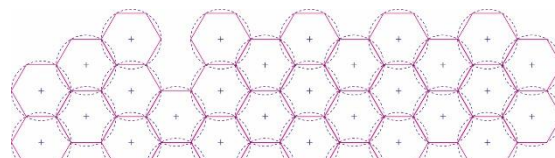


# Regulating digital platforms to encourage competition

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Digital platforms deliver digital services such as e-commerce, social media, and a wide variety of cloud-based services. Until very recently digital platforms were virtually unregulated, but now it is recognised that the rise of these platforms has also created problems. There is now a growing consensus that this should change – specifically how should digital platforms be regulated to protect consumers against harm, preserve the democratic process, and enable competitive markets? In this paper we focus on the last of these three questions – whilst recognising that whatever regulation is applied to enable competition may both contribute to, and conflict with, measures designed to preserve the democratic process or protect consumers.

## The rise of the digital platform

Over the past decade digital platforms have transformed the economic and social lives of billions of people around the globe. Figure 1 illustrates their increasing importance. It shows how the nature of the world's top ten companies, as measured by their market capitalisation has changed over the past decade. In 2009 the top ten was dominated by the oil industry with four entries and there was only one digital platform, Microsoft. Ten years later there are seven digital platforms and oil companies have disappeared from the top ten.

Figure 1: Market capitalisation, top 10 companies<sup>1</sup>

Q2 2009		Q2 2019	
PetroChina	\$367bn	Microsoft	\$1028bn
Exxon Mobil	\$341bn	Amazon	\$928bn
ICBC	\$257bn	Apple	\$911bn
Microsoft	\$212bn	Alphabet	\$751bn
China Mobile	\$201bn	Facebook	\$551bn
Wal-Mart	\$189bn	Berkshire Hathaway	\$521bn
China Construction Bank	\$182bn	Alibaba	\$439bn
Petrobras	\$165bn	Tencent	\$432bn
Johnson and Johnson	\$157bn	Johnson and Johnson	\$370bn
Shell Oil	\$156bn	J P Morgan	\$363bn
<b>% of capitalisation from digital platforms</b>	<b>8%</b>		<b>80%</b>

The seven digital platforms listed in Figure 1 have developed very different business models. In particular it is useful to distinguish between those which generate revenues primarily from supplying physical products (including software products) and those which monetise purely digital services. Specifically:

- Alphabet generates the bulk of its revenues from targeted online advertising services based around the data it collects from its Google search engine and its YouTube social media platform<sup>2</sup>. As such it is primarily a digital service provider.
- Facebook (which owns Instagram) is the biggest supplier of social media services in most countries of the world. It uses this position to generate very substantial revenues and profits from targeted online advertising. As such it is a pure digital services platform.
- While Amazon today generates most of its revenue from the online sale of physical products to consumers – either directly or by providing a platform to third parties – the operating margin on these businesses is low compared with those of Alphabet or Facebook. Instead Amazon makes most of its profits from providing web services and infrastructure to third parties. These digital services make up less than 10% of its revenues.
- Apple makes the bulk of its revenues and profits by selling devices such as phones, tablets and laptops. Digital services constitute less than 20% of its revenues.
- Microsoft continues to make the bulk of its money from software products (Office and operating systems) and hardware (Xbox and other devices). Less than 15% of its revenues come from digital services.

<sup>1</sup> Source: Financial Times Global 500; digital platforms shaded

<sup>2</sup> Data may also be generated from other Google applications such as email and online storage.

- Alibaba has a very similar business model to Amazon. But its focus so far is on China rather than the rest of the world.
- Tencent makes the bulk of its revenue in China from selling games for use on PCs and mobile phones.

Figure 2 summarises these key differences. It shows that Alphabet (through its subsidiaries) and Facebook stand out as by far the biggest suppliers of digital services.

