

# Digital Platforms and Competition Policy: A Business-Ethical Assessment

Research Article

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**Abstract:** The debate around 'big tech' and competition law and policy has gained traction over the past few years – not least because of the various ongoing antitrust investigations in China, Europe, and the U.S. This paper builds on the renewed interest in the topic and discusses the key characteristics of digital markets, the business models and strategies of major tech platforms such as Amazon, Apple, Facebook, and Google, and the corresponding antitrust issues. It does so by utilizing a distinct business ethics perspective, i.e., ordoliberalism. By doing so, the paper not only aims to enrich the current debate on big tech and antitrust; it also intends to illustrate the continuing relevance and importance of 'German neoliberalism' in the 21<sup>st</sup> century.

**Keywords:** Ordoliberalism • Big Tech • Digital Markets • Antitrust • Competition Law and Policy

**JEL Classification:** B2, K21, O3

## 1. Introduction

The debate around 'big tech' and antitrust has played a prominent role in public (policy) discourses in many parts of the world over the past few years. Noteworthy is that several countries and regions, including China, the European Union, and the United States, have launched multiple probes and investigations into the allegedly anticompetitive and exclusionary business practices of Amazon, Apple, Facebook, Google, and their Chinese

counterparts, Alibaba and Tencent.<sup>2</sup> This paper builds on the renewed interest in the topic and discusses the key characteristics of digital markets, the business conduct of major tech platforms, and the corresponding antitrust concerns. It does so by utilizing a distinct business ethics perspective, that is, ordoliberalism or 'German neoliberalism'.

The paper's primary goals are twofold: *First*, it provides an overview of the main features of the internet economy and analyzes the central business strategies of four major tech platforms, i.e., Amazon, Apple, Facebook, and Google. *Second*, it derives and applies key ordoliberal principles to the digital economy and analyzes big tech's business conduct from a (mostly) Euckenian standpoint, thereby contributing to and enriching contemporary ordoliberalism.

The paper contributes to the academic literature in several ways: *First*, the discourse on big tech and

1 *Acknowledgment:* The author would like to thank two anonymous reviewers for their constructive feedback and criticism. They helped to improve the article significantly. The usual caveats apply.

2 Cp. DOJ, 2020a, 2020b; European Commission, 2020, 2021a, 2021b, 2021c; FTC, 2020; New York Times, 2021a.

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antitrust is mainly dominated by legal scholars and economists; yet what appears to be lacking is a genuinely business *ethics* framework; ordoliberalism is such a concept that could help to fill the void. *Second*, several antitrust researchers refer to ordoliberalism *en passant*<sup>3</sup>, but fail to (fully) acknowledge its relevance and importance; hence a distinct ordoliberal perspective on the topic is missing in the academic literature. *Finally*, the paper also aims to contribute to and enrich the current ordoliberal debate: So far, the topic of big tech companies and competition policy does not play a (very) prominent role in contemporary ordoliberal debates; yet, as the following sections will show, by applying (slightly) revised or updated ordoliberal principles (i.e., ‘ordoliberalism 2.0.’<sup>4</sup>) to the digital economy and antitrust, contemporary ordoliberalism can reveal its full potential and contribute to a more effective antitrust enforcement.

The paper is structured as follows: *Section 2* provides an overview of the vital business-ethical principles of ordoliberalism. *Section 3* takes a closer look at four major digital platforms, i.e., Amazon, Apple, Facebook, and Google, and analyzes their business practices. *Section 4* applies the principles derived in *Section 2* to the business conduct of the tech companies discussed in *Section 3*. That is, it critically evaluates the business practices of big tech and the corresponding antitrust concerns from an ordoliberal perspective. The paper ends with a summary of its main findings and a brief outlook on (possible) future big tech and antitrust developments (*Section 5*).

## 2. Ordoliberalism<sup>5</sup>

Ordoliberalism is a business-ethical concept with a long tradition; in its classical form, it dates back to the 1930/40s. It is part of the main normative pillars of the so-called social market economy, the politico-economic system implemented after World War II in Germany and beyond – e.g., within the European Union –, which tries to bridge the gap between economic (i.e., competition, market freedom) and ethical (i.e., social justice, human rights) imperatives. Its primary goal is to establish an economically efficient and, at the same time, humane socio-economic and political order, which can protect the Kantian values of freedom, autonomy, and human dignity.<sup>6</sup> Classical ordoliberalism consists of two different schools of economic thought – the Freiburg School of Law and Economics and sociological neoliberalism.

