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This document was prepared by the OECD Secretariat to serve as a background note for the discussion during the session *Practical approaches to assessing digital platform markets for competition law enforcement* that will take place at the Latin American and Caribbean Competition Forum on 24-25 September 2019 in Honduras.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

More documentation related to this discussion can be found at: oe.cd/lacfc.

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Latin American and Caribbean Competition Forum

Session III: Practical approaches to assessing digital platform markets for competition law enforcement

– Background Note by the Secretariat –*

This paper highlights some practical approaches for competition authorities pursuing digital platform enforcement cases, given the unique challenges this can involve. It explains the key features of digital platform market dynamics and emphasises the importance of selecting and prioritising cases based on economic impact, resource requirements and probability of success, among other criteria. It discusses the challenges of market definition due to multi-sidedness, and proposes defining markets only when necessary. It explains the limitations of some tools for assessing market power, and lays out a qualitative approach that can be followed and supplemented with key indicators, whose limitations should be clearly recognised. Finally, it explains the different types of anticompetitive conduct that may emerge in digital markets, and some considerations when deciding whether to pursue these cases.

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1. Introduction

1. Digital platforms play a prominent role in today's economy and our daily lives. For instance:

- Seven of the world's top 10 companies in terms of market capitalisation operate digital platforms.¹
- Internet advertising sales in 2018 exceeded USD 100 billion in the US alone.²
- Forty-five percent of the world's population are active users of social media.³
- Sixty-two percent of the Latin American and Caribbean region used the internet in 2017⁴ compared to fewer than 4% in 2000.

2. However, competition authorities are still developing their approach to analysing these platforms, and making enforcement decisions regarding their conduct.

3. Markets for digital platform services have certain characteristics that must be taken into account in the analysis of competitive conditions. They are multisided, meaning that they involve a firm acting as a platform, selling different products to different groups of interrelated consumers. Crucially, the demand among consumers on at least one side of a platform depends on the demand of consumers on another side. This can make competition analysis challenging, since ignoring the relationships between different groups of consumers can lead to errors, including either over- or under-estimating the degree of competitive pressure that a firm faces.

4. Multisided markets are not a brand-new concept for competition authorities. For example, the assessment of mergers in traditional media sectors (e.g. newspapers, radio and television) has required competition authorities to assess how both consumers of media and advertisers would be affected, taking into account the interrelationship between both groups. While competition authorities can apply the same underlying economic intuition and existing legislation to digital platform markets, they face some new challenges.

5. First, digital platforms involve new business models that result in more complex multisided markets. The monetisation of data collected from consumers, either in developing new products or through sales to third parties, can complement revenues earned by platforms from the sale of advertising.

6. Second, the volume of mergers among digital firms is growing (OECD, 2018b, p. 61), and concerns about the competition implications of certain digital platform business practices is growing (OECD, 2016a). The implication is that competition authorities may need to assess platforms more frequently than in the past.

7. Third, the economics of platform competition is still a developing field. Some of the typical quantitative analysis tools used by competition authorities will require adjustments for multisided markets, and their use may be limited by data constraints. At the same time, markets involving products offered to consumers at a price of zero can also create conceptual and practical challenges for competition analysis. Further, several types of conduct in digital platform markets may have either procompetitive or anticompetitive impacts, depending on the situation of the specific market, thus requiring competition authorities to engage in a case-by-case analysis rather than rely on broad presumptions.

8. Competition authorities in Latin America and the Caribbean have dealt with very few enforcement cases involving digital platforms to date. However, there are signs that this may change. The digital economy in the region is growing, with both local and global firms competing in digital platform markets in the tourism, financial services, transport and retail sectors. Given the importance of these sectors to the economy, and their impact on broader societal wellbeing, for example by improving financial inclusion, competition authorities' digital platform caseload may grow in the future.

9. The aim of this background paper is to provide practical guidance to competition authorities in Latin America and the Caribbean for enforcing competition law in platform markets; namely:

- Understanding the competitive dynamics of platforms (**Section 2**)
- Selecting and prioritising cases (**Section 3**)
- Defining markets (**Section 4**)
- Evaluating market power; and (**Section 5**)
- Assessing potential misconduct (**Section 6**)

10. **Section 7 concludes.** This guidance is based on a range of OECD resources that can be consulted for further reading. A list of these resources is contained in **Annex A**.

2. Understanding the competitive dynamics of platforms

11. Digital platforms take different forms and arise in a wide range of sectors. Understanding the business models underlying these platforms and the associated competitive dynamics is a first step in competition enforcement analysis. This section will highlight some of the key features of digital platforms that shape market dynamics.

2.1. Cross-platform network externalities

12. Network effects refer to the gains enjoyed by consumers of a product when more consumers use that product. For example, users of a social network experience a benefit, or positive externality, as more of their acquaintances set up accounts on the network.

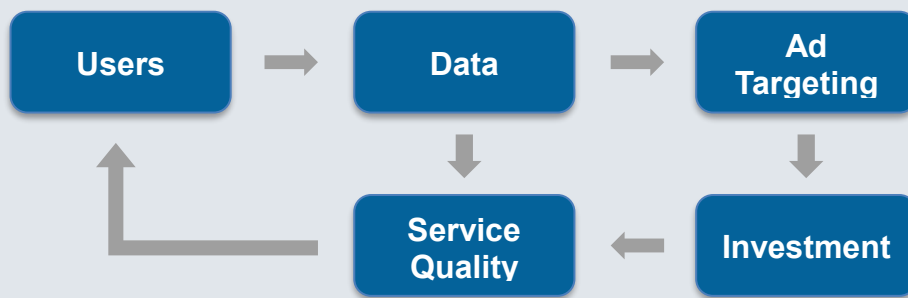
13. One of the defining characteristics of a platform is that it provides different services to different groups of interconnected consumers. This interrelationship comes from the fact that the participation of users on at least one side of the platform generates network externalities on another side of the platform – something referred to in economics as a cross-platform network externality. When these externalities exist, the demand on one side of the platform will depend on the participation on another side of the platform. For example, as the number of viewers of an online video content platform increases, the value to advertisers of using that platform also increases – in other words, viewers generate a positive cross-platform externality for advertisers. In some cases, this externality can also be negative. In the same video content platform example, users may find the value they obtain from the platform declines as more advertisers use it.

14. Because of the dynamics generated by network effects, feedback loops may also be observed in digital platform markets (see Box 1 below for an illustration). This means that a change to the conditions on one side of the market may be amplified as a result of network

effects. A drop in demand on one side of the market can cause demand on the other side to reduce if the network effects shrink, which can cause a further decrease in demand on the side of the market from which the effect originated. As a result, markets with strong platform externalities may be relatively more concentrated – the success of firms can be self-perpetuating, while small firms may find it difficult to generate enough value for consumers. Some firms identify network externalities as an efficiency justification for mergers or other conduct that may give rise to competition concerns.

Box 1. Data-driven feedback loops

In digital markets, data can be a valuable competitive asset and source of consumer benefits. For example, if an online platform uses data generated by its users' activities to improve its service, it will be able to increase consumer value and thus demand. It may also sell data to third parties, or use the data to better target advertisers, thus improving its revenues. Because these revenues can be invested in further improvements in service quality, demand may rise even further. Thus, an initial user base can generate a self-reinforcing cycle of improvements that cause the user base to increase further, continuing the cycle. This cycle is one of the reasons why concentration may be higher in digital platform markets.



Source: Excerpted from OECD, 2016b

15. Cross-platform network externalities set platform markets apart from traditional markets, and are the source of many of the analytical challenges for competition enforcers in these markets. However, they arise to some degree in a large number of markets. Before grappling with the complex issues of multisided market analysis, therefore, competition authorities may wish to assess the importance of cross-platform network externalities.

16. As explained further in OECD (2018a, p.10), there are examples of markets in which analysis should not be overcomplicated, and a single-sided market approach would suffice. A supermarket can be considered a multisided market, in that it facilitates purchases by consumers of suppliers' products. Cross-platform externalities exist on both sides, given that consumers benefit from greater variety and suppliers benefit from having more potential purchasers in a shop. A merger between large national chains, or certain vertical agreements, may have significant competition implications in which multi-sidedness should be assessed. However, in a merger of local supermarkets that is unlikely to affect suppliers, a more simple approach could be followed in considering the impact on consumers in terms of price, variety and other dimensions of quality, without need for extensive analysis of the cross-platform externalities.

17. While there are risks of overcomplicating an assessment when the role of cross-platform externalities is not significant, there are also risks of making errors when important cross-platform externalities are not taken into account. Any change in the conditions of demand on one side of the market can affect the other side in the presence of these externalities. For example, when cross-platform externalities are important, assessing the impact of a price change on one side of the market will require (i) determining the demand response on that side of the market, (ii) determining the resulting demand response on other sides of the market, and (iii) determining how prices will evolve in the other side or sides. Conducting only step (i) of this analysis could therefore either over- or underestimate the impact of the price change.

18. Competition authorities therefore must identify the importance of the cross-platform externality, and its relevance to the merger or conduct in question, before proceeding with further analysis adapted to multi-sidedness. This information could come from:

- **Discussions with, or surveys of, the consumers that benefit from the externality:** Specifically, consumers could be asked what their response would be to a decline in participation on the other side of the platform. This could be put into tangible terms, such as waiting times for ride-hailing applications, or reduced selection for e-commerce platforms.
- **Event studies:** Another potential source of information that could help identify the importance of cross-platform network externalities is an event study. For example, if in recent years there was a sudden exogenous (i.e. determined by external events) change in participation on one side of a platform, the response of users on the other side of the platform could be identified if sufficient data is available. Regression analysis could be used to isolate the impact of the demand shock.
- **Firm and industry expert documents:** Internal firm documents, industry analyst reports and commentary from the investment industry can also be helpful in identifying the degree to which demand on different sides of a platform is interlinked. For example, if internal firm emails indicate a high degree of concern about a loss of users in response to a change in the advertising side of a video content platform, it is a sign that cross-platform network externalities, and therefore multi-sidedness, should be considered in the analysis.

2.2. Platform type

- Digital platforms can fall into several categories based on their activities and the direction of the cross-platform network externality (as discussed in detail in OECD, 2018a). The category can have implications for the firm's pricing structure and the functioning of the market. If the platform has more than two sides (e.g. consumers, data purchasers and advertisers), more than one category may apply.
19. First, platforms can be categorised as either matching platforms or audience-providing platforms:
- **Matching platforms** serve to introduce different groups to each other. Because each group is seeking a match on the other side, the cross-platform externalities move in both directions. For example, drivers on ride-hailing applications benefit when there are more customers to keep them busy, and customers benefit when there are more drivers to keep wait times low.