**Figure 2: Revenues (US\$ bn) of major digital platforms from digital services in 2018<sup>3</sup>**

Platform	Total revenues	Digital services revenues	Comment
Alphabet	137	123	From targeted on-line advertising
Facebook	56	55	From targeted on-line advertising
Amazon	233	12	Digital services revenues exclude web services and retail sales
Apple	60	9	Digital services revenues exclude device sales
Microsoft	110	13	Digital services revenues exclude hardware and software sales
Alibaba	55	8	Digital services revenues exclude retail sales
Tencent	45	16	Digital services revenues exclude sales of PC and mobile games

In this paper we focus on the digital service markets in which these two firms operate, the competition problems which arise and the regulatory remedies which might be used to deal with them. At the same time, we note that regulation which enables competition in the markets where Alphabet and Facebook are strongest might also be required to deal with competition problems raised by the activities of other large digital platforms.

### The key characteristics of digital services markets

The digital service markets from which Facebook, YouTube and Google make the bulk of the money have a number of

characteristics<sup>4</sup> which, in combination, can lead to competition problems. Specifically:

- The marginal cost of serving an additional customer in a digital services market is very low compared with other markets, given the near global ubiquity of broadband Internet access. This means that digital service providers can expand rapidly if they have a service which consumers want. Facebook, for example, had one million subscribers in 2004, 350 million in 2009 and 2,300 million at the end of 2018.
- The market is multi-sided, bringing together two or more distinct but interdependent groups of users<sup>5</sup>. For example, several digital platforms bring together consumers, sellers or content suppliers, and advertisers. The digital service provider offers the service free of charge to consumers in return for extensive consumer data which can then be assembled into a “big data” set, analysed and monetised. In the case of Google, YouTube and Facebook this is done by offering online targeted advertising services to a wide range of companies wanting to sell their goods and services. Once this big data set is established it creates a barrier to entry by others, who must come close to replicating it to compete effectively in the market.
- By offering a range of linked services, the dominant digital service provider can expand the information collected on consumers and make it even more challenging for entrants to replicate its big dataset. So for example Alphabet owns Google. But it also offers social media, email, maps, storage, translation and shopping services.
- There may be network effects which make the service of the dominant service provider more attractive to potential subscribers than the digital services of rivals. For example, Facebook is often more attractive than rivals because consumers know that their friends and relatives are likely to be on Facebook as well.
- A substantial majority of consumers find it convenient to single-home on the services offered by the dominant digital service provider rather than to multi-home on several competing services and then choose between them on their merits. Google has a big advantage here when it comes to search. Google is the default search engine on all Android phones and paid Apple \$12 billion to make it the default search engine on Apple phones in 2019. As a result Google is the default search engine for well over 90% of smartphone users worldwide<sup>6</sup>.

<sup>3</sup> Source: financial results of the companies.

<sup>4</sup> See for example Scott Morton et al, Stigler Centre, May 2019, *Committee for the Study of Digital Platforms - Market Structure and Antitrust Subcommittee Report*

<sup>5</sup> See OECD, 2018, *Rethinking Antitrust Tools for Multi-Sided Platforms*, P9.

<sup>6</sup> See for example ACCC, June 2019, *Digital Platforms Inquiry*, P10

The combination of these characteristics means that digital service markets can tip rapidly in favour of one dominant player – with a brief period of competition for the market but very little competition in the market once the tipping point has occurred. The winner of the competition for the market then has enduring dominance.

### The market power of Google and Facebook

Figure 2 shows that Alphabet and Facebook generate digital service revenues which are an order of magnitude greater than the other large digital platforms listed. Both generate these revenues almost entirely from online targeted advertising and have been declared dominant by at least two competition authorities in related markets:

- The European Commission has declared that Google, by far the largest of Alphabet's operating companies, is dominant in the supply of search engine services and smartphone operating systems across the EU<sup>7</sup>
- The Australian competition authority, the ACCC, has declared that Google is dominant in the supply of search engine services and search advertising services whilst Facebook is dominant in the supply of social media services and display advertising services in Australia<sup>8</sup>.

These decisions are based largely on analysis of market share data and the high and enduring levels of profitability.