The founding fathers of the Freiburg School, an interdisciplinary research group at the University of Freiburg, were the economist Walter Eucken and the two legal scholars Franz Böhm and Hans Großmann-Doerth; the leading representatives of sociological neoliberalism were Alexander Rüstow and Wilhelm Röpke. Besides classical ordoliberalism, there is also contemporary ordoliberalism which bears considerable resemblances to constitutional economics à la Hayek and Buchanan. Members of contemporary ordoliberalism are Feld, Goldschmidt, and Vanberg – to name a few.<sup>7</sup>

At the heart of ordoliberalism is the differentiation between *Ordnungspolitik* (i.e., regulatory or ordering policy) and *Prozesspolitik* (i.e., ‘process policy’)<sup>8</sup>: *Ordnungspolitik* – which is preferred by all ordoliberals – requires the government to primarily function as a rule-maker and not as a significant economic player; it is thus responsible for setting and preserving the regulatory framework under which market transactions are carried out. In other words, the government must focus solely on establishing, monitoring, and enforcing the ‘rules of the game’ instead of influencing or intervening in market processes, i.e., the game itself. The overall goal of an ordoliberal regulatory policy – together with the help of the rule of law – is to implement a competitive socio-economic order which enables and safeguards freedom and other human rights. Eucken’s ordoliberal principles, for instance, demand – among other things – a ‘market-conform’ regulatory policy – one that does not interfere with market processes and the price mechanism.

A ‘non-conform’ economic policy (i.e., *Prozesspolitik*)<sup>9</sup>, however, is dismissed for the following reasons: Ordoliberals consider ‘process policy’ as a form of interventionist economic policy which is mainly based on ad-hoc and case-by-case decisions; it also allows for arbitrary and selective interventions in the economic ‘game of catallaxy’<sup>10</sup> and thus lacks predictability and a long-term perspective and socio-economic stability. Most importantly, however, it opens the door for special interest groups which (might) use their power to influence legislative decision-making: That is, *Prozesspolitik* is (more) prone to the influence of lobbying and rent-seeking groups – e.g., due to a more extensive regulatory load, but also due to the existence of a high(er) discretionary leeway among (political) decision makers. It thus (oftentimes) goes hand in hand with a substantial lack of transparency – as political debates

3 Cp. Petit, 2020; Wu, 2018.

4 Cp. Wörsdörfer, 2020.

5 Cp. for foundation: Wörsdörfer, 2020.

6 Cp. Wörsdörfer, 2013a.

7 Cp. Feld & Köhler, 2011; Goldschmidt, 2002, 2007; Goldschmidt & Wohlgemuth, 2008; Vanberg, 2004, 2005, 2008.

8 Cp. Eucken, 1950/1965, 1952/2004, 1999, 2001.

9 Cp. Eucken, 1952/2004.

10 Cp. Hayek, 1973.

take place behind closed doors – and a lack of accountability and democratic legitimacy – given that interest groups only represent a small fraction of society and are seldom directly elected by the public (ordoliberalism are especially worried about Prozesspolitik when constitutional checks and balances are inadequate). Overall, ‘process policy,’ seen here as an interest group-based policy, has the potential to endanger society’s wealth – due to granting (costly) exclusive privileges to specific groups – and undermine the freedom of individuals – due to the growing politico-economic influence of rent seekers.

From an ordoliberal perspective, it is essential to also discuss the relationship between markets and the state and to define the government’s tasks and the limits of its responsibilities: The ideal ordoliberal state, according to Eucken and others, is a strong and independent constitutional state<sup>11</sup>, a state standing above special interest groups and functioning as a ‘market police,’<sup>12</sup> ‘ordering power,’ and ‘guardian of the competitive order.’<sup>13</sup> Ideally, the government should be able to defy special interest (groups), follow the principles of neutrality and impartiality, and focus on regulatory policy. The underlying ordoliberal ideals are equality before the law, freedom of privileges, and the principle of non-discrimination – similar to constitutional economics à la Buchanan and Hayek.<sup>14</sup> In short, ordoliberalism is searching for an integrative ‘third way’ between laissez-faire capitalism and authoritarian-totalitarian collectivism. Classical ordoliberals refer to this as ‘social liberalism,’ ‘economic humanism,’ or simply as ‘social market economy.’<sup>15</sup>

Of particular importance for the upcoming discussion on big tech and antitrust are Eucken’s Constituent and Regulating Principles and his Principles of Economic (State) Policy.<sup>16</sup> The following paragraphs focus only on those principles which are most relevant to competition law and policy: Eucken’s *Constituent Principles*<sup>17</sup> aim to establish a highly *competitive economic order* in which market processes and price mechanisms are left intact. This implies – among others – no outside, e.g., governmental interference or obstruction of the interplay of supply and demand. Eucken also argues for *open markets* as an essential requirement for competition: Only when companies can quickly enter – and exit – markets can

