Experiences (2015-2018) in Conducting Competition Advocacy in Digital Markets” Available at: https://www.internationalcompetitionnetwork.org/wp-content/uploads/2019/06/AWG_AdvDigitalMktsReport2019.pdf
20 WBG “2019 2020 Competition Advocacy Contest” Available at: <https://www.worldbank.org/en/events/2019/11/11/2019-2020-competition-advocacy-contest#4>
21 WBG “2016 2017 Competition Advocacy Contest” <https://www.worldbank.org/en/events/2016/10/24/the-2016-2017-competition-advocacy-contest>
22 COFECE’s opinion on Fintech Law. Available at: <https://www.cofece.mx/CFOResoluciones/docs/Opiniones/2018/0953499.pdf>
23 ICN “Report on ICN Members’ Recent Experiences (2015-2018) in Conducting Competition Advocacy in Digital Markets” Available at: https://www.internationalcompetitionnetwork.org/wp-content/uploads/2019/06/AWG_AdvDigitalMktsReport2019.pdf

in the mobile money market. Furthermore, the CAK also enforces the transparency and disclosure requirements by regularly monitoring the market for mobile payment systems.

- **Zimbabwe—Mobile money**²⁴

The Competition and Tariff Commission worked with the Telecommunications Regulator and the Central Bank of Zimbabwe to address regulatory barriers in the telecommunications sector, which resulted in a reduction in mobile money transfer transaction costs. Its collaboration with the other authorities increased access to mobile payment systems in rural and remote areas.

- **Germany—Digital Economy**²⁵

Among other measures, the German competition authority (Bundeskartellamt) set up a “think tank” in early 2015 in which legal experts and economists studied the latest economic research on platforms and networks and discussed how best to apply the results to antitrust case practice. In June 2016, the Bundeskartellamt published a working paper titled “Market Power of Platforms and Networks”. The paper deals with the economic specifics of digital platforms and networks as well as their effects on market definition and the criteria used to assess market power. In another project conducted jointly with the French competition authority, the Bundeskartellamt examined the consequences and challenges, which the collection and use of data in the digital economy and other industrial sectors, pose to competition authorities.

- **UK—Algorithms: How they can reduce competition and harm consumers**²⁶

The Competition and Markets Authority (CMA) opened advocacy efforts in January 2021 to identify potential harms to competition and consumers from the use of algorithms, such as the personalization of prices, the use of algorithms to exclude competitors, and the potential for algorithms to facilitate collusion.

- **Mexico**²⁷

COFECE issued an opinion recommending local governments to formally recognize services provided by passenger transport digital platforms, such as Uber, and avoid imposing regulations that would restrict their ability to compete. The Department of Transportation of Mexico City, relying on COFECE’s opinion, was the first local government in Latin America to issue a specific regulation that allows these platforms to operate fully. Spillover effects were substantial with other local governments.

- **Brazil**²⁸

The competition authority (CADE) issued two studies concluding that the entry of passenger transport ride-hailing digital platforms can result in several benefits for consumers by being substitutes of traditional transportation services. Since releasing these studies, local governments have consulted with CADE on the regulation of these platforms and the market for passenger transportation services.

24 WBG “2015 2016 Competition Advocacy Contest” <https://www.worldbank.org/en/events/2015/10/30/the-2015--2016-competition-advocacy-contest-how-to-build-a-culture-of-competition-for-private-sector-development-and-economic-growth#5>

25 ICN “Report on ICN Members’ Recent Experiences (2015-2018) in Conducting Competition Advocacy in Digital Markets” Available at: https://www.internationalcompetitionnetwork.org/wp-content/uploads/2019/06/AWG_AdvDigitalMktsReport2019.pdf

26 Paper from the CMA’s Data, Technology and Analytics (DaTA) Unit, identifying potential harms to competition and consumers from the use of algorithms. Available at: <https://www.gov.uk/government/publications/algorithms-how-they-can-reduce-competition-and-harm-consumers>

27 COFECE “Opinion on the impact of passenger transport digital platforms” Available at: <https://www.cofece.mx/CFCResoluciones/docs/Mercados%20Regulados/v6/16/2012252.pdf> / <https://www.cofece.mx/wp-content/uploads/2017/11/AnalisisCasos-Uber-v4.pdf>

28 CADE Studies on the incursion of passenger transport ride-hailing digital platforms. Available at <http://www.cade.gov.br/acesso-a-informacao/publicacoes-institucionais/dee-publicacoes-anexos/o-mercado-de-transporte-individual-de-passageiros.pdf>. <http://www.cade.gov.br/acesso-a-informacao/publicacoes-institucionais/dee-publicacoes-anexos/invalidade-apos-entrada-o-impacto-imediato-do-aplicativo-uber-sobre-as-comidas-de-taxi.pdf>



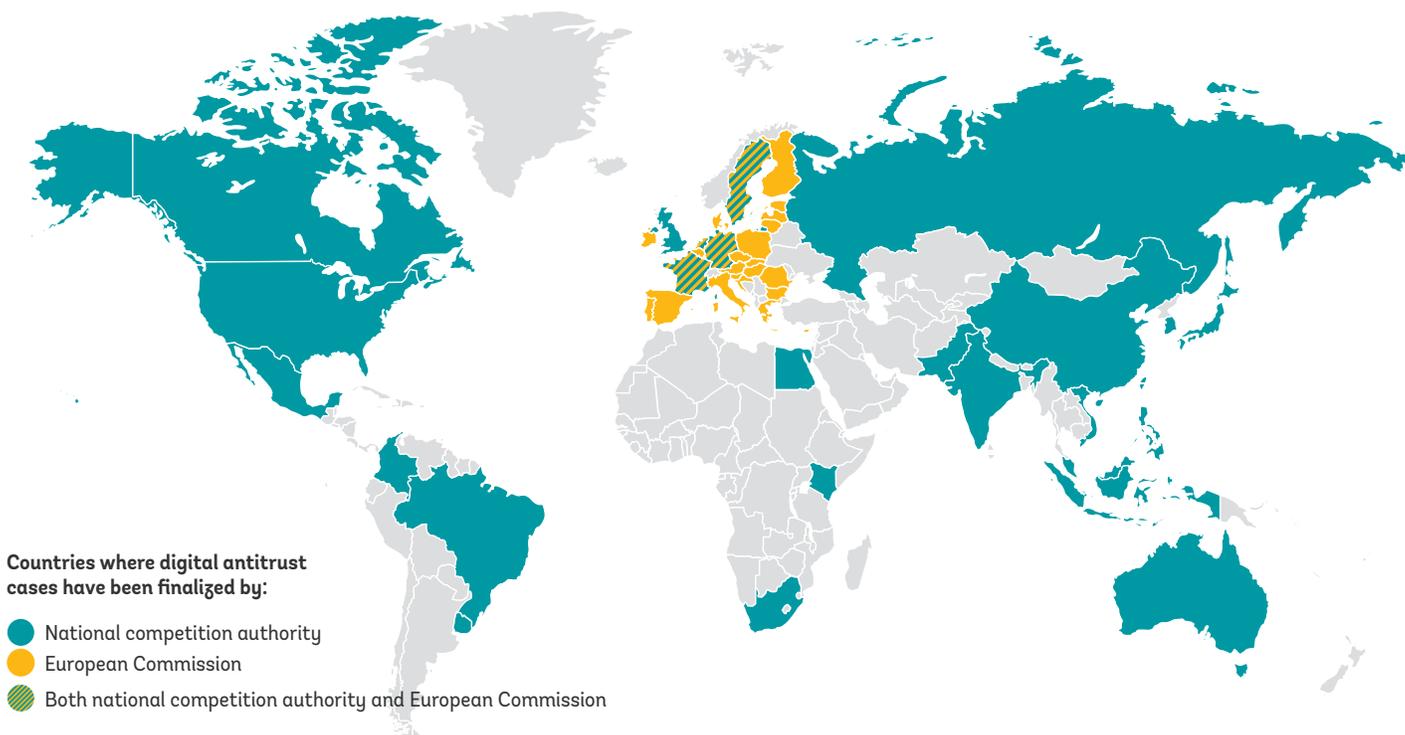
Key findings on antitrust cases in the digital economy

2.1. Overall statistics

As of January 2020, the Global Digital Antitrust Database (the MCT DAD) comprises 103 cases focused²⁹ on digital platform firms, which have been tackled by antitrust authorities in 27 different jurisdictions³⁰ from all regions. Figure 2 shows where cases have been tackled by different jurisdictions.³¹



FIGURE 2 - Jurisdictions identified as having tackled antitrust cases involving digital platforms



²⁹ Six cases in the database concern very clearly two or more different markets, or two or more different practices. In such instances, each market/practice was registered as a different entry to have richer and better-categorized information on the analysis conducted by the authority.

³⁰ The International Competition Network (ICN) has 140 competition authorities as members. In collecting cases for the MCT DAD, only 26 jurisdictions were identified as reporting digital economy cases. The list of ICN members is available at: <https://www.internationalcompetitionnetwork.org/members/?location=asia>

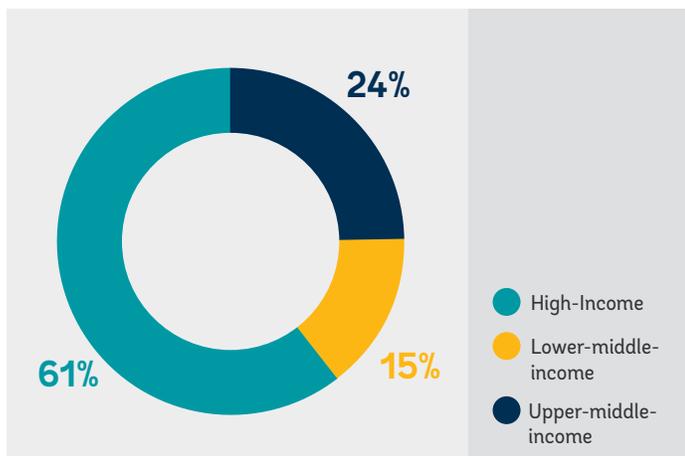
³¹ Cases reviewed by the European Competition Commission are registered separately (under "European Union") from the cases reviewed by the national authorities in European countries.

While digital antitrust cases have been finalized in both high- and middle-income economies, none has been finalized in low-income economies. Out of the 103 cases, 63 (61 percent) belong to jurisdictions classified as “high-income”, 25 to “upper-middle-income”, and 15 to “lower-middle-income” (Figure 3).³² The absence of cases, involving digital platforms³³ in lower-income countries, likely reflects the economic priorities of these countries, the capacity of their authorities (or, in some cases, the lack of a functional authority), and the fact that digital platforms are more likely to be present in high- and upper-middle-income countries. Nevertheless, an increase in digital economy cases in the coming years in low-income countries is expected, particularly as more merger transactions start to occur in these markets and the footprint of digital platforms expands to these markets.

Although all the regions of the world are represented, European antitrust authorities, in general, have been the most active in finalizing cases (being responsible for 34 percent of the cases). This reflects the European Commission’s strong stance on ensuring the existence of competitive markets in the digital economy, which is aligned to its objective of achieving a Digital Single Market in Europe. Following Europe are authorities in East Asia and Pacific (18 percent), Latin America (15 percent), North America (13 percent), South Asia and Africa (around eight percent each), and then Central Asia (four percent) (Figure 4). Details on how the shares of the different case types vary across the regions are provided in Section 2.3. A list of cases in the lower-middle-income countries can be found in Annex B.

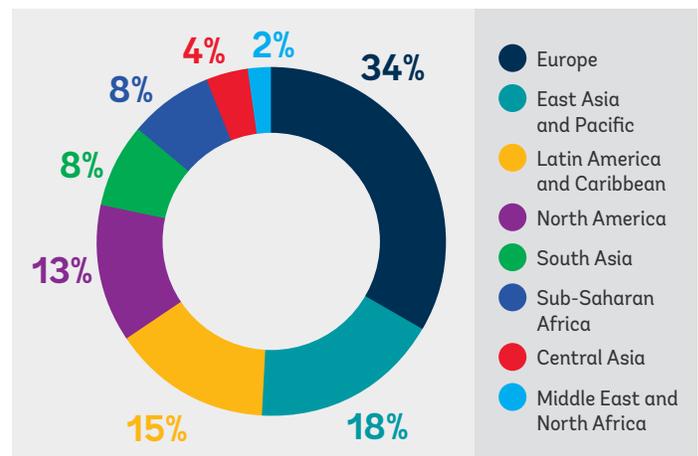
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FIGURE 3 - Cases by Income Level Classification



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FIGURE 4 - Cases by Region³⁴

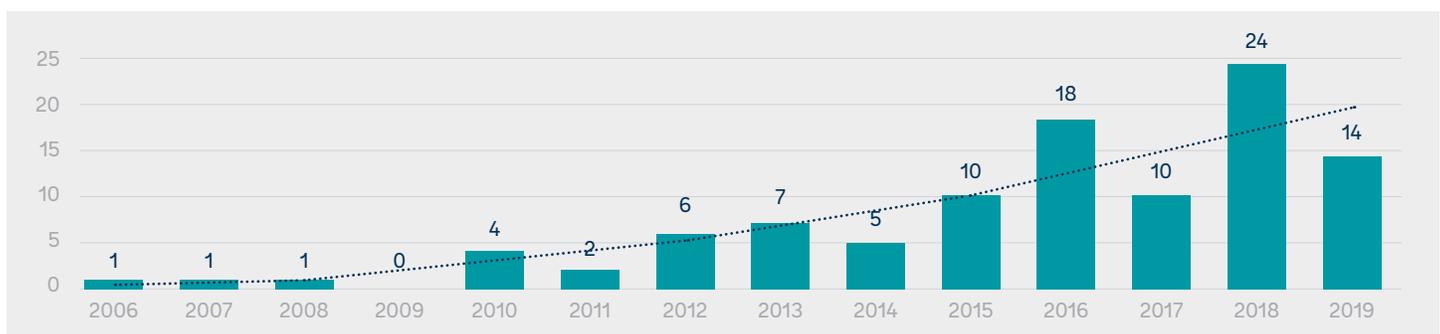


Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Worldwide, the number of antitrust cases in the digital economy have increased significantly. Before 2015, the average yearly number of cases resolved by authorities in all regions were less than four. From 2015 to 2019, the average number of cases resolved per year increased significantly to 15. In 2018 alone, 24 cases were identified as resolved that year (Figure 5).

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FIGURE 5 - Total Worldwide Cases Identified as Resolved Per Year



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

³² Classified according to the World Bank Group’s income classification that is available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>

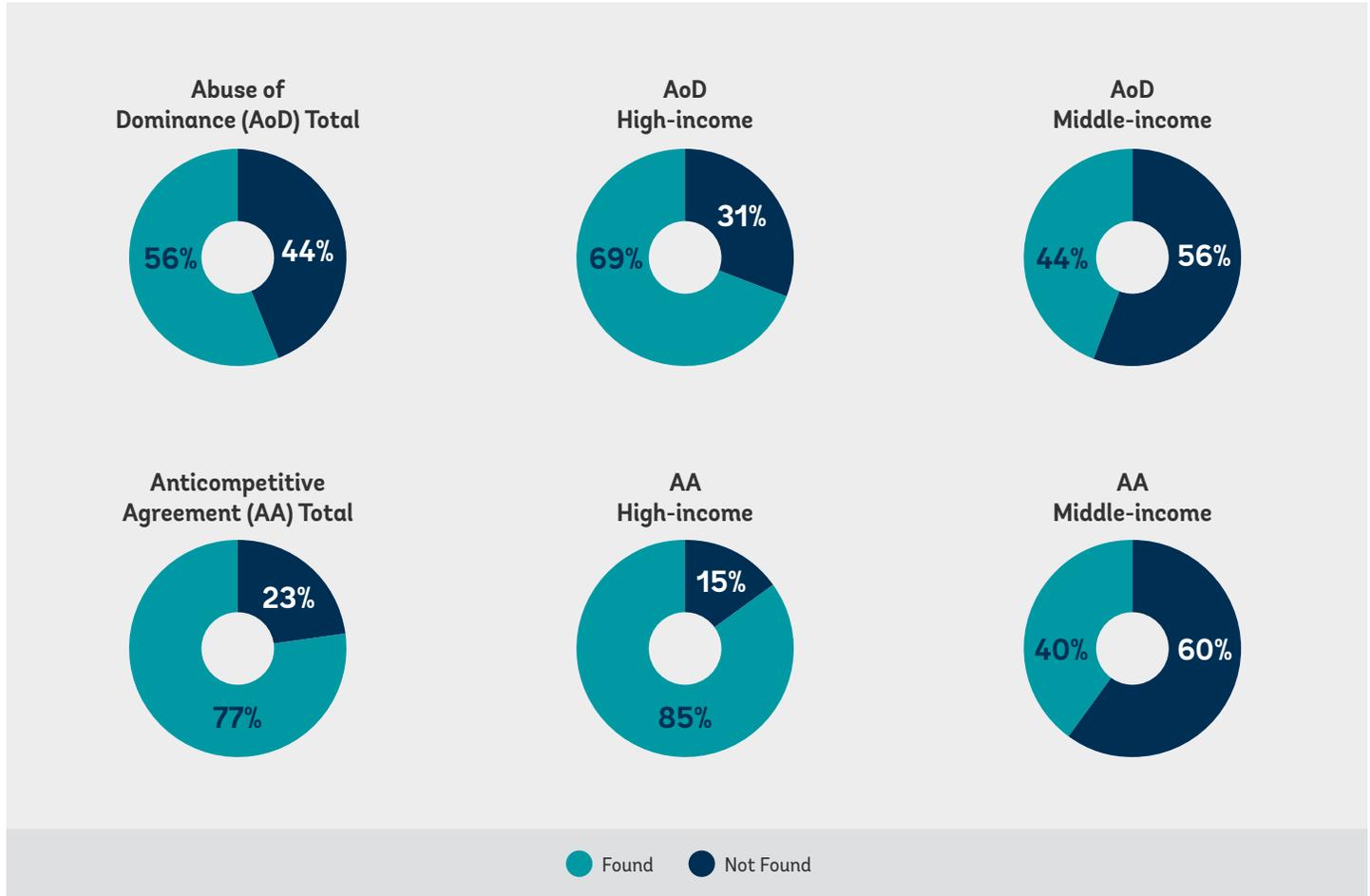
³³ Whenever the digital economy is mentioned, this refers to the markets and the market interactions of digital platforms.

³⁴ Russia is the only country in Central Asia, which is represented in the database, as of the January 2020 cut-off.

There is an ultimate finding of misconduct in most anticompetitive practices cases (Figure 6).³⁵ In anticompetitive agreements cases, authorities found wrongdoing in 77 percent of the cases globally. Authorities found evidence of wrongdoing in 58 percent of collusion cases, 56 percent of abuse of dominance cases, and 85 percent of vertical restraints cases. Nevertheless, wrongdoing was found considerably more frequently in developed economies in both abuse of dominance and anticompetitive agreements cases, indicating that more developing jurisdictions may face greater difficulties in finding and presenting evidence in their cases.

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FIGURE 6 - Practice Case type By Authorities' Findings



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

³⁵ Information on the origins of cases—complaint or ex-officio—does not exist for all cases included in the MCT DAD. However, where data were available, wrongdoing was found in all but one of the abuse of dominance and anticompetitive agreement cases that were determined to have started ex-officio, compared to only 47 percent of cases initiated via a complaint, where abuse of dominance was found. Therefore, it would be valuable to gather more input on whether cases were initiated ex-officio or via complaints.

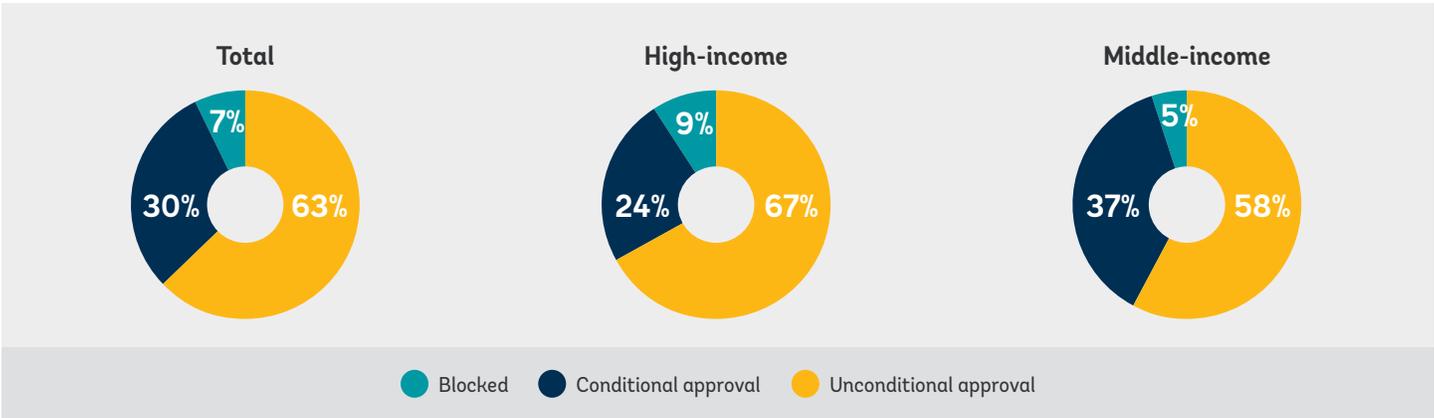


Mergers were prohibited in seven percent of cases and approved with conditions in 30 percent of cases. The remainder were approved unconditionally (Figure 7). Looking at available comparators,³⁶ this is similar to cases reviewed by a group of authorities globally in 2017/18 for mergers across all sectors (including beyond digital), although the proportion of mergers blocked is slightly lower across all sectors (six percent). In high-income jurisdictions, there is a higher proportion of mergers being approved without conditions than in middle-

income countries. It would be of value to monitor how these figures evolve to understand how digital mergers may differ from mergers more broadly. In addition, while these proportions are based on absolute numbers of mergers reviewed, it would also be valuable to analyze the outcomes of merger reviews on the basis of the value of the transactions if this data become available in future. Fines, remedies, and conditions imposed by authorities will be further discussed in Section 4.

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FIGURE 7 - Outcomes of Merger Cases Involving Digital Platforms



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

³⁶ Data were obtained from the Rating Enforcement 2018 and 2019 of the Global Competition Review, containing data on mergers filed and reviewed in Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Denmark, European Union, Finland, France, Germany, Greece, India, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Mexico, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Proportions were calculated, using mergers that led to in-depth review as the denominator, available at: <https://globalcompetitionreview.com/benchmarking/rating-enforcement-2018/1174789/analysis>; <https://globalcompetitionreview.com/benchmarking/rating-enforcement-2019/1197029/analysis>.

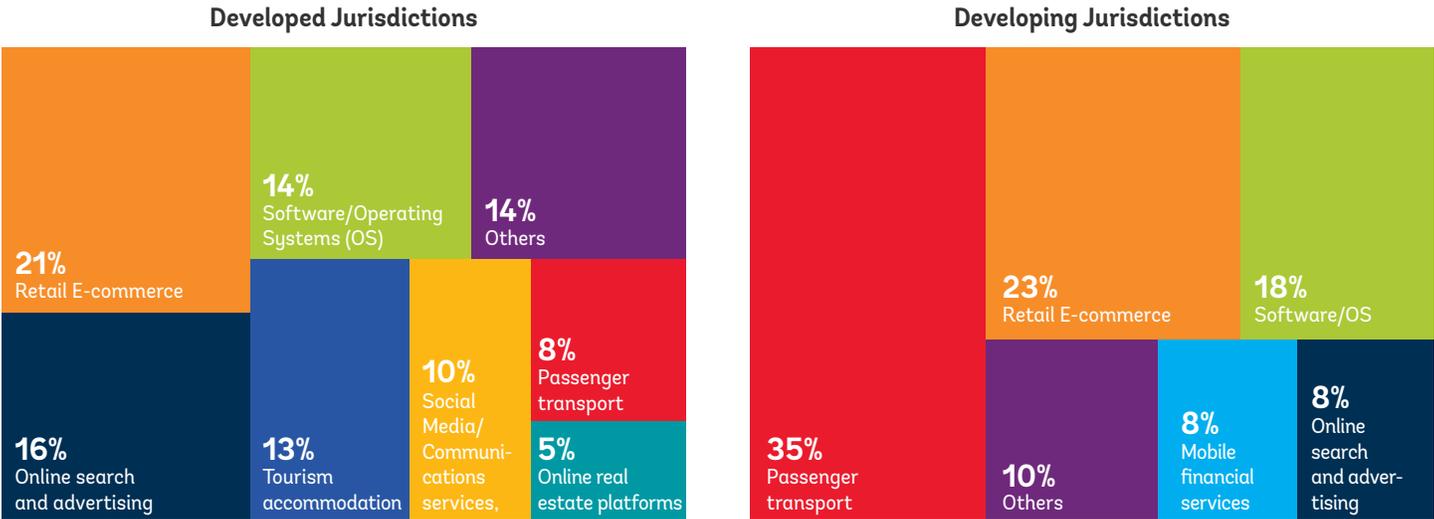


2.2. Sectoral distribution of cases

Digital antitrust cases have occurred across 16 economic sectors, but are skewed towards six sectors, with the distribution varying markedly between developed and developing jurisdictions. Retail e-commerce, passenger transport, and software/operating systems (OS) account for 56 percent of all cases globally. Online search and advertising, tourism, and social media/communication services together account for another 30 percent of the cases. The sectoral distribution of antitrust cases in the digital economy varies between developed and developing countries (see Figure 8 and box 2 for more details).