- **Audience-providing platforms** sell the attention of an audience, often to advertisers. They are also referred to as subsidy-based platforms, since the audience receives content that is subsidised by advertisers. These platforms differ from matching platforms because the externalities may be one-sided. For example, the advertisers on a video streaming platform will directly benefit from a larger audience, but the audience may not benefit from increased advertiser participation (for example they may not derive value from a greater variety of advertisements). Increased advertiser revenues may indirectly improve the value of the platform for viewers by allowing the platform to invest in better content, but the direct effects may be neutral or negative.

20. Second, platforms can be further distinguished based on whether the firm can observe a transaction or not. If the firm observes the transaction, for example because it accepts payment on behalf of the seller or processes a buyer's order, then it can charge a per-transaction price to consumers. In particular, if externalities are generated on a per-transaction basis rather than on a membership basis, a per-transaction price would allow the platform to better reflect the nature of the externality in its pricing. However, if a platform firm cannot directly observe the transaction, for example in the case of classified advertisement websites where individuals transact offline after being introduced through the platform, they may charge a membership fee instead. Identifying these characteristics can be helpful for understanding how a platform's business model functions.

Table 1. Examples of digital platforms by category

	Matching platform	Audience-providing platform
Transaction platform	<ul style="list-style-type: none"> • Ride-hailing applications • E-commerce platforms (including auction services) • Payment services • Reservation services platforms • Stock exchanges • Mobile application stores 	<ul style="list-style-type: none"> • Content platforms where consumer purchases via advertisements can be tracked by the firm
Non-transaction platform	<ul style="list-style-type: none"> • Dating applications • Classified advertisements 	<ul style="list-style-type: none"> • Content platforms featuring advertising without a direct purchasing link

2.3. Platform pricing

21. The price structure of a digital platform will be reflective of a range of characteristics, including transaction observability, demand conditions on each side (including potential sources of market power, as discussed in Section 5 below), and the nature of the network externalities. As a result, any competitive assessment of a digital platform should take into account the overall structure of prices rather than looking at price impacts on a single side in isolation. This is consistent with how firms make decisions in multisided markets – they must balance the prices and demand conditions on each side, considering externalities and possible feedback loops.

22. The importance of such an approach may be most evident in markets with a large discrepancy in the prices paid by different sides of the market. For example, when consumers are offered a product at a price of zero, it may be subsidised by payments from another side of the platform (see OECD, 2018c). A firm's business model in that case may

be driven by the fact that (i) consumers on the zero-price side are highly price-sensitive, and (ii) the side that pays a positive price, such as advertisers, may benefit most strongly from the network effects.⁵

23. Some digital platforms may also feature personalised pricing, meaning that the platforms use data regarding a consumer's characteristics (such as location, age or income level), or at least indicators of those characteristics, to estimate their willingness to pay and tailor the price offered to them. This form of pricing can be beneficial for overall consumer welfare, but should be incorporated into any competition analysis, and may raise consumer protection concerns (see OECD, 2018d).

2.4. Multi-homing by consumers

24. A final characteristic of digital platforms that may significantly affect competition analysis is whether consumers are able to multi-home – in other words, whether they are able to use multiple competing platforms at the same time, or if they are limited to a single platform. For example, single-homing may be dominant where users invest a significant amount of time in establishing a profile on a networking platform and cannot easily move their profile to other platforms. In other words, consumers may face significant switching costs that would limit their use of multiple platforms at once. Multi-homing may be more prominent for platforms such as ride-hailing applications, since users can consult the prices and availability on multiple applications in real time with minimal effort.

25. Multi-homing can be further differentiated according to whether users can use multiple platforms for a single decision, or whether it occurs through substitution more broadly. OECD (2018a, p. 19) for example differentiates between two types of multi-homing: whether a consumer can multi-home across multiple food delivery applications when ordering a pizza on a Sunday night, or whether her multi-homing is more limited to choosing among different applications that may offer different food selections or opening hours.

26. The ability of consumers to multi-home is not on its own determinative of competitive conditions in a market. For example, if network effects are very strong, a consumer may not opt to use multiple competitors even if they face relatively few barriers in doing so. Conversely, firms may compete fiercely for customers on platforms for which multi-homing is limited. Misinterpretations of multi-homing patterns can also have consequences for market definition. Multi-homing could mean that consumers see the different platforms as substitutes, and thus close competitors. It could also mean that consumers treat the platforms as complements, in which case the platforms are not in direct competition.

27. However, multi-homing is an important feature to take into account. Entry by new platforms may be easier when multi-homing is possible, for example. Moreover, conduct by dominant firms to limit multi-homing without objective business justifications (potentially including loyalty bonuses that seek to deny rivals scale) may raise concerns of anticompetitive conduct.

3. Selecting and prioritising digital platform cases

28. All competition authorities face the challenge of choosing which cases to pursue, both in terms of in-depth merger reviews and actions against anticompetitive conduct. This is because the number of potential investigations may exceed an agency's resources, and not all cases are likely to be successes for a variety of reasons. Digital sectors are no different: whether through formal criteria or a more informal assessment, all agencies grapple with questions regarding case selection and prioritisation. Some relevant criteria for this process include:

- **Degree of demonstrable economic harm:** one important filter to apply to case selection and prioritisation is whether the economic literature, facts of the case, and available evidence would allow the agency to demonstrate economic harm from the conduct or merger in question. This generally requires a focus on consumers (rather than competitors), and must be directly associated with harm to competition rather than conduct that should be addressed through other regimes, such as consumer protection laws.

Some authorities will choose to prioritise a case because it related to a specific type of conduct that may become increasingly common in the future. Thus, the potential impact of pursuing the case may exceed that of the conduct in question. In particular, a case may prevent future harm by clarifying to market participants the legality of a given action, and the agency's commitment to addressing it going forward.

As will be discussed further in the sections below, there is substantial debate in the competition community about the likelihood that certain types of digital platform conduct will lead to consumer harm. Thus, an agency with limited resources must assess how the facts of the case in question fit in with this debate.

- **Chances of meeting legal standards:** while economic harm is an important first filter, an authority must also determine whether a case is likely to meet the legal standards laid out in competition legislation. Cases that involve a less heavy evidentiary burden, for example when there are clear contractual terms that show foreclosure and thus extensive data analysis may not be required, could be candidates for prioritisation. Thus, the chances of legal success can be considered in light of the magnitude of potential harm.
- **Success in other jurisdictions:** another consideration that may be applied by newer or smaller competition authorities is whether other jurisdictions have pursued similar cases, or are considering doing so. Although there may be differences in legislation and the market conditions across countries, a successful enforcement action could be a signal that the case has economic merit. Opportunities for co-operation with other authorities, for example through joint enforcement or merger investigations, could also increase the odds of case success. Conversely, a case may also be pursued if it has substantial local impact and is unlikely to be addressed by action in other jurisdictions.
- **Impact on vulnerable consumers:** the nature of consumer harm generated by misconduct could also be considered in case selection. For example, if a given type of conduct is suspected of generating significant harm for a broad range of consumers, including vulnerable or low-income consumers, it may justify a higher priority relative to disputes that generate relatively less harm for a smaller group of consumers. For example, ensuring a competitive financial sector in Latin America

and the Caribbean could help promote financial inclusion among poorer citizens, and promote entrepreneurialism. Success in cases that involve broad-based economic harm can also help emphasise the benefits of competition, and competition law, within a country.

- **Broader economic impact:** case selection can also include an assessment of the importance of a sector for the economy more broadly. Sectors that play an important role in promoting economic productivity, export sectors, and a government’s economic priority sectors could all be factored in to case selection and prioritisation as well. This could help maximise the competition authority’s broad economic impact.

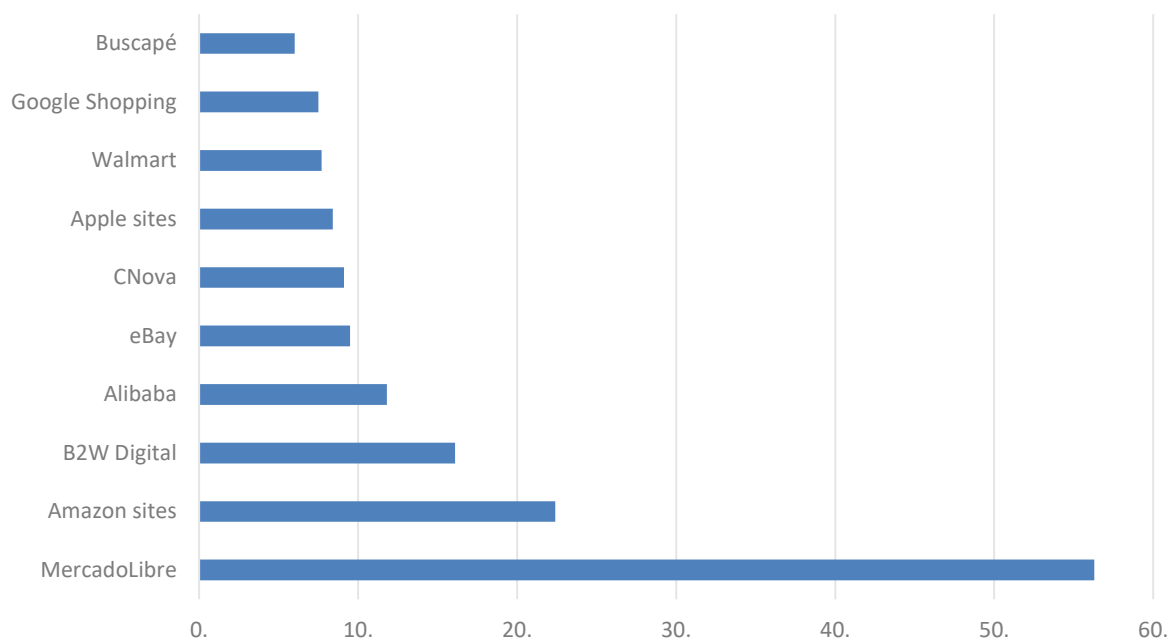
29. Beyond selection and prioritisation decisions, another key determinant of the cases that will be reviewed by an authority is the merger notification threshold in the jurisdiction. In digital sectors, there may be transactions that do not meet the revenue thresholds used for merger reviews, but which may harm competition (see, for example, OECD, 2015). For example, a revenue threshold would not capture acquisitions of small start-up firms that have not yet generated revenue, but which may substantially disrupt a market in the future. If large market incumbents acquire these firms in order to limit any disruptive change in the market, despite its potential benefits for consumers, competition concerns would arise. Some jurisdictions are experimenting with additional thresholds, such as transaction revenue thresholds, although there are no simple solutions yet. In particular, it can be challenging to design thresholds that capture these particular circumstances of harm without overbroad application, which could constitute a burden for both competition authorities and businesses. The approach in the UK, involving voluntary notification and a “share of supply” test (whether the merger creates or enhances a 25% share of supply of any good or service)⁶, may be better equipped to capture these potentially problematic transactions.