competitive economic processes, which facilitate innovation and prosperity, be initiated. Besides low market entry barriers, competitive markets also require low exit barriers: That is, bankrupt or insolvent companies should not be artificially kept alive, e.g., with the help of government subsidies or bailouts – instead, they should exit the market as early as possible. Following his discussion on the importance of private property rights, Eucken also encourages businesses and entrepreneurs to enter private (business) *contracts*; yet these contracts are only legitimate if they are in conformity with the competitive market order and do not restrict or limit market access or contribute to the monopolization of the economy. The freedom to sign contracts is, thus, not an absolute but a conditional right. Additionally, the economic policy of governments must be long-term rather than short-term oriented and display a certain degree of stability. That is, it should not be based on ad-hoc and case-by-case interventions or frequent changes in policy directions; instead, it should be based on the principles of *predictability* and *regularity*. Noteworthy is that Eucken emphasizes the interdependency of all principles, i.e., they should be seen as a unity and an integral part of a sustainable (ordoliberal) economic policy.

Besides the above Constituent Principles, Eucken also defined four complementary *Regulating Principles*<sup>18</sup>, i.e., containment and correction of socio-economic power, income redistribution, correction of negative externalities, and correction of ‘abnormal supply reactions.’ Their main task is to guarantee the lasting success of the competitive socio-economic order, e.g., by correcting market failures and providing basic social security measures. The first of those principles – containment and correction of socio-economic power – is particularly important for the following analysis: it requires governments to prevent all forms of (abuse of) *market power*, e.g., in the form of cartels, oligopolies, and monopolies. Crucial in this regard is establishing an independent cartel office and a mergers and acquisitions (M&A) commission.

In addition to the Constituent and Regulating Principles, Eucken also defined two *Principles of Economic (State) Policy*<sup>19</sup>: The first one is called the ‘principle of limiting the power of pressure groups’ (i.e., lobbyism) and aims to prevent the monopolization of the economy, while the second one requires governments to focus on regulatory or ordering policy instead of an interventionist and privilege-granting form of ‘process policy.’

The principles listed in table 1 are essential for Eucken’s ordoliberalism which intends to establish an

11 Cp. Röpke, 1942, 1944/1949, 1950; Rüstow, 1955.

12 Cp. Röpke, 1942; Rüstow, 1957, 2001.

13 Cp. Eucken, 1952/2004; Röpke, 1944/1949.

14 Cp. Buchanan, 1975/2000; Hayek, 1973; Vanberg, 2008.

15 Cp. Müller-Armack, 1956; Oppenheimer, 1933; Röpke, 1944/1949; Rüstow, 2001.

16 Cp. Eucken, 1952/2004; Grosseckler, 1994; Meijer, 2007.

17 Cp. Eucken, 1952/2004.

18 Cp. Eucken, 1952/2004.

19 Cp. Eucken, 1952/2004.

Constituent Principles	Regulating Principles	Principles of State Policy	Competition Policy Principles
Competitive Economy	Correction of Market Power	Limiting Power of Rent Seekers	Competition Law and Policy
Monetary Policy & Price Stability	Income Redistribution (Distributive Justice)	Focus on Regulatory Policy	Cartel Office, M&A Commission
Open Markets	Correction of Negative Externalities		Corporate Break-up (Divestiture)
Property Rights	Correction of Abnormal Supply Reactions		
(Non-Exclusionary) Contracts			
Principle of Liability			
Regularity of Economic Policy			
Interdependency of Constituent Principles			

**Table 1.** Ordoliberal Principles

economically efficient and competitive socio-economic order – as a significant precondition for realizing the previously mentioned Kantian values of human dignity, freedom, and autonomy. To reach this goal, ordoliberalism makes use of a variety of legal and politico-economic tools, including competition law and policy: One of the primary purposes of those tools – and regulatory policy in general – is to ensure that markets are open, and abuses of market power are limited. That is, the power of dominant corporations and the influence of powerful rent-seeking groups must be severely restricted; cartels and trusts – and other forms of possible collusion or market coordination – need to be monitored and, if necessary, sanctioned by an independent agency (i.e., cartel office); and M&As must be reviewed and approved by a sovereign commission. If the M&A commission or the cartel office is concerned that an M&A might lead to the monopolization of a market segment – e.g., when the respective conglomerate reaches or surpasses a certain dominating market share threshold –, it would be entitled to impose special (i.e., pro-competitive) conditions on the merging parties, which must be met before M&A approval; under certain circumstances, the agencies would also be able to block the entire M&A. The battle against cartels, monopolies, and oligopolies aims at preventing ‘too-big-to-fail’ and ‘system-relevant’ corporations – which can bring the entire economic system on the verge of collapse – as the 2007/8 financial market crisis has demonstrated. Remarkably, Eucken and other ordoliberals were already discussing the problem of too-big-to-fail and system-relevant corporations – and the trend towards the increasing concentration of power in the hands of a few companies – in the 1940s. In one of his post-World War II reports for the allies, he argued for the break-up or divestiture of powerful and dominant companies.<sup>20</sup>