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FIGURE 8 - Sectoral Distribution of Antitrust Cases in the Digital Economy by Income Level³⁷



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database; Note: There are currently no low-income jurisdictions represented in the database, since no cases have been finalized in low-income countries. Therefore, the “developing” category only contains information from middle-income countries. This will be updated as more cases are finalized.

³⁷ “Others” for developed jurisdictions include: digital music, e-books, educational materials, food delivery, online comparison platforms, dating platforms, and ticketing. “Others” for developing jurisdictions include: online delivery services, ticketing, and tourism.



BOX 2 - Variations in the sectoral focus of digital antitrust cases across developed and developing jurisdictions

Some notable differences (and similarities) are present in the sectoral distribution of cases between developed and developing countries.

- **Similarities between regions:** Developed and developing jurisdictions have an equal proportion of retail e-commerce cases (21 percent compared to 23 percent). In fact, every region, except for the Middle East and North Africa (MENA), has at least one case in the retail e-commerce sector. Cases related to software/operating systems (OS) are present in similar percentages in jurisdictions of both income levels, with a slightly larger proportion in developing jurisdictions (19 percent) versus developed jurisdictions (14 percent).
- **Sectors that are more prevalent in developing jurisdictions:** Cases related to the passenger transport sector are more prevalent in developing jurisdictions (35 percent) than developed jurisdictions (eight percent). All regions, except Europe, have at least one case in the passenger transport sector. Mobile financial services is a sector that appears in developing jurisdictions (in Latin America, South Asia, and Africa), but not in high-income jurisdictions.
- **Sectors that are more prevalent in developed jurisdictions:** Cases in tourism and social media/communications show higher prevalence among developed countries (13 percent and 10 percent, respectively), while there is only one case in tourism and none in social media/communications in developing jurisdictions.³⁸ The online search and advertisement sector is more prevalent in cases in developed jurisdictions (16 percent) than in developing jurisdictions (eight percent). In North America, authorities have seen more than 45 percent of their cases related to online search and advertising. Only Africa, Central Asia, and the Middle East do not have cases in this sector.

The differences between the income levels of jurisdictions in the sectoral distribution of cases likely reflect the relative importance of various sectors in the different countries. For example, mobile financial services is a sector of greater importance in developing economies than developed economies. According to the answers of jurisdictions to the Fifth Global Payment Systems Survey of the World Bank Group (WBG), lower-income economies lead in the availability of mobile money services and the acceptance of payments with mobile money, when compared to developed economies. For example, mobile money services are especially relevant in the East Asia Pacific (91 percent availability), South Asia (100 percent), and Sub-Saharan Africa (88 percent) regions, but are only available in less than 60 percent of the high-income Organisation for Economic Co-operation and Development (OECD) economies.³⁹ Online advertising is another sector where the difference in case proportions may be related to the relative importance of the sector between developed and developing countries. Although developing countries account for 67 percent of the online users, their share of total online advertising spending is only 23 percent.⁴⁰

Differences among regions could also be influenced by the replication or harmonization of approaches between jurisdictions and authorities in a region (such as the relatively coordinated response of European authorities toward digital platforms) and the phenomenon of regional merger waves (as in the case of passenger transport in East Asia Pacific). The relatively high proportion of transport cases in developing countries could also be partly driven by reactions against the disruption that platform firms have brought to traditional transport markets. Most anticompetitive practices cases in passenger transport in developing jurisdictions (five of eight cases) were initiated after formal complaints by traditional taxi companies or associations.

38 Tourism cases in high-income countries are predominantly reviewed by authorities in Europe as well as East Asia Pacific. All the cases in the social media/communications sector took place in Europe.

39 WBG, "Payment Systems Worldwide: A Snapshot—Summary Outcomes of the Fifth Global Payment Systems Survey," last modified 2020, <http://documents1.worldbank.org/curated/en/115211594375402373/pdf/A-Snapshot.pdf>.

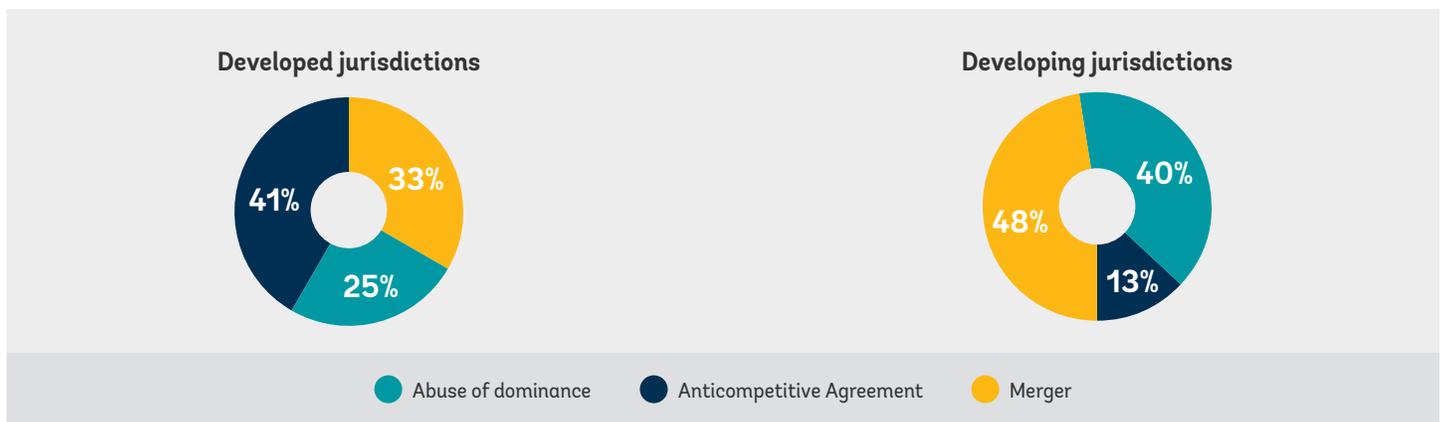
40 Forrester, "Assessing The Digital Marketing Opportunity Across The Globe," last modified 2015, http://www.onx.com/wp-content/uploads/2017/01/Assessing_The_Digital_Mar1.pdf.

2.3. Case types and practices

The distribution of cases worldwide between the types—abuse of dominance, anticompetitive agreements, and mergers—is even. Nevertheless, when comparing this distribution by income classification, important differences emerge (Figure 9). Abuse of dominance cases are considerably more prevalent in developing jurisdictions. On the other hand, in developed jurisdictions, more than 40 percent of cases involve anticompetitive agreements compared to only 13 percent in developing jurisdictions. This could reflect the different economic structures of countries in different income groups: developing jurisdictions are potentially more concerned with dominant firms excluding smaller rivals. Looking across regions, South Asia, Central Asia, and Sub-Saharan Africa stand out as having a relatively higher proportion of abuse of dominance cases, while Middle East and North Africa (MENA) have not seen any such cases (Figure 10). In East Asia and Pacific, the proportion of vertical restraints cases is notable (56 percent), especially as such cases are rare in other regions. Merger cases are relatively more common in developing jurisdictions: this is potentially a sign that such authorities have been more reactive in taking on cases involving digital platforms (through reviewing notified mergers), rather than proactively starting cases against anticompetitive conduct by these firms.

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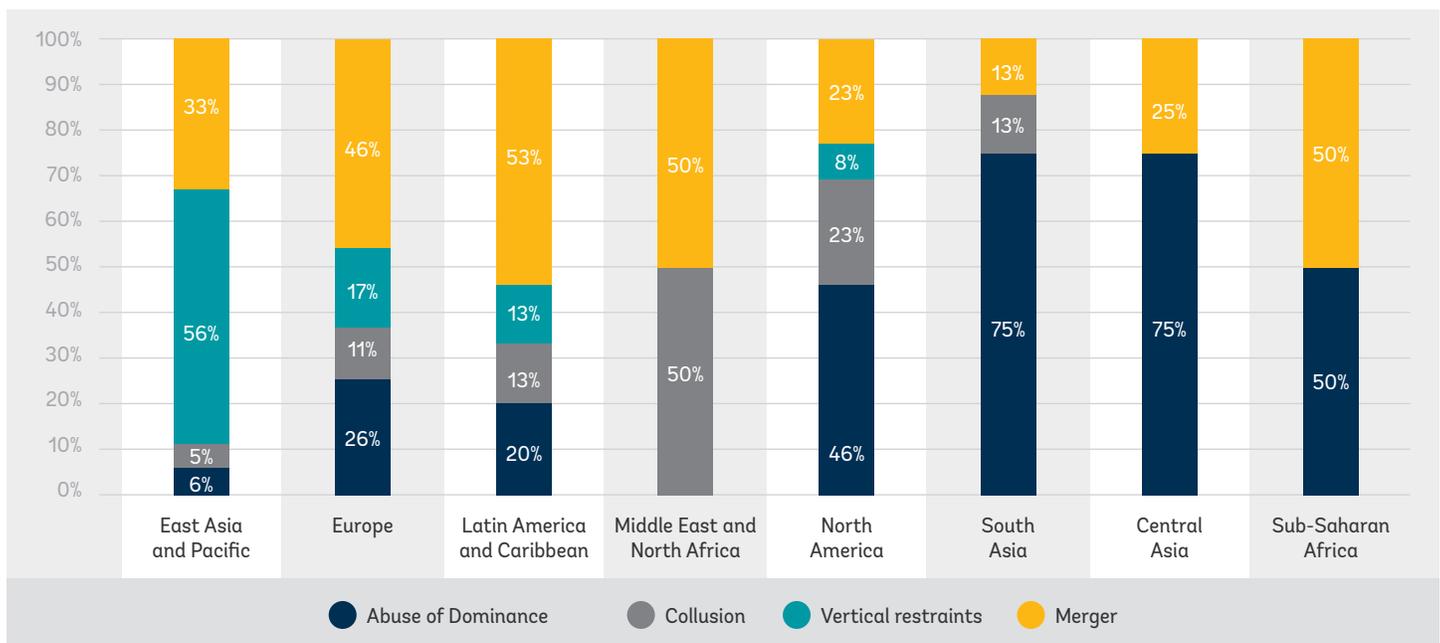
FIGURE 9 - Types of Cases by Income Level



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

> > >

FIGURE 10 - Types of Cases by Region

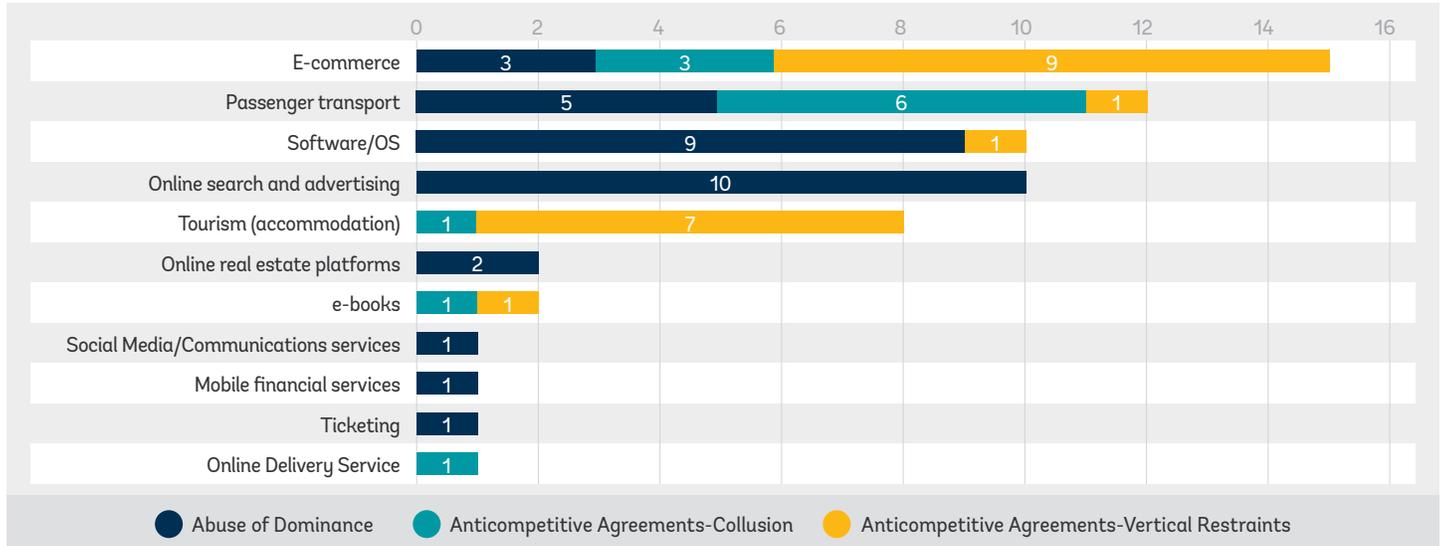


Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Different sectors may be prone to different types of anticompetitive behavior, depending on the business model. The e-commerce and accommodation sectors are predominantly affected by vertical restraints, which reflect their reliance on small businesses to provide products and capacities. In online search and advertising as well as operating systems/apps, abuse of dominance cases are more common, partially due to their use of self-preferencing algorithms. In passenger transport, collusion cases are the most frequent, potentially due to the use of pricing algorithms in this sector (Figure 11).

> > >

FIGURE 11 - Types of Practices Among Sectors

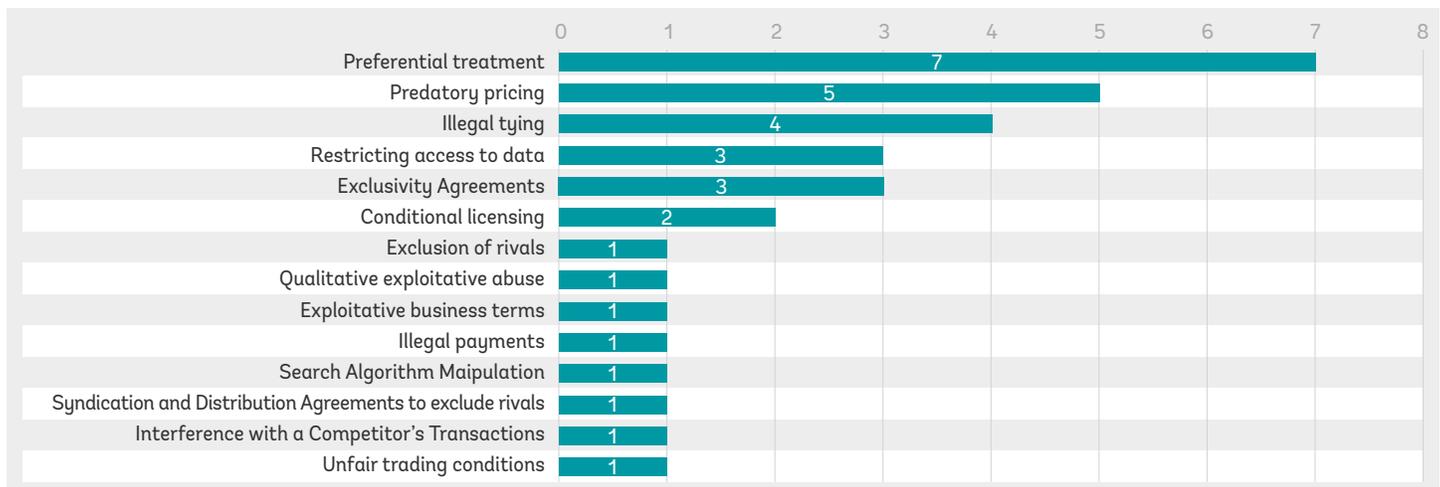


Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Looking specifically at abuse of dominance, there are 14 different types of abusive behaviors investigated in finalized cases (Figure 12). Differential treatment, predatory pricing, and illegal tying account for half of the cases. Restricting access to data is investigated in only 10 percent of cases, despite policy discussions trending towards the importance of data for firms to compete. The number of cases investigating restrictions to access to data may be expected to grow in the future, as antitrust activities evolve in their approach toward digital economy cases. It will become important for authorities to take a case-by-case effects-based approach to determining whether restrictions on accessing data are anticompetitive, though there is currently no consensus on how to do so. However, a framework akin to the “essential facilities doctrine” may be helpful for an authority to identify a refusal to deal (in this case in data) as an abuse and impose a duty to deal.⁴¹ Table 2 shows a list of abuse of dominance cases investigated, by type of practice.

> > >

FIGURE 12 - Practices Investigated in Abuse of Dominance Cases



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

41 Whereby an authority must determine that the facility (in this case, data) is indispensable to compete, that it cannot be easily replicated, and that the firm controlling the facility has no objective justification to refuse to supply

TABLE 2 - Abuse of Dominance Cases by Type of Practice⁴²

Practice	Case	Country	Conduct examples
Exclusionary practices			
Differential treatment	Buscape vs Google	Brazil	<ul style="list-style-type: none"> • A vertically-integrated platform or a platform with a presence in adjacent markets using its dominant position to favor its own products or services over those of its competitors • Favoring of certain users of the platform over others
	VG Media vs Google	Germany	
	Sellers Association vs Flipkart	India	
	Matrimony.com and Consumer Unity & Trust Society vs Google		
	vs Funda Real Estate	Netherlands	
	Kaspersky vs Microsoft (antivirus)	Russia	
	vs Google (Search practices)	United States	
Predatory pricing	Sao Paulo taxi drivers vs Uber	Brazil	<ul style="list-style-type: none"> • A dominant platform charging below-cost prices for its products or services to foreclose online and/or offline competitors
	Meru (taxis) vs Uber	India	
	Taxis vs Ola in Bengaluru		
	Little Cab (taxis) vs Uber	Kenya	
	Metered Taxi Industry vs. Uber	South Africa	
Illegal tying	vs Google (Android/mobile internet)	European Union	<ul style="list-style-type: none"> • A vertically-integrated firm or a firm with a presence in adjacent markets conditioning device manufacturers' access to apps, software, or operating systems to the installation of other apps or software
	vs Microsoft (Internet Explorer)		
	vs Google (mobile suite of Google apps)	India	
	Yandex vs Google (Google Play/Android)	Russia	
Restricting access to data	Bing (Microsoft) vs Google [AdWords application programming interface (API)]	Brazil	<ul style="list-style-type: none"> • Dominant platforms restricting users' access to data that could be used on competing platforms • Limiting access to data to certain users only
	vs Google (AdWords)	Canada	
	vs Toronto Real Estate Board		
Exclusivity agreements	Sellers Association vs e-commerce platforms	India	<ul style="list-style-type: none"> • Dominant platforms establishing exclusivity agreements with users, such as sellers or agents, to prevent them from doing business on competing platforms
	vs Safaricom (M-Pesa)	Kenya	
	Competitors complaints vs Computicket	South Africa	
Conditional licensing	vs Google (Android/mobile internet)	European Union	<ul style="list-style-type: none"> • A vertically-integrated firm or a firm with a presence in adjacent markets imposing a requirement that device manufacturers and network operators send traffic to its services, or mandating favorable pre-set applications and placement of applications • Prohibiting pre-set applications from other vendors
	Yandex vs Google (Google Play/Android)	Russia	
Illegal payments	vs Google (Android/mobile internet)	European Union	<ul style="list-style-type: none"> • Making payments to manufacturers and mobile network operators to exclusively pre-install a dominant firm's software
Search algorithm manipulation	vs Google (AdWords' API clauses in online search and search advertising)	Canada	<ul style="list-style-type: none"> • Altering algorithms to exclude rivals that provide competing services
Syndication and distribution agreements to exclude rivals	vs Google (AdWords' API clauses in online search and search advertising)	Canada	<ul style="list-style-type: none"> • Entering syndication agreements with third-party platforms that create entry points directly to a dominant firm's services on websites
Interference with a competitor's transactions	vs DeNA (disconnecting game's links if on another platform)	Japan	<ul style="list-style-type: none"> • Forcing developers not to provide products or services through a competing platform by disconnecting links if on another platform, thereby preventing multihoming on different platforms
Exploitative practices			
Qualitative exploitative abuse	vs Amazon due to terms of business	Germany	<ul style="list-style-type: none"> • Imposing abusive rules and practices on business users, along with a lack of transparency on the terms of business
Exploitative business terms	vs Facebook (exploitative business terms for inadequate data processing)	Germany	<ul style="list-style-type: none"> • Collecting an almost unlimited amount of any type of user data from third-party sources and allocating them to user accounts for data-processing processes
Unfair trading conditions	vs Google due to the operating rules of Google Ads	France	<ul style="list-style-type: none"> • Account suspension procedure implemented in a nonobjective, nontransparent, and discriminatory manner, which could influence the markets in which the advertisers operate

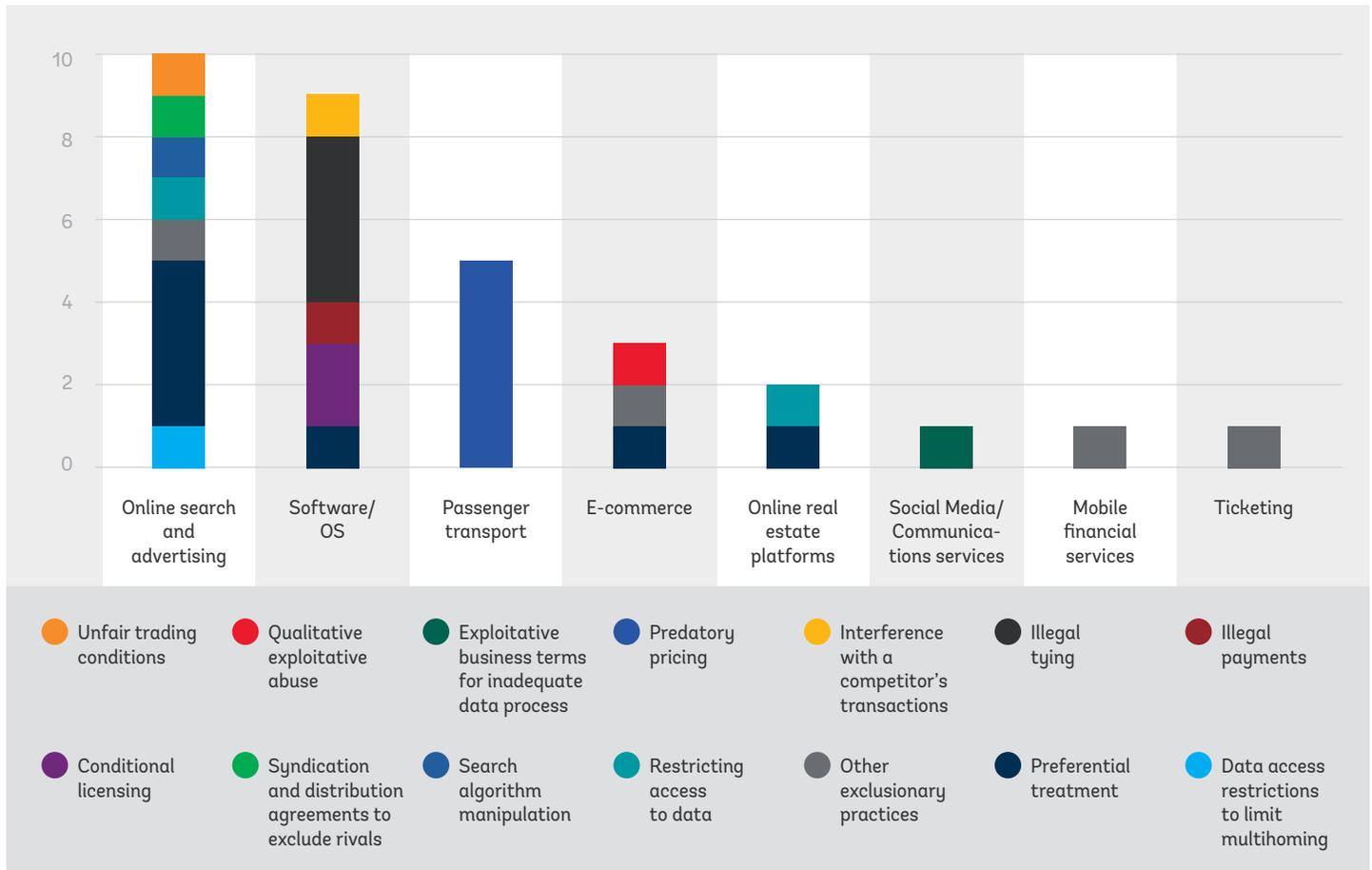
Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database. Note: A version of this table, with further details, on each case is included in Annex D.