30. The fact that there have been few competition law enforcement cases in Latin America and the Caribbean involving digital platforms so far suggests that relatively few have met the strategic criteria or merger review thresholds described above. The sections below provide background on four sectors in the region that do feature the presence of substantial digital platforms, and which could be considered in future case selection efforts: e-commerce, financial services technology (“Fintech”), transport, and tourism.

3.1. E-commerce platforms in Latin America and the Caribbean

31. E-commerce⁷ activity has a substantial global economic footprint, amounting to over USD 2.3 trillion in revenues in 2017⁸ (a figure which excludes online event and travel reservations). While it remains relatively small in Latin America, it is growing rapidly: revenues reached USD 45.4 billion in 2017 compared to USD 29.8 billion in 2015⁹. While not all e-commerce firms are platforms (e.g. many traditional retailers also sell their products on their own websites), many of the largest players in e-commerce in Latin America are platforms: the main e-commerce retailers in Latin America include MercadoLibre, Amazon, B2W Digital, Alibaba, eBay, CNova, Apple, Walmart, Google Shopping, Buscape (see Figure 1 below).

Figure 1. Top online retailer websites in May 2018 in Latin America by number of unique visitors (millions)



Source: Statista, <https://www.statista.com/statistics/321543/latin-america-online-retailer-visitors/>

32. The most popular e-commerce retailer in Latin America is MercadoLibre, a C2C e-commerce platform similar to eBay, with over 56 million unique visitors in May 2018. The company is headquartered in Argentina and operates in 18 countries including Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. MercadoLibre generated USD 1.4 billion in revenue in 2018¹⁰. MercadoLibre also offers online payment solutions.

33. Amazon started operating in Latin America in 2011, in Brazil by selling electronic books, and in 2017 entered the market for electronic goods and some household products. It expanded to Mexico in 2014 before entering Chile and Colombia in 2017¹¹ and Argentina in 2018¹².

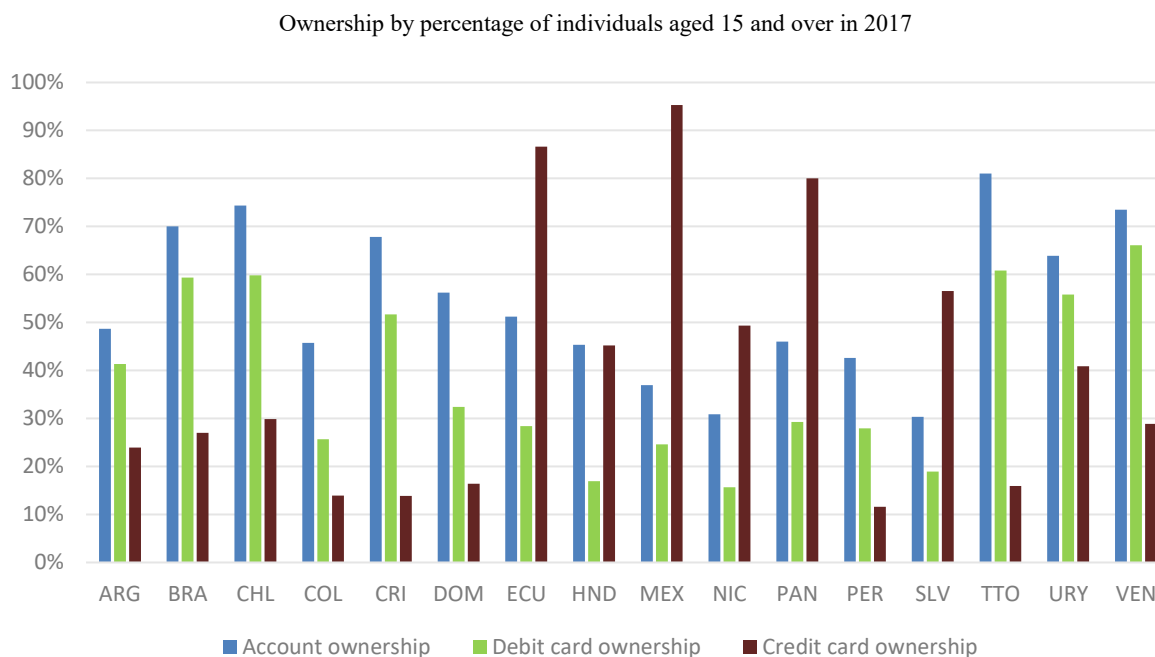
34. B2W Digital is a Brazil-based company operating digital platforms which sell various types of products such as computer games, electronic devices, appliances, books, furniture, among others. In addition, the company offers consumer financing, including credit cards and instalment plans through the Digital Finance and Submarino Finance brand names. B2W Digital reported revenues of BRL 6.29bn¹³. Also based in Brazil is Buscape, a comparison shopping service that operates in Argentina, Colombia, Venezuela and Peru as well.

35. There is substantial scope for expansion of e-commerce in Latin America. For instance, in 2017, 35% of Chileans had purchased on line, compared to 27% in Brazil, 13% in Mexico, and 8% in Colombia¹⁴.

36. One potential barrier to the development of the e-commerce sector in Latin America could be financial inclusion. Data from the World Bank shows that 55.1% of the Latin America and Caribbean population over 15 had an account with a financial institution or a mobile-money service provider in 2017¹⁵. The distribution of account ownership however varies across countries ranging from 30% to over 70% in some countries (see Figure 3

below). In addition to a bank account, having a credit and/or a debit card are also important means to make purchases online. These means of payment remain relatively limited in Latin American and Caribbean countries, suggesting an important link between Fintech market development and access to e-commerce.

Figure 2. Financial inclusion in Latin America and the Caribbean



Source: World Bank Financial Inclusion (Global Findex) Database

37. Competition authorities have conducted a range of enforcement cases in e-commerce sectors, including those involving vertical restraints (discussed further in Section 6 below).¹⁶

3.2. Fintech platforms in Latin America and the Caribbean

38. A range of new Fintech offerings and business models have been introduced in Latin America and the Caribbean, which offer benefits including improved financial services access for low-income individuals, and new sources of financing, in particular for small and medium enterprises (SMEs). For example, the emergence of new online platforms with lower transactional fees and new techniques to assess credit risk is expected to increase SME's access to credit in the region (Economist Intelligence Unit, 2018), while increased mobile network penetration is expanding payment services access for underserved consumers.

39. One study identified 703 Fintech start-ups in 16 Latin America countries in 2017 (IDB and Finovista, 2017), of which 33% were in Brazil, 26% in Mexico, 12%, in Colombia, 10% in Argentina and 9% in Chile. A year later, the study identified 1,166 companies in the region, representing a 66% increase from the previous year (IDB and Finovista, 2018). The main business segments in which these Fintech start-ups are active include payments and remittances (24%), lending (18%), enterprise financial

management (15%), personal financial management (8%) and crowdfunding (8%) (IDB and Finovista, 2018, p. 15).

40. Platform business models play a particularly important role in the Fintech ecosystem, for example by providing matching services between lenders and borrowers. This can include peer-to-peer lending, and crowdfunding and donation platforms. An example is Cumplo, a crowd-lending company operating in Chile and Mexico, which served as a platform for USD 300m worth of loans between 2012 and 2018 (Economist Intelligence Unit, 2018, p. 8).

3.3. Transport digital platforms in Latin America and the Caribbean

41. Latin America and the Caribbean has a population of approximately 644 million people with about 37% of them living in cities with a population over 1 million in 2017¹⁷. Given the transportation needs of a concentrated population, digital platforms services such as ride-sourcing and ride-sharing apps have increased in popularity in the region.

42. Many digital platforms in the transport sector provide ride-sourcing services. These platforms connect drivers and riders, often using GPS technology to track location and calculate fares. They may also process payments and provide rating services for drivers and riders. The revenue generated from ride sourcing in Latin America in 2018 was USD 518 million¹⁸. The main ride-sourcing platform service providers in the region include Uber, 99, Easy Taxi, and Cabify.

43. Uber entered Latin America in 2013 in Mexico and has operations in more than 16 Latin American countries. The ride-sourcing platform 99 (formerly “99Taxis”) operates in Brazil with about 14 million users. Easy Taxi started in Latin America in 2011. Cabify operates across many Latin American markets including Argentina, Mexico, Bolivia, Panama, Brazil, Peru, and Chile.

44. Other platforms active in the region provide ride-sharing services, bringing together drivers and passengers travelling the same route in order to save costs. Ride-sharing trips are originated by a driver planning to travel a route, who posts details on the platform in order to find passengers who will pay a fee to join the trip. While this business model began with long-distance travel, services are being introduced for shorter distances, such as commutes within urban areas. These platforms became particularly successful because of their offerings in terms of lower prices, reduced waiting times for passengers, increased safety by using reputation mechanisms, and more convenient ways of making bookings and payments (OECD, 2018d). Companies that offer these services include BlaBlaCar, Bynd and ALD sharing.

45. The question of whether to extend traditional taxi regulation to alternative transportation platforms has attracted significant attention, including in Latin America. Competition authorities in Brazil, Colombia, and Mexico have undertaken advocacy in favour of procompetitive regulations in this sector (OECD, 2018e).

46. Beyond regulation, several competition authorities have grappled with analytical questions involving digital transportation platforms, both in terms of mergers (e.g. market definition) and anticompetitive conduct (including regarding pricing strategies). These cases are explored in detail in OECD (2018e).

3.4. Hotel accommodation digital platforms in Latin America and the Caribbean

47. The travel industry is increasingly driven by technology, with online travel agents (OTAs) playing a material role in the way people search as well as book their travels, and share their experiences with others. Accommodation digital platforms have also brought new opportunities for ordinary residents to participate in the tourism value chain by offering rooms to a marketplace of consumers. While the practice of offering rooms has always existed offline, digital platforms have substantially expanded the opportunities available to both travellers and property owners, thus challenging traditional hotel business models.