In summary: The primary objective of ordoliberal competition law and policy is to keep markets open and to ensure equal market access so that anyone – small companies same as big ones – can compete for the best products and services and generate the best ideas. That is, antitrust is all about protecting competition as a ‘discovery procedure’<sup>21</sup> – thereby allowing for innovation and protecting consumer sovereignty. It is noteworthy that competition benefits consumers in several ways, such as lower prices, better quality, and more innovation and choice. Furthermore, antitrust is about economic freedom (rights) and the distribution of ownership and control: that is, it tries to avoid the concentration of economic or private power and minimize possible abuses of power. Besides those economic aspects, ordoliberals also feared that the concentration of economic powers might contribute to and consolidate political powers and ultimately lead to and foster anti-democratic political pressures. That is, ordoliberals perceived monopolies not only as an economic threat but also as a threat to the rule of law (and democracy as a whole); the erosion and undermining of political freedom rights are especially likely when monopolies and other forms of economic collusion and market coordination are accompanied by lobbyism and rent seeking.

### 3. Digital Platforms<sup>22</sup>

This section provides an overview of four of the biggest tech companies in the world – Amazon, Apple, Facebook, and Google. It details their anticompetitive business conduct and explains why several antitrust agencies worldwide are currently investigating those platforms. The four companies have been selected for two reasons – *first*, because of their size – i.e., all of

20 Cp. Eucken, 1946/1999.

21 Cp. Hayek, 1968/2002.

22 Cp. for foundation: Subcommittee on Antitrust, 2020.

them are part of the top-6 biggest companies in the world based on market capitalization<sup>23</sup> – and *second*, because they are at the center of the current (Western) debate on big tech and antitrust. The four companies are discussed in alphabetical order. Note that Microsoft, another major tech company, has not been included in this section since it is currently not part of any major antitrust investigation<sup>24</sup> – although this could change soon given that the company uses similar, i.e., anticompetitive business tactics.<sup>25</sup> Chinese companies such as Alibaba, Baidu, and Tencent have not been selected due to the (relative) lack of independently verifiable research data. However, many of the antitrust concerns discussed in the following sections also apply to the Chinese tech giants.

### 3.1 Amazon

Amazon has revolutionized e-commerce and brought consumers many benefits, such as lower prices, easy and transparent product comparisons, and conveniences such as time savings and home deliveries. The company is nowadays *the* dominant and most powerful player in the e-commerce market and a very influential actor in consumer electronics, T.V. and film production, groceries, cloud computing, e-book, and logistics markets. The company's business strategy focused for a long time on long-term growth at the expense of short-term profits: In the first few years of the company's history, losses, not profits, were the norm. That is, the company was willing to forego profits to grow and establish market dominance, e.g., as shown in increasing revenue and market share numbers over the years. The largest source of revenue right now is Amazon's retail operations, yet AWS, the company's cloud computing business, is gaining more relevance.<sup>26</sup>

Amazon is also considered one of the biggest profiteers of the coronavirus pandemic of 2020/21<sup>27</sup>: The company has seen significant growth in sales and revenues (and corresponding profits), and its market capitalization – as of mid-2021 – has risen to more than \$1.7 trillion. In fact, the company is now more valuable than Walmart, Target, eBay, and Etsy combined.<sup>28</sup> Amazon's estimated market share in the U.S. online retail market is at least 50%; some experts believe that the company

controls roughly 65-70% of all online marketplace sales.<sup>29</sup> In addition, it is a potent player in the book industry, including sales, distribution, and publishing, and its e-book/audiobook (i.e., Audible and Kindle) market share is estimated to be more than 80% in the U.S.<sup>30</sup>

All of the above make Amazon the primary gatekeeper for *e-commerce*: E.g., more than 60% of all online product searches start on Amazon's website, and more than 60% of U.S. households – roughly 150 million people – have a Prime membership, which locks customers into Amazon's ecosystem simply because once the membership is purchased customers have an incentive to do more online shopping on Amazon.<sup>31</sup> Consequently, the company possesses substantial market power over roughly two million small- and medium-sized sellers and suppliers who depend on Amazon as their primary source of revenue and income.<sup>32</sup> As such, it can dictate prices and the terms and conditions of e-commerce (note that many companies cannot afford to leave Amazon due to its importance no matter the fees/prices and how bad they are treated).