42 As was mentioned before, in some cases, authorities investigated more than one type of practice, as in the case against Google (AdWords) in Canada.

Trends in types of abuse of dominance behaviors highlight the risks that one might expect to arise from business models in the different sectors (Figure 13). Preferential treatment is the most common behavior investigated in online search and advertising, reflecting the incentive of firms in this sector to provide advantages to their own products and services. In cases involving software/operating systems (OS), the most common behavior has been illegal tying; this is aligned with the fact that Over-The-Top apps and services are often provided to users along with the software and OS. With regards to passenger transport, the abuse of dominance investigations relate only to predatory pricing, which reflect the sector's provision of subsidized services to customers. Section 3.3.1 provides examples of different platform business models and the potential risks they pose.

> > >

FIGURE 13 - Types of Abuse of Dominance by Sector



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

2.3.1 Digital platform business model dimensions and what they mean for competition issues

The risk of different types of anticompetitive behavior by digital platforms is related to their business models. Identifying their business model dimensions can help competition authorities in their detection and investigation of competition issues in digital markets. Examples of the dimensions and business models associated with them are described below.

> > >

FIGURE 14 - Digital Platform Business Model Dimensions

Data	Type	Method to obtain	Frequency
Users/Clients	Businesses	Individuals	
Type of transaction	B2B	B2C	P2P
Conglomeration	Vertical Integration	Adjacent markets	
Pricing	Fixed by platform	Set by users	
Informal regulatory role of platform	Yes	No	
Investment that enhances value/ increases capital of users	Yes	No	
Artificial/Natural	Low transaction costs	High transaction costs	
Revenue Source	Advertising/ Data Sale	Transaction/ Commission	Subscription

Source: Authors' own elaboration

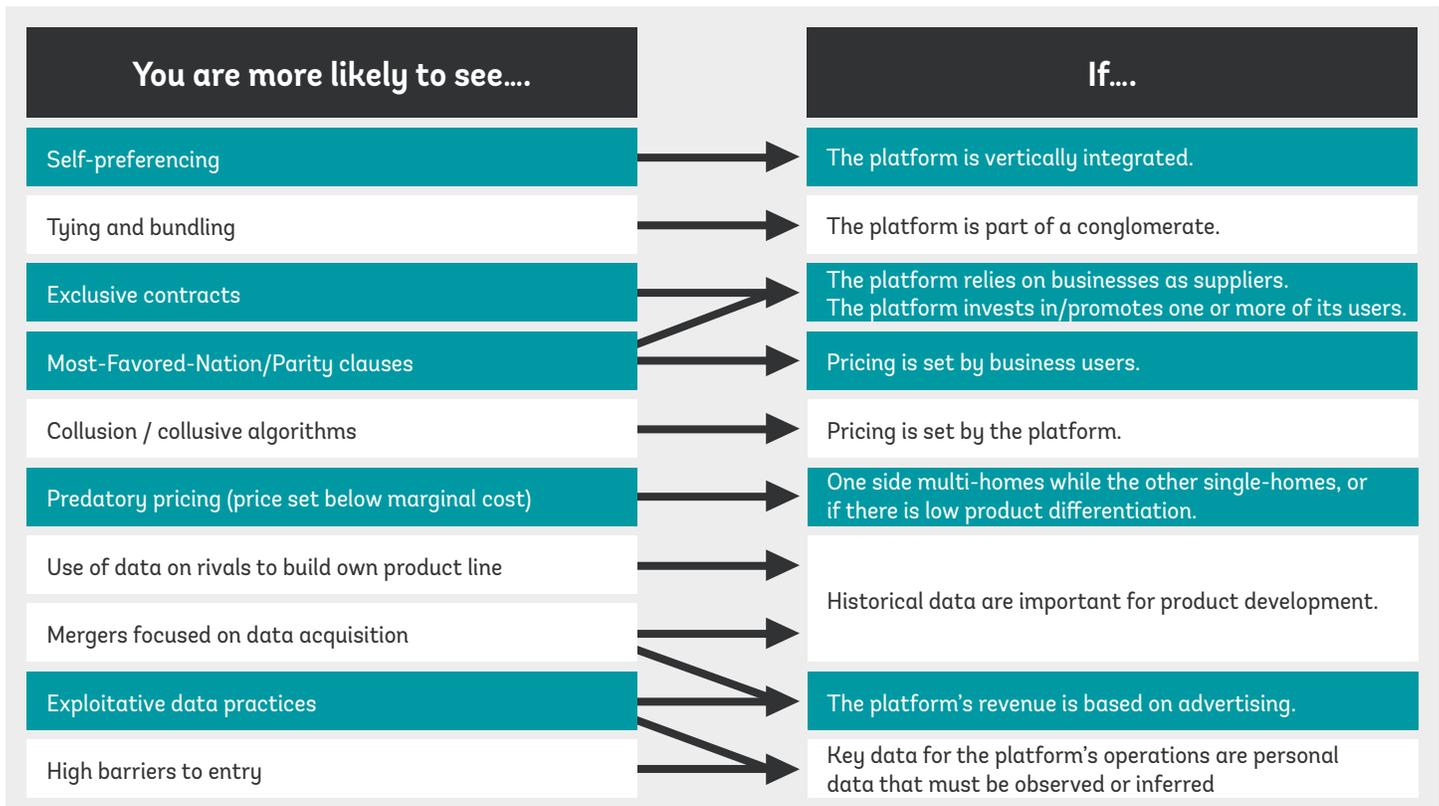
Examples of how dimensions of business models in the digital economy entail different risks and incentives, with regards to competition conditions in markets, include the following (see Figure 15 for a further summary):

- **The type, method, and frequency of data**
 - **When the key data for a platform's operations are personal data that must be observed or inferred**, barriers to entry can be high because the data are relatively less replicable. Additionally, restrictions related to personal data protection make remedies involving sharing data in these contexts more difficult.
- **The type of user or type of transaction**
 - **Platforms that rely on businesses as suppliers** are more prone to vertical restraints imposed by the platform on its business users, for example, Most-Favored-Nation clauses.
 - **Platforms that have individuals or informal entrepreneurs as their users in peer-to-peer (P2P) interactions** are more likely to exist as a crucial way to lower high transaction costs, which could lead the market to tip to dominance, but also generate greater efficiencies.
- **Investments by platforms that enhance value or increase the capital of users**
 - **Digital platforms that invest in users on one side of their platform are more likely to impose exclusive contracts.** While this helps to prevent the free-rider problem and incentivizes efficient investments, it can also have anticompetitive effects.

- **Degree and type of conglomeration**
 - **Digital platforms that are vertically integrated** (for example, e-commerce platforms that also sell products) have a business model that relies not only on the income generated through the platform serving third parties (for example, through commissions or advertising), but also on the sales of their own products that compete with platform users. This could generate incentives for the self-preferencing of its own products and the misuse of data from users to anticompetitively exclude competitors.
 - **Digital platforms with a presence in adjacent (but not necessarily vertically-integrated) markets** may generate conditions for the illegal tying of products (for example, operating system producers tying apps or other software) and increases in switching costs for users, which produce lock-in effects.
 - **Platforms that are vertically-integrated firms, or with a presence in adjacent markets, also have advantages in the scale and scope of data collection.** This could generate entry barriers for smaller competitors that would have difficulties in replicating these big datasets (for example, trying to replicate Google's data access).
- **Price setting**
 - **When the platform is responsible for price setting**, this is often performed by algorithms (for example, ride-hailing apps). The use of pricing algorithms can entail risks, such as: (1) algorithmic collusion; or (2) barriers to entry for small competing platforms that can have difficulties collecting the quality and amount of data needed to “train” the algorithms for effective dynamic pricing and price discrimination.
 - **When prices are set by users**, incentives for vertical agreements between suppliers and platforms may exist (for example, restrictions on the resale of rooms on tourism platforms and the resale price maintenance on e-commerce platforms).
- **Reliance on advertisement as a revenue source (for example, search engines and social media)**
 - In this case, a large volume and variety of data are essential for monetization, which is relevant to competition, because a lack of data and analytics capacity are likely to become barriers to entry. This reality therefore increases the incentives for the exploitative use of data, which in turn, generates incentives for conglomerations and mergers to acquire data. Such a revenue model is usually paired with zero-pricing or subsidization strategies to attract more users.

> > >

FIGURE 15 - Examples of How Firm Conduct and Effects Depend on the Platform Business Model



Source: Authors' own elaboration

Figure 16 shows some examples of how these dimensions apply in selected anticompetitive practice cases, depending on the firms involved and their business model dimensions. The diagram shows details of how the business model characteristics (captured in highlighted boxes) that were relevant in leading to the anticompetitive behavior investigated played into the case. A valuable area of further work is to review various business models to understand their interrelations with cases in a more systematic way. This could provide more insights that serve competition authorities in monitoring markets with digital platforms, developing theories of harm, as well as designing remedies and conditions.

> > >

FIGURE 16 - Examples of Digital Platform Business Model Dimensions and Antitrust Cases

(Highlighted boxes represent business model characteristics that were relevant in leading to the anticompetitive behavior investigated)

	UBER			Booking			M-Pesa			Google/Android			Amazon		
Data	TYPE: Personal/Non-Personal	OBTAINED: Observed/ Volunteered	FREQUENCY: Historical/Real Time	TYPE: Personal/Non-Personal	OBTAINED: Observed/ Volunteered	FREQUENCY: Historical/Real Time	TYPE: Personal/Non-Personal	OBTAINED: Observed/ Volunteered	FREQUENCY: Historical/Real Time	TYPE: Personal/Non-Personal	OBTAINED: Observed/ Volunteered	FREQUENCY: Historical/Real Time	TYPE: Personal/Non-Personal	OBTAINED: Observed/ Volunteered	FREQUENCY: Historical/Real Time
Users/ Clients	Individuals			Businesses/ Individuals			Businesses/ Individuals			Businesses/ Individuals			Businesses/ Individuals		
Type of transaction	C2C			B2C			C2C/B2C			B2C			B2C		
Conglomeration	Adjacent markets (e.g. Uber Eats)			Vertically integrated (e.g. Car rental)			Vertically integrated (e.g. mobile network Safaricom)			Vertically integrated (e.g. app store/apps) Adjacent markets (search)			Vertically integrated (e.g. Amazon's own products) Adjacent markets (e.g. AWS, Kindle)		
Pricing	Platform			Users			Platform			Platform			Platform/Users		
Informal regulatory role of platform	Yes			Yes			Yes			No			Yes		
Investment that enhances value/ increases capital of users	No			No			Yes			No			Unclear		
Revenue Source	Transaction/ Commission			Transaction/ Commission			Transaction/ Commission			Advertisement (search)			Transaction/Commission Direct Sales Subscription Advertisement		
	● ● ●			● ● ● ●			● ●			● ●			● ● ● ●		
	Complaints in Brazil and India in which Uber was denounced for algorithmic collusion. Complaints in South Africa and Kenya in which Uber was accused of predatory pricing. Pricing done by platform and revenue source by commission features > Conditions for possibility of algorithmic pricing collusion and other pricing anticompetitive conduct.			Cases against Booking in Germany, Brazil and Australia for Most Favored Nation Clauses imposed on hotels. MFN clauses removed by Booking. B2C, pricing by business users and revenue from commission features > Platform relies on businesses as suppliers so might be prone to vertical restraints imposed by the platform on its business users.			Case in Kenya for AoD of Safaricom through exclusivity contracts that excluded rival money transfer providers from M-PESA's mobile agents' services. CAK ordered Safaricom to share its agents with other telecommunication firms. Vertical integration and investment in users > Platform VI with mobile network and investment in mobile money agents likely to impose exclusivities.			Cases in EU and Russia against Google as supplier of OS/app store abusing dominance by obliging device manufacturers to preinstall suite of apps (search, browser) as a condition to license app store. Vertical integration/adjacent markets, data needs features > Conditions for platform to incur in illegal tying of products.			AoD case in Germany against Amazon. Third party sellers considered themselves at a disadvantage in respect of seller ratings because Amazon is not rated as a seller itself. Vertically integrated, informal regulatory role, direct sales as revenue, data on consumer preference features > Platform might have incentives to self-preference own products using regulatory role for this purpose.		

Source: Authors' own elaboration.

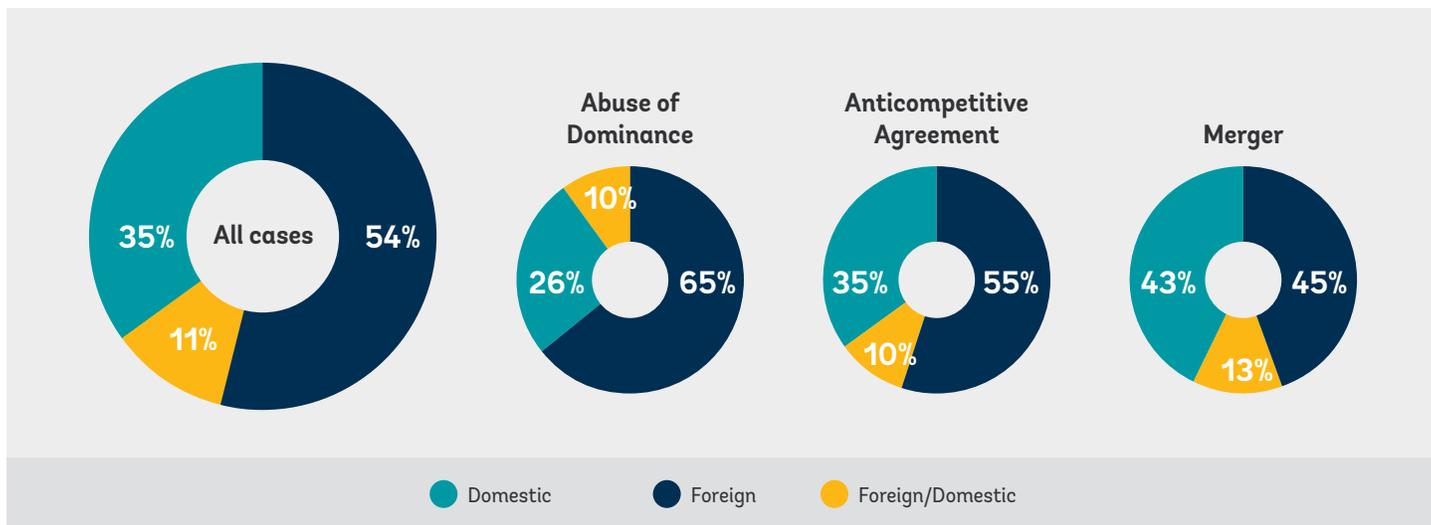
References to example cases: Uber Brazil https://sei.cade.gov.br/sei/modulos/pesquisa/md_pesq_documento_consulta_externa.php?DZ2uWeaYicbuRZEFhBt-n3BfPLiu9u7akQA8mpB9yMoApKcz8ELnAZd2EyCRH9tTRIPRGsoybrVkhGllb0X4CgW9nU9w7Ns7Q8pdf4XhtWpQGuc_PBO56paZt_TrAmX; Uber India <https://www.cci.gov.in/sites/default/files/37of2018.pdf>; Booking Germany https://www.bundeskartellamt.de/SharedDocs/Entscheidungen/EN/Kartellverbot/B9-121-13.pdf?__blob=publicationFile&v=2; Booking Brazil https://sei.cade.gov.br/sei/modulos/pesquisa/md_pesq_processo_exibir.php?0c62g277G-vPsZDAXAO1tMiVcL9FcFMR5UuJ6rLqPEJuTUu08mg6wxLt0JzWxCor9mNcMYP8UAjTVP9dxRfPBcaGwUbu8O3nDD3a9jhRYUPrvyX4oz-gmQsy3fPo2Hsf; Booking Australia <https://www.accc.gov.au/media-release/expedia-and-booking-com-agree-to-reinvigorate-price-competition-by-amending-contracts-with-australian-hotels>; M-Pesa Kenya <https://www.cak.go.ke/index.php/14-latest-news/138-cak-orders-safaricom-to-open-up-m-pesa>; Google EU http://ec.europa.eu/competition/elojade/iseif/case_details.cfm?proc_code=1_40099; Google Russia <http://en.fas.gov.ru/documents/documentdetails.html?id=14677>; Amazon Germany https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Fallberichte/Missbrauchsaufsicht/2019/B2-88-18.pdf?__blob=publicationFile&v=5

2.4. Foreign versus domestic profile of firms

Most digital antitrust cases have been focused on foreign-headquartered firms, especially abuse of dominance cases (Figure 17). This is likely linked to the fact that most abuse of dominance cases have taken place in developing jurisdictions, while the leading platform firms⁴³ come from developed jurisdictions. Likely for the same reason, there is a larger proportion of cases that involve domestic firms in developed jurisdictions than in developing jurisdictions across both practices and mergers (39 percent versus 30 percent).

> > >

FIGURE 17 - Overall Distribution of Cases by Location of Headquarters

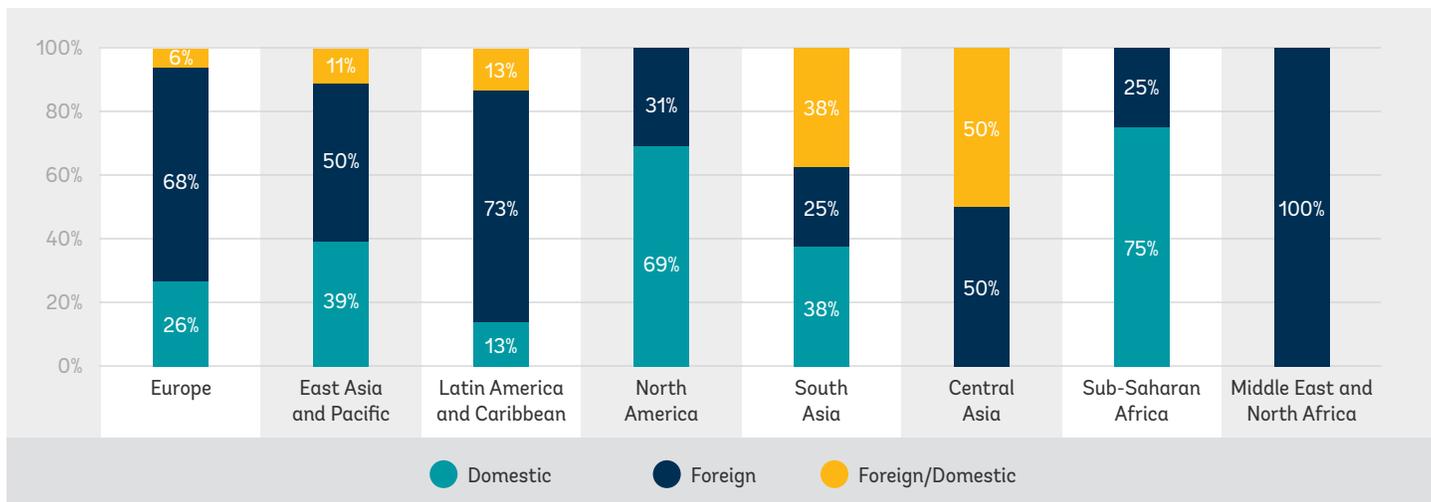


Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

North America stands out in the proportion of cases involving domestic firms (69 percent): this is to be expected since the largest platforms have their headquarters there (Figure 18). Sub-Saharan Africa is the only other region where most cases involved domestic firms, although these results are driven by only eight cases, with five cases involving domestic platforms, mainly in South Africa.⁴⁴

> > >

FIGURE 18 - Distribution of Cases (All Types) Involving Foreign/or Domestic Firms by Region



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

⁴³ Domestic firms are defined as firms that originated in that jurisdiction.

⁴⁴ MPESA (Kenya), Takealot (South Africa), Coricraft (South Africa), Naspers/AutoTrade (South Africa), and Computicket (South Africa)

2.5. Frequently appearing firms

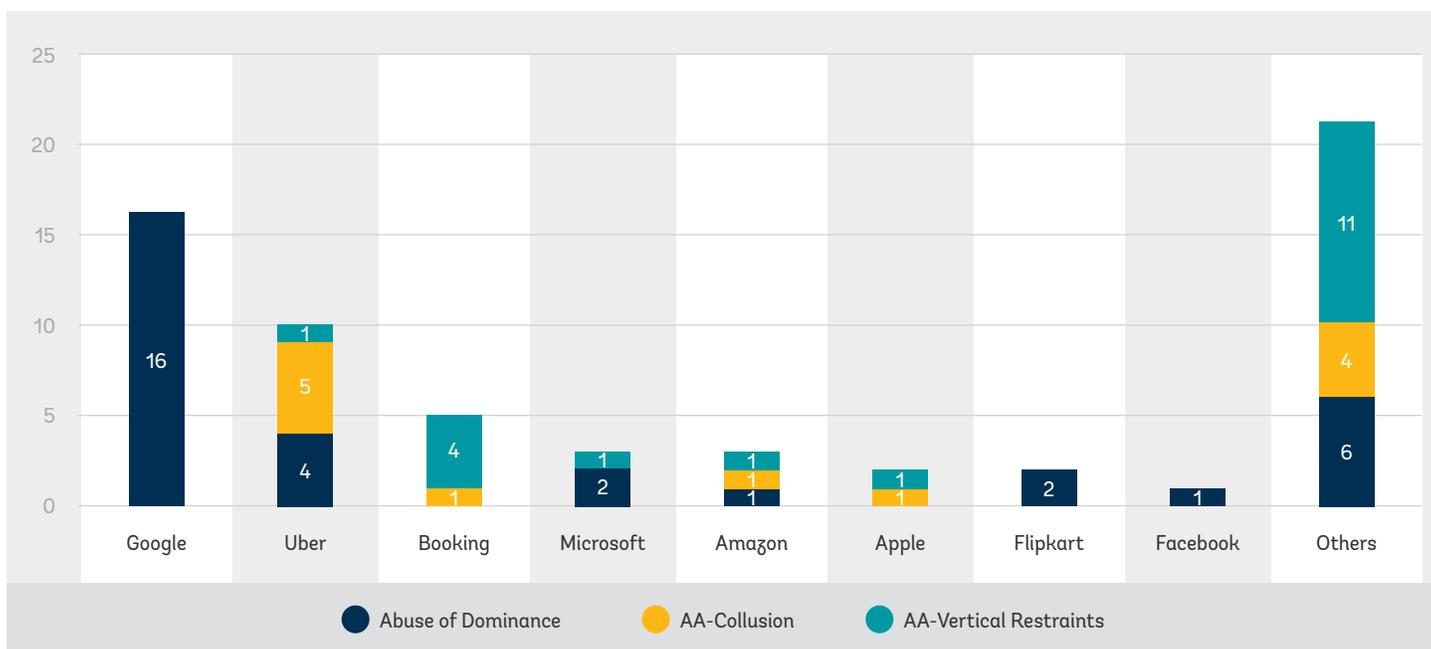
Seven firms stand out as having been involved in more than one anticompetitive practice case (Figure 19). The leader is Google: it has been involved in 16 anticompetitive practices cases in the database (24 percent), all of which were abuse of dominance cases. Uber is second at 10 anticompetitive practice cases (16 percent). Uber (six) and Booking (five) are the firms with the highest number of anticompetitive agreement cases in the database. Uber stands out, in terms of collusion cases, while Booking is present in almost only vertical restraints cases.