**Figure 3: Market share and profit indicators**

Measure	Alphabet	Facebook	Others	Source
Time of Australians spent on-line	21%	19%	60% <sup>9</sup>	ACCC's digital platform inquiry
Search engine market share in Europe:				
2009	94%	0%	6%	DG Competition
2017	92%	0%	8%	2017
Operating margin:				
2013	27%	44%		Company financial results
2017 or 2018	23%	39%		

<sup>7</sup> See for example DG Competition. July 2017, *Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service*

<sup>8</sup> ACCC June 2019 op cit

<sup>9</sup> No other digital platform had a share in excess of 3.5%

<sup>10</sup> On TV, cinema, in print and on radio

A more detailed analysis of the market for online targeted advertising supports these conclusions. Since 2005 online targeted advertising has rapidly displaced traditional advertising<sup>10</sup> as the best way for firms to advertise their goods and services.

There are three main forms of online advertising, as defined in reports by Plum<sup>11</sup> and the ACCC<sup>12</sup>:

- search-based advertising in which advertisers sponsor links on search engines to give them prominence in search results;
- display advertising in which adverts are integrated<sup>13</sup> with content which has attracted end-users. This category can be subdivided by content type into social display content (for example from Facebook or YouTube) and open display content from online publishers like newspapers and magazines; and
- classified advertising in which advertisers, often small businesses, pay for an entry in an online classified listing to advertise their goods and services online.

The first two of these categories of adverts are targeted – that is the adverts or search results which consumers received are tailored to meet their preferences as revealed through analysis of the big datasets held by the digital service provider. The effectiveness of the targeting depends on the quality of data used<sup>14</sup>. Therefore, the online advertising service offered by the digital service provider with the largest and most comprehensive dataset is likely to capture the lion's share of the online advertising revenues and, to a significant extent, dictate the terms of supply.

Figure 4 provides indicative estimates of the UK online advertising revenues in 2017. It suggests that:

- Google is strongly dominant in the supply of search-based online advertising – a finding which is consistent with the conclusions of the European Commission and the ACCC; and
- whether Facebook is dominant in the supply of display-based online advertising depends on whether the markets for social display-based and open display-based advertising are considered separate markets or segments of the same market.

<sup>11</sup> Plum Consulting report for UK Government, January 2019, *Online advertising in the UK*

<sup>12</sup> ACCC June 2019 op cit

<sup>13</sup> In a number of forms which include banner adverts, integrated content, and videos

<sup>14</sup> In terms of both the number of users and the quantity of data held on each of them

**Figure 4: Indicative estimates of UK on-line advertising revenues – 2017 (£bn)<sup>15</sup>**

Type of on-line advertising	Alphabet	Facebook	Others	Total
Search based	5.2	0	0.6	5.8
Display based:				
social	0.5	1.7	0.2	2.4
open	0.2	0	1.6	1.8
Classified	na	na	na	1.5

Overall there is strong evidence that the markets for search-based online advertising and social display based advertising have already tipped<sup>16</sup> in favour of Google and Facebook respectively. What competition problems are raised by this?

### Competition problems following the tipping point

There are two main competition problems which arise from the strong market positions, post-tipping-point, of Google and Facebook:

- The opportunity for successful direct competitive entry is limited.
- The dominant digital service providers are able to foreclose complementary digital services.

#### Direct entry

The barriers to successful entry by a direct competitor, as set out in Section 3, are substantial. They include the need for the entrant to:

- overcome the very substantial brand and economy of scale advantages enjoyed by Google and Facebook;
- construct a dataset on consumers which rivals that of the established digital service provider. This barrier is likely to grow in future as the incumbent makes more effective use of artificial intelligence to analyse consumer preferences; and
- overcome user inertia to switching to a rival service.

#### Foreclosure of complementary services

Digital platforms like those of Google and Facebook are used by complementary digital services. For example online comparison shopping services use the Google search engine to reach customers, while online news services use Facebook. Initially

these services enhance the value of Google and Facebook for consumers and enable these platforms to grow more quickly. But as they gain market power, Google and Facebook have both the incentive and the means to foreclose the activities of the companies providing these complementary services by:

- changing the terms of trade offered so as to reduce the profits generated by the rival complementary services. For example:

*"Other platforms impose rules and institutions that reach beyond the pure matching services and shape the functioning of the marketplace and, potentially, the relationship between the various platform sides, e.g. by regulating access to and exclusion from the platform, by regulating the way in which sellers can present their offers, the data and APIs they can access, setting up grading systems, regulating access to information that is generated on the platform, imposing minimum standards for delivery and return policies, providing for model contracts, imposing price controls and MFN clauses, etc. Such rule setting and "market design" determine the way in which competition takes place."*<sup>17</sup>

- Identifying, through analysis of its data set, which complementary services from rivals are proving most successful or posing the biggest potential competitive threat;
- setting up their own complementary services in competition and diverting traffic to them<sup>18</sup>; and
- acquiring the companies running these complementary services as an alternative to developing their own complementary service.