The economic power of Amazon also stems from the fact that the current e-commerce market has high market entry barriers, e.g., due to network effects (i.e., online shopping platforms gain in popularity the more customers and sellers they attract), switching (platform) costs, and the costs to set up a properly functioning logistics network – to name a few. Hence, Amazon's market dominance is predicted to continue to grow. Noteworthy is that Amazon also extracts state subsidies, avoids paying (federal) taxes (e.g., in the U.S.), and engages in anticompetitive business conduct as detailed below. Consequently, it has gained an unfair advantage over its competitors.

Amazon's acquisition strategy is similar to other (big) tech companies. Its merger activity focuses (primarily) on purchasing direct or indirect competitors, including those operating in adjacent markets. Overall, Amazon has acquired more than one-hundred companies over the past two decades, including Whole Foods, Ring, Zappos, Quidsi, Audible, and Goodreads.<sup>33</sup> Consequently, the company faces less competitive pressure – especially regarding product quality and price (note that for consumers, Amazon's M&A strategy means fewer choices). Equally important, however, is that Amazon has gained additional access to customer data, e.g., with the purchase of Whole Foods and similar acquisitions – which can be monetized, especially in the form

23 Cp. Statista, 2021b.

24 Note that the company has been the target of antitrust scrutiny over a long time – first in the U.S. and then in the E.U. (cp. Wörsdörfer, 2020).

25 Cp. Petit, 2020.

26 Cp. McLaughlin, 2019; Stone, 2021.

27 Cp. Stone, 2021.

28 Cp. Subcommittee on Antitrust, 2020.

29 Cp. Subcommittee on Antitrust, 2020.

30 Cp. Evans, 2019; Hovenkamp, 2021.

31 Cp. eMarketer, 2019; Statista, 2021d.

32 Cp. JungleScout, 2020.

33 Cp. Khan, 2017.

of targeted advertising. In fact, Amazon is, in essence, a (big) data company that invests heavily in data mining and analytics, AI-technology, and especially Internet of Things (IoT) companies: E.g., Amazon acquired the companies Blink and Ring, two home-security system companies, to be more present in the market for 'smart homes.' Other notable M&As include Kiva Systems, a robotics company specializing in product packing and shipping, and PillPack, an online pharmacy that marks Amazon's entry into the pharmaceutical market.

Among the main reasons Amazon is at the center of many antitrust investigations in Europe and the U.S. is its anticompetitive and exclusionary business conduct and especially its mistreatment of third-party sellers. The company has been criticized – *inter alia* – for its bullying tactics, forced arbitration, seller fee increases, appropriation of third-party seller data, use of most favored nation clauses, self-preferencing, tying and bundling, predatory pricing, platform mismanagement, and abuse of monopsony power.<sup>34</sup> The following paragraphs take a closer look at each of those allegations:

1. *Bullying*: Amazon's abusive business tactics are enabled and fostered by the power asymmetries between the company and its independent sellers.<sup>35</sup> That is, Amazon can impose (i.e., forced acceptance) terms and conditions that favor exclusively itself and discriminate against independent sellers. The company reportedly also makes use of retaliation and coercion tactics, e.g., it can remove the 'buy' or 'pre-order' buttons for certain products, show certain products as out of stock, delay shipping times, suspend accounts, or lower the rank of products or delist them entirely. These tactics have in common that they threaten the business model – and in some cases the existence and survival – of small and medium-sized companies. In fact, many companies live in fear of Amazon and its frequent changes in terms and conditions. As an additional problem, third-party sellers must also deal with Amazon's internal dispute resolution mechanism – which is described by many as flawed given that it involves significant uncertainties, unresponsiveness, and intransparent decision making – in addition to mediocre customer service for sellers.
2. *Forced arbitration*: All independent sellers are obliged to sign away their right to sue Amazon if a dispute arises. The main problem with these so-called binding arbitration clauses

is that Amazon controls the entire arbitration process. Consequently, only a few companies have initiated those proceedings over the past few years. Those that have gone through the process describe it as unfair and unlikely to resolve the issues at hand; that is, they do not expect – and in multiple cases have not received – a meaningful remedy.

3. *Seller fee increase*: Amazon views third-party sellers as a source of profit (note that to be listed, independent sellers need to pay a fee to the company – which comes on top of other fees, e.g., sale fees). It is thus not surprising that the seller fees have risen significantly over the past decade. The average fee on each sale is reportedly 30% (and rising).<sup>36</sup>
4. *Appropriation of third-party seller data*: Another critical issue is the asymmetric access to and use of seller data, including proprietary information. Amazon can identify and replicate (i.e., copy) popular and profitable products and launch its private-label products. It can thus free ride and exploit the hard work of innovative (small and medium-sized) companies.
5. *Most favored nation (MFN) clauses*: Amazon (allegedly) imposes MFN clauses and price parity provisions on third-party sellers. Those provisions include a best price guarantee and most favorable terms and conditions, preventing independent sellers from offering cheaper or more innovative products elsewhere. A violation of those clauses could lead to an account suspension or delisting.
6. *Self-preferencing*: Amazon favorably treats its products and discriminates against those of competing sellers, e.g., via the control of the so-called Buy Box. It also possesses privileged access to market data and marketing tools – e.g., Amazon Vine, an internal service that generates customer reviews – unavailable to third-party sellers. The company has thus more significant insights into customer behavior and preferences and can exploit those information asymmetries. The fundamental issue here is Amazon's dual role as an operator and retailer (that is, the company operates an online marketplace and hosts millions of third-party sellers while at the same time selling [similar] products itself). This dual role leads to substantial conflicts of interest and gives the company the power to disadvantage rivals' products and