48. Although the contribution of accommodation digital platforms to the tourist sector in Latin America is relatively small compared to other regions, it is growing. For example, there were about 198,000 Airbnb guest arrivals in South America in 2017 (World Bank, 2018), and some countries in the region are experiencing 200% annual growth (Helms and Palacios, 2016). Rio de Janeiro ranked fourth in the world in numbers of Airbnb properties with more than 33,000 in 2016 (Helms and Palacios, 2016).

49. Given the importance of the tourism sector to the economy of several countries in the region (for example, tourism directly accounted for 2.6% of employment in Brazil, 6.5% in Colombia, and 6.8% in Costa Rica¹⁹), online accommodation platforms could emerge as an area of interest for competition authorities.²⁰ Several such platforms have been assessed by competition authorities for anticompetitive conduct, in particular vertical restraints on the prices hotels can offer on competing platforms (discussed further below, and in OECD, 2016c).

4. Market definition for digital platforms

50. Digital platform business models can create several challenges for the market definition process. These challenges have revived a long-standing debate in competition policy about the usefulness of market definition as a concept (see, for example, OECD, 2012). In particular, economists warn against an overly mechanical approach to market definition that fails to take account of competitive pressures outside of a market. A related concern is the overreliance on market shares at a single point in time, which could lead to serious errors if not accompanied by an understanding of market contestability, competitive dynamics and the features of an industry that may affect its structure, such as network effects and barriers to entry.

51. Despite these critiques, many competition authorities are obliged by legislation to define markets. Further, as concluded in a 2012 OECD Competition Roundtable on the subject, market definition can be a useful intuitive framework for thinking about the competitive conditions of a market. However, the risks of a pro forma market definition exercise that does not reflect economic realities remain significant, and may be particularly high in multisided markets.

52. This section identifies the main challenges of market definition for digital platforms, and some potential strategies to address them. However, it may be advisable to avoid market definition as much as possible in cases where the data requirements are insurmountable and network externalities are too difficult to quantify.

4.1. Defining one or multiple markets

53. One of the main questions that arise in market definition for platforms is whether to define one or multiple markets. Put differently, an authority will need to decide whether the different sides of a platform participate in different interrelated markets or a single market. OECD (2018) explains that this decision may not always matter in terms of the competition assessment. In particular, the experts consulted for that publication emphasised the importance of taking into account the interrelationships between the different sides of the platform, regardless of whether this is done by defining a single market or separate but interrelated markets.

54. There may, however, be some exceptional implications to the decision of defining a single or multiple markets, depending on the legal framework in a jurisdiction. For example, market definition may be required to establish the dominance of a firm. The economics of platforms suggests that a firm either has market power over the entirety of a multisided market or it does not – it is not possible to be dominant in one side of the market but face competitive pressures on the other side (OECD, 2018). However, if an authority opts to define multiple separate markets, its ability to reflect this fact may be limited.

55. The consideration of efficiencies may also be affected by the market definition decisions of an authority. Some legal standards may prevent the recognition of efficiencies associated with a platform merger or conduct if they offset harm that occurs on another side of a platform. As a result, multiple market definitions may limit the recognition of efficiencies if they do not directly benefit the side of the market that is harmed. Some have argued that this goes contrary to our economic understanding of platforms (see OECD, 2018). In particular, the terms offered to each side of a platform reflect a balancing of interests between different sides of a platform (based on the demand conditions on each side and the nature of the externalities). As long as the overall value to consumers on all sides of a platform increases, some would argue that it is not relevant for competition authorities to consider the relative distribution of value on the platform.

56. Thus, while the decision to define one or multiple markets may not matter for economics purposes, it may have legal implications which authorities should carefully consider. A single market definition may be preferable, all else equal. In particular, transaction-matching platforms could constitute a single market, given that they provide a similar service (finding a match) to different groups of consumers, both of which benefit from cross-platform externalities (per OECD, 2018). In such cases, market shares may not be meaningful, or it may be impossible to calculate them given the incorporation of both sides of the platform into the market.

57. While the situation may be more complex for attention-providing platforms, given that externalities may not run in both directions, a single definition could be considered in some cases given the legal constraints described above. However, even if separate market definitions are established, the important relationships between the sides of a platform should be taken into account in the competitive assessment. Box 2 provides an example of a merger in Brazil that illustrates these questions.

Box 2. Market definition in Itaú/XP

In 2017, the Brazilian Competition Authority (Conselho Administrativo de Defesa Econômica, CADE) reviewed an acquisition by a bank (Banco Itaú) of a stake in a platform allowing consumers to purchase financial products online (XP Investimentos). XP offered a range of products from different issuers and fund managers, whereas traditional banks offered only their own funds to customers (CADE, 2017).

In this case, CADE's General Superintendent's Office considered the inter-dependence between the issuers of the products and the consumers, including the increased utility on one side of the platform when the number of market participants increases on the other side (Global Competition Review, 2018).

CADE indicated that the market shares resulting from the transaction would have been moderate to low if the analysis focused only on the market for the sale of financial products to consumers (Global Competition Review, 2018). However, in its opinion, the authority pointed out that XP also offered a service on the other side of the platform, competing with similar platforms to procure products from issuers and managers (such as small and medium banks or small companies offering securities). In view of this, CADE considered competitive conditions on both sides of the market, taking into account their interrelationships (CADE, 2017).

Source: Based on the opinion of CADE's General Superintendent's Office in Case 08700.004431/2017-16 Itaú/XP²¹.

4.2. Non-price dimensions of competition

58. Another risk in market definition is an exclusive focus on price as a dimension of competition. For digital platforms, price may not be the only, or even most important, dimension of competition. This is most vividly illustrated when consumers can access digital platforms at a price of zero. Considering the various other parameters on which firms compete, such as innovation or various dimensions of quality, can be challenging.

59. OECD (2018f) emphasises the need for competition authorities to (i) determine relevant dimensions of competition based on the characteristics that consumers value, (ii) consider the relationship between different dimensions of competition and associated trade-offs (e.g. price versus quality) in assessing competition, and (iii) consider incorporating non-price competition into market definition. On the latter point, while there are some quantitative adaptations to price-based market definition tools, such as SSNIP tests, the requisite data will be available in only a few cases. Thus, a sound understanding of consumer preferences, elasticity, and substitution, either using surveys or internal firm documents about expected consumer behaviour, can be used to conduct a qualitative market definition approach that builds in non-price competition. The hypothetical monopolist test can be used to guide this assessment – i.e., starting with a narrow market to which products are then added to consider the boundaries of the market. Authorities should use caution to ensure that the dimensions considered are current or potential dimensions of competition, in order to avoid using only product characteristics to define markets, which can fail to take account of competitive dynamics. Box 3 sets out an example of a merger case in which non-price effects played an important role (several other examples are available in OECD, 2018f).

Box 3. Non-price dimensions of competition in a US merger

In its complaint regarding the acquisition by Halliburton of Baker Hughes, the Department of Justice expressed concerns about the impact of the transaction on industry competition, including via prices, quality, and innovation. The merging firms were observed to have only one other rival of sufficient scale to exert competitive pressure.

The importance of innovation was established based on Baker Hughes' characterisation of itself as an industry leader in innovation, the magnitude of both firms' R&D spending, and the number of new products being introduced. Examples of specific projects that required both firms to undertake significant R&D expenditure to compete were also identified. Further, it was noted that the transaction would involve the elimination of overlapping research projects.

With respect to quality, the Department of Justice observed that only the three largest firms, including the two merging parties, possessed quality oil reservoir data, for example, which would be crucial for the value proposition offered to consumers in some markets. In addition, substantial barriers to entry were identified, limiting the prospects of potential future competition to the post-merger firm.

Thus, the Department of Justice's complaint addressed the proposed merger's impact both on competition broadly, and on two specific dimensions of non-price competition as well as prices. The parties abandoned the merger after the Department of Justice issued its complaint.

Source: Excerpted from OECD, 2018f (p. 36), based on: Complaint in United States of America v. Halliburton Co. and Baker Hughes Inc., United States District Court for the District of Delaware, Case no. Case 1:16-cv-00233-UNA.

60. Non-price characteristics can also have an important role in the geographic scope of a market. For example, geo-blocking, language constraints and cultural factors may lead to national, as opposed to cross-border, market definitions, depending on the specific conditions of the market (see OECD, 2016d).

4.3. Evidence and analytical tools for defining digital platform markets

61. Overcoming the challenges associated with digital platform market definition, ranging from zero prices to rapid change, requires several strategies by competition authorities; namely:

- **Collecting the right evidence from the parties:** Internal documents can be particularly relevant for determining relevant dimensions of competition and defining markets (e.g. executive presentations, emails regarding competitive positioning, and strategic plans), since they provide a clear picture of how the firm(s) viewed competition prior to an authority's review. These documents can show both the identity of the firms that are seen as competitors, and the metrics used to assess their relative position.

62. Firms may also hold analysis that could be repurposed for market definition purposes. For instance, if a firm has contemplated a price increase or quality decrease, it may have assessed the potential demand response on different sides of the market and the impact on profitability.

- **Obtaining third party and consumer survey evidence:** In digital platform markets where price may not be a relevant metric of competition on at least one side, competition authorities may need to rely on alternative evidence. Consumer surveys, or reports from industry and investment analysts, can help identify potential parameters of competition. Once these parameters have been identified, surveys can be used to try to gauge demand elasticity with respect to these parameters. This information could then be put into a SSNIP test framework, as described below.

Industry and investment analysts can also be helpful sources of information about the future evolution of the market, which may be rapidly changing. For example, competition authorities may face the challenge of assessing whether various social networking and content platforms are all competing in the same market. Some have argued that these platforms compete for user attention (see, for example, Prat and Valletti, 2018). Determining how broad the market definition should be requires an understanding of the substitutability of these platforms in the minds of consumers, and how it is evolving given rapid changes in platform functionality and features.

- **Adapting the SSNIP test:** As described in OECD (2018a), the small but significant non-transitory decrease in price (SSNIP) test must be adapted before being applied in platform markets. This is because of the interrelationships between different sides of the platform. In particular, to correctly apply this analysis, an authority would need to: (i) assess the change in demand on one side of the platform to a SSNIP, (ii) predict the change in demand on the other sides in response, (iii) determine what the market-balancing prices on these other sides would be in response to the change in demand. The exercise would then be repeated for each side of the market, and with a simultaneous increase in prices on both sides. Where there are zero prices, the SSNIP test on the zero price side of the market would not generate meaningful results. Thus, it would need to be conducted on the basis of the total costs of a transaction (see OECD, 2018a).

Completing a SSNIP test with quantitative methods could be demanding, as it would require a reliable estimate of demand elasticities and the value of the cross-platform network externalities. An alternative for when non-price competition is important could be a small but significant non-transitory decrease in quality (SSNDQ) test, but this has rarely been applied quantitatively and is demanding in terms of data.