Three firms combined have been involved in close to 40 percent of finalized mergers. These firms are Google, Uber, and Microsoft. Microsoft and Google are the acquiring firms

in all cases, while Uber has also participated in mergers as a target. None of these three firms has been involved in mergers that were blocked. All mergers in which Uber participated and one of Microsoft's mergers were approved with conditions. All mergers in which Google participated were cleared without conditions. Concerns have recently been growing over the fears of large platforms engaging in the acquisitions of small or start-up tech firms in order to eliminate a future source of competition. The concerns lie in the fact that these acquisitions do not trigger merger reviews by competition authorities because they do not meet traditional turnover or asset-based thresholds for merger notifications (see box 4 below on challenges in digital markets).⁴⁵ Box 3 provides an analysis of mergers involving digital platforms.⁴⁶

> > >

FIGURE 19 - Firms Involved in Most Anticompetitive Practice Cases⁴⁷



AA: Anticompetitive Agreements

Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

⁴⁵ See, for example, the U.S. House Judiciary Committee's Subcommittee on Antitrust, Commercial, and Administrative Law in its report, "Investigation of Competition in Digital Markets."

⁴⁶ Analyzing firm participation in mergers based on the transaction value of the operations would be ideal when and if information is made available.

⁴⁷ The "Other" comprises firms that have been involved in only one case, as identified in the database. Firms in "Others" include companies, such as Airbnb, ASICS, Asus, Axel Springer SE, Immowelt AG, CDK, Computicket, Expedia, Glovo, LG, Netshoes, M-Pesa, Mobilink, Ola, Rakuten, Naspers, Sanoma, and Walmart.

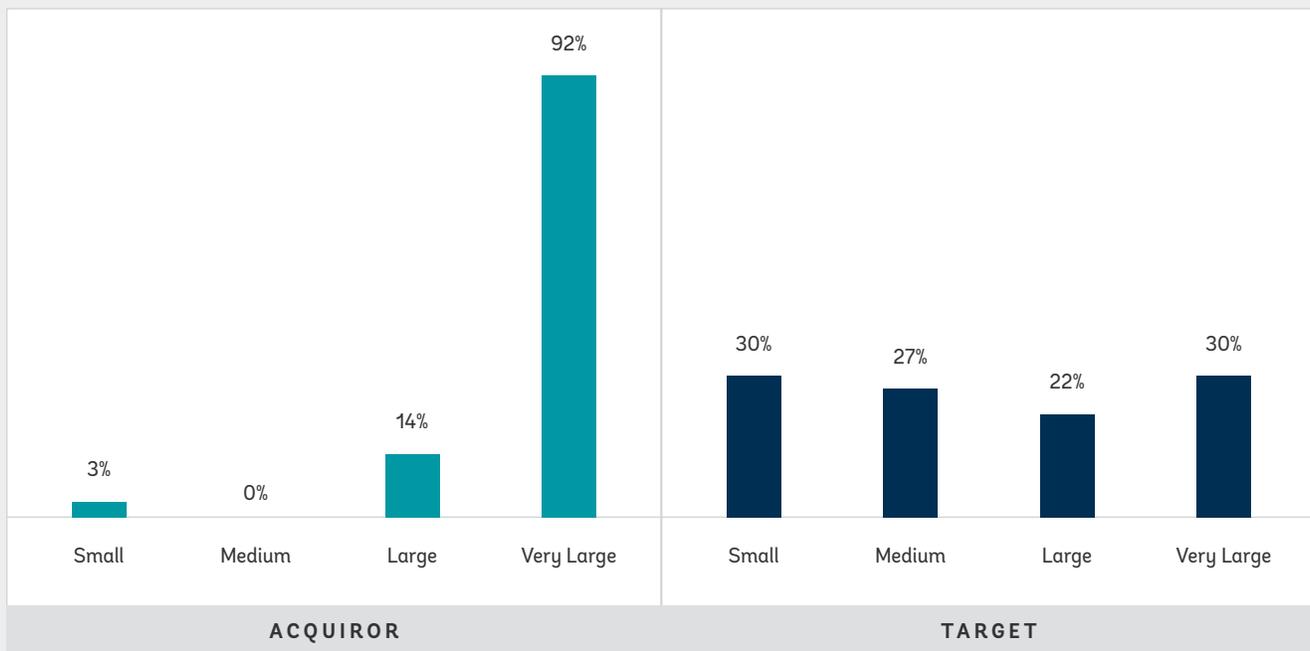


BOX 3 - Analysis of global mergers involving digital platforms

In order to further understand the dynamics of merger cases⁴⁸ involving digital platforms as captured in the MCT DAD, the firms involved were classified according to their size, whether they were foreign or domestic firms in relation to the jurisdiction in which the merger was being reviewed, and whether the target firm was a start-up at the time of the transaction (see Annex C for details on the size classifications of the firms).

The majority of the firms (92 percent), acting as acquirers in mergers involving digital platforms, were very large.⁴⁹ In 24 percent of the cases, both the target and the acquirer firm were classified as being very large (making the combinations of two very large firms the largest single type of merger in the database). Only one acquiring firm was classified as small. In the case of target firms, the distribution of the sizes was more equally spread, as shown in box Figure 1. Overall, more than half of the cases involved a large or a very large firm seeking to acquire a small or medium-sized target. There is only one case between two small firms and none between medium-sized firms.

BOX FIGURE 1 - Distribution of Firm Sizes Among Acquiring and Target Firms in Mergers and Acquisitions Involving Digital Platforms



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Cases on the acquisition of start-ups do not appear to be commonplace. Start-ups (defined as firms with less than five years of existence) were targets of acquisitions in only three finalized cases: 1) Facebook-Instagram, 2) Facebook-WhatsApp, and 3) Walmart-Cornershop. One involves a foreign acquirer (Walmart) and a domestic target (Cornershop), while the other two are between foreign firms. Two of the acquired start-ups were considered small and one medium-sized, while the acquirers are very large firms in all three cases. Without further data on all the transactions in an economy, it is difficult to tell whether the lack of cases involving small firms or start-ups is a reflection that merger notification thresholds do not capture these cases (see Box 4) or a representation of the actual underlying patterns in transactions. Further research would be valuable here.

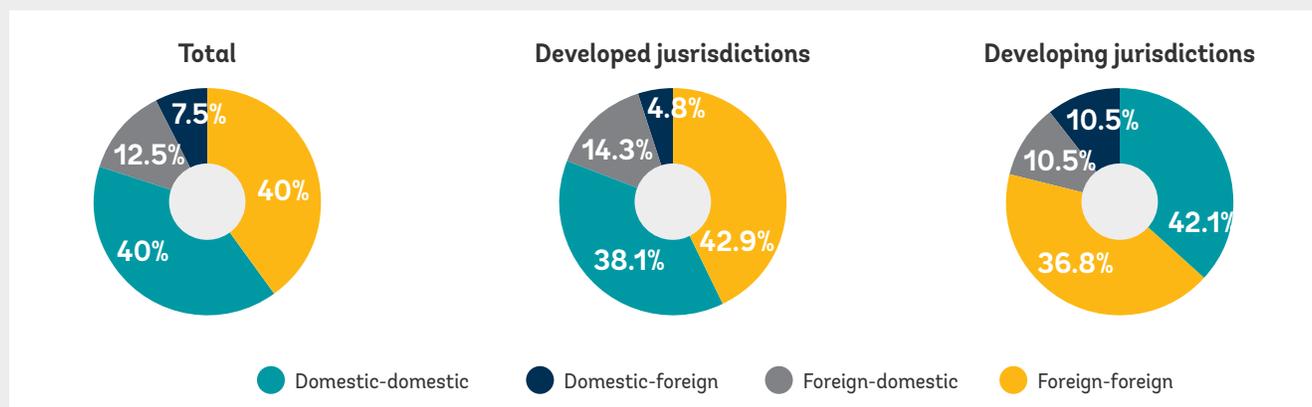


48 We define a case by the activity of the relevant competition authority. Therefore, when one merger or acquisition has been reviewed by multiple authorities and in different markets, it is counted as individual cases.

49 The size classification differentiates between small, medium, large, and very large firms for both the acquiring and the target firm. The classification is based on revenue and employee numbers. See Annex C for more details.

Finally, looking at the nationalities of the firms involved in the mergers, around 40 percent of the combinations involve two domestic firms—the same percentage as mergers in which two foreign-headquartered firms are involved (see box Figure 2 below). Interestingly, there are more cases of two domestic firms being merged in developing jurisdictions (42 percent) than in developed countries (38 percent); in the latter case, most mergers involve two foreign players. This outcome could also be due to a lack of regulatory clarity about the need to notify mergers involving two foreign firms in developing jurisdictions.

BOX FIGURE 2. Shares of Transactions Between Domestic and Foreign Firms



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Although the majority of cases in the MCT DAD occurred in developed jurisdictions, the most prevalent digital platform firms in the MCT DAD also have a presence in developing countries. Authorities in developing countries should therefore be aware of these cases. The presence of digital platforms in countries cannot be solely defined as “physical presence”. The nature of digital platforms’ business models requires a definition of “presence”, which is based on whether they make sales to consumers or offer products and services to users in a jurisdiction. As such, digital platform firms are also present in a high number of countries in the developing world (see Table 3). Because these platforms are present in developed countries and might have similar incentives, it would be valuable for authorities in developing countries to be informed on how cases in other jurisdictions were analyzed and decided upon, and which remedies, conditions, and fines were imposed. This could be helpful, since it is probable that they would be faced with cases involving similar conduct by the same firms.

>>>

TABLE 3 - Worldwide Presence of the Most Prevalent Firms in the MCT DAD⁵⁰

Firm	Physical presences	Services offering
Google	<ul style="list-style-type: none"> Offices in 53 countries (19 developing) 	<ul style="list-style-type: none"> Services in all but 5 countries
Uber	<ul style="list-style-type: none"> Offices in 71 countries (31 developing) 	<ul style="list-style-type: none"> Services in 71 countries (31 developing)
Booking	<ul style="list-style-type: none"> Offices in 72 countries (30 developing) 	<ul style="list-style-type: none"> Property listings in 225 countries/territories
Microsoft	<ul style="list-style-type: none"> Offices in 190 countries (118 developing) Subsidiaries in 120 countries (67 developing) 	<ul style="list-style-type: none"> Worldwide
Amazon	<ul style="list-style-type: none"> 17 marketplaces (4 developing) Offices in 36 countries (11 developing) 	<ul style="list-style-type: none"> Customers in 200+ countries 245 countries/territories served with Amazon Web Services (AWS)
Apple	<ul style="list-style-type: none"> Offices in 26 countries (13 developing) 	<ul style="list-style-type: none"> Platform services in 175 countries

50 Sources: Google: <https://support.google.com/business/answer/6270107?hl=en>, <https://careers.google.com/locations/>; Uber: <https://www.uber.com/global/en/cities/>; Booking: <https://ir.bookingholdings.com/static-files/92c3d5b6-8f42-4686-afc1-f6bd61b94e06>, <https://www.bookingholdings.com/about/factsheet/>, <https://www.booking.com/content/offices.en-gb.html>; Microsoft: <https://www.microsoft.com/en-us/worldwide.aspx>, <https://news.microsoft.com/facts-about-microsoft/>; Amazon: <https://sell.amazon.com/global-selling.html>, https://www.amazon.jobs/en/locations/?&continent=north_america&cache, <https://aws.amazon.com/about-aws/global-infrastructure/>; Apple: <https://support.apple.com/en-us/HT204411>, <https://www.apple.com/newsroom/2020/04/apple-services-now-available-in-more-countries-around-the-world/>, <https://craft.co/apple/locations>.



Factors being assessed by competition authorities in digital cases

The Global Digital Antitrust Database (MCT DAD) contains information on which economic factors have been mentioned by antitrust authorities in describing their assessments of anticompetitive practices and merger cases. For the remainder of the discussion, we assume that the factors mentioned in the published decisions are those that are most pertinent in the assessments of these cases.

The analysis of digital antitrust cases holds a number of challenges (see box 4) in adequately accounting for emerging features, theories of harm, and efficiencies associated with digital markets. This section identifies how often these features have been incorporated into the analyses conducted by competition authorities.

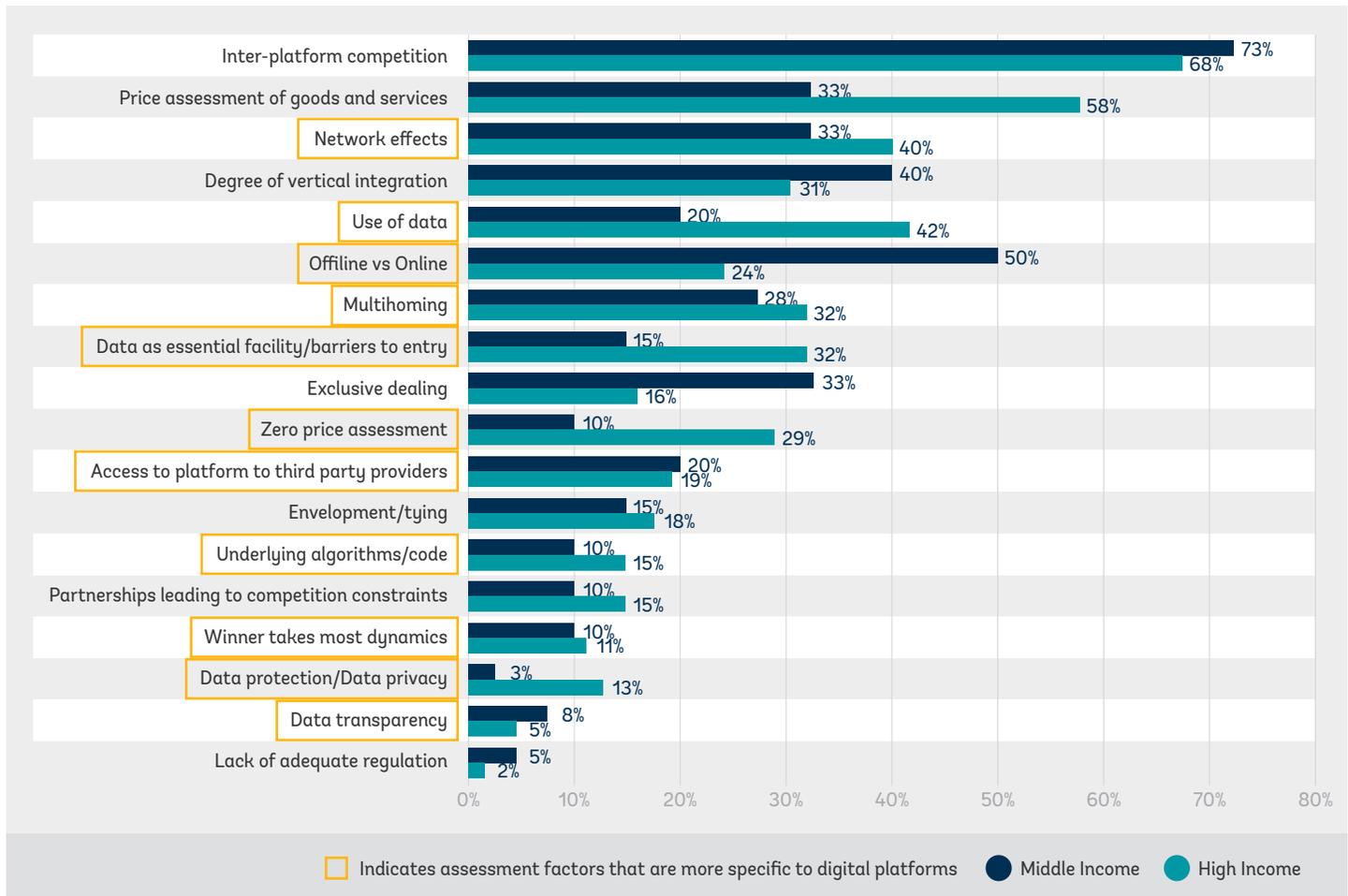
Antitrust investigations relating to digital platforms seem to be increasingly considering features specific to data-driven markets, although there may be room for a greater focus on these factors (see Figure 20 and Figure 21). For example, network effects and multihoming behavior by consumers (where consumers use multiple sites or apps when accessing a service) are explicitly mentioned in 40 percent and 31 percent of cases, respectively, across all jurisdictions. However, the two most frequently assessed factors tend to be more traditional: the assessment of competition from other platforms and the prices of goods and services. While these factors often remain relevant, other more novel issues posed by these markets appear to be less systematically covered. Zero-price issues are mentioned in less than a quarter of the cases. The analysis of data, as a barrier to entry or essential input, is present in 27 percent of all cases (equally split between the abuse of dominance and merger cases). Issues with algorithms are covered in only 13 percent of the cases. Data protection and privacy factors are raised as issues in just six percent of the cases overall. Building capacity within regulatory authorities would help further address these challenges.

New features associated with the digital economy appear to be more frequently assessed by developed jurisdictions (Figure 20). Factors related to the use of data, particularly data as an essential facility or barrier to entry and data protection/privacy, are especially prevalent in the evaluations of authorities in high-income jurisdictions as compared to low-income jurisdictions. This is also true for the zero-price analyses.⁵¹ Vertical integration and exclusivities

are more frequently mentioned in developing jurisdictions. Network effects and multihoming are considered to be similar across income levels. Table 4 presents an example of how assessment approaches differed between authorities when dealing with features associated with the digital economy. Box 4 provides an example of how the assessment of multihoming is important for determining case outcomes in the case of abuse of dominance.

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FIGURE 20 - Factors Assessed by Income Level of Jurisdiction



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

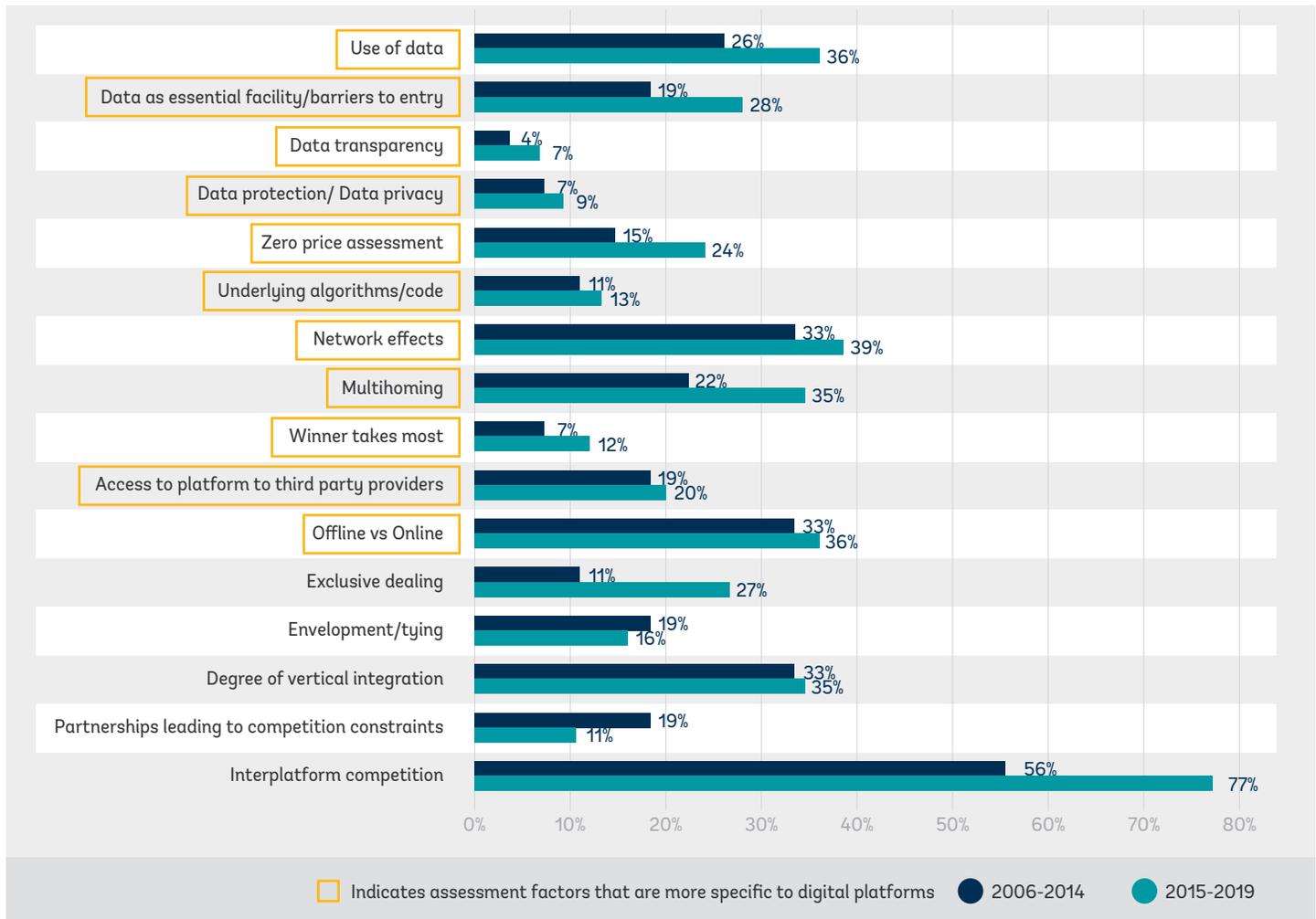
51 Many digital platforms' services are free to one or more sides of the market, since technology allows them to monetize the information conveyed by users (for example, revenue source coming from advertising). "Zero-price" is a particular characteristic that is not frequently present outside of digital economy markets. This leads to prices not necessarily being an appropriate criterion for competition analysis in digital markets, since users frequently are "paying" with data for the services provided by platforms.

The percentage of cases that consider data-related and zero-price features in their analyses has increased in recent years. In the cases resolved between 2006 and 2014, the use of data was analyzed in 26 percent of all digital economy cases, while for the period between 2015 and 2019, the percentage increased to 36 percent. Data as an essential facility/barriers to entry features are considered in only 19 percent of the cases from 2006 to 2014. However, this figure rose to 28 percent from 2015 to 2019. Data transparency

and data protection/data privacy features have had a lower increase between the two periods. Zero-price assessments were included in 15 percent of cases in the earlier period, while in more recent years, they have been addressed in 24 percent of the case analyses (see Figure 21). Other digital economy-specific features, such as multihoming and network effects, have also seen increases in the percentage of cases that considered them to be part of their analyses.

> > >

FIGURE 21 - Features Included in Analyses over Time



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database



> > >

BOX 4 - Challenges to competition analysis in digital markets

Traditional antitrust tools require adaptation when it comes to data-driven markets. New market dynamics arising from data-driven markets have challenged policy makers to rethink their approach to antitrust rules, with new strategies published by jurisdictions around the world. Platforms require competition authorities to adopt a multisided approach to their analyses. The multisided nature of data platforms allows for interactions between different groups of users (including advertisers in some cases), thus complicating the definition of markets and raising the potential for cross-subsidization between users. This multisided nature ties in with the emergence of “attention markets”, where firms use content to compete for the time of users in order to be able to sell that time to advertisers. Not accounting for the multisided characteristic of most digital markets could lead to incomplete and incorrect analyses of competitive structures and dynamics in these markets, which can have negative impacts in the decision making of authorities.⁵²

Delineating market definition in the case of digital markets can be more challenging than with regards to traditional markets. Most common frameworks, such as the small, but significant, non-transitory increase in price and the hypothetical monopolist test, can be more difficult to utilize due to the fact that many digital platforms’ services are free to one or more sides of the market, since technology allows them to monetize the information conveyed by users (for example, revenue source coming from advertising).

> > >

52 OECD, “Rethinking Antitrust Tools for Multi-Sided Platforms,” last modified 2018, <https://www.oecd.org/daf/competition/Rethinking-antitrust-tools-for-multi-sided-platforms-2018.pdf>.