34 Cp. Subcommittee on Antitrust, 2020.

35 Cp. Subcommittee on Antitrust, 2020.

36 Cp. Subcommittee on Antitrust, 2020.

services, e.g., via limiting digital ad buying, downranking, and shipment delays. Noteworthy is that at the beginning of the pandemic, i.e., in spring and (early) summer of 2020, Amazon reportedly delayed shipments of non-essential items to ensure warehouse workers' safety; yet products coming directly from Amazon were exempted from this company directive.<sup>37</sup>

7. *Tying and bundling*: A strong link exists between many Amazon products and services. E.g., Amazon Marketplace (and Prime) and the Fulfillment by Amazon (FBA) program (i.e., Amazon's paid logistics service) are tied to each other. As such, both programs strengthen and reinforce each other – especially given that FBA and Prime participation are both crucial for third-party sellers to win the Buy Box. I.e., participating sellers have certain advantages (i.e., preferable treatment, privileged market access) over non-participating ones – which results in discriminatory market access. Another form of tying exists in sellers being (indirectly) required to purchase ads if they want to sell products on Amazon's platform. This way, Amazon promotes its Sponsored Products and Sponsored Brand tools. In other words: Sellers not advertising through Amazon's Pay-Per-Click offering risk losing prioritized ranking in search results for specific keywords.
8. *Predatory pricing*: The main goal of Amazon's below-cost pricing strategy is to lure and lock customers into the company's ecosystem (i.e., the company is thus willing and able to [temporarily] forego profits to grow and establish market dominance). A good example is Prime, which is a highly unprofitable program, yet an effective growth driver – simply because Prime members have an incentive to shop on Amazon.com once they have signed up for the program. Another typical example of predatory pricing is Amazon's smart speaker, Echo, which is frequently priced below cost.
9. *Platform mismanagement*: Amazon is also accused of platform mismanagement and selling unsafe or counterfeit products. That is, the company is allegedly turning a blind eye towards these potentially dangerous products; even worse, it is reportedly benefiting from the sale of these products.<sup>38</sup>

10. *Abuse of monopsony power*: Amazon is one of the biggest private employers in the U.S. It thus possesses substantial power in labor markets and exerts significant influence over its employees, e.g., warehouse and storage workers, seasonal workers, and delivery workers. Of particular importance is the company's wage-setting power, which is often used to depress wages. In addition, Amazon classifies many workers as 'independent contractors,' which means that they have (considerably) fewer employment protections, e.g., regarding healthcare and other insurances and retirement savings. In recent months, the company has also been accused of applying union-busting tactics to prevent the establishment of unions at U.S. warehouses.<sup>39</sup> Lastly, Amazon is infamous for its rather inhumane working conditions in its warehouses, including unfair hiring and firing practices and inhumane packing and sorting quotas (note that the working conditions have reportedly got worse during the pandemic, e.g., due to the lack of personal protective equipment).<sup>40</sup>

Besides its marketplace, Amazon also offers other notable products. Among those are Amazon *Alexa*, the company's voice assistant, and *Echo*, the company's smart speaker – both of which are part of Amazon's IoT ecosystem (this ecosystem also includes Blink and Ring, which create IoT-devices for the smart home/home security market) and significant sources of customer data. The market share of Echo in the U.S. is approximately 60%<sup>41</sup>, while an increasing number of companies offer Alexa-enabled devices, including car manufacturers. The voice assistant and smart speaker markets have significant market entry barriers, mainly due to the high upfront costs and investments in A.I., hardware, and cloud computing infrastructure. They also lead to lock-in effects and high switching costs – mainly because the training of voice assistants is time-consuming.