For this strategy to be successful it is important that the incumbent retains control over the relationship with consumers so as not to allow successful complements to establish direct relationships with them – that is to prevent them from disintermediating the incumbent.

The likely outcome of leaving these two problems unresolved is that there is enduring dominance by the incumbent digital service provider which leads to higher prices, lower quality and less innovation than would occur in competitive markets.

### Regulating digital platforms – the current position

Competition authorities on both sides of the Atlantic have started to regulate digital platforms with increasing frequency. In

<sup>15</sup> Plum Consulting report for UK Government, January 2019, *Online advertising in the UK*

<sup>16</sup> 'Tipping' refers to monopolisation ('winner-takes-most') of the market. This may occur if a certain scale is reached due to several factors, such as economies of scale or scope, network externalities, difficulty raising capital, and behavioural limitations of consumers. See Furman et al, *Unlocking digital competition*, March 2019

<sup>17</sup> Cremer et al, April 2019, *Competition policy for the digital era*

<sup>18</sup> DG Competition, June 2017, *Summary of Commission decision of 27 June 2017 relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement (Case AT.39740 — Google Search (Shopping))*

Europe the competition directorate of the European Commission has:

- found that Google is dominant in the supply of search services and has abused that position. In June 2017 it found that Google distorted competition in the supply of comparison shopping services by using its search engine to give undue prominence to its own shopping services at the expense of rivals. It fined Google €2.4 billion. Then in March 2019 it fined Google a further €1.5 billion for the way it controlled how advertisements from rival search engines were positioned on the websites of content publishers which used the Google search algorithm; and
- found that Google abused its dominant position in the market for smart mobile operating systems to increase its market power in the supply of search engine services. In July 2018 it fined Google €4.3 billion for this abuse.



## The European Commission has found that Google is dominant and has abused its position in the supply of search services and the market for smart operating systems

The EU has also passed its general data protection regulation (GDPR) in 2018. With digital platforms in mind the GDPR is designed to protect the privacy of data provided by consumers.

In the US there has been relatively little action to date by the relevant authorities. In July 2019 the Federal Trade Commission fined Facebook \$5 billion for misleading consumers over the privacy of the data it holds on them. At the same time it announced that it would start an investigation into Facebook for possible anti-competitive conduct. Then in early September 50 attorneys general from US states and territories announced an antitrust investigation into Google.

In parallel with these enforcement actions we have seen a flurry of authoritative reports setting out the case for regulating digital platforms. In March 2019 an expert panel reported to the UK government (the Furman report<sup>19</sup>); in April a panel reported to the head of the European Commission's competition directive (the Vestager report<sup>20</sup>); in May a panel of economic experts from the Stigler Centre<sup>21</sup> provided a US perspective on the problems (the Morton report<sup>22</sup>); then in June the ACCC

published a report setting out proposals for regulating digital platforms<sup>23</sup>. These reports make four high level proposals.

### Figure 5: Proposals for regulating digital platforms

#### Proposal 1

- Continue to use the existing framework of competition law as the basis for regulating digital platforms

#### Proposal 2

- Implement measures which improve consumer welfare

#### Proposal 3

- Establish a sector specific regulator to complement the competition authority

#### Proposal 4

- Apply key measure to dominant platforms only

#### Proposal 1: Continue to use the existing framework of competition law as the basis for regulating digital platforms

There is a general consensus across these reports that the existing framework of competition law remains a good starting point for regulating digital platform but needs to be modified given the characteristics of digital platform markets listed in Section 3 above. For example:

*"The Panel believes that competition policy should be given the tools to tackle new challenges, not radically shifted away from its established basis"*<sup>24</sup>

*"While the existing tools and goals of competition law and consumer law frameworks remain applicable to digital markets, the opacity and complexity of these markets make it difficult to detect issues and can limit the effectiveness of the broad principles"*<sup>25</sup>

#### Proposal 2: Implement measures which improve consumer welfare

There is also a general consensus that any regulation of digital platforms should be designed so as to maximises consumer welfare. But there is growing recognition that digital platforms can act in a way which creates consumer harm and reduces consumer welfare. So measures to prevent consumer harm and measures to enable competition may conflict and make it difficult to measure the net effect on consumer welfare. For example:

- Digital service providers have incentives to create addictive content (which generates consumer harm). They want to keep consumers online for as long as

<sup>19</sup> Furman et al, March 2019, *Unlocking digital competition*

<sup>20</sup> Cremer et al, April 2019, op cit

<sup>21</sup> An academic institute within the University of Chicago Booth

<sup>22</sup> Morton et al, May 2019, op cit

<sup>23</sup> ACCC, June 2019, op cit, which has a focus on the impacts of these platforms on traditional media

<sup>24</sup> Furman et al March 2019, op cit P5

<sup>25</sup> ACCC, June 2019 op cit, P13

possible to gather more data from, and present more adverts to, consumers. This effect may be amplified by competition as rival platforms compete for our attention.

- Implementing measures to prevent consumer harm can raise the fixed costs of a digital platform. This in turn increases economy of scale effects and further raises the barriers to successful competitive entry.

### Proposal 3: Establish a sector specific regulator to complement the competition authority

There is an emerging consensus that there is a role for a sector specific regulator of digital platforms which might include responsibility for minimising consumer harm as well as understanding market dynamics and enabling competition so as to complement the activities of the competition authority. This would put the digital authority in a position to consider the interaction between measures designed to achieve these two different policy objectives. This digital authority might be independent, part of the competition authority, part of the data protection authority, or part of the national telecommunications regulator<sup>26</sup>. The main arguments put forward in favour of creating a digital authority are as follows:

- The markets for digital services are changing quickly and a sector specific digital authority may be able to intervene more quickly to correct for market failure, than a general competition authority.
- With the exception of merger cases, competition authorities consider what has happened in the past, whilst a digital authority might regulate on a forward-looking basis.
- A digital authority might be given the powers to take measures to move a market towards more effective competition, where there is a clear dominance. In contrast the competition authority might focus on preventing abuse of a dominant position.
- Competition authorities typically take one-off decisions – levying fines, ordering structural changes and prohibiting certain conduct. Sector specific regulators are more often set up to monitor market developments and the behaviour of dominant players on an ongoing basis.
- A sector specific digital authority might gather data on how digital service markets function so as to shed light on complex and opaque markets. By contrast a competition authority typically works on a case-by-case basis across a wide range of sectors.

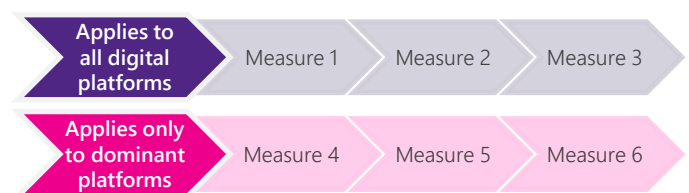
### Proposal 4: Apply key measures to dominant platforms only

There is a consensus that several of the measures required to enable competition should apply only to digital platforms which have already won the race to dominate a specific market. But the term used to label such platforms varies. Vestager talks about *dominance*; the ACCC about *substantial market power*; Furman about *strategic markets status*; and Morton about *bottleneck power*. It is not clear whether the tests used to identify such platforms are consistent with one another.

### Specific measures to enable competition

There are six specific measures which the recent work of Vestager, Furman, the ACCC, and Morton agree should be considered so as to enable competition in the supply of digital services. We list and comment on them below. Measures 1 to 3 might apply to all digital platforms; Measures 4 to 6 to dominant platforms only.