However, the SSNIP and SSNDQ tests may still provide a useful discipline to qualitative analysis supporting a market definition – particularly to avoid an approach that relies solely on platform characteristics, which is unlikely to be informative. An example of a qualitative approach to market definition is provided in Box 4 below.

Box 4. Market definition in Facebook/WhatsApp

In August 2014, Facebook notified the European Commission of its intention to acquire WhatsApp. Both parties offered applications for smartphones allowing users to communicate by text, photo, voice and video messages.

The Commission focused its investigation in three areas: (a) consumer communication services, (b) social networking services, and (c) online advertising. In this case, considering that the first two products are free, the relevant market was identified using qualitative evidence.

The Commission opted not to further segment the market by operating system platform, or to include in the relevant market traditional communications services such as SMS, MMS or emails. The geographic market identified by the Commission was at least EEA (European Economic Area) -wide, if not worldwide.

The importance of network effects in these markets was recognised; however the analysis revealed a number of factors mitigating these effects. These included: the dynamic evolution of the market; the short innovation cycle; the multi-homing behaviour of users; and the ease to switching. The Commission authorised the merger in October 2014. In May 2017, Facebook was fined by EUR 110 million for providing incorrect information about the possibility of matching Facebook and WhatsApp users' accounts.

Source: Excerpted from OECD, 2018h (pp. 48-49), based on European Commission Press Release (2017), "Mergers: Commission fines Facebook €110 million for providing misleading information about WhatsApp takeover", http://europa.eu/rapid/press-release_IP-17-1369_en.htm.

5. Evaluating the market power of digital platforms

63. A central challenge facing competition authorities in digital platform enforcement cases is determining the extent of market power held by those firms (i.e., the ability of firms to unilaterally set prices above, or quality below, the competitive level). This assessment is relevant both to understand the effect of mergers and to assess whether a firm holds a dominant position in the context of abuse case. The source of such market power – entry barriers, intellectual property rights, strong network effects, among others – can originate from one side of the market, but it will be exerted across the entire platform. Thus, focusing analysis on one side can obscure the nature and effects of market power. One-sided analysis can either over- or under-estimate market power by failing to assess the influence of competitive conditions on the other sides of the platform.

64. When seeking to identify and assess market power in a digital platform, understanding the pricing structure and business model can be an important first step. The pricing structure reflects the balancing exercise undertaken by firms between the different sides of the market, and can provide clues about the nature of demand conditions on each side. For example, some sides of a platform may bear a disproportionate share of the monetary costs, which can reflect both the nature of the externalities generated, and the alternatives available to consumers on the other side. The non-price conditions offered to different sides of the market can similarly reflect the sources of potential market power, and so price should only be one element of the assessment. In particular, it is important to understand how the platform generates revenue, where this revenue comes from, and the

relevant non-price dimensions of competition (i.e. quality) that can be used to assess market power on each side. For example, the amount of personal data collection could be considered a relevant dimension of competition on one side a market, to the extent that consumers care about it, and seek to reflect this in their purchasing decisions (see, for example, OECD, 2018f).

65. Next, an authority can use this understanding to assess market power based on the responsiveness of demand to price or quality changes. One common approach for merger analysis in single-sided markets is the use of upward pricing pressure or gross upward pricing pressure indices (UPPI and GUPPI, respectively). Adapting these approaches to multisided markets (through the approach explained in OECD, 2018a) can be data-intensive, since it would require: (i) the price elasticity of demand for each side of the market; (ii) the elasticity of demand for each side of the market with respect to demand on the other side of the market; and (iii) an estimate of how the price on each side of the market would change in response to a price change in the other. Surveys can be used to calculate these elasticities, although these surveys must be carefully designed, since the questions must be framed in a way that is meaningful for consumers (e.g. in absolute terms rather than percentages). Further, an authority should seek external validation of any answers provided by the platform itself for the third effect (about the price response on the other sides of the platform), since they have an incentive to understate any market power that they may have.

66. As noted in Section 4 above, markets in which consumers obtain products at a price of zero can complicate these analyses. The elasticity of demand of an increase in price from zero to a positive number would be infinite, meaning the indices cannot be calculated. Further, available literature suggests that consumers may respond in unique ways to a price of zero, for example valuing a zero-priced product more than expected (see OECD, 2018c).

67. A lack of willingness by consumers to pay a positive price for a product is not, however, conclusive evidence that a platform does not have market power – especially if there is limited consumer response to profitable (from the firm’s perspective) decreases in quality on dimensions that consumers care about. There may in fact be markets that would theoretically exhibit negative prices in perfect competition. Further, given the potentially unique nature of consumer behaviour, a price of zero could in fact constitute a behavioural barrier to entry for new firms that may need to charge a nominally higher price – even if those firms were to offer a higher level of quality in dimensions that consumers report they care about.

68. When quantification is not possible, a qualitative approach to assessing demand responsiveness could be used. For example, if consumers use a digital platform for a price of zero, an industry analyst report may help identify the key competitive parameters in a sector, say user friendliness, variety, and refund policies. A survey could then be conducted to determine the degree to which consumers would respond to a reduction in variety or a worsening of refund policies. Internal firm documents could then be helpful to understand how advertisers value ad exposure per user. The competitive constraints faced by the firm could then be assessed by virtue of the likely responses by consumers on both sides of the platform. Current prices should not be assumed to be competitive in this approach, however. In other words, limitations on a firm’s ability to depart from the current level of price or quality do not disprove market power if current conditions already reflect market power. Thus, while this approach can be a helpful indicator of market power, it should be assessed in the context of additional evidence

69. One alternative approach, although it serves as an indicator of current market power only (rather than a tool to measure the impact of a merger), is the adjusted Lerner index identified by Tremblay (2017). This traditional metric of the cost-price margin of a firm could be adapted to a platform market by adding the total profits and fixed costs of a platform together, then dividing the sum by the platform's total revenue. This approach allows the use of financial information, which is likely to be more available than detailed transaction data needed to estimate elasticities. However, caution should be used to ensure that the figures reflect only the costs and revenues associated with the platform in question.

70. To complement these options, OECD (2018a) identifies several alternative indicators of market power. However, it should be noted that these alternatives should be used with caution given some inherent assumptions they make:

- **Barriers to entry:** Barriers to entry such as high fixed costs, important assets (e.g. data), intellectual property and network effects can all give rise to market power. The existence of these barriers should be assessed carefully, however, in case competitive pressures are imposed by alternative digital platforms that have different cost structures or use different technologies. Even if these alternatives do not currently compete in the market, they may have the requisite resources to enter the market. An authority's assessment of these barriers could be validated by industry or investment analyst reports, since these professionals are likely to have conducted significant analysis of industry cost structures and susceptibility to new entry.
- **Measures of profitability:** If a firm exhibits relatively high profit levels compared to others in the market, it could be a potential indicator of market power, but further evidence will be needed to understand the causes (e.g. efficiency, innovation, product differentiation, investment decisions). Whether these relatively high profits have been enjoyed consistently in recent years could be helpful in understanding competitive conditions. In particular, analyses of the evolution of profits over time can demonstrate whether a market has been contestable in the past (e.g. dominant firms have been overtaken). Stable profits over time could be a signal of market power, but the time horizon used for this assessment should reflect the characteristics of an industry (i.e. its susceptibility to rapid shifts). Additional context is needed to understand whether during this time a firm has introduced significant new features or innovations in order to maintain its position in the market given competitive pressures, although such changes may have registered in changes to profits if they required substantial investments. Care should also be taken in ensuring that economic, rather than accounting, profit measures are used. The adapted Lerner index from Tremblay (2017) could be a good alternative.
- **Market shares and measures of concentration:** Analysis based on the share of markets or concentration (such as the Herfindahl-Hirschman index) should not be used in isolation in digital platform markets. It requires a subjective judgment about a firm's competitors, and implicitly assumes platforms offer homogeneous services, which is particularly inaccurate given the importance of network effects in platform markets. Further, relying on a single unit of measure (e.g. search traffic or advertising revenues) may not adequately capture the multisided nature of a market. Nonetheless, a comparison of the evolution of various market share metrics over time could be helpful as an indicator of market contestability.
- **Multi-homing:** Multi-homing can be a helpful indicator of competitive dynamics in a sector, but its presence or absence is not determinative of market power on its own (as discussed in Section 2 above).

6. Assessing potential misconduct affecting digital platform markets

71. The anticompetitive conduct that may emerge in digital platform markets can involve both straightforward and more ambiguous theories of harm. This section will describe two key categories of antitrust concerns regarding digital platforms: collusion and vertical restraints. Competition authorities deciding whether to pursue a given case in digital platforms may need to weigh the resources required and chance of success with the magnitude of consumer harm and availability of alternative tools (e.g. consumer protection or data protection regulations) to address the concern (discussed further in Section 3 above).

6.1. Collusion involving digital platforms

72. As with any other market, collusion cases involving digital platforms generate straightforward economic harm for consumers and are good candidates for prioritisation. Two particular risks may emerge in these markets:

- **Algorithmic collusion:** Digital platform markets often involve transparent prices and, in at least some cases, algorithms that process data on market conditions to set prices. As described in OECD (2017), this can enable collusion by making it easier for cartel participants to monitor each other's behaviour and punish those who deviate from the agreement. One example is the agreement formed in Amazon Marketplace in the UK (see OECD, 2017). A more challenging scenario may arise if profit-maximising algorithms reach a tacitly collusive outcome without an explicit agreement among firms or instructions from their designers. Cartel prohibitions may not apply in these situations, depending on the design of the algorithms and behaviour of the firms. Distinguishing between these two scenarios, and thus deciding whether to take enforcement action, will require the same established approaches as in any other market – namely identifying evidence of intent and an agreement. However, authorities can consider using data availability to their advantage by developing new detection methods, such as algorithms of their own. While not conclusive, these methods can include looking at pricing patterns for variability, rapid synchronised price adjustments (which may indicate the use of algorithms), and evidence that agreement deviators have been punished.
- **Cartel facilitation:** Digital platforms, particularly transaction platforms, could be in a position to facilitate collusion among sellers on one side of the market. For example, a platform could serve as the “hub” in a hub-and-spoke cartel, providing a conduit for the exchange of information among competitors that have agreed to collude, and potentially punishing deviators. While this is not a new theory of harm, competition authorities face the challenge of determining whether certain vertical agreements (e.g. exclusivity agreements, or limits on retailer pricing) should be considered a hub-and-spoke cartel, or vertical restraints. This decision has a significant impact, since in most jurisdictions cartel conduct can be prosecuted without the need to prove consumer harm (for further discussion, see OECD, 2018g, pp 40-42). Box 5 describes a case addressing allegations of this type.