Nominally-free or “zero-price” is a characteristic that is not frequently present outside of digital economy markets. This leads to prices not necessarily being an appropriate criterion for competition analysis in digital markets, since users are frequently “paying” with data for the services provided by platforms instead. Particularly challenging is how to: assess consumer harm in markets where goods and services are nominally provided for “free”, detect collusive algorithms, and account for the non-price dimensions of competition, such as data protection and privacy. Therefore, the competition analysis of digital markets may need to broaden the concept of consumer welfare beyond prices to consider issues, such as data flows as well as personal data protection and privacy.⁵³

Market power is also more difficult to assess due to the multisided nature of digital platforms. Authorities must not only estimate the impacts that a price rise on one side of the platform would have on users on that same side, but also on the demand, prices, and quality dimensions on the other sides of the platform. Similarly, market shares on one side should only be interpreted simultaneously with other sides of the market. Profitability should be measured at a platform level and not just on sales on one side of the market. Access to and control of data may also need to be considered as key determinants of market power, which is frequently reinforced by the existence of indirect network effects.

In addition, platform firms typically exist in a digital ecosystem where providers of complementary digital products interconnect and regularly exchange data to provide consumer products. To the extent that these complementary firms may also act as nascent competitors to larger platform firms, the effect of competition restrictions on these complementary products is important to understand alongside the direct effects on the users of a platform. The potential for platforms to engage in what is known as “killer” or “zombie” acquisitions, that is, acquire potential competitors in complementary markets before they can become a competitive threat, and either shut them down or prevent the further development of their products, has also become a topic of debate.⁵⁴ Such a “theory of harm” also merits consideration in merger reviews. Likewise, authorities should also be increasingly alert to the harms to competition and innovation, which can come from mergers driven by the desire to acquire new data or data-relevant intellectual property, such as algorithms.⁵⁵

Moreover, under traditional antitrust regimes, mergers involving data-driven firms may be less likely to trigger a review by the antitrust authority because such firms typically do not have sufficient tangible assets or revenues to meet the traditional thresholds of merger notifications. Although the urgency of these concerns for developing countries will depend on their start-up environments, thresholds for merger notifications could be revamped to allow antitrust authorities to review potentially anticompetitive mergers, involving data-driven firms that may currently appear small, but have the potential to rapidly become market challengers through exponential growth. This change in the rule has already happened in Austria, Germany, and Japan, which have adopted thresholds for digital markets, based on transaction values. Another option would be to require notifications before the mergers of any planned acquisition by dominant firms and/or consider shifting the presumptions for future mergers, such that an acquisition by a dominant platform would be presumed anticompetitive, unless the merging parties could show otherwise.⁵⁶

53 UNCTAD, “*Competition Issues in the Digital Economy*,” last modified 2019, https://unctad.org/meetings/en/SessionalDocuments/ciclpd54_en.pdf.

54 Argentesi et al. (2019) “Merger Policy in Digital Markets: An Ex-Post Assessment” Available at: https://ideas.repec.org/p/ces/ceswps/_7985.html; Motta and Peitz (2020) “Big Tech Mergers” Available at:

55 Gautier and Lamesch (2020) “Mergers in the Digital Economy” Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3529012

56 This approach has recently been suggested by the U.S. House Judiciary Committee’s Subcommittee on Antitrust, Commercial, and Administrative Law in its report, “Investigation of Competition in Digital Markets”; see Nadler and Cicilline, 2020.

57 Canadian Competition Bureau, case information available at: <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04066.html>.

58 CADE, Case number: 08700.005694/2013-19, information about the case available at: https://sei.cade.gov.br/sei/modulos/pesquisa/md_pesq_documento_consulta_externa.php?DZ2uWeayYicbuRZFhBt-n3BfPLu9u7akQAh8mpB9yPU6WEVpqsD71wZh_UXEhBwNimCEVH_DWu20Vj-yrkhn0rSaUY_vZle-vW6Lie0JKlptMD-QRdZ40fQuKWEDXD2.



BOX 5 - Differing approaches to the assessment of abuse of dominance in online search and advertising: The case of Google AdWords

In 2016, the Canadian Competition Bureau found that Google had used the terms and conditions (T&C) of its application programming interface (API) for AdWords (its advertising tool) to prevent software developers that help companies manage their search advertising campaigns from easily transferring information from their advertising campaigns run on Google to their advertising campaigns on competing platforms. Google's use of the T&C restricted multihoming by advertisers, excluded its search engine rivals, and reduced competition in search advertising. Google was ordered to remove these clauses and provide a commitment not to reintroduce them.⁵⁷

In 2019, in a similar investigation in Brazil, the General Superintendence of the Administrative Council for Economic Defense (CADE) found that the AdWords' T&C did not cause negative effects to competition. CADE concluded that the restrictions imposed were not able to restrict multihoming because there is still a possibility of advertising, both on AdWords and on competitors' platforms, even without the need for third-party software (not common in Brazil). Specifically, CADE stated that rival platforms can be satisfactorily accessed through existing software and direct programs developed by the platforms themselves (such as AdWords Editor and Bing Ads Editor).⁵⁸

Source: Authors' elaboration on decision documents.

There are noticeable differences between the types of factors being assessed by authorities when dealing with different types of antitrust cases (see Figure 22, Figure 23, and Figure 24). This disparity could be related to the effects that each practice may have on the market. In collusion cases, fewer economic factors are typically assessed, since the practice is considered as a per se offence that is anticompetitive by object, without a need to show effects. Abuse of dominance cases, on the other hand, must consider a greater range of factors to first determine if: 1) the accused firm is, in fact, dominant; and 2) its behavior had detrimental effects on the market. Likewise, the merger assessment also requires a demonstration of likely effects, before the authority reaches a decision. This is borne out in the MCT DAD where various economic factors are more frequently assessed in abuse of dominance and merger cases. However, beyond this, some other interesting patterns emerge, which in some cases, could warrant further research to understand the drivers of these patterns.

Inter-platform competition, which does not fundamentally differ from the traditional analysis of competitors in offline markets, is overall the most commonly-assessed factor across the cases. However, it is considered significantly more frequent in abuse of dominance and anticompetitive agreement cases in developing jurisdictions than in developed jurisdictions. This difference may be related to the reliance on more traditional means of assessing competition dynamics in developing jurisdictions. Nevertheless, inter-platform competition is analyzed in 94 percent of the mergers in high-income countries as compared to 73 percent in middle-income countries.

The use of algorithms is not commonly assessed in cases. And although the analysis of algorithms appears most frequently in anticompetitive agreement cases, such analysis was less prevalent in developed jurisdictions than in developing jurisdictions (although there are only five cases of anticompetitive agreements in the latter). In the abuse of dominance cases and mergers, authorities in developed jurisdictions considered the use of algorithms more frequently than developing jurisdictions.

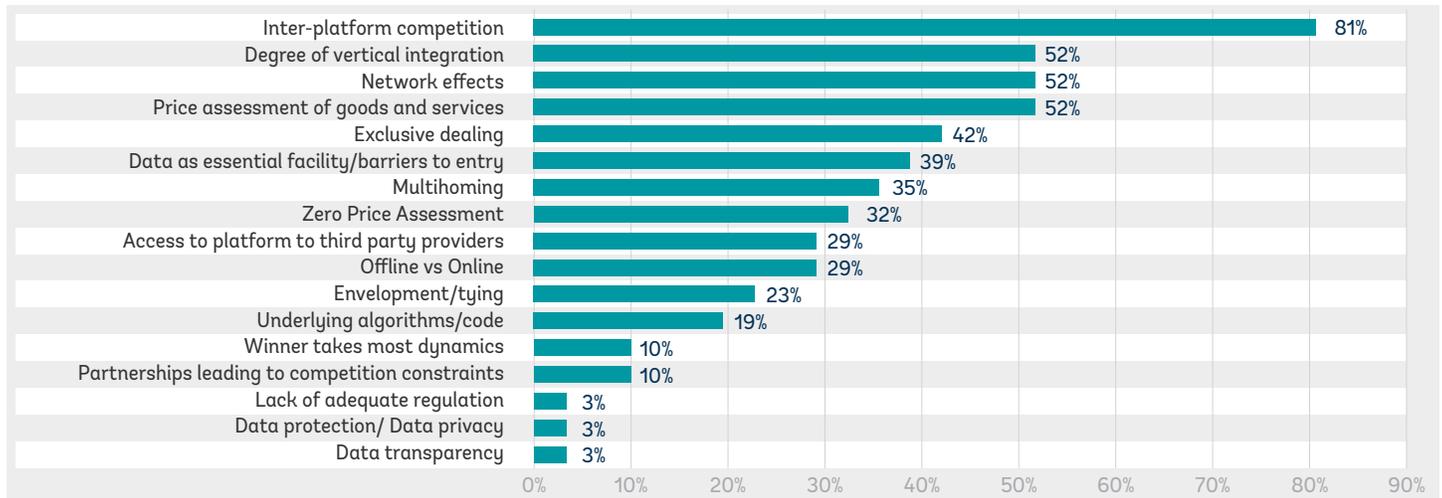
Winner-takes-most dynamics are mentioned mainly in merger cases. Only 10 percent of the abuse of dominance cases considered it an issue, despite these dynamics being frequently mentioned in the literature on digital markets. Overall, authorities in developed jurisdictions (29 percent) considered this factor to be relevant in mergers twice as frequently as in developing jurisdictions (14 percent).

For abuse of dominance cases, the use of data and network effects is analyzed in a relatively high number of cases in developed jurisdictions, but not in developing jurisdictions. Vertical integration issues are assessed in similar proportions in countries from both income categories.

For mergers, multihoming and the use of data are most important alongside network effects and vertical integration. Multihoming and the use of data are part of the analyses mainly in developed jurisdictions, with 57 percent and 67 percent, respectively, in comparison to the corresponding figures of 28 percent and 20 percent in developing jurisdictions. Again, this may point to the scope for these emerging features to be better incorporated into the analyses of developing jurisdictions.

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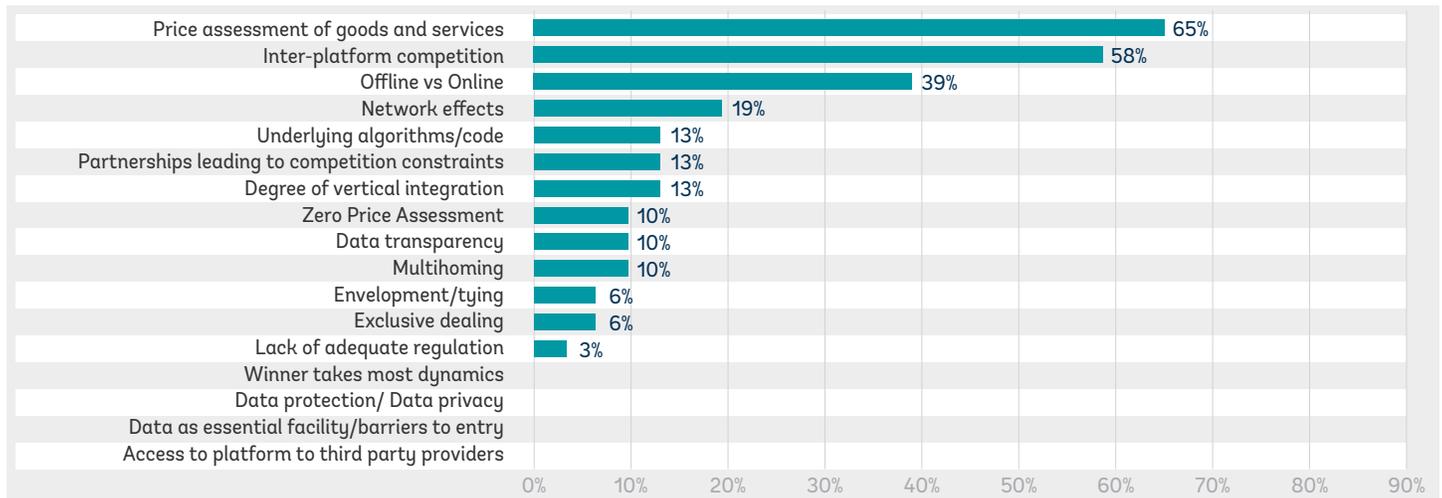
FIGURE 22 - Factors Assessed in Abuse of Dominance Cases



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

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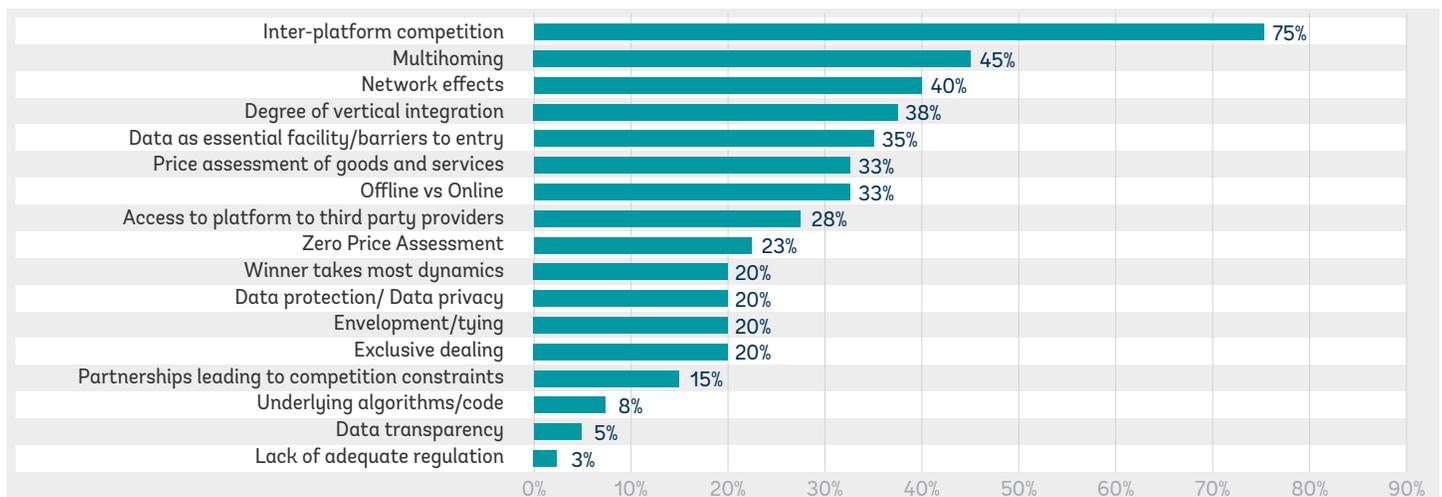
FIGURE 23 - Factors Assessed in Anticompetitive Agreements Cases



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

> > >

FIGURE 24 - Factors Assessed in Mergers



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

The extent to which different factors are assessed in different sectors, in some cases, reflects the underlying business models. The assessments of *data factors* and zero pricing, which are particularly relevant due to their novelty and how they have become emerging issues with the development of digital platform markets, are covered in sections 3.1 and 3.2, while an overview of other factors is provided below (Figure 25). Online search and advertising has the highest proportion of cases that considered *algorithms*: this is to be expected because the cases relate to algorithmically-supported self-preferencing in this sector. Issues related to *access to platforms by third-party providers* are mainly present in cases involving software/operating systems. Again, this is to be expected, as firms that produce operating systems for electronic devices are frequently vertically integrated with producing applications and other software that compete with third-party providers.

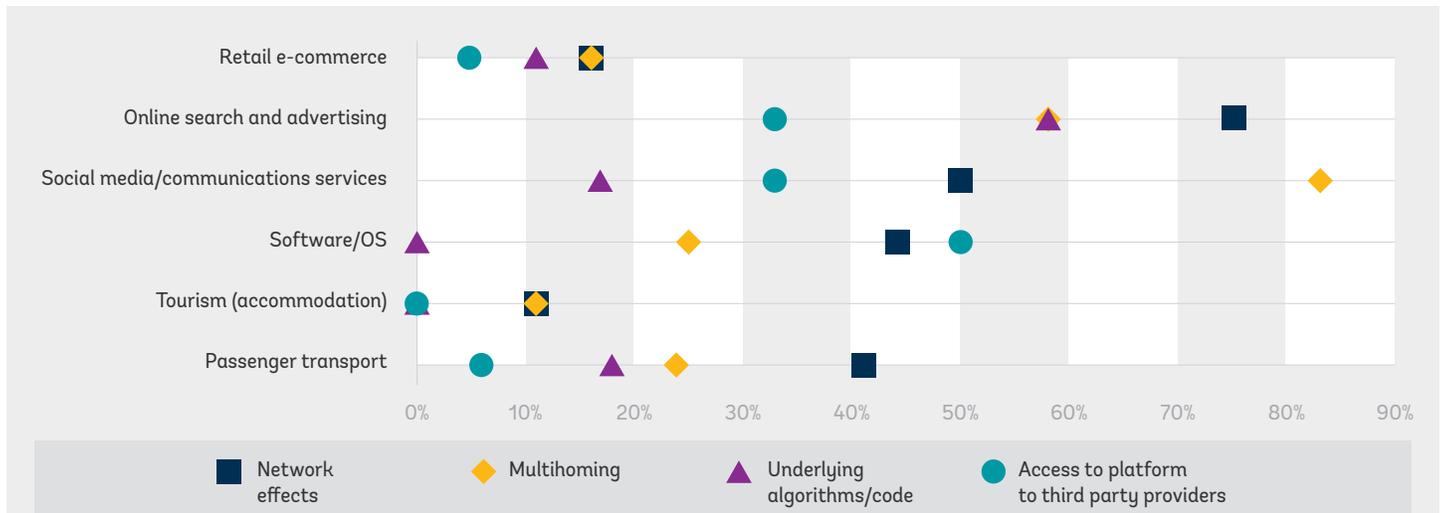
In other cases, the frequency of assessment of factors raises questions over whether some factors may need to be better incorporated into assessment approaches. The economic factors that may be more relevant to analyze in antitrust cases may differ according to the typical characteristics of platforms in each sector. Since platform business models will continue to evolve, this research will require continuous updating for further research, as seen in the examples below.

- **Network effects and multihoming may be relevant across sectors.** In practice, *network effects* were mentioned in 75 percent of the cases concerning online search and advertising. However, surprisingly, its prevalence is below 50 percent in other sectors. While it may be that *network effects* were implicitly factored into the analyses, it would be worth determining whether the factor has been sufficiently covered. *Multihoming* is

most frequently analyzed within the social media and communications services sector (83 percent); however, it was explicitly mentioned in less than 30 percent of the cases in all other sectors (apart from online search and advertising). Yet, multihoming is an important factor across a range of sectors: it provides an indicator of the willingness or ability of consumers to switch between platforms and the potential for entrenched market power. The low frequency of explicit mentions may partly be a result of a lack of alternative platforms, thus preventing an analysis of multihoming.

- **The assessment of underlying algorithms would be expected to be more relevant for platforms, where rankings are important or pricing is dynamic/automated.** The assessment of algorithms in the analyses does seem to be reflected in the data to some extent, given that this factor is assessed in sectors, such as e-commerce and online search (which rely on rankings), and transport (that depend on dynamic pricing algorithms). Indeed, algorithms are assessed in almost 60 percent of online search and advertisement cases. However, it is assessed in only approximately 10 percent of e-commerce cases, despite product rankings being a potential issue in the sector.
- **Understanding whether third parties can access a platform would be most relevant for vertically-integrated platforms,** as they are more likely to use their position to foreclose their downstream or upstream competitors from the market. In practice, this is assessed most frequently in online search, social media, and software/operating systems—all of which tend to be characterized by vertical integration. However, it is less frequently assessed in e-commerce sectors, despite vertical integration being common in the sector.

FIGURE 25 - Assessment of Digital Economy Factors by Sector



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Summary of Economic Assessment Factors by Platform/Sector Characteristics

Economic assessment factors	Relevant to...	Common examples of sectors
Network effect	Most platforms	All
Multihoming	Most platforms	All
Underlying algorithms/code	Platforms that rely on the automated ranking of content or automated/dynamic pricing	Transport, e-commerce, online search, and social media
Access to platform by third-party providers	Platforms that are vertically integrated	Software/operating systems, e-commerce, online search, and social media

Source: Authors' own elaboration.

3.1. Assessment of use of data

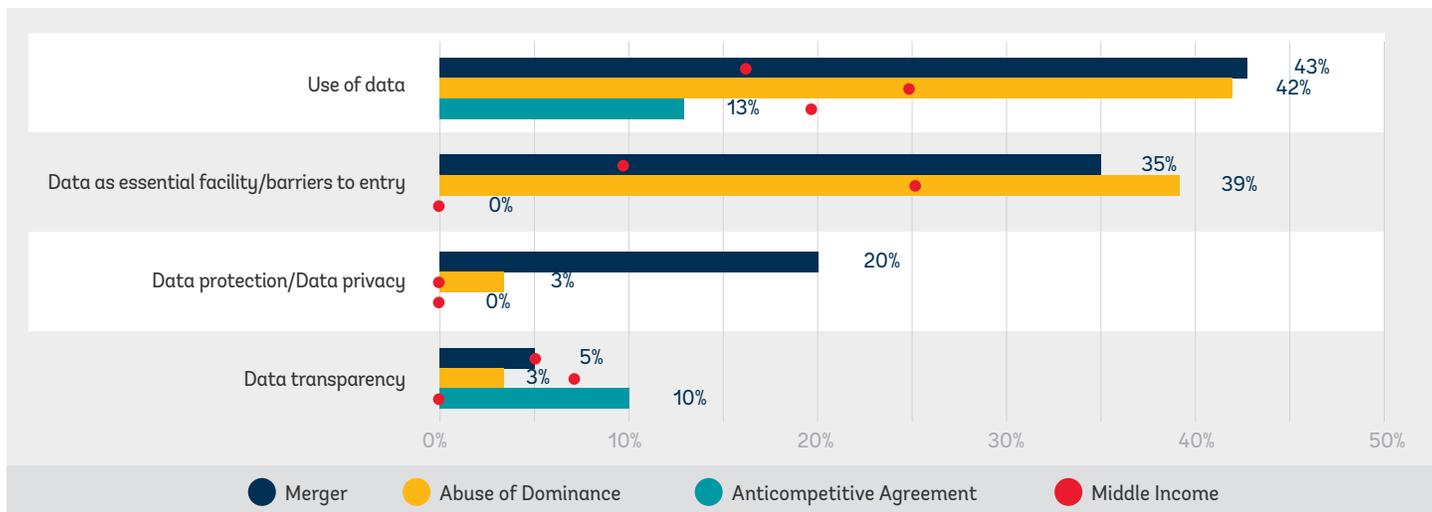
Overall, data issues are considerably less prevalent in anticompetitive agreement cases than in abuse of dominance and merger cases, as would be expected (Figure 26). Analysis of *data as a barrier to entry or essential input* is slightly more common in abuse of dominance cases than in mergers, while not showing relevance in anticompetitive agreement investigations. *Data transparency* is analyzed more frequently in anticompetitive agreement cases than in the abuse of dominance and merger cases as expected. *Data protection and privacy* factors are mainly studied in merger cases.

The German competition authority's 2019 case against Facebook for its exploitative data policy is the first abuse

of dominance case relating specifically to privacy.⁵⁹ The authority worked closely with data protection authorities and used protections, laid out in the General Data Protection Regulation (GDPR) of the European Union, as a basis for a claim of exploitation. The Bundeskartellamt imposed data collecting and processing remedies on Facebook to eliminate this anticompetitive behavior (see Table 6). The case was appealed and is ongoing at the time of writing, with one of the key questions in the case being whether consumers value privacy in this market. Despite the appeal, in June 2020, the Federal Supreme Court ruled that Facebook must comply with the Bundeskartellamt order to stop merging and sharing data across its platforms.

59 Bundeskartellamt, decision on Case B6-22/16, Available at: https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Entscheidungen/Missbrauchsaufricht/2019/B6-22-16.pdf?__blob=publicationFile&v=5; Bundeskartellamt prohibits Facebook from combining user data from different sources: Background information on the Bundeskartellamt's Facebook proceeding, February 2019; the Federal Court of Justice has provisionally confirmed the allegation of abuse of a dominant position by Facebook, available at: <https://www.bundesgerichtshof.de/SharedDocs/Pressemitteilungen/DE/2020/2020080.html>.