Figure 6: Measures to enable competition



#### Measure 1: Portability of customer data

The aim of this measure is to reduce the costs of consumers switching between digital platforms and might include the development of open standards on digital identity owned by the end-user. But there are issues here of how to define the term *customer data*. There is a need to distinguish between *"volunteered, observed and inferred data"*<sup>27</sup>. The ACCC also questions whether such a measure would have much effect given that consumers can already multi-home on rival services which are free of charge. This measure may be more effective if it is applied to the reputational data<sup>28</sup> of suppliers on the other side of multi-sided markets.

#### Measure 2: Interoperability between services offered by rival digital platforms.

An obvious example of such a measure is its application to communication services like WhatsApp and Windows Live Messenger. There are obvious parallels here to the requirements which exist in the licences of telecommunications operators to interconnect with and deliver voice calls to rival networks.

<sup>26</sup> Given that a primary role of a digital authority might be to move digital services markets towards greater competition. Telecommunications regulators have considerable experience in moving the telecommunication sector from monopoly towards effective competition. See Richard Feasey, *Ex*

*ante digital regulation – what can we learn from telecoms?*, 2019 for a fuller discussion on this point.

<sup>27</sup> Cremer et al, April 2019, op cit, P8

<sup>28</sup> The data which establishes a supplier's reputational rating for potential buyers to take into account when considering a purchase.

Indeed, the EU's European Electronic Communications Code includes provisions for interoperability between the communications services of digital platforms in its Article 61<sup>29</sup>. However, it is unclear whether such a measure would increase consumer welfare in the long term. The coordination needed between rival digital platforms to meet the interoperability requirement could chill innovation in the further development of value-added communication services. It is also unclear whether lack of interoperability between the communication services supplied by digital platforms is a primary cause of dominance by digital platforms.

### Measure 3: Encourage consumers to multi-home

Consumers are often reluctant to multi-home on several rival digital services and then choose between them on their merits. Such a process would stimulate competition but can be time-consuming for consumers who frequently accept default options and conditions of use for their data without examining them. Changing such behaviour is challenging, but regulators could reasonably nudge consumers away from accepting default settings – for example on choice of search engine – by requiring them to make an explicit choice from time to time. The ACCC is proposing such a requirement for search engines in Australia.

### Measure 4: Data sharing between dominant digital platforms and smaller rivals

It is clear that the existence of the big datasets of Facebook and Google are a major barrier to competitive entry into the targeted online advertising markets. Sharing this data would go a long way towards lowering this barrier to entry. But any regulation which requires such sharing would require satisfactory resolution of at least five questions<sup>30</sup>:

- What categories of data should be shared? For example, should data sharing extend beyond the data which consumers explicitly provide to the dominant platform, to include consumer behaviour observed on that platform and even inferences drawn by the platform from that behaviour?
- Should data sharing be required on a one-off or on-going basis?
- Would regulation, like the EU's GDPR, restrict such data sharing to an extent which would mean it had little value for the smaller rival?
- What price would the dominant operator be allowed to charge for the shared data? In answering this question it is important to note that there are fundamental differences here between regulated prices for essential inputs to telecommunication services and regulated prices for the proposed data sharing. When a

telecommunications access provider rents an essential input to an access seeker it diminishes the supply available to others (including itself). When data is shared the supply is not diminished. In economic terms data are non-rivalrous goods.

- What impact would obligations to share data have on the dominant digital platform's incentives to innovate further so as to improve its services?

### Measure 5: Modifying the merger review process

There is a growing concern that the merger review process needs to be overhauled, given that dominant digital platforms now have a strong track record of acquiring innovative companies which might otherwise grow into rivals. There are three main proposals:

- The dominant digital platform should notify the competition authority of its intention to acquire smaller firms than under current notification rules.
- The theory of harm analysis used by competition authorities should change. Competition authorities, especially in the US, have until now taken the view that avoiding false positives (such as banning mergers which would increase consumer welfare) is better than avoiding false negatives (such as allowing mergers which would decrease consumer welfare). This deliberate bias rests on a judgement that false positives are very difficult to correct (once a merger has been banned) whilst market forces will quickly correct false negatives. But now some leading competition authorities argued that, in the case of certain digital platform markets, dominance is so strong that the prospects of self-correction of false negatives are remote and this bias should be removed.<sup>31</sup>
- The burden of proof to demonstrate that a merger will be welfare enhancing should, in the case of markets with dominant digital platforms, shift to those proposing the merger – given the information asymmetries which exist in the complex markets for digital services.