Box 5. Collusion allegations in the ride-hailing sector in Brazil

In 2018, CADE's General Superintendent's Office analysed whether Uber had acted as a cartel facilitator. The authority had opened a preliminary investigation following a complaint claiming, among other things, that Uber had facilitated a cartel by fixing prices for affiliated drivers.

Following an investigation, CADE decided to dismiss the complaint. The authority found that Uber set its pricing model in response to decisions by drivers on their hours worked, and that there was insufficient evidence of collusive agreements among drivers.

Further, CADE issued recommendations for Uber and other similar digital platforms to increase competition in the transport sector. These recommendations included supporting a competition compliance programme for drivers, among other things, to make drivers aware that coordination aimed at rising prices (e.g. by simultaneously turning off the Uber application to increase prices) is illegal. CADE also encouraged that platforms consider a business model allowing drivers to set their own prices (similar to that of Airbnb).

Source: Parr, 2018a.

73. As will be discussed further below, vertical restraints can have significant procompetitive benefits in at least some circumstances, including for example improving contestability by allowing new entrants to compete more effectively. However, they can have significant anticompetitive effects as well, including dampening horizontal competition and excluding competitors. Authorities may therefore need to take into account both possibilities in their analysis, and thus consider these agreements as vertical restraints rather than collusion, except in cases where the facts suggest a clear horizontal agreement among competitors.

6.2. Vertical restraints

74. A second, and perhaps more controversial, category of anticompetitive conduct emerging in digital platform markets is the imposition of vertical restraints (i.e. restraints on firms either above or below a firm in the distribution chain). Specifically, there is a concern that firms may impose conditions on upstream or downstream firms in order to minimise price competition and exclude competitors from the market. As opposed to horizontal agreements, these restraints are assessed on a case-by-case basis, since they can be either pro- or anti-competitive. They include:

- **Exclusivity agreements:** These are agreements between firms at different levels of the distribution chain to only sell to, or purchase from, each other. For example, a manufacturer may reach an exclusivity agreement with a retailer, which would involve the retailer agreeing not to sell any competing manufacturer's products in their stores. Firms may also use de facto exclusivity agreements, such as the use of loyalty bonuses and rebates. These agreements can enhance efficiency and consumer welfare if they align certain incentives across the distribution chain. For example, an exclusivity agreement may ensure that retailers have enough incentives to invest in promoting and displaying a manufacturer's product. Exclusivity agreements can also be valuable for new entrants into a market, since they can help establish the firm's position, generate economies of scale, and ensure a product is adequately displayed for consumers.

75. However, exclusivity agreements may also have significant anticompetitive impacts in digital platform markets. For example, recognising the importance of network effects, a dominant firm may seek to use exclusivity agreements with consumers on one side of a platform (e.g. service providers selling through the platform) to deny any competitors the opportunity to attract a sufficient user base to compete (OECD, 2018a). Restrictions on multi-homing can exacerbate these effects, since the ability of users to try multiple different platforms could be key for market contestability. Thus, particularly when imposed by a dominant firm, exclusivity agreements can result in competitive harm and should be assessed based on whether there is an objective justification (i.e. a business rationale beyond simply pushing competitors out of the market, meaning that the agreement would have been profitable in the absence of any impact on rivals, as described by Katz in OECD, 2018a and below with respect to predatory pricing).

- **Selective distribution agreements:** Selective distribution agreements generally involve the imposition of conditions on retailers seeking to sell a manufacturer's products. For example, they may be particularly common for luxury goods manufacturers who seek to ensure that their products are only sold in high-end retail outlets, thus protecting their brand image. A related type of restriction would be a prohibition on selling a product online, which could either be explicit or de facto (e.g. requirements to have a physical showroom). There are concerns that these restrictions may go beyond what is justifiable from an efficiency perspective and harm competition (see, for example, OECD, 2018g, pp 17-19).
- **Resale price maintenance (RPM):** RPM occurs when an upstream firm (e.g. manufacturer) imposes pricing limitations on downstream firms (e.g. distributors or retailers). When that price is a maximum price, it tends not to give rise to significant competition problems. However, when the price is set at a minimum or fixed level, it can harm competition. As with other vertical restraints, RPM has some procompetitive justifications. It can ensure retailers have incentives to invest in product promotion, and it can prevent free riding by some firms in the market. For example, a retailer may allow consumers to try a product in a store and employ knowledgeable sales staff. However, their prices may be higher than discount retailers that do not offer these services. RPM prevents the discount retailer from free riding on the full-service retailer's efforts, by avoiding situations where consumers try the product at a full-service retailer and then make their purchase at the low cost retailer. In digital platforms, this type of feature may be essential – for example, to ensure there are enough drivers on a ride-sharing application (Hovenkamp, 2019).

76. Despite these justifications, RPM can generate significant harm. It suppresses competition among retailers to sell products of the same brand, and may facilitate collusion through price transparency and discipline. As noted above, addressing this conduct as a vertical restraint rather than hub-and-spoke cartel may be more practical for competition authorities, and allow for the consideration of any efficiencies justifying the conduct (and, if so, whether there are less anticompetitive methods of achieving the same efficiency benefits). Enforcement could be focused on cases where competition among brands are weak (i.e. the supplier is dominant). Box 6 sets out the guidance provided to firms in the UK to prevent anticompetitive RPM.

Box 6. RPM guidance in the UK

The Competition and Markets Authority (CMA) in the UK has been particularly active in looking at RPM clauses in the online sector.

Following a case in 2017, in which the CMA fined a supplier of domestic light fittings for trying to dictate the minimum retail prices, the Authority published a letter to raise awareness of market players on the implementation of RPM clauses.

In particular, the letter highlights the most relevant points to know in the practice of RPM:

If you are a supplier:

- *You must not dictate the price at which your products are sold, either online or through other sales channels.*
- *Policies that set a minimum advertised price for online sales can equate to RPM and are usually illegal.*
- *You must not use threats, financial incentives or take any other action, such as withholding supply or offering less favourable terms, to make resellers stick to recommended resale prices.*
- *You cannot hide RPM agreements - restrictive pricing policies in business-to-business arrangements are illegal whether verbal or written. Equally you cannot try to use apparently legitimate policies (e.g. image licensing) to conceal RPM practices.*
- *If you receive a CMA warning letter, take it seriously and seek independent legal advice to ensure your business is compliant with competition law.*

If you are a reseller:

- *You are entitled to set the price of the products you sell, whether online or through other sales channels.*
- *Suppliers are not usually allowed to dictate the prices at which you sell or at which you advertise their products online.*
- *If you have agreed to sell at fixed or minimum prices with your supplier, you may both be found to be breaking competition law.*
- *If a supplier asks you to comply with a restrictive pricing policy you should report this to the CMA*

Source: Excerpted from OECD, 2018h (p. 63), based on https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/620454/resale-price-maintenance-open-letter.pdf

- **Most-favoured-nation (MFN) agreements and across-platform parity agreements (APPAs):** MFNs refer to agreements between firms connected on the vertical distribution chain that include a commitment by one party to offer the most favourable terms to the other. For example, a supplier could commit in a MFN not to offer a lower price to any other retailer. These types of agreements generally arise in digital platform markets as APPAs – an agreement by suppliers not to offer their products on rival platforms at a lower price. These agreements can be narrow – meaning that a supplier is only preventing from undercutting on its own website the price it offers the platform, or broad – meaning the supplier cannot offer a lower price anywhere. One notable example is the case of Booking.com, which required hotels using its platform not to offer a lower price on any other platform or on their own website, until competition authorities intervened (see OECD, 2018g for Europe and Turkey and Box 7 for Brazil).

Box 7. Online travel agency MFNs in Brazil

CADE's Tribunal addressed MFN agreements in the context of an investigation of Booking, Decolar and Expedia, which was settled in March 2018. The investigation had been initiated following a complaint by an association of hotels, which claimed that online travel agencies (OTAs) imposed MFNs, preventing hotels from offering better rooms and sales conditions in their own sales channels or in rival platforms (Parr, 2018b).

CADE opted for an effects-based approach to MFNs. In this regard, the authority noted that this type of agreement can restrict competition by homogenizing prices and increasing the barriers to entry to new OTAs. However, it pointed out that MFNs also have advantages, such as deterring free riding (i.e. consumers comparing prices in one OTA and then booking directly with the hotel or with another OTA). In this regard, CADE found that OTAs should be allowed to use MFN as regards direct online sales in hotels' websites, but not for offline channels (e.g. over the counter sales at hotels or sales to travel agencies) or for other OTAs (Global Competition Review, 2018).

77. These agreements can harm both competition among platforms and competition among suppliers. For example, a new platform seeking to attract suppliers could be unable to do so if it cannot offer lower prices to consumers in order to attract a critical mass of users onto the platform.

78. APPAs can be a particularly harmful type of MFN agreement because they involve a platform agreeing with the supplier side of the market about the price that will be offered to a third party (i.e. the consumer). Given that the consumer is not a party to the agreement or present to defend its interests, it may generate harm in a way that a traditional MFN agreement would not (since a supplier would not agree to terms that would not be in its own interest – see OECD, 2018a).

79. However, these agreements can be effective tools for new entrants, and thus enforcement measures should focus on dominant firms, which may be best-positioned to impose these agreements in any event. Depending on the legal standards of a jurisdiction, the burden can be placed on a dominant platform to demonstrate efficiencies from the agreement.

80. Assessing the effects of vertical restraints requires competition authorities to understand the scope of the restraint and whether it is binding, as well as the rationale for each side participating (per OECD, 2018a, p. 28). Next, the effect of the restraint on total

output in the market, for example total transaction volume, could be considered. As Wright and Yun (2019) explain, this is more meaningful than simply looking at the price impact on one side of the market when assessing the effect of the restraint, given the importance of cross-platform network externalities and complexities in pricing structure across the platform. If it can be established that total output in the market (i.e. for the platform and its competitors) has not increased as a result of the restraint, and that some consumers are being harmed when they engage in transactions, harm will be clearly established (as set out in Hovenkamp, 2019). Making this assessment requires identifying what the output would have been without the restraint – in other words the relevant counterfactual. For example, consider an assessment of the effects of a restraint two years after its introduction. Comparing output before and after the imposition of the restraint (e.g. year 1 versus year 2) would be inaccurate, as it would fail to take into account other changes that would have occurred over the same period. Thus, an estimate of what output would have been in year 2 without the restraint would be required (relevant questions could include: what was the expected growth rate? did other external effects impact output?).