For both products, Alexa and Echo, Amazon has been accused of making use of anticompetitive businesses tactics such as self-preferencing: Alexa, for instance, favors Amazon.com as the default online shopping store, Amazon Basics products as the default products, and Prime Music, as the default music streaming service. In short, the defaults for the most common

37 Cp. Stone, 2021.

38 Cp. CPSC, 2021.

39 Cp. New York Times, 2021b.

40 Cp. New York Times, 2020; Stone, 2021; Washington Post, 2021c.

41 Cp. Statista, 2021e.

voice commands all relate to and promote Amazon's products and services. In addition, voice shopping via Alexa is tied to the Amazon account of users. Another primary antitrust concern relates to predatory or aggressive pricing: That is, many Alexa-enabled devices, e.g., Echo, are often priced below cost to gain more market share and to push out competitors. Besides, the company misuses its power as a gatekeeper, e.g., when it threatens to delist or lower the ranking of other companies' consumer electronic products on Amazon Marketplace to get more favorable conditions for its products, such as the enabling of Alexa on certain third-party products. Alexa, Ring, and other Amazon-owned products are promoted on Amazon Marketplace and receive preferential treatment, including a top ranking. Amazon is also accused of misusing Alexa-collected data and personal information and recording and storing voice data, including background conversations, without user consent. Lastly, the company reportedly 'copies' (i.e., steals) technology of nascent competitors such as small start-ups or misappropriates business intelligence data to improve its products and services such as smart home products.

*Amazon Web Services* (AWS) is a pioneer in cloud computing (the company's origins date back to 2006). It has maintained its first-mover advantages for over a decade and is currently the dominant market player (its estimated market share, as of mid-2021, is 32%).<sup>42</sup> AWS contributes significantly to Amazon's revenues and profits. Noteworthy is that AWS is a central player in the government cloud infrastructure market and has conducted multiple projects with the U.S. intelligence community. The cloud computing market possesses multiple market entry barriers, primarily due to high investments and fixed costs, economies of scale, network effects, and switching costs. Amazon's cloud computing business has considerable advantages in this regard due to its extensive collection of cloud service offerings: AWS is the largest cloud marketplace in the world with thousands of products and vendors and – equally important – thousands of trained AWS engineers. Another related issue is lock-in effects, which are reinforced by long-term, i.e., multi-year, business contracts and egress fees, that is, fees imposed by cloud computing companies on their customers for moving data to another competing cloud provider. Besides those market entry barriers, the cloud computing market also experiences significant conflicts of interest. For instance, rival companies such as Netflix (competing with Prime Video) and Target (competing with Amazon.com) rely on AWS. In addition, AWS provides Amazon with valuable insights into start-ups and

other rival companies, including unique business intelligence data. This data can then be used to replicate promising technology or to acquire companies (AWS data thus informs Amazon's investment decisions). Additional (antitrust) concerns include self-preferencing, the possible degradation of interoperability, and – most importantly – the possible misappropriation of data: For instance, AWS and other cloud computing companies are accused of creating proprietary versions based on open-source software products. This might not only involve the copying of open-source software; it might also force open-source vendors to become more defensive – which would ultimately reduce feature availability and access or lead to the use of closed-off licenses, all of which might harm innovation and consumer welfare.

### 3.2 Apple

A significant (i.e., majority) amount of Apple's revenue comes from iPhone sales.<sup>43</sup> Additional sources of revenue (and profit) include selling Macs, iPads, Apple Watches, and HomePods. In recent years, the company has expanded in other digital market segments, including digital content (Apple Music, Apple TV+), cloud storage (iCloud), and payments (Apple Pay). The company mainly targets high-margin markets and avoids price competition. It bets on innovative industrial design and the intuitive ease of use – which are two key characteristics that differentiate Apple's hardware products from its competitors. The company's business strategy also rests on (luxury) branding, a careful and exclusive retailer selection, and repeated supply chain changes (for instance, the processor supplies changed from IBM to Intel to Apple). Apple tries to maintain control over its proprietary architectures, designs, and interfaces, and prevent rivals from offering compatible equipment, thereby creating a closed corporate ecosystem.<sup>44</sup> This ecosystem comes with various advantages (e.g., quality [control], security, and privacy protection), but it also leads to multiple antitrust issues, including high transfer costs for customers and significant market entry barriers for competitors.

Apple possesses significant market power in the mobile operating system (OS) and *app store* markets. Its market dominance is primarily due to ecosystem lock-in effects, high switching costs (i.e., iOS users rarely switch to Android devices [and vice versa]), and brand loyalty. The company also has gatekeeping power over software distribution; that is, it possesses monopoly power in the mobile app store market on iOS

42 Cp. ParkMyCloud, 2021; Statista, 2021f.

43 Cp. Statista, 2021a.

44 Cp. Washington Post, 2021b.

devices primarily via prohibiting the installation of alternative app stores and the sideloading of apps. This way, the company controls access to more than 100 million phones and tablets in the U.S. alone.<sup>45</sup>