Some analysts argue that this concern needs to be balanced against the incentives which unconstrained mergers with dominant digital platforms creates for innovative start-ups. These start-ups may develop new, welfare enhancing, digital services only if there is a prospect of them being acquired by a dominant digital platform.<sup>32</sup> Others argue that this incentive will remain when there are merger constraints on the dominant platforms because there are non-dominant digital providers who will also want to acquire innovative start-ups.

<sup>29</sup> DIRECTIVE (EU) 2018/1972 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing the European Electronic Communications Code, December 2018

<sup>30</sup> See also Feasey, September 2019, *Implementing data sharing regulation*

<sup>31</sup> Furman et al March 2019 op cit. Furman proposes that the "balance of probabilities test" is replaced by a "balance of harm test" in its recommendations on changes to the UK merger review process

<sup>32</sup> See Furman et al March 2019, op cit, P49, para 1.156.

## Measure 6: Require non-discrimination in the treatment of complementary services

The problem of foreclosure of complementary services by dominant digital platforms highlighted in Section 5 above might be addressed by putting an obligation on the dominant digital platform not to discriminate in favour of its own complementary services and against those of rivals which use the platform. There are potential lessons here from the telecommunication sector – where requirements for non-discrimination in the supply of essential inputs has been in place for many years. This has led to the development of concepts such as equivalence of outputs, equivalence of inputs, and functional separation, alongside the more intrusive option of structural separation, to deal with problems of discrimination in the supply of essential inputs by vertically integrated firms.

### Future challenges

It is clear from the analysis set out above that regulation of digital platforms is still in its early stages and that there is considerable uncertainty over what form it should take. But there is now momentum to impose regulation on global digital platforms – at least in Australia, Europe, the UK and the US. Key challenges for the development of regulation which will increase consumer welfare include the following:

- Is it possible to establish a global regulatory framework which will constrain the potentially negative behaviour of global digital platforms in a consistent way? This is clearly a desirable end point. But it almost certainly requires global leadership by key countries if it is to be reached.
- What is the appropriate role for sector specific digital authorities to complement the work of competition authorities?
- How successful will digital authorities be in understanding how the dominant digital platforms work, how they use consumer data, how they interact with other platforms, and the extent to which competition between dominant digital platforms may develop in future?<sup>33</sup>
- Which of the measures listed in Section 7 should be implemented first? There is a strong case for taking regulatory action. But the markets being regulated are complex and there is substantial scope for regulatory

error and unintended consequences which could reduce rather than enhance consumer welfare.

- How can the authorities best improve their understanding of the digital service markets that they want to regulate? Is this a role for new digital authorities?
- To what extent is it possible to establish, ex-ante, a code of conduct for dominant digital platforms which specifies the boundaries of what constitutes anti-competitive conduct<sup>34</sup> and to what extent is a case-by-case approach required to individual instances of alleged anti-competitive conduct<sup>35</sup>?
- How should potential conflicts between regulation designed to avoid consumer harm and regulation designed to enable competition be resolved?

Clearly there is much more to be done.

### About Plum

We are a leading independent consulting firm, focused on the telecommunications, media, technology, and adjacent sectors. We apply extensive industry knowledge, consulting experience, and rigorous analysis to address challenges and opportunities across regulatory, radio spectrum, economic, commercial, and technology domains.

Now a Plum Associate, David Lewin was a founding partner of Plum. He has worked for 30 years to help clients resolve competition, policy and regulatory issues in ICT markets.

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<sup>33</sup> Competition between Google and Facebook in the targeted advertising markets may strengthen in future, whilst Amazon may become a significant player in these markets as it collects growing volumes of consumer data through its retail sale, Amazon Prime and Alexa services.

<sup>34</sup> Such an approach is proposed by Furman.

<sup>35</sup> A focus of the Vestager report.