6.3. Other conduct (abuses of dominance)

81. Aside from the vertical restraints described above, there are several other types of misconduct that may emerge in digital platform markets. They have not been addressed in detail here, although some research suggests they may generate significant harm. Because of the significant practical as well as conceptual challenges they raise, authorities may wish to engage in a prioritisation taking into account the resources required to conduct these cases and the magnitude of potential harm. OECD (2018g) provides further information on several types of cases, including:

- **Tying and bundling:** The decision by a firm to require the purchase of several products together, rather than separately, could be considered anticompetitive in some cases. In particular, there is a concern that a firm may tie the purchase of a product for which it has dominance in the market with the purchase of another product in order to exclude competitors from the latter market. There can be some particular challenges to tying and bundling cases in digital platform markets, including how to define the limits of different products (e.g. whether related services on a single platform constitute different products), and the degree to which the “tie” is in fact binding on consumers (see OECD, 2018g). However, some have indicated that tying could be particularly harmful in multisided markets when it links different multisided markets together, so further consideration may be warranted (see, for example, Iacobucci and Ducci, 2018). Box 8 illustrates an example of a tying case involving digital platforms.

Box 8. Tying allegations involving Microsoft in the US

In October 1998 the Department of Justice (DOJ) sued Microsoft Corp. (Microsoft) for its practice of tying the operating system Windows with the internet browser Internet Explorer.

During the first trial, the District Court (DC) found Microsoft had monopoly power in the market for operating systems and declared the tying unlawful per se. The remedy imposed was a breakup of Microsoft in two different units: one offering operating systems and the other offering software.

The Appeals Court rejected the DC decision, imposing a rule of reason assessment. The Court challenged the first trial judgment on the basis that it did not take into account the potential efficiencies deriving from the tying, which could have compensated for any anti-competitive effects.

In November 2001, Microsoft settled the case with the DOJ which in part obligated the company to share its Application Programming Interfaces (API) with other companies. Apart from the judicial proceeding, the theory of harm behind the case represents an interesting example of how a company could use a tying strategy to protect its dominance in the tying and not in the tied product market.

In fact, Microsoft was accused of limiting the expansion of Netscape Navigator (a competitor internet browser) because the underlying middleware (Java) used a programming language which allowed applications to run on multiple operating systems. In other words, the competitive threat was that an eventual Netscape success would have represented an incentive to developers (and users) to use Java, with the consequent risk of creating the basis for the growth of new operating systems.

Source: Excerpted from OECD, 2018h (p. 56), based on United States v. Microsoft Corporation, 253 F.3d 34.

- **Refusal to supply:** In some jurisdictions, a certain asset can be considered essential for firms to compete in a market, and thus efforts by a vertically integrated dominant firm to exclude its competitors by controlling access could be considered an abuse. However, the applicability of these concerns to digital platform markets may not be clear. For instance, it may be difficult to establish that a given data set constitutes an essential asset if alternative data sets that serve a similar purpose are available for purchase from third parties. The burden for proving the importance of a given digital platform asset or infrastructure can be substantial. Box 9 provides an example of these concerns in Mexico.

Box 9. Abuse of dominance concerns in Walmart/Cornershop

Recently, COFECE analysed the risks of unilateral effects in the context of digital platforms. The authority analysed the proposed acquisition by Walmart of Cornershop, a grocery delivery start-up, and ultimately decided to block the transaction.

COFECE determined that Cornershop was a dominant player in certain regions where it faced little competition or was the only grocery delivery service available (Parr, 2019). The authority found that if Walmart acquired Cornershop: (i) Cornershop could block access to the platform for Walmart's competitors; (ii) Walmart could stop distributing its products through platforms other than Cornershop; and (iii) by using the information that Walmart's competitors provide and generate in Cornershop with the sale of their products, Walmart could discriminate its competitors so they leave the platform (COFECE, 2019).

Further, COFECE took into account that Mexican consumers are generally reluctant to switch to a different platform and, hence, would possibly continue to use Cornershop even if less choice was offered (Parr, 2019).

In the end, COFECE decided to refuse the commitments offered by the parties (including granting other retailers access to the platform on a free and non-discriminatory basis) on the basis that they were not binding and that they were too vague, and it blocked the merger (Parr, 2019).

- **Predatory pricing:** The underlying rationale for predatory pricing cases is that a dominant firm may cut its prices to a loss-making level with the specific intent of driving its competitors out of the market. Multi-sidedness, particularly the presence of zero prices, makes the assessment of these cases particularly difficult. In particular, it can be a normal part of a platform business model to charge a low (or zero) price on one side of the market in order to attract consumers who generate positive network externalities for the other (subsidising) part of the market. However, some economists have indicated that predatory pricing may be particularly harmful in multisided markets, given a desire to maximise network effects.

82. Tests of the effects of predatory pricing based on cost (price-cost tests) do not appear to be reliable in multisided markets. As an alternative, Katz (in OECD, 2018a) proposes determining:

1. Whether below-cost pricing is profitable because it increases a platform's user base, making it a stronger competitor; and
2. Whether it weakens competition by preventing competitors from attaining the user base necessary to generate sufficient network effects

83. If only the second is true, it suggests that predation may be a problem given the lack of an efficiency justification (i.e. if the conduct did not harm competitors, it would not have been profitable through efficiency gains for the firm itself). Box 10 below describes an example of a predatory pricing case involving platforms.

Box 10. Predatory pricing claims involving online maps

In July 2009, Bottin Cartographes filed a complaint against Google France, alleging that the latter was abusing its dominant position in the market for digital mapping APIs (application programming interfaces) through predatory prices.

The plaintiff theory was that Google France was offering these services on a free basis to users in order to remove its competitors from the market, after which it could increase prices.

In 2012, the Paris Tribunal de Commerce found that Google France had foreclosed the market and ordered it to pay damages of EUR 500 000. This decision was reversed in November 2015 by the Paris Court of Appeal, after it sought an opinion from the French Competition Authority. In the opinion, the Authority noted the potential competition faced by Google in the market, and found based on price-cost tests that there was no evidence of predation. The Authority further noted the complexity of applying these tests in digital markets (Autorité de la concurrence, 2014).

The original Tribunal de Commerce decision has been critiqued for applying an analytical framework developed for traditional markets to this case (see, for examples, Concurrences, 2013). In particular, the digital mapping API services provided by Google were part of a broader business model based on advertising sales, and were thus a multisided market. As a result, examining the revenues and costs on one side of the market (API services) alone could lead to an erroneous finding of predatory pricing even though a zero price on one side of the market was compensated for by positive prices on another (advertising).

- **Forced free riding:** A somewhat novel theory of harm, forced free riding can be defined as: “when a platform appropriates innovation by other firms that depend on the platform for access to consumers” (Shelanski, 2013, p. 1699). While there are few examples of cases in this area, an investigation was opened by the US Federal Trade Commission which resulted in commitments by Google to refrain from certain conduct (described further in OECD, 2018g, p. 37).
- **Exploitative practices:** Finally, in some jurisdictions, dominant firms may be prevented from engaging in certain practices that constitute an exploitation of their power in their relationships with consumers. While these concerns are not addressed here given that they are not included in the legislation of several jurisdictions, they are discussed further in OECD (2018g, p. 38).

7. Conclusion

84. This paper highlights some practical approaches for competition authorities pursuing digital platform enforcement cases, given the unique challenges this can involve. It explains the key features of digital platform market dynamics and emphasises the importance of selecting and prioritising cases based on economic impact, resource requirements and probability of success, among other criteria. It discusses the challenges of market definition due to multi-sidedness, and proposes defining markets only when necessary. It explains the limitations of some tools for assessing market power, and lays out a qualitative approach that can be followed and supplemented with key indicators, whose limitations should be clearly recognised. Finally, it explains the different types of anticompetitive conduct that may emerge in digital markets, and some considerations when deciding whether to pursue these cases.

85. While not covered here, there are several other considerations for competition authorities, particularly smaller or newer authorities, undertaking digital platform cases. Ensuring sufficient resources and expertise to undertake screening, assess mergers, and develop anticompetitive conduct cases can be a challenge. A balance of both internal staff and external consulting support may be required. Information-sharing and investigative co-operation among jurisdictions may help alleviate some of this burden. Further, digital tools for assessing pricing algorithms and managing large volumes of evidence may be useful.

86. Finally, as alluded to in this paper, digital platform cases may involve a complex range of issues that extends into the domain of consumer and data protection authorities, among other regulators. Thus, competition authorities may wish to enhance their co-ordination with these entities to facilitate investigative work.

87. Further resources on the topics explored in this paper can be found in Annex A. Despite the challenges involved, these resources provide a path for successful competition enforcement in a sector that has an important role in current economic wellbeing in Latin America and the Caribbean, and an even more important role in the region's future.

Annex A: OECD resources on digital platforms

OECD resources for competition enforcement in digital platform markets are available for the following topics:

- Antitrust Tools for Multi-Sided Platforms:
www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm
- E-commerce: <https://www.oecd.org/daf/competition/e-commerce-implications-for-competition-policy.htm>
 - Background note: [https://one.oecd.org/document/DAF/COMP\(2018\)3/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)3/en/pdf)
- Taxi, Ride-Sourcing and Ride Sharing Services:
<https://www.oecd.org/daf/competition/taxis-and-ride-sharing-services.htm>
 - Background note:
[https://one.oecd.org/document/DAF/COMP/WP2\(2018\)1/en/pdf](https://one.oecd.org/document/DAF/COMP/WP2(2018)1/en/pdf)
- Across platform parity agreements (APPAs):
<http://www.oecd.org/daf/competition/competition-cross-platform-parity.htm>
- Zero Price Markets: <https://www.oecd.org/competition/quality-considerations-in-the-zero-price-economy.htm>
 - Background note: [https://one.oecd.org/document/DAF/COMP\(2018\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)14/en/pdf)
- Big data: <https://www.oecd.org/competition/big-data-bringing-competition-policy-to-the-digital-era.htm>
 - Background note: [https://one.oecd.org/document/DAF/COMP\(2016\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf)
- Algorithms and Collusion: <https://www.oecd.org/competition/algorithms-and-collusion.htm>
 - Background note: www.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm
- Non-price effects in merger control: <https://www.oecd.org/daf/competition/non-price-effects-of-mergers.htm>
 - Background note: [https://one.oecd.org/document/DAF/COMP\(2018\)2/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)2/en/pdf)
- Market Definition:
<http://www.oecd.org/daf/competition/Marketdefinition2012.pdf>
- Disruptive innovation: <https://www.oecd.org/daf/competition/disruptive-innovations-and-competition.htm>
 - Background note:
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP\(2015\)3&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP(2015)3&docLanguage=En)
- Geographic market definition: <https://www.oecd.org/daf/competition/geographic-market-definition.htm>
 - Background note:
[https://one.oecd.org/document/DAF/COMP/WP3\(2016\)5/en/pdf](https://one.oecd.org/document/DAF/COMP/WP3(2016)5/en/pdf)