FIGURE 26 - Frequency of Analysis of Factors Related to Data Use by Case Type (All Countries)⁶⁰



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

As Figure 26 shows, authorities in developing jurisdictions assess data issues less frequently than authorities in developed jurisdictions. Examples of cases in which data issues have been assessed by authorities in middle-income countries are provided in Table 4. An analysis of data-related factors by sector is provided in Annex A.

TABLE 4 - Examples of How Data Issues Have Been Assessed by Authorities in Middle-Income Countries

Country and case	Case summary	Relevance of data to the case
INDIA : Abuse of dominance by Google in online search and advertising markets⁶¹ (2018)	The Competition Commission of India (CCI) found that Google abused its dominant position in web search and advertising, such as favoring Google’s own services and partners through manually manipulating its search algorithm, thus putting smaller businesses at a disadvantage.	Data as barrier to entry in online search and advertising: The CCI found that crawling the web and indexing data were critical activities for a search engine, and that the cost of doing so would be prohibitive for a new entrant, as Google had an insurmountable scale advantage in this regard. Google was also found to give prominence to its own web content, which in turn allowed it to collect more user data, thus reinforcing its advantage in the search advertising market. Provision of data on advertising performance: Google was also accused of abusing its dominant position by not providing advertising firms with details of their “quality scores” to understand the performance of ads. Nevertheless, the CCI dismissed this accusation, determining that Google has provided several granular metrics beyond the quality score.
MEXICO : Merger between Walmart and Cornershop (a logistics platform)⁶² (2019)	The Federal Economic Competition Commission (COFECE) blocked Walmart’s proposed acquisition of Cornershop, partially due to the potentially harmful effects it may have on smaller retailers.	Access to strategic data from competitors and confidence in how that data would be used: The COFECE found that the new company’s access to data on the sales of competing retailers through the platform could lead retailers to leave the platform over a loss of confidence in how the data would be used by Walmart.
EGYPT : Merger between Uber and Careem⁶³ (2019)	The Egyptian Competition Authority (ECA) cleared Uber’s acquisition of Careem, subject to behavioral commitments that include: (1) the obligation to provide data on mapping and user trips to potential rivals; and (2) the imposition of caps on pricing.	Data as barrier to entry: The merged entity would have access to superior mapping data due to its control over the combined datasets of the two firms. The ECA found that the time and cost for potential entrants to collect and create similarly efficient mapping systems would likely deter potential new entry into the market. Use of data in price discrimination: The ECA also considered that the ability of the merged entity to combine trip and customer-behavior datasets could exacerbate the risk of personalized pricing being introduced in the future.

Source: Authors’ elaboration on decision documents.

⁶⁰ The use of data includes all cases that mentioned data in the analysis. Data as an essential facility/barriers to entry involves all cases that mention data as an essential facility, barrier to entry, or something similar, such as: difficulty in accessing data, increase in data for some players, complaints about need access to data, and the difficulty of duplication/replication of data. Data protection/data privacy includes mentions of privacy of information and data protection. Data transparency comprises mentions related to price transparency or the disclosure of relevant/important data.

⁶¹ Competition Commission of India (CCI), Case Nos. 07 and 30 of 2012 “Matrimony.com Limited & Consumer Unity & Trust Society (CUTS) vs Google”, decision available at: <https://www.cci.gov.in/sites/default/files/07%20%26%20%2030%20of%202012.pdf?download=1>.

⁶² Federal Economic Competition Commission (COFECE), Walmart/Cornershop merger, Docket CNT-161-2018, available at: <https://www.cofece.mx/CFCResoluciones/docs/Concentraciones/V6008/9/4845885.pdf>.

⁶³ Egyptian Competition Authority (ECA), “ECA’s Assessment of the Acquisition of Careem, Inc. by Uber Technologies, Inc.,” available at: <https://www.docdroid.net/GX-SIQ7c/ecas-assessment-of-the-acquisition-of-careem-inc-by-uber-technologies-incnon-confidential1-pdf>.

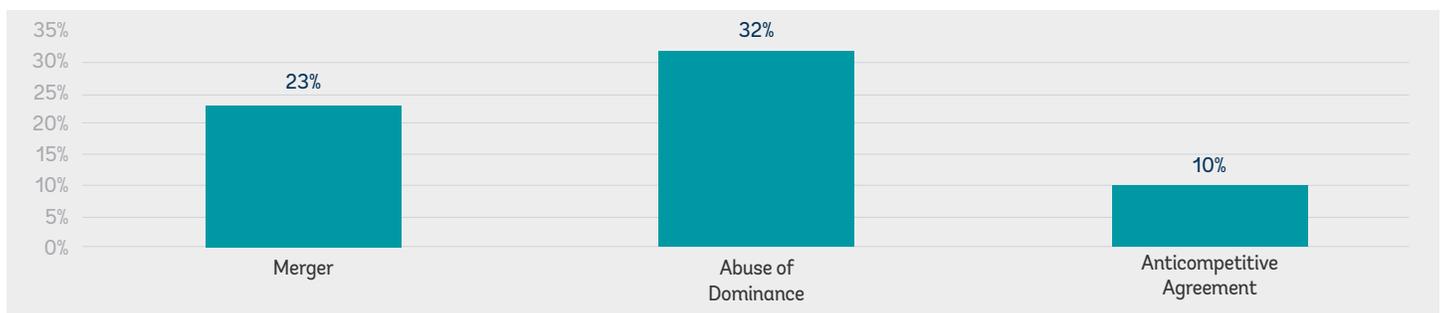
3.2. Zero-price assessment

The zero-price assessment is starting to emerge as an assessment factor in digital economy cases. One emerging feature that has arisen in the context of digital platform firms is nominally-free goods or services, or the zero pricing of goods and services.⁶⁴ In these cases, in the presence of strong indirect network effects between the multiple sides⁶⁵ of a platform, one side of a platform is supplied for free in order to draw that type of user to the platform, since these users will then increase the utility of another type of user on the platform. The platform can then monetize the presence of the second group of users.

Typically, zero pricing is associated with sectors that rely on advertising revenue or other forms of data monetization, such as online search and social media. It may be for this reason that zero pricing was considered most frequently in the abuse of dominance cases (Figure 27). Around 23 percent of the merger cases considered this factor in the analysis, though it is not present frequently in anticompetitive agreement investigations. This is likely because zero-price scenarios do not lend themselves to collusive scenarios (where collusion often happens on price).

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FIGURE 27 - Frequency of Analysis of Zero-price Assessment by Case Type

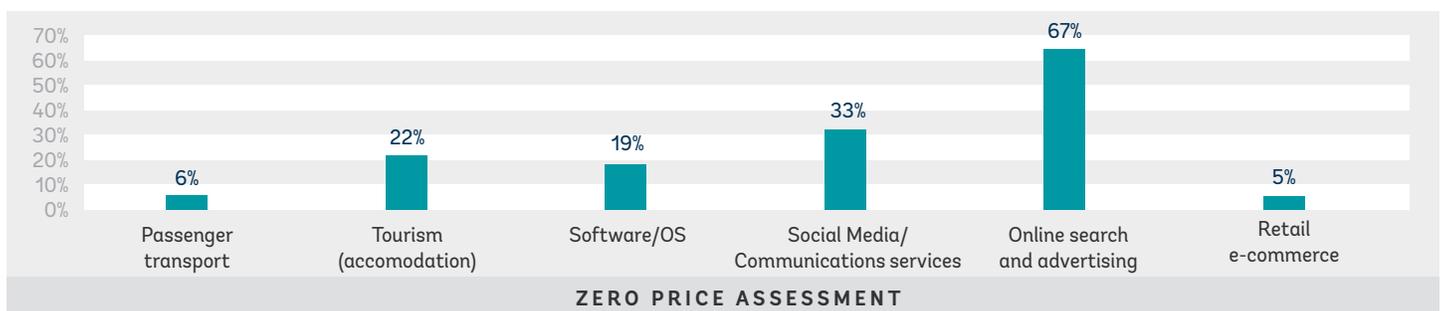


Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

As expected, the sector for which authorities assessed zero prices most often is the online search and advertising sector (Figure 28). Nearly 70 percent of the cases in this sector mentioned zero prices in the assessment. This outcome is not surprising since zero pricing has been a key characteristic of the business model, whereby search is provided to users for free alongside advertising paid for by advertisers. The social media/communications sector that often operates on a similar model has the next highest proportion of cases considering zero pricing (one third of cases).

> > >

FIGURE 28 - Proportion of Cases that Analyze Price Factors by Sector



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

⁶⁴ Note that we include “negative” prices (where users are compensated for using a product) within the category of zero prices here.

⁶⁵ A multisided market can be defined as a market in which a firm acts as a platform by serving different groups of consumers, which are affiliated with the platform, whereby the demand of one group of customers depends on the demand of other group(s). Multisided markets are frequently characterized by the presence of indirect network effects between two or more consumer groups (users) who participate in the platform, which affects the price-setting mechanism and the competitive interaction in the market.

Andrei Hagiu and Julian Wright, “Multi-Sided Platforms,” *International Journal of Industrial Organization* 43 (2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2794582

OECD, “Market Definition in Multi-sided Markets—Note by Sebastian Wismer & Arno Rasek. Hearing on Re-thinking the Use of Traditional Antitrust Enforcement Tools in Multi-sided Markets,” last modified 2017, <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282017%2933/FINAL&docLanguage=En>

OECD, “Rethinking Antitrust Tools for Multi-Sided Platforms,” last modified 2018, <https://www.oecd.org/daf/competition/Rethinking-antitrust-tools-for-multi-sided-platforms-2018.pdf>

Jean-Charles Rochet and Jean Tirole, “Two-sided Markets: A Progress Report,” *The RAND Journal of Economics* 37, no. 3 (September 2006): 645–667, <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1756-2171.2006.tb00036.x>



Fines and remedies imposed

In 44 of the 103 cases included in the database, orders to cease an anticompetitive behavior and/or other remedies (or conditions in the case of mergers) were imposed.⁶⁶ Out of these 44 cases, 59 percent are cease and desist orders. Of the remaining 18 cases with remedies or conditions, 10 are mergers, five abuse of dominance cases, and three anticompetitive agreement cases.

Fines were imposed in 17 out of the 103 cases in the database. As would be expected, fines were mainly imposed in anticompetitive practice cases (15), with nine of them being anticompetitive agreements and six abuse of dominance cases. The remaining two fines were imposed on mergers, as described below.

4.1. Imposition of fines

Out of the 42 anticompetitive practice cases in which authorities determined that there was wrongdoing, fines were imposed in only 15 cases (35 percent of cases), principally on anticompetitive agreements. In the rest of the anticompetitive practice cases in which wrongdoing was found, the authorities either imposed remedies (26 percent) or ordered firms to cease the practice (74 percent). Among the anticompetitive agreements in which fines were imposed, seven correspond to vertical restraints and two to collusion (Figure 29). Six abuse of dominance cases also ended up with the authorities setting fines. The sectors with the highest number of cases with fines are retail e-commerce (five cases) and software/operating systems (four cases). Fines were imposed in two merger cases: (1) the European Commission fined Facebook for providing misleading information about the possibility of automatically matching the accounts of Facebook and WhatsApp users during their merger review of 2014;⁶⁷ and (2) the Competition and Consumer Commission of Singapore found that the merger between the ride-hailing apps, Grab and Uber, had led to a substantial lessening of competition in Singapore through price increases and the imposition of exclusivities.⁶⁸

⁶⁶ It is important to note that the conditions of remedies that are not related to competition concerns, such as public interest remedies, are not included in the database.

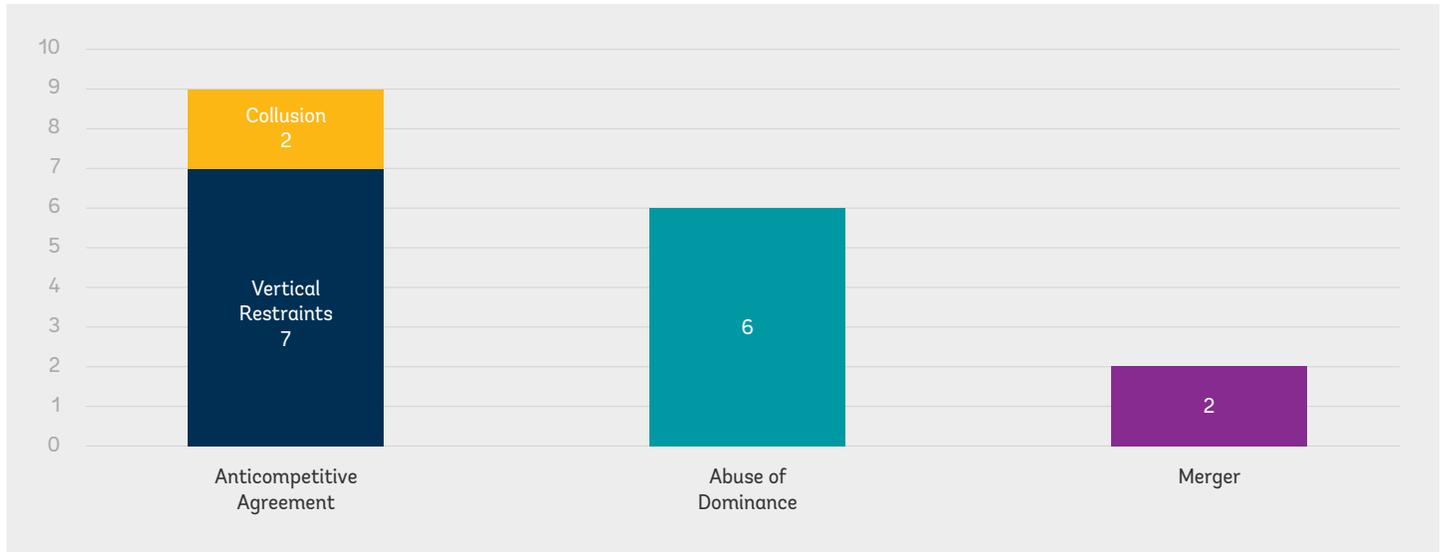
⁶⁷ "Mergers: Commission Fines Facebook €110 million for Providing Misleading Information about WhatsApp Takeover," available at: https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1369.

⁶⁸ "Grab-Uber Merger: CCCS Imposes Directions on Parties to Restore Market Contestability and Penalties to Deter Anti-Competitive Mergers," available at: <https://www.cccs.gov.sg/media-and-consultation/newsroom/media-releases/grab-uber-id-24-sept-18>.

The geographical distribution of cases with fines shows that authorities in Europe imposed the greatest number of fines with eight cases (Figure 30). Five of these eight cases were sanctioned by the European Commission. East Asia and Pacific also stands out with five cases in which fines were imposed.

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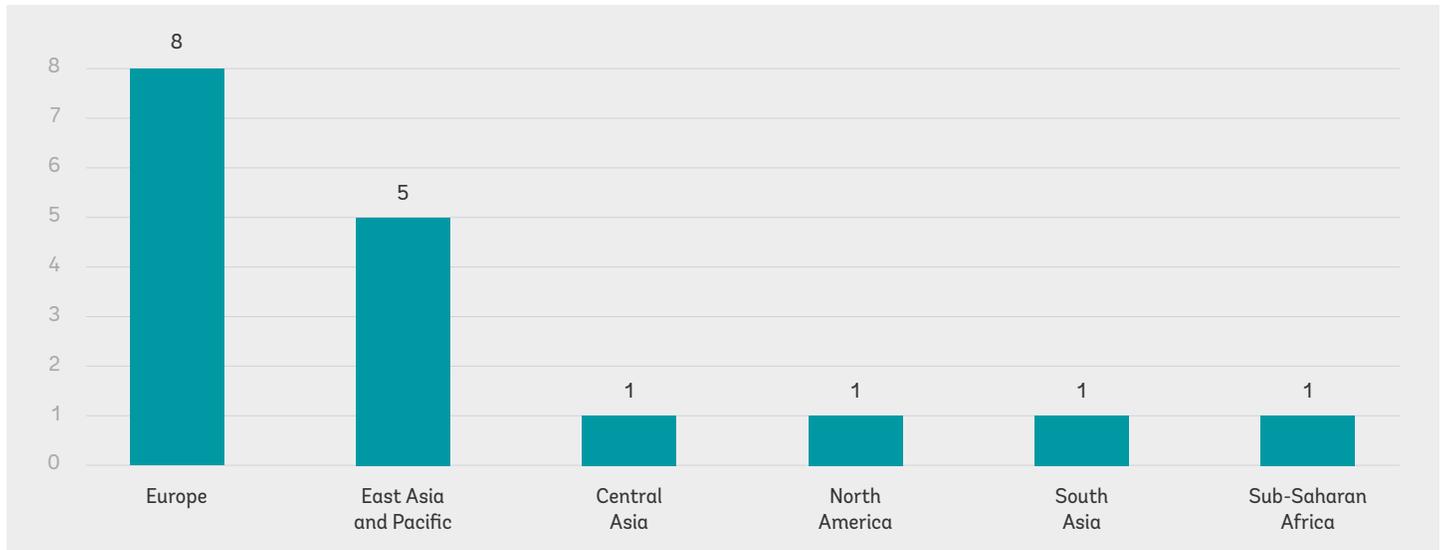
FIGURE 29 - Number of Cases with Fines Imposed by Type of Case



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

> > >

FIGURE 30 - Cases with Fines by Region



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Fines vary significantly in magnitude, but tend to be higher in developed than in developing jurisdictions (Table 5).

The five fines imposed by the European Commission (EC) top the list, in terms of absolute magnitude, together with the fine c.USD180 million imposed by France on Google in 2019 and the USD450 million fine that the United States Department of Justice imposed on Apple for a 2012 vertical restraints case in the e-book market. The largest fine registered is the USD4.5 billion imposed on Google by the EC in 2018 for abuse of dominance regarding Android mobile devices. Since fines are commonly calculated based on the proportion of the revenue of the firms sanctioned, the fact that larger fines were imposed in developed jurisdictions could be expected due to the higher revenues digital platforms obtain in these markets.

In middle-income countries, the Russian, Indian, and South African authorities have each imposed fines in one case, all for abuse of dominance.

The c.USD20 million fine imposed by the Competition Commission of India on Google for an abuse of dominance case in 2018 stands out as the highest among middle-income countries, although it amounts to only five percent of Google's average turnover in India in the previous three years.⁶⁹ In contrast, the fines Russia and South Africa imposed on Google and Computicket, respectively, though small in magnitude, are higher, in terms of their proportions of local revenues. Russia's fine of ≈ USD7.8 million on Google represents nine percent of Google's revenues in Russia in 2014,⁷⁰ while the ≈ USD 1 million fine by South Africa's authority on Computicket equates to almost 10 percent of the company's revenues. The fines of Russia and India mentioned above could be seen as high, in terms of the percentage of turnover corresponding to each country's jurisdiction. Nevertheless, even the maximum fines that could be imposed in some developing countries would amount to a low

percentage of a large digital platform's revenues worldwide. This points to a potential issue that fines determined on the basis of national turnover may not be a significant deterrent in the context of global firms with substantial turnover from a wide range of jurisdictions.

The overall mean fine of USD367 million and the median fine of USD20 million appear low relative to the revenues of many large platforms, lending some backing to the argument that fines are not a significant deterrent for firms.

Even the EC's fine on Google represents only 4.4 percent of Google's 2018 revenue of USD136 billion.⁷¹ Meanwhile, the USD600 million fine imposed on Microsoft by the EC in 2013 accounts for just one percent of the company's worldwide revenues that year.⁷²

Most fines imposed are below the maximum amount that could have been enforced (see Table 5).

With regards to those cases for which it is possible to determine whether the maximum possible fines had been imposed, only two fines were set at the highest possible amount: Facebook's fine by the EU for misleading information in its acquisition of WhatsApp and South Africa's fine on Computicket for exclusivity agreements. The other cases imposed lower fines, either due to a lower starting base of calculation than the maximum allowed by law or owing to fine reductions for cooperation and/or settlement agreements. In Australia's case against Flight Centre, the Australian Authority (ACCC) looked for a higher fine to be imposed by the Court; though the fine was increased, the amount did not match the ACCC's expectations. There may be reason to further explore the deterrent effects of fines, especially those based on national revenues in the context of large global firms, and particularly, how effective fines are relative to other remedies.

69 CCI Matrimony vs Google Case decision, available at: <https://www.cci.gov.in/sites/default/files/07%20%26%20%2030%20of%202012.pdf?download=1>

70 TechCrunch "Google reaches \$7.8 million settlement in its Android antitrust case in Russia", available at: <https://techcrunch.com/2017/04/17/google-reaches-7-8-million-settlement-in-its-android-antitrust-case-in-russia/>

71 Statista "Annual revenue of Google from 2002 to 2020", available at: <https://www.statista.com/statistics/266206/googles-annual-global-revenue/>

72 Statista "Microsoft's annual revenue worldwide from FY 2002 to FY 2021", available at: <https://www.statista.com/statistics/267805/microsofts-global-revenue-since-2002/>

TABLE 5 - Digital Economy Cases in which Fines Have Been Imposed (Gray Rows Connotate Middle-Income Countries)

Country	Year	Case	Type of conduct	Conduct	≈Fine in million USD	Fine as ≈ percentage of annual worldwide turnover	Was the fine below the maximum amount possible?
European Union	2018	Google (Android/mobile internet)	Abuse of dominance	Google imposed restrictions on Android device manufacturers and network operators to ensure that traffic on Android devices goes to the Google search engine.	4,687.2	4.43% ⁷³	Yes ⁷⁴ Fine could have been calculated by using 30% of sales; only 11% were used.
European Union	2013	Microsoft (Internet Explorer tying)	Abuse of dominance	Microsoft failed to comply with its commitments to not bundle Internet Explorer with Windows.	605.8	1.02% ⁷⁵	Yes ⁷⁶ Fine could have gone up to 10% of total turnover.
United States	2012	Publisher and Apple Inc (e-books)	Anticompetitive agreement-Vertical restraints	International publishers and Apple were charged with conspiring on e-book pricing.	450.0	0.29% ⁷⁷	N/A
France	2019	Google (Unfair trading conditions Google Ads)	Abuse of dominance	Operating rules of Google Ads platform were “opaque and difficult to understand”, and were applied in an unfair and random manner.	181.65	0.1% ⁷⁸	Yes Fine could have gone up to 10% pre-tax sales worldwide
European Union	2014	Facebook-WhatsApp (merger)	Merger	Facebook was fined for giving “misleading information” about its takeover of WhatsApp.	118.8	0.95% ⁷⁹	On the max; ⁸⁰ Up to 1% of the aggregated turnover of companies for providing incorrect or misleading information
European Union	2018	Asus resale price maintenance (RPM)	Anticompetitive agreement-Vertical restraints	Asus engaged in resale price maintenance (RPM) by placing limits on the ability of online retailers to set their retail prices.	68.5	0.53% ⁸¹	Yes ⁸² Fine could have been up to 10% of Asus’ turnover; decided on a lower basis and then reduced due to cooperation
European Union	2018	Guess (distribution agreements)	Anticompetitive agreement-Vertical restraints	Cross-border sales restrictions, internet sales limitations, and resale price restrictions	43.0	1.82% ⁸³	Yes ⁸⁴ Basis for calculation set at 7% of sales, when it could have been 30%, and then further reduced by 50% due to cooperation; fine could not exceed 10% of global turnover.
Korea	2006	Microsoft (tying of Windows Messenger and Media Player)	Abuse of dominance	Microsoft was fined for selling the Messenger program in a bundle with the Window Media Service (WMS) and the Window Media Player program (WMP).	35.2	0.08% ⁸⁵	N/A
India	2018	Google (favoring flight unit)	Abuse of dominance	Google abused its dominance by placing its commercial flight unit at a prominent position in the search engine results.	20.0	0.01% ⁸⁶ 5% of local turnover in India	Yes ⁸⁷ Could have gone up to 10% of turnover in India in the previous three years

73 EC Case 40099 Google Android, available at: https://ec.europa.eu/competition/elojade/iseif/case_details.cfm?proc_code=1_40099

74 EC Case 40099 Google Android, available at: https://ec.europa.eu/competition/elojade/iseif/case_details.cfm?proc_code=1_40099