Apple has been the target of several antitrust probes around the globe (e.g., in the U.S. and E.U.<sup>46</sup>) – primarily due to its (allegedly) anticompetitive business conduct, e.g., regarding its app store commissions and in-app purchase policies: It is widely known that Apple charges app developers ‘supra-competitive’ prices in the app store, which usually include a 30% installation commission, a 30% fee on in-app purchases, and a 30% fee for the first year of app subscriptions and 15% for the following years. The company’s app-store-related estimated revenues in 2019 were \$15 billion, and it is expected that this amount will rise to almost \$19 billion in 2022.<sup>47</sup> These numbers contrast sharply with the estimated costs to run the app store, which is less than \$100 million.<sup>48</sup> Hence, Apple is extracting (monopoly) rents from app developers, which – in the end – harms consumers, especially when those additional costs are passed on to users in the form of higher app and subscription prices or reduced investments in new and innovative products, thereby leading to (potentially) lower-quality products (in addition, Apple’s terms and conditions might lead to a lower number of available apps and hence reduced consumer choice).

Besides, Apple does not yet allow alternative payment systems (e.g., PayPal) and subscription methods on its platform. Such methods and systems would not only enhance competition – possibly leading to more innovation – but also reduce consumer prices. In addition, Apple blocks the sideloading of apps – which is possible on desktop P.C.s, including Apple’s own Mac computers – and the installation of alternative app stores (note that other companies, e.g., Samsung, allow for several app stores to be installed on their mobile devices). Furthermore, app developers cannot communicate with their customers about alternative (i.e., cheaper) purchasing options outside of Apple’s app store. This form of communication between an app company and a customer would violate Apple’s terms and conditions and could therefore result in the removal of the app from the store – which would imply that the app developing company would lose access to the only way of app distribution on iOS devices. Epic Games, a popular video game and software developing company,

introduced a direct payment system in its Fortnite app in a currently pending case. Apple responded by disabling app updates due to an alleged violation of the terms and conditions of the App Store. Both companies have sued each other over the App Store’s terms and conditions (note that Epic Games has filed a similar lawsuit against Google’s Play Store).<sup>49</sup>

Various antitrust agencies have also accused Apple of using other anticompetitive and exclusionary business strategies, such as self-preferencing: The allegation is that Apple favors its apps and services – and discriminates against the apps of third-party developers –, e.g., via the pre-installation of specific apps or setting them as defaults. As of mid-2021, Apple demands the pre-installation of approximately 40 company-owned apps on Apple devices, whereas (almost) no third-party app currently gets the same (prominent) treatment. Another way Apple distorts competition is with the help of default settings: For instance, clicking on a link on an Apple device opens the Safari browser, clicking on an address opens Apple Maps, and requesting a song activates Apple Music. Siri is also programmed in a way that it favors – i.e., automatically launches – Apple products and services. In addition, Safari is set as the default browser on most Apple products. Noteworthy in this regard is that Apple received \$12 billion in 2019 from Google to make Google Search the default search engine on Safari web browser (the likely reason is that Apple does not offer its own search engine; it does thus not directly compete with Google).<sup>50</sup>

The above business practices have in common that they create stickiness and hence a status-quo bias – simply because most users keep the presented default option and do not change the settings on computers or mobile devices. More importantly, these tactics give Apple products a competitive advantage over rival applications and create additional market entry barriers. In the end, those tactics have the potential to limit market competition and, therefore, innovation.

Another antitrust issue related to Apple’s App Store is the app search ranking: Here, the company’s apps (e.g., Apple Music) rank first or second and ahead of competing apps (e.g., Spotify). The same is true for Apple News, Podcasts, and T.V. All those company-owned apps thus receive preferential treatment. Noteworthy is also that Apple’s own apps are not reviewable – contrary to third-party apps – which means that there are no available ratings and reviews (hence, the consumer cannot assess the quality and content of those apps properly).

45 Cp. Subcommittee on Antitrust, 2020.

46 Cp. DOJ, 2020a, 2020b; European Commission, 2020, 2021a, 2021b, 2021c; FTC, 2020.

47 Cp. Bloomberg, 2020; CNBC, 2020; Subcommittee on Antitrust, 2020.

48 Cp. Subcommittee on Antitrust, 2020.

49 Cp. The Verge 2020a, 2020b; for the latest developments see CNBC, 2021; United States District Court Northern District of California, 2021a, 2021b; Washington Post, 2021d.

50 Cp. Fortune, 2018.

Furthermore, Apple is accused – by antitrust agencies and competitors alike – of exploiting third-party app developers – many of which rely on the app distribution in the App Store, the sole distribution channel for iOS devices. The allegation is that Apple not only collects competitively sensitive information about popular apps, e.g., by closely monitoring them and gathering business intelligence data via the App Store, but that it also replicates those apps (i.e., copycat applications) or integrates successful features into its apps. This practice is commonly referred to as ‘Sherlocking’<sup>51</sup> (besides antitrust, this practice might also involve a