References

- Autorité de la concurrence (2014), Avis n° 14-A-18 du 16 décembre 2014, <http://www.autoritedelaconcurrence.fr/pdf/avis/14a18.pdf>.
- COFECE (2019), “COFECE resolvió no autorizar la concentración entre Walmart y Cornershop” [COFECE decides not to authorise the merger between Walmart and Cornershop], <https://www.cofece.mx/cofece-resolvio-no-autorizar-la-concentracion-entre-walmart-y-cornershop/>.
- Concurrences (2013), "Les Marchés "Biface", Séminaire Nasse" [Two-side markets, the Nasse Seminar], <https://www.concurrences.com/fr/revue/issues/no-1-2013/conferences/les-marches-biface-seminaire-nasse-paris-13-decembre-2012>
- Economist Intelligence Unit (2018), “Latin America's emerging sectors: A closer look at Fintech and renewable energy”, <https://perspectives.eiu.com/economic-development/breaking-barriers-agricultural-trade-between-gcc-and-latin-america-0/white-paper/latin-america%E2%80%99s-emerging-sectors-closer-look-Fintech-and-renewable-energy>.
- Global Competition Review (2018), “E-Commerce Enforcement Guide: Brazil”, <https://globalcompetitionreview.com/insight/e-commerce-competition-enforcement-guide/1177735/brazil>.
- Helms, B. and A. Palacios (2016) “The sharing economy can transform economic development”, *FOMIN/IDB Lab*, <https://www.fomin.org/en-us/Home/News/article-details/ArtMID/18973/ArticleID/5966/The-sharing-economy-can-transform-economic-development.aspx>.
- Hovenkamp, E. (2019), “Platform Antitrust”, *Journal of Corporation Law*, Forthcoming, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3219396.
- Iacobucci, E. and F. Ducci (2018), “The Google search case in Europe: tying and the single monopoly profit theorem in two-sided markets”, *European Journal of Law and Economics*, Vol. 47, <https://doi.org/10.1007/s10657-018-9602-y>.
- IDB and Finnovista (2017), “Fintech Innovations You May Not Know were from Latin America and the Caribbean”, <https://publications.iadb.org/en/Fintech-innovations-you-may-not-know-were-latin-america-and-caribbean>.
- IDB and Finnovista (2018) “Fintech Latin America 2018: Growth and Consolidation”, <https://publications.iadb.org/en/Fintech-latin-america-2018-growth-and-consolidation>
- International Transport Forum (2016), Regulating App-Based Mobility Services Roundtable, <https://www.itf-oecd.org/regulating-app-based-mobility-services-roundtable>.
- OECD (2011), OECD Guide to Measuring the Information Society, <http://www.oecd.org/sti/ieconomy/oecdguidetomeasuringtheinformationsociety2011.htm>.
- OECD (2012), “Policy Roundtables: Market Definition”, <http://www.oecd.org/daf/competition/Marketdefinition2012.pdf>.
- OECD (2015), “Hearing on Disruptive Innovation: Issues Paper by the Secretariat”, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP\(2015\)3&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP(2015)3&docLanguage=En).

- OECD (2016a), “Executive Summary of the Hearing on Across-Platform Parity Agreements”, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/M\(2015\)2/AN3/FINAL&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/M(2015)2/AN3/FINAL&doclanguage=en).
- OECD (2016b), “Big Data: Bringing Competition Policy into the Digital Era: Background note by the Secretariat”, [https://one.oecd.org/document/DAF/COMP\(2016\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf).
- OECD (2016c), “Summary of [OECD Competition Committee] Discussion of the Hearing on Across-Platforms Parity Agreements”, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/M\(2015\)2/AN2/FINAL&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/M(2015)2/AN2/FINAL&doclanguage=en).
- OECD (2016d), “Defining Geographic Markets Across National Borders: Background note by the Secretariat”, [https://one.oecd.org/document/DAF/COMP/WP3\(2016\)5/en/pdf](https://one.oecd.org/document/DAF/COMP/WP3(2016)5/en/pdf).
- OECD (2017), “Algorithms and Collusion: Competition Policy in the Digital Age”, www.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm.
- OECD (2018a), “Rethinking Antitrust Tools for Multi-Sided Platforms”, www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm.
- OECD (2018b), “Going Digital in a Multilateral World – An Interim Report to Ministers”, <https://www.oecd.org/going-digital/C-MIN-2018-6-EN.pdf>.
- OECD (2018c), “Quality Considerations in Zero Price Markets: Background note by the Secretariat”, [https://one.oecd.org/document/DAF/COMP\(2018\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)14/en/pdf).
- OECD (2018d), “Personalised Pricing in the Digital Era: Background note by the Secretariat”, [https://one.oecd.org/document/DAF/COMP\(2018\)13/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)13/en/pdf).
- OECD (2018e), “Taxi, Ride-Sourcing and Ride Sharing Services: Background note by the Secretariat”, [https://one.oecd.org/document/DAF/COMP/WP2\(2018\)1/en/pdf](https://one.oecd.org/document/DAF/COMP/WP2(2018)1/en/pdf).
- OECD (2018f), “Considering non-price effects in merger control: Background note by the Secretariat”, [https://one.oecd.org/document/DAF/COMP\(2018\)2/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)2/en/pdf).
- OECD (2018g), “Implications of E-commerce for Competition Policy: Background note”, [https://one.oecd.org/document/DAF/COMP\(2018\)3/en/pdf](https://one.oecd.org/document/DAF/COMP(2018)3/en/pdf).
- OECD (2018h), “Digital Platforms and Competition in Mexico”, <https://www.oecd.org/da/competition/eng-digital-platforms-and-competition-in-mexico.pdf>.
- Shelanski, Howard A. (2013), “Information, Innovation and Competition Policy for the Internet,” *University of Pennsylvania Law Review*, Vol. 161, https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1025&context=penn_law_review.
- Parr (2019), “Mexico’s COFECE publishes public decision on Cornershop/Walmart”, <https://app.parr-global.com/intelligence/view/prime-2860178>.
- Parr (2018a), “CADE’s SG dismisses complaint against Uber”, <https://app.parr-global.com/intelligence/view/prime-2714574>.
- Parr (2018b), “CADE settles abuse of dominance investigation with online travel agencies”, <https://app.parr-global.com/intelligence/view/prime-2610389>.
- Prat, A. and T. Valletti (2018), “Attention Oligopoly”, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3197930.
- Tremblay, M. (2017), “Market Power and Mergers in Multi-Sided Markets”, <https://pdfs.semanticscholar.org/f616/50eb348e876eba72df68b299172822838ae8.pdf>.

World Bank (2018), “Tourism and the Sharing Economy: Policy & Potential of Sustainable Peer-to-Peer Accommodation”, <http://documents.worldbank.org/curated/en/161471537537641836/Tourism-and-the-Sharing-Economy-Policy-Potential-of-Sustainable-Peer-to-Peer-Accommodation>.

Wright, J. and J. Yun (2019), “Burdens and Balancing in Multisided Markets: The First Principles Approach of Ohio v. American Express”, *George Mason Law & Economics Research Paper*, No. 18, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3308507.

Endnotes

¹ PriceWaterhouseCoopers (2018), “Global Top 100 companies by market capitalisation: 31 March 2018 update”, <https://www.pwc.com/gx/en/audit-services/assets/pdf/global-top-100-companies-2018-report.pdf>.

² <https://www.iab.com/wp-content/uploads/2019/05/Full-Year-2018-IAB-Internet-Advertising-Revenue-Report.pdf>.

³ <https://wearesocial.com/global-digital-report-2019>.

⁴ World Bank Development Indicators, <https://datacatalog.worldbank.org/dataset/world-development-indicators>.

⁵ Hovenkamp (2019) explains this price balancing in more detail.

⁶ See, for instance, <https://gettingthedealthrough.com/area/20/jurisdiction/22/merger-control-2019-united-kingdom/>.

⁷ This note uses the term e-commerce as the sale or purchase of good and services conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders (see OECD, 2011).

⁸ <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>.

⁹ <https://www.statista.com/statistics/445860/retail-e-commerce-sales-latam/>.

¹⁰ MercadoLibre Annual Report, 2018. Available at: <http://investor.mercadolibre.com/financial-information/annual-reports>.

¹¹ See <https://www.worldcrunch.com/business-finance/amazon-v-mercadolibre-latin-america39s-online-retail-war-heats-up>.

¹² See <https://gestion.pe/economia/empresas/amazon-busca-expandirse-america-latina-nueva-oficina-argentina-234110>.

¹³ See <https://markets.ft.com/data/equities/tearsheet/profile?s=BTOW3:SAO>.

¹⁴ OECD data on ICT Access and Usage by Households and Individuals, OECD.stat.

¹⁵ World Bank, World Development Indicators database.

¹⁶ The Mexican Competition Authority (Comisión Federal de Competencia Económica, COFECE) is currently investigating whether digital platforms would have carried out monopolistic practices, such as bundling, predatory or discriminatory pricing, competitors' margin squeeze, or refusal to supply. See: <https://www.cofece.mx/en/investiga-cofece-mercado-de-servicios-de-plataformas-de-comercio-electronico-en-mexico/>.

¹⁷ World Bank, World Bank Data bank Available at: <https://data.worldbank.org/indicator/EN.URB.MCTY.TL.ZS?locations=ZJ>.

¹⁸ Statista, available at: <https://www.statista.com/outlook/368/103/ride-hailing/south-america>.

¹⁹ Key Tourism Indicators from OECD.Stat, <https://stats.oecd.org>.

²⁰ As indicated in Box 7 below, CADE recently carried out an investigation on OTAs.

²¹ The opinion of CADE's General Superintendent's Office on this case is available here: https://sei.cade.gov.br/sei/modulos/pesquisa/md_pesq_documento_consulta_externa.php?DZ2uWeaYicbuRZEFhBt-n3BfPLlu9u7akQAh8mpB9yNK1AWDAPHpuoiwVc9PqM9phwjWCC-b2ksnBRyMCdaScQXDxeCu_wEJ96tI-C8NUWXRTLAjzIkGwMir7Pw3vZ3y.