75 EC Case 39530 Microsoft (Tying), available at: https://ec.europa.eu/competition/elojade/iseif/case_details.cfm?proc_code=1_39530

76 EC Case 39530 Microsoft (Tying), available at: https://ec.europa.eu/competition/elojade/iseif/case_details.cfm?proc_code=1_39530

77 Statista Global revenue of Apple from 2004 to 2020, available at: <https://www.statista.com/statistics/265125/total-net-sales-of-apple-since-2004/>

78 Autorité de la concurrence “Decision 19-D-26 of 19 December 2019 regarding practices employed in the online search advertising sector”, available at: https://www.autoritedela-concurrence.fr/sites/default/files/attachments/2020-04/19d26_en.pdf

79 Facebook “Facebook Reports Fourth Quarter and Full Year 2014 Results”, available at: <https://investor.fb.com/investor-news/press-release-details/2015/Facebook-Reports-Fourth-Quarter-and-Full-Year-2014-Results/default.aspx#:~:text=Revenue%20for%20the%20full%20year,%25%20year%2Dover%2Dyear>

80 CASE M.8228 - FACEBOOK /WHATSAPP, available at: https://ec.europa.eu/competition/mergers/cases/decisions/m8228_493_3.pdf

81 Statista “Asus revenue worldwide from 2011 to 2019, by region”, available at: <https://www.statista.com/statistics/791193/worldwide-asus-revenue-by-region/>

82 EC Case AT.40465 — Asus (vertical restraints), available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0921\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0921(01)&from=EN)

83 Statista “Net revenue of Guess, Inc. worldwide from fiscal year 2017 to 2020”, available at: <https://www.statista.com/statistics/1026318/guess-net-revenue-worldwide/>

84 EC “CASE AT.40428 – GUESS, available at: https://ec.europa.eu/competition/antitrust/cases/dec_docs/40428/40428_1205_3.pdf

85 Statista “Microsoft’s annual revenue worldwide from FY 2002 to FY 2021”, available at: <https://www.statista.com/statistics/267805/microsofts-global-revenue-since-2002/>

86 Statista “Annual revenue of Google from 2002 to 2020”, available at: <https://www.statista.com/statistics/266206/googles-annual-global-revenue/>

87 CCI Matrimony vs Google Case decision, available at: <https://www.cci.gov.in/sites/default/files/07%20%26%20%2030%20of%202012.pdf?download=1>

Country	Year	Case	Type of conduct	Conduct	≈Fine in million USD	Fine as ≈ percentage of annual worldwide turnover	Was the fine below the maximum amount possible?
Singapore	2018	Grab-Uber (merger)	Merger	Uber-Grab merger led to a substantial lessening of competition.	9.1 Grab 4.5/Uber 4.6	Grab 0.45%/Uber 0.04% ⁸⁸	N/A
Australia	2018	Flight Centre Limited (MFN)	Anticompetitive agreement-Collusion	Airlines would not offer their air fares directly to consumers at less than the prices provided by Flight Centre.	8.1	0.48% ⁸⁹	Yes. ⁹⁰ The ACCC wanted the fine of AUD11 million imposed by the court increased. Though it was increased to 12.5 million AUD, the ACCC still considered it to be low.
Russia	2015	Google (app mandatory installation)	Abuse of dominance	The conditions for offering the applications stores included the mandatory preset of Google applications and the search system, along with their mandatory placement in priority positions.	7.0	0.01% ⁹¹ 9% of local turnover in Russia	Yes ⁹² It was 9%, when it could have been up to 15% of turnover in Russia.
Korea	2012	Goldwin Korea's (North Face exclusive dealing)	Anticompetitive agreement-Vertical restraints	Goldwin forced stores to not sell at retail prices below some set prices and prohibited online selling.	4.3	0.71% ⁹³	N/A
Sweden	2015	Booking (MFN)	Anticompetitive agreement-Vertical restraints	Booking.com's price parity clauses with hotels	3.5	0.04% ⁹⁴	N/A
South Africa	2019	Computicket (exclusivity agreements)	Abuse of dominance	Computicket's exclusivity agreements with inventory providers for the provision of tickets for entertainment events	1.1	10.00% ⁹⁵	On the max ⁹⁶ —max imposed; may not exceed 10% of firms' annual turnover of previous year
United Kingdom	2016	Trod Limited and GB (collusion)	Anticompetitive agreement-Collusion	GB eye and Trod agreed that they would not undercut each other's prices on Amazon and used automated re-pricing software to monitor and adjust prices.	0.2	1.1% ⁹⁷	Yes ⁹⁸ Reduction for settlement and cooperation; could have gone up to max 10% of turnover
Taiwan, China	2010	Wei Fong vs Merida Bicycle (prohibition of online sales)	Anticompetitive agreement-Vertical restraints	Prohibition to sell online	0.1	N/A	N/A
Grey rows connote middle-income countries							

Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

88 Bloomberg "Ride-Hailing Giant Grab Expects to Double Revenue in 2019", available at: <https://www.bloomberg.com/news/articles/2018-09-06/ride-hailing-giant-grab-expects-to-double-revenue-in-2019>; CNBC "Uber's growth slowed dramatically in 2018", available at: <https://www.cnbc.com/2019/02/15/uber-2018-financial-results.html#:~:text=According%20to%20the%20private%20company's,percent%20from%20the%20prior%20year>

89 ACCC "Flight Centre ordered to pay \$12.5 million in penalties", available at: <https://www.accc.gov.au/media-release/flight-centre-ordered-to-pay-125-million-in-penalties>; Flight Center Travel Group "Annual Report 2018", available at: <https://www.fctgl.com/wp-content/uploads/2018/09/Computershare-FLT-Final-Annual-Report.pdf>

90 ACCC "Flight Centre ordered to pay \$12.5 million in penalties", available at: <https://www.accc.gov.au/media-release/flight-centre-ordered-to-pay-125-million-in-penalties>

91 Statista "Annual revenue of Google from 2002 to 2020", available at: <https://www.statista.com/statistics/266206/googles-annual-global-revenue/>

92 FAS Yandex vs Google Case, available at: <http://en.fas.gov.ru/documents/documentdetails.html?id=14677>

93 Goldwin Inc. "Summary of Consolidated Financial Results for the Year Ended March 31, 2013", available at: https://corp.goldwin.co.jp/eng/cgi/wordpress/wp-content/uploads/2013/06/%E2%91%A3%E7%AC%AC62%E6%9C%9F_%E6%B1%BA%E7%AE%97%E7%9F%AD%E4%BF%A1Report.pdf

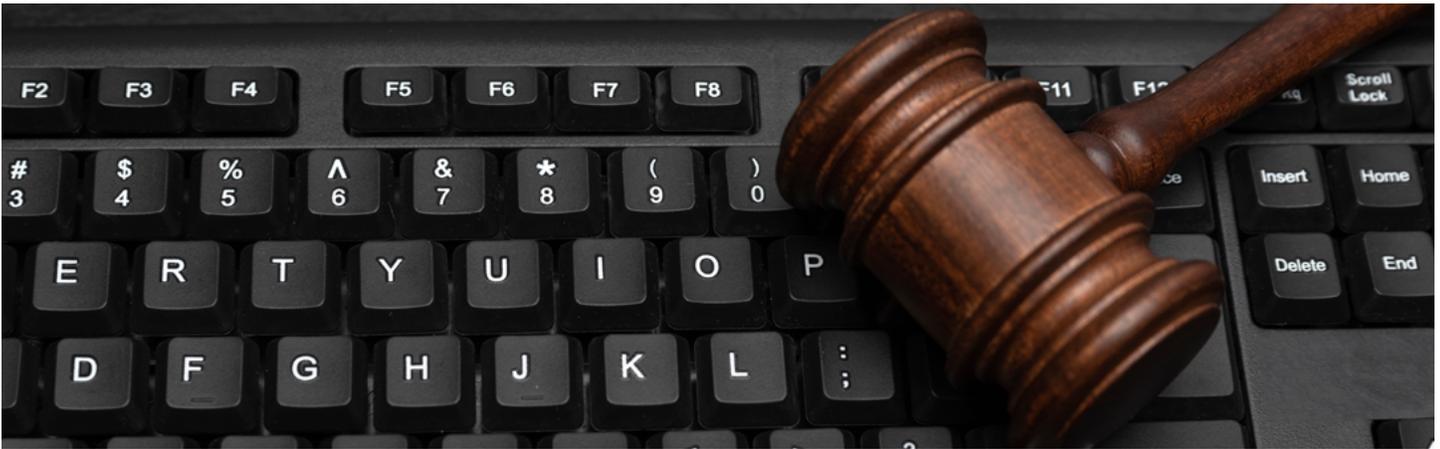
94 UNITED STATES SECURITIES AND EXCHANGE COMMISSION. The Priceline Group Annual Report, available at: <https://ir.bookingholdings.com/static-files/52c8f565-1f02-4f0f-9931-6485fc838d5c>

95 Competition Tribunal of South Africa. COMPETITION COMMISSION AND COMPUTICKET (PTY) LTD, available at: <https://www.comptrib.co.za/case-detail/5455>

96 Competition Tribunal of South Africa. COMPETITION COMMISSION AND COMPUTICKET (PTY) LTD, available at: <https://www.comptrib.co.za/case-detail/5455>

97 CMA decision on Case 50223 "Online sales of posters and frames", available at: <https://assets.publishing.service.gov.uk/media/57ee7c2740f0b606dc000018/case-50223-final-non-confidential-infringement-decision.pdf>

98 CMA decision on Case 50223 "Online sales of posters and frames", available at: <https://assets.publishing.service.gov.uk/media/57ee7c2740f0b606dc000018/case-50223-final-non-confidential-infringement-decision.pdf>



4.2. Remedies and conditions

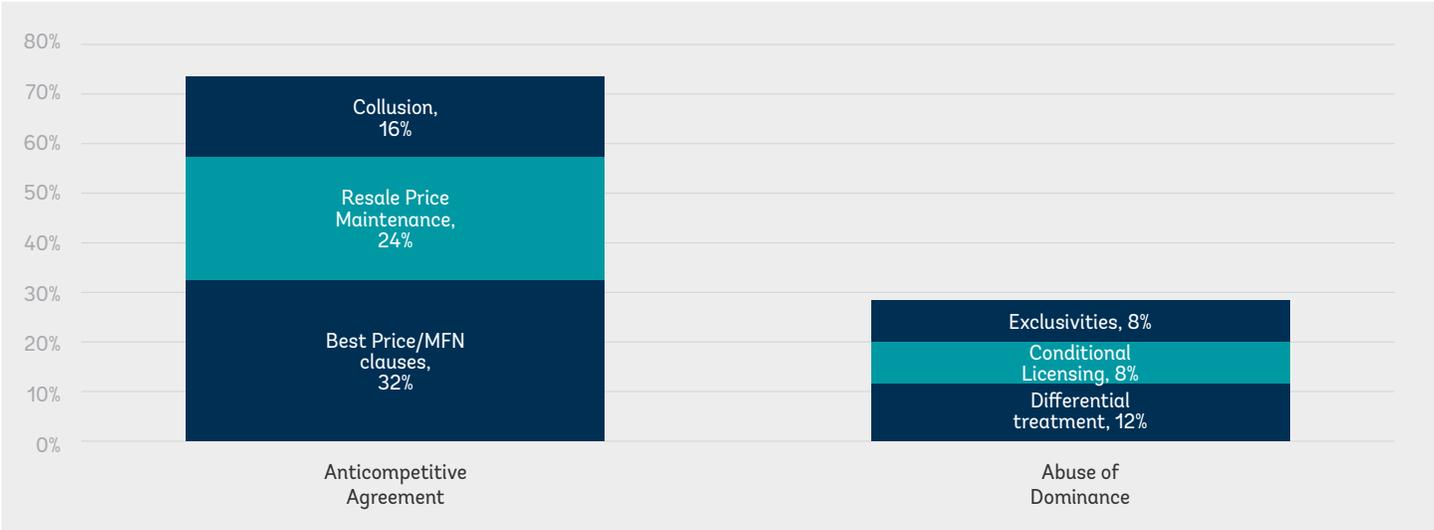
Firms that are found to have infringed competition law with anticompetitive practices, such as the abuse of dominance or anticompetitive agreements, can be subject to remedies imposed by competition authorities to restore or preserve competition. Remedies are focused on rearranging the conditions of a market to eliminate the possibility of and/or to disincentivize anticompetitive behavior. Structural remedies can, for example, involve the divestiture of parts of the business. Behavioral remedies that target the future behavior of the firm could grant access to essential inputs or facilities, while also prohibit behaviors that have been found to restrict competition. These usually come in the form of orders to “cease and desist” the identified anticompetitive behavior. In mergers, if a competition authority concludes that an operation may substantially lessen competition, it can decide to either impose a ban that prevents the parties from consummating the transaction, or negotiate a

settlement that establishes conditions to modify the merger and allow it to proceed, while preserving competition.

In 44 of the 103 cases included in the database, orders to cease an anticompetitive behavior and/or other remedies were imposed by the corresponding antitrust authorities (or conditions in the case of mergers). In 25 of these 44 cases, the authority ordered the parties involved to cease the behavior that led to competition concerns. Seven of these cases (28 percent) are abuse of dominance cases and 18 (72 percent) are cases of anticompetitive agreements. The distribution of cease orders by conduct can be seen in Figure 31. It is unknown in how many cases these cease orders were complied with, as there is little public information on the monitoring of these conditions.

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FIGURE 31 - Cases in which Authorities Ordered Cessation of Behavior by Type of Conduct



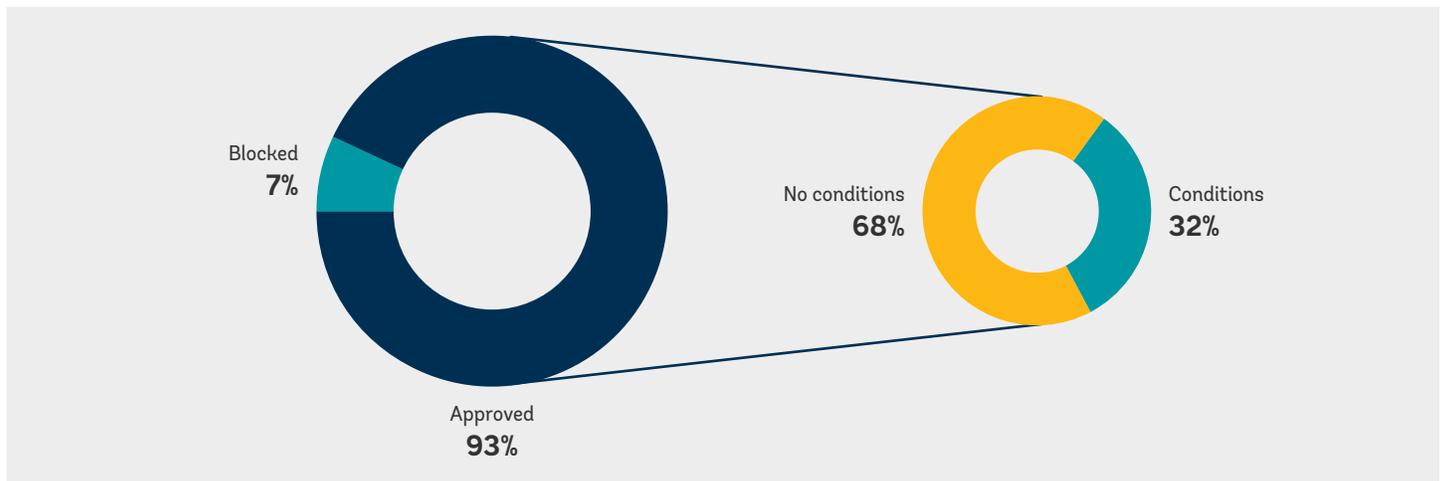
Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Remedies or conditions have been imposed in 20 cases: in developing jurisdictions, this is largely in merger cases, while in developed jurisdictions, it is mostly in abuse of dominance cases. The cases that resulted in remedies or conditions are split evenly between developed and developing jurisdictions; however, the distribution among types of cases differs significantly. In developing jurisdictions, most cases with conditions are mergers (78 percent). Developing jurisdictions only imposed remedies in one abuse of dominance case and one anticompetitive agreement case. In developed jurisdictions, cases with remedies are split more evenly among abuse of dominance cases, mergers, and anticompetitive agreements.

Of the mergers that were approved, 32 percent were approved with conditions (Figure 32).⁹⁹ Mergers that could lessen competition, if completed as proposed by the parties, but that could be modified to avoid the possibility of anticompetitive behavior or the incentives for it, were approved with conditions, rather than outright prohibition. Conditions imposed can be remedies that are structural (for example, the divestiture of parts of the business) or behavioral that are designed to prevent or disincentivize harmful behavior.

> > >

FIGURE 32 - Mergers Approved with Conditions (out of Total Mergers) Approved



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

Most of the conditions imposed by authorities in digital economy mergers are behavioral. Conditions were imposed on four mergers in the passenger transport sector—all of which involved Uber. These conditions include prohibitions on imposing exclusivities on platform users. Data-related conditions were imposed on three mergers in the passenger transport, social media/communications services, and educational materials sectors. These conditions are discussed below in Table 6. Examples of other conditions imposed in mergers are prohibitions on the tying/bundling of software and operating systems in the software or operating systems (OS) sector (such as the Microsoft-LinkedIn merger), along with ensuring non-discriminatory conditions for third parties in the software/OS sector (for example, the Microsoft-LinkedIn merger) and the commercialization of flights (for example, the Avianca-PriceRes merger).

Among anticompetitive practices, abuse of dominance (20 percent) and collusion (17 percent) make up the highest proportion of cases with remedies (beyond cease and desist) imposed. Only five percent of vertical restraints cases have remedies imposed.

While the data show that remedies are not common, some interesting examples have emerged, including those related to giving access to third parties to platforms or access to data. Some examples are described in Table 6. It remains to be seen whether these remedies can address the bottlenecks of business models in the digital economy; thus, these examples are worth monitoring in the coming years.

⁹⁹ As a comparison point, this proportions are similar to mergers across all sectors. The proportion approved with conditions is 34 percent across all sectors, as reported in Global Competition Review (GCR) data for 2017 and 2018. Data for all mergers in 2017–18 were obtained from the Rating Enforcement 2018 and 2019 of the Global Competition Review containing data on mergers filed and reviewed in Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Denmark, European Union, Finland, France, Germany, Greece, India, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Mexico, Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Proportions were calculated, using mergers that led to an in-depth review as base, available at: <https://globalcompetitionreview.com/benchmarking/rating-enforcement-2018/1174789/analysis>; <https://shop.globalcompetitionreview.com/products/rating-enforcement-2018>; <https://globalcompetitionreview.com/benchmarking/rating-enforcement-2019/1197029/analysis>; and <https://shop.globalcompetitionreview.com/products/rating-enforcement-2019>.

Currently, little evidence is available on the impact of these remedies, which is a clear area where further research would be valuable.

> > >

TABLE 6 - Examples of Cases Where Data-Related Remedies/Conditions were Imposed

Case	Type of remedies/ conditions	Remedies/ Conditions	Essential facility equivalent
Microsoft-LinkedIn merger (European Commission 2016) ¹⁰⁰	Behavioral	<ul style="list-style-type: none"> Continue to make the Microsoft Graph application programming interface (API) available to LinkedIn's competitors to ensure that Microsoft cannot prevent LinkedIn's rivals from integrating into Office by denying them API access 	<ul style="list-style-type: none"> Microsoft Graph API
Uber-Grab (Singapore 2018) ^{101, 102} and Uber/Careem mergers (Egypt 2019) ¹⁰³	Behavioral	<ul style="list-style-type: none"> • EGYPT: <ul style="list-style-type: none"> » Grant future competitors access to Careem's "points of interest map data" on a one-time basis » Grant competitors access to trip data (including rider and driver information), subject to data protection laws » Give riders access to their own data » Remove exclusivity requirements in contracts with drivers • SINGAPORE: <ul style="list-style-type: none"> » The authority considered mandating the transferability of driver data between apps before abandoning the idea, after a survey of potential entrants suggested that this was not an impediment to entry. Remedies that prohibit the imposition of exclusivity on drivers and force Grab to maintain its pre-merger pricing algorithm were imposed. • CONCERNS: <ul style="list-style-type: none"> » Institutional arrangements for monitoring and implementing data sharing remedies are a concern. » Data remedies could involve higher costs for firms, which could be passed on to consumers. 	<ul style="list-style-type: none"> Map data Rider and driver data
Amazon abuse of dominance case (Germany 2019) ¹⁰⁴	Behavioral	<ul style="list-style-type: none"> Amend terms of business for sellers on Amazon's online marketplaces across Europe, North America, and Asia to reduce Amazon's (previously extensive) rights to use data on the products of third parties. Actions of national authorities can impact the policies of platform firms globally. 	<ul style="list-style-type: none"> Data on products sold by third parties in Amazon
Sanoma-Iddink merger (Netherlands 2019) ¹⁰⁵	Behavioral	<ul style="list-style-type: none"> Competitors must be granted access to the Magister platform (an online learning management system owned by Iddink) and its data under equal conditions to prevent Sanoma's competitors (other publishers) from being excluded from offering their educational materials to schools and students through Magister. Sanoma prohibited from accessing the commercially-sensitive information of competing publishers through the platform 	<ul style="list-style-type: none"> Magister platform and database
Facebook's abuse of dominance for inadequate data processing (Germany 2019 and ongoing) ^{106, 107}	Structural/Behavioral	<ul style="list-style-type: none"> Adapt the terms of service and data processing to prevent it from combining user data across its own suite of platforms and gathering data on users from third-party websites without consent This could be seen as an internal divestiture of Facebook's data. 	<ul style="list-style-type: none"> User data of each of Facebook's platforms

Source: Authors' elaboration on decision documents.

100 EC Case M.8124 – Microsoft / LinkedIn, available at: https://ec.europa.eu/competition/mergers/cases/decisions/m8124_1349_5.pdf, https://europa.eu/rapid/press-release_IP-16-4284_en.htm

101 Information from interviews. The authority did however mandated that Grab should maintain its pre-merger pricing algorithm and driver commissions to protect riders and drivers. From the date of the authority's decision, there have been two new entries to the Singaporean market. Skift "Grab Will See New Ridehailing Competition in Singapore From Go-Jek", available at: <https://skift.com/2018/11/28/grab-will-see-new-ridehailing-competition-in-singapore-from-go-jek/>, KrASIA "FastGo launches Grab competitor in Singapore, but it's more expensive than other ride-hailers", available at: <https://kr-asia.com/fastgo-launches-its-grab-competitor-in-singapore-but-its-more-expensive-than-other-ride-hailers>

102 CCCS "Grab-Uber Merger: CCCS Imposes Directions on Parties to Restore Market Contestability and Penalties to Deter Anti-Competitive Mergers", available at: <https://www.cccs.gov.sg/media-and-consultation/newsroom/media-releases/grab-uber-id-24-sept-18>

103 Egyptian Competition Authority "ECA's Assessment of the Acquisition of Careem, Inc. by Uber Technologies, Inc", available at: <https://www.docdroid.net/GXSIQ7c/ecas-assessment-of-the-acquisition-of-careem-inc-by-uber-technologies-incnon-confidential1.pdf>

104 Bundeskartellamt "Bundeskartellamt obtains far-reaching improvements in the terms of business for sellers on Amazon's online marketplaces", available at: https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/17_07_2019_Amazon.html

105 Netherlands' Authority for Consumers and Markets. "ACM conditionally clears acquisition of Iddink Group by Sanoma Learning." <https://www.acm.nl/en/publications/acm-conditionally-clears-acquisition-iddink-group-sanoma-learning>

106 Bundeskartellamt. Decision on Case B6-22/16, available at: https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Entscheidungen/Missbrauchsaufsicht/2019/B6-22-16.pdf?__blob=publicationFile&v=5

107 The case was appealed and is still ongoing at the time of writing. On June 23rd 2020, the Federal Court of Justice provisionally confirms the allegation of Facebook's abuse of a dominant position.

Remedies imposed on digital platforms with global or regional presence could impact practices in multiple countries. For example, commitments given by Amazon to the German competition authority, in response to competition concerns by third-party sellers, demonstrate how the actions of national authorities can have an impact on the policies of platform firms globally. In this case, Amazon agreed to amend its terms of business for sellers on Amazon's online marketplaces across Europe, North America, and Asia. Among the changes were a reduction in Amazon's (previously extensive) rights to use data on the products of third parties.¹⁰⁸

The idea that antitrust enforcement in digital markets might have effects in several jurisdictions at once, due to the global nature of platforms, highlights the potential for collaboration between competition authorities. There are very recent examples of collaboration between competition

authorities in antitrust cases. During its in-depth investigation of the Google-Fitbit merger of 2020, the European Competition Commission worked in close cooperation with competition authorities around the world, as well as with the European Data Protection Board.¹⁰⁹ This merger brought together the competition authorities of several jurisdictions, including those from developing countries like South Africa, to discuss its implications and share information. The most recent International Competition Network (ICN) highlighted the need for competition authorities to work together in addressing competition issues in digital markets.¹¹⁰ The harmonization of approaches to antitrust in digital markets through international fora could be relevant for interjurisdictional collaboration. Further research and future versions of the MCT DAD could be capturing the extent of collaboration between authorities in different jurisdictions and different regulators in digital economy antitrust cases.

108 Bundeskartellamt, 17 July, 2019, "Press Release: Bundeskartellamt Obtains Far-reaching Improvements in the Terms of Business for Sellers on Amazon's Online Marketplaces.", available at: https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/17_07_2019_Amazon.html

109 EC "Mergers: Commission clears acquisition of Fitbit by Google, subject to conditions", available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2484

110 ICN 2020 Virtual Annual Conference, available at: <https://www.internationalcompetitionnetwork.org/2020vac/>



Key Takeaways and Recommendations

- 1. While antitrust cases involving digital platforms have been investigated in all regions of the world, no cases have been finalized by authorities in low-income jurisdictions.** This is likely a reflection of: (1) the economic priorities of these countries, or a perception that digital markets only affect a narrow portion of society; and (2) the capacity or appetite of their authorities (or, in some cases, the lack of a functional authority) to pursue cases against large firms that have the resources to enter into long legal battles. However, we expect this to change in the coming years, as digital markets develop and as more merger transactions start to occur in developing markets. Therefore, it will be valuable for these countries to think ahead about building their institutional capacities in order to lay the groundwork for competitive digital markets. Although there are several cases that have been finalized and ongoing in lower-middle-income countries (see Annex B), further research could hone in on the key constraints to enforcement with regards to the digital economy in these countries.
- 2. The sectors, in which antitrust cases involving digital platforms have been investigated, vary by income level and region.** These differences reflect the relative importance of certain sectors in the economy (for example, mobile financial services cases only appear in developing countries); a harmonization of approaches between authorities in the same region (as seems to be the case between European jurisdictions); and regional merger waves (as in the case of passenger transport in East Asia and Pacific). There could also be opportunities for authorities to learn from what other jurisdictions have, or have not, assessed when analyzing specific sectors. Authorities may also consider sectors into which they had not previously ventured. For example, tourism and social media/communications are two sectors where developing jurisdictions have very few cases; however, this is likely to be of significance to their economies and populations. Since developed jurisdictions have seen several cases in these sectors, there are opportunities here for learning and knowledge sharing between high- and middle-income countries.

- 3. Further research into what is driving the distribution of cases that involve foreign versus domestic firms across regions could help in understanding the activities of competition authorities.** It could be useful to understand why certain regions in the developing world have a higher predominance of cases involving domestic or foreign firms than others. This status quo could be mirroring the composition of the platforms' ecosystems in each region and country (for example, dynamics are partially driven by the fact that many large platforms are headquartered in North America). An area for further research could be whether this could relate to the role of political economy dynamics in the investigations, which are linked to the nationalities of the firms involved.
- 4. Developing countries may have had a more reactive approach to analyzing cases in the digital economy, while high-income authorities have been more proactive.** Most cases in developing jurisdictions are merger cases that must be reviewed on notification. Authorities in developing jurisdictions have been relatively less active in pursuing cases against anticompetitive practices (which often require a more proactive investigatory approach) than authorities in developed jurisdictions. Further research would be needed to determine if developing countries have been less active in the digital economy relative to their actions in the non-digital economy. Studying the kinds of sectors, case types, and factors analyzed by authorities globally could provide developing jurisdictions with learnings to become more proactive in the digital economy. The use of other instruments by competition authorities, like market studies/inquiries and advocacy efforts, is another emerging avenue that has started to get some developing countries' authorities more involved in the digital economy.
- 5. It is valuable to understand how different sectors may be prone to different types of anticompetitive behavior by digital platforms, depending on the typical business models seen in those sectors.** For example, e-commerce and the tourism sectors may see relatively more anticompetitive vertical restraints practices due to their reliance on small businesses to provide products and capacity. In online search and advertising and operating systems/apps, the use of self-preferencing algorithms by large vertically-integrated players may tend to lead to more abuse of dominance cases. In passenger transport, collusion cases are the most frequent, potentially due to the use of pricing algorithms in this sector. These are the

patterns that we see in the data, and while previous behavior should not unduly bias future judgements, they do represent patterns that could help develop common theories of harm for certain types of business models.

- **Related to the previous point, authorities should focus their efforts on developing a sound understanding of the different business models, characteristic of digital platforms, as well as identifying the incentives and avenues for anticompetitive behavior that these business models create.** The digital economy database highlights some examples in this respect. Preferential treatment is the most common type of behavior investigated in online search and advertising, as might be expected given the incentive for firms in this sector to provide advantages to their own products/services. In software/operating systems (OS), the most common type of abuse of dominance investigated is illegal tying, which tallies with the fact that Over-The-Top apps and services are usually provided with software and OS.
- 6. Authorities that are active in the digital economy space should review whether they are adequately accounting for emerging economic features, theories of harm, and efficiencies associated with the digital markets.** Certain characteristics of digital markets and platform business models need to be analyzed more frequently, especially in developing jurisdictions. For example, features, such as winner-takes-most dynamics, multihoming, zero-price behavior, and algorithms are mentioned in decisions relatively infrequently.¹¹¹ There are also very few cases investigating data-related issues, even though data are an important part of the production process for business models in the digital economy.
 - **Authorities in developing jurisdictions should take steps to include emerging features (like multihoming and data) in their analyses and build more capacity on these topics by taking advantage of the analyses conducted in developed economies.** Developed countries more frequently assess new features associated with the digital economy, while developing countries rely more on traditional means of assessing competition (for example, inter-platform competition and prices). In particular, developing jurisdictions may be able to learn from developed jurisdictions on where and how to assess data-related issues (data as an essential facility/barrier to entry and data protection/privacy), particularly in abuse of dominance cases.

111 As an example, the proportion of social media/communications services and passenger transport sector cases that analyze network effects appears to be relatively low, given the importance of these features in the aforementioned sectors and business models.

7. Antitrust authorities, especially in developing countries, should be encouraged to participate more actively in the debate on how data protection/privacy can be relevant dimensions for competition analyses.

Data protection/privacy factors are not commonly raised by authorities worldwide, which may be understandable, given the ongoing debate on the inclusion of the privacy dimension in antitrust investigations. For example, there is some debate over whether reductions in privacy could constitute an exploitative abuse of dominant position or a degradation of competition in data-driven mergers. More analysis on the matter when investigating cases in the digital economy could help develop a better understanding on how data protection/privacy should be part of antitrust cases and how the valuation of data protection/privacy by consumers potentially differs in developing countries from its valuation in developed economies.

8. Fines that are low relative to the global income of platform firms (partly because they are often based on national revenues) may limit the deterrent effect of antitrust on the anticompetitive conduct by firms.

Only 34 percent of practice cases where wrongdoing was found had fines imposed. Additionally, the magnitude of most of the fines imposed represents a very low proportion of the revenues of firms that usually generate billions of dollars of income worldwide (based on the figures available, often imposed fines are only a fraction of the 10 percent of turnover cap that is typically allowed under competition regimes). The data also point to a potential issue that fines determined on the basis of national turnover may not be a significant deterrent in the context of global firms with substantial turnover from a wide range of jurisdictions.

- **Further analyses of the impacts of these fines are needed to determine how fines should be set to deter anticompetitive behavior** (even if set at a higher level) or whether the focus should shift more towards remedies as a way of promoting competition.

9. Authorities worldwide would benefit from greater capacity in the design of remedies and conditions.

Remedies have been infrequently imposed worldwide, and currently, there is little to no available evidence on their efficacy. Most remedies imposed have been in developed jurisdictions. It would be particularly helpful for authorities in developing countries to build their capacities on how remedies can be targeted specifically at bottleneck issues, so they can effectively alleviate competition

concerns without unduly raising costs for firms. Moreover, in cases where the practice under investigation may hold certain efficiencies (particularly in vertical restraints cases), it is important that the analysis thoroughly takes into account both harms and efficiencies, before an order to cease the behavior is issued, so that behaviors that may be pro-competitive on balance are not unnecessarily restricted. Finally, the design of remedies also needs to account for budget and institutional capacity to facilitate or monitor these remedies. When imposing remedies, authorities should factor in the resources and capacity required for ex-post analysis of market dynamics after the remedies are implemented.

10. Orders to cease anticompetitive behavior are a common result in cases where wrongdoing was found, but it is important for authorities to monitor compliance with these orders.

It is unclear from public data whether the cease orders made are being monitored or whether they are being complied with. Therefore, it would be important for authorities to factor this monitoring into their planning to ensure effectiveness. Reviewing compliance with these orders and their impact could be an area for further research. Additionally, it would be interesting to conduct analyses on the results of the remedies and conditions imposed, in terms of market outcomes, to determine whether or not there have been improvements. Though this could be a difficult task due to the lack of counterfactual situations to compare with, it would be relevant to pursue it in order to improve the design and implementation of remedies imposed.

11. Potential cross-country spillovers from, and collaboration on, antitrust actions on global digital firms could be leveraged to support better outcomes across jurisdictions.

For example, some mergers involving platforms will affect several jurisdictions concurrently, including those in developing countries. Cooperation across jurisdictions in the review of such mergers can help ensure consistent decisions, while building capacity in lower-income jurisdictions. More generally, authorities can share information on their experiences in digital economy cases across countries, especially because some platform behaviors are seen in a number of countries. Moreover, remedies imposed by competition authorities on a digital platform firm with a global or a regional presence may also impact practices in other countries, which could indirectly affect individuals in developing countries.

12. To support transparency and cross-border learning, authorities should strive to make their decisions public and provide clarity about the factors justifying their decisions. Apart from being a good practice in general, transparency about decisions and their rationale would also be useful for joint learning and capacity development on digital markets across all regions. Information on how different practices and business models have been considered in other jurisdictions is valuable for authorities looking at digital markets in their own jurisdictions.

13. Several areas for further research have been raised by this analysis, which will be useful for further defining policy responses. Among the areas for further research are: (a) systematization of which sectors/markets may be

more prone to different types of firm conduct and which economic assessment factors may be more relevant to analyze across different sectors/markets; (b) new competition and regulatory concepts (for example, the concept of “gatekeeper” and its regulation) being developed in response to digital platform challenges (especially in developed economies) and their relevance to developing countries; (c) the main constraints on developing countries to take action on global digital companies; (d) the extent to which political economy factors determine which cases are taken on by competition authorities; and (e) the extent of collaboration between competition authorities on digital economy cases and the potential spillovers of anti-trust decisions on other jurisdictions.

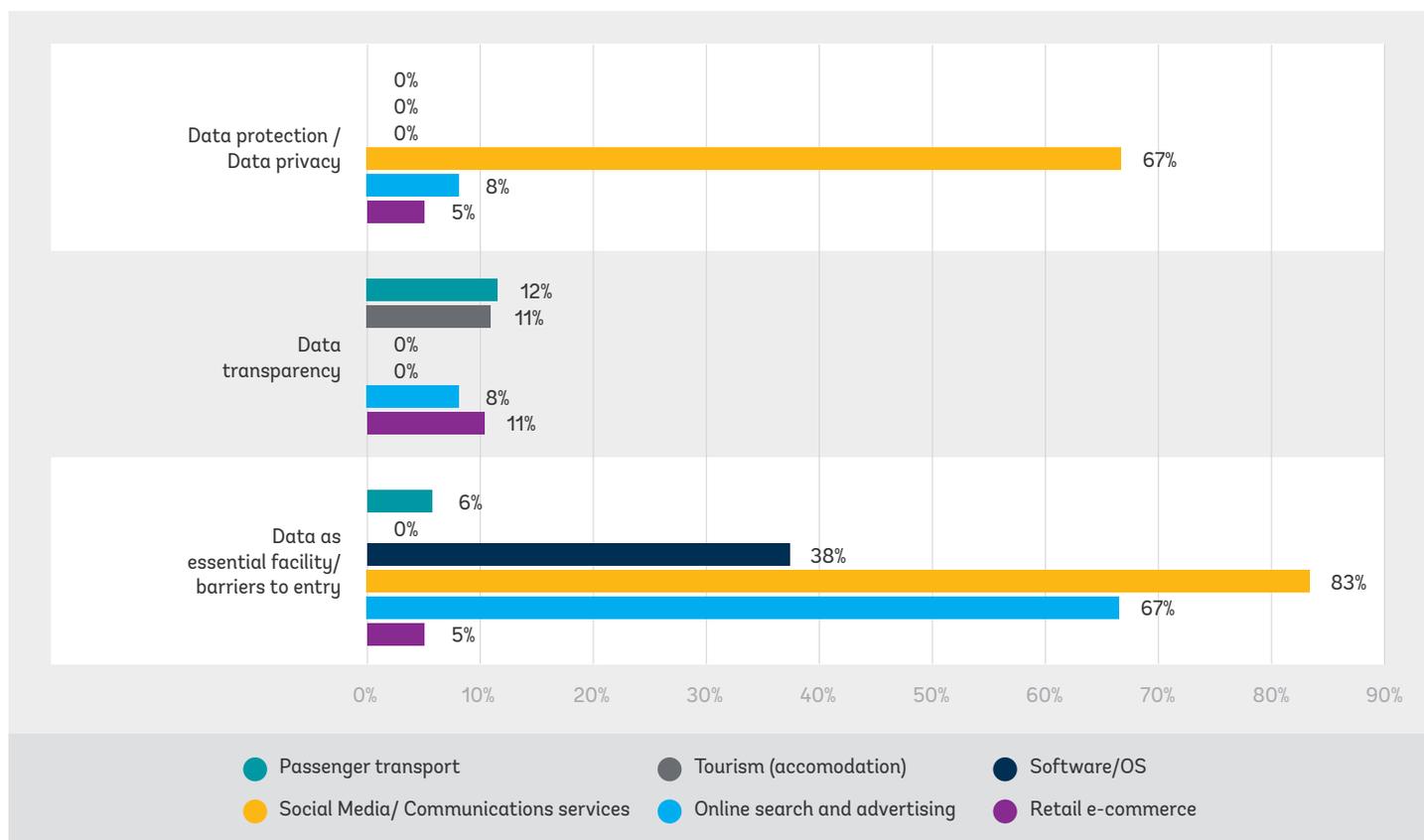


Annex A

The analysis of data-related factors is particularly prevalent in the social media and communications services sector, while only 16 percent of e-commerce cases analyzed data issues.¹¹² All the cases in the social media sector considered the use of data in their analyses. Analyzing data, both as a barrier to entry/essential input and in terms of protection/privacy, is particularly common in cases in this sector. In online search/advertising, the analyses of data issues are particularly focused on data as a barrier to entry/essential input.



Data-related Factors by Sector



Source: WBG, Markets, Competition and Technology Unit, Global Digital Antitrust Database

112 Here, differences in factors of assessment are analyzed for sectors with five or more cases.



Annex B

The table below shows a list of identified antitrust cases involving digital platforms in lower-middle-income countries. Twelve that have been identified as finished are included in the database. Eight additional cases have been identified as unfinished as of January 2020, and are being tracked.



Antitrust Cases Involving Digital Platforms in Lower-middle-income Countries

Finalized cases in lower-middle-income countries				
Region	Country	Sector	Case	Type of Case
East Asia and Pacific	Philippines	Passenger transport	Grab-Uber Merger	Merger
Middle East and North Africa	Egypt	Online Delivery Service	Glovo-Delivery Hero Collusion	Anticompetitive agreement
Middle East and North Africa	Egypt	Passenger transport	Uber-Careem merger	Merger
South Asia	India	Online search and advertising	Matrimony.com and Consumer Unity & Trust Society vs Google	Abuse of dominance
South Asia	India	Passenger transport	Meru Travel Solutions Private Limited vs Uber	Abuse of dominance
South Asia	India	Passenger transport	Samir Agrawal vs Ola-Uber	Anticompetitive agreement
South Asia	India	Passenger transport	Traditional taxis vs Ola in Bengaluru	Abuse of dominance
South Asia	India	Retail E-commerce	Sellers Association vs Flipkart	Abuse of dominance
South Asia	India	Software/OS	Abuse of dominant position by Google in the mobile operating system related markets (GSM)	Abuse of dominance
South Asia	Pakistan	Mobile financial services	Mobilink-Waird Telecom merger	Merger
Sub-Saharan Africa	Kenya	Mobile financial services	CAK vs Safaricom (M-Pesa)	Abuse of dominance
Sub-Saharan Africa	Kenya	Passenger transport	Little Cab vs Uber Kenya	Abuse of dominance



Antitrust Cases Involving Digital Platforms in Lower-middle-income Countries

Cases in lower-middle-income countries identified as unfinished as of January 2020				
Region	Country	Sector	Case	Type of Case
East Asia and Pacific	Indonesia	Passenger transport	Grab-Uber Merger	Merger
East Asia and Pacific	Indonesia	Passenger transport	Grab	Abuse of dominance
South Asia	India	Retail E-commerce	Amazon-Future Retail	Merger
South Asia	India	Tourism	Competition Commission of India vs. MakeMyTrip	Abuse of dominance
Sub-Saharan Africa	Kenya	Mobile financial services	PastFast-Direct Pay merger	Merger
Sub-Saharan Africa	Kenya	Mobile financial services	Direct Pay-Paygate merger	Merger
Sub-Saharan Africa	Nigeria	Mobile financial services	OneFi-Amplify merger	Merger
Sub-Saharan Africa	Zimbabwe	Health	Maisha Health (Cassava) and Mars Ambulance	Merger



Annex C

To classify firms for an analysis of mergers in the MCT DAD, the following assumptions were used:

- The size indicator differentiates between small, medium, large, and very large firms for both the acquiring and the target firm. The classification is based on revenue and employee numbers, as outlined in Table 1, which were drawn from various public sources. When a firm fell under two different categories, the category according to the firm's revenue was chosen.
- A domestic firm is a firm with its headquarters in the jurisdiction in which the merger was assessed. A foreign firm has headquarters in a jurisdiction other than the one in which the merger was assessed. In particular, cases investigated by the European Commission are considered “domestic”, if the headquarters is in a country within the European Union at the time of the review. In this way, the indicator captures the “ultimate” nationality of the firm, even when the firm has a local subsidiary.
- The indicator for “start-ups” classifies the target firm as such, if it was founded five or fewer years ago.



TABLE 1. Firm Size Classifications According to Number of Firm Employees and Revenue

	Employees	Revenue (US\$)
Small	< 200	<50 million
Medium	200-500	50-200 million
Large	500-10,000	200-1billion
Very large	>10,000	> 1billion



Annex D

Abuse of Dominance Cases by Type of Practice

Practice	Case	Country	Conduct investigated
Differential treatment	Buscape vs Google	Brazil	Google giving illegal advantage to its own comparison shopping
	VG Media vs Google	Germany	Google requiring publishers to agree to have snippets displayed in Google services at no fee or Google would curtail the display of hits on their websites in its search results
	Sellers Association vs Flipkart	India	Flipkart favoring a particular retailer in the e-commerce platform
	Matrimony.com and Consumer Unity & Trust Society vs Google		Google, through its search design, placing its commercial flight unit at a prominent position on the Search Engine Result Page (SERP) and allocating disproportionate space to such units to the disadvantage of others
	vs Funda Real Estate	Netherlands	Differential treatment with regards to subordination in ranking, price difference, and no access to information database to certain brokers who are users of the real estate website
	Kaspersky vs Microsoft (antivirus)	Russia	Microsoft favoring its own antivirus software over competitors in Windows
	vs Google (Search practices)	United States	Google preferencing its own content on the Google search results page and selectively demoting its competitors' content from those results
Predatory pricing	Sao Paulo taxi drivers vs Uber	Brazil	Below-cost pricing by Uber
	Meru (taxis) vs Uber	India	Uber charging lower fares to foreclose radio taxi competitors
	Taxis vs Ola in Bengaluru		Platform for booking city taxis charging low fares to foreclose traditional taxi competitors.
	Little Cab (taxis) vs Uber	Kenya	Uber charging lower fares to foreclose a competing platform
	Metered Taxi Industry vs. Uber	South Africa	Uber charging significantly lower fares than regular metered taxis
Illegal tying	vs Google (Android/mobile internet)	European Union	Google requiring device manufacturers to pre-install the Google Search app and browser app as a condition for licensing Google's app store
	vs Microsoft (Internet Explorer)		Microsoft tying of Internet Explorer with Windows on PCs
	vs Google (mobile suite of Google apps)	India	Google requiring device manufacturers to preinstall the entire suite of Google apps and in pre-determined positions, in order to be able to preinstall any proprietary app of Google
	Yandex vs Google (Google Play/Android)	Russia	Google offering the applications store to device manufacturers, only when Google applications and the search system are preset

Practice	Case	Country	Conduct investigated
Restricting access to data	Bing (Microsoft) vs Google [(AdWords' application programming interface) (API)]	Brazil	Google's terms of service of AdWords' API preventing advertisers from transferring data from Google's platform to competitors' sponsored search platforms
	vs Google (AdWords)	Canada	Google's terms of service of AdWords' API preventing advertisers from transferring data from Google's platform to competitors' sponsored search platforms
	vs Toronto Real Estate Board (TREB)		TREB restricting the access of real estate brokers and consumers to historical home sales data
Exclusivity agreements	Sellers Association vs e-commerce platforms	India	Exclusivity agreements of platforms with sellers to sell the selected product exclusively on the selected portal to the exclusion of other e-portals or physical channels.
	vs Safaricom (M-Pesa)	Kenya	Exclusivity agreements imposed by Safaricom, which barred M-Pesa's mobile money transfer agents from engaging in business with other mobile operators
	Competitors' complaints vs Computicket	South Africa	Exclusivity agreements with ticket providers for events
Conditional licensing	vs Google (Android/mobile internet)	European Union	Restrictions on Android device manufacturers and network operators to ensure that traffic on Android devices goes to the Google search engine
	Yandex vs Google (Google Play/Android)	Russia	Google mandating preset applications and search system and placement in priority positions, along with prohibiting preset applications from other vendors
Qualitative exploitative abuse	vs Amazon due to terms of business	Germany	Amazon using abusive rules and practices, such as a lack of transparency of the terms of business; the unexpected termination and blocking of sellers' accounts; and the obligation on sellers to transfer the rights to use product information to Amazon.
Exploitative business terms	vs Facebook (exploitative business terms for inadequate data process)	Germany	Facebook collecting an almost unlimited amount of any type of user data from third-party sources, allocating them to the users' Facebook accounts, and using them for numerous data- processing processes.
Illegal payments	vs Google (Android/mobile internet)	European Union	Google making payments to manufacturers and mobile network operators on the condition that they exclusively pre-install the Google Search app on their devices
Search algorithm manipulation	vs Google (AdWords' API clauses in online search and search advertising)	Canada	Google altering search results to exclude rivals that provide competing services (for example, maps, local reviews, and travel)
Syndication and distribution agreements to exclude rivals	vs Google (AdWords' API clauses in online search and search advertising)	Canada	Google entering syndication agreements with third-party websites that create search entry points directly on websites
Interference with a competitor's transactions	vs DeNA (disconnecting game's links, if on another platform)	Japan	Forcing users not to provide products or services through a competing platform by disconnecting links if on another platform
Unfair trading conditions	vs Google due to the operating rules of Google Ads	France	Account suspension procedure implemented in a nonobjective, nontransparent, and discriminatory manner that could influence the markets in which the advertisers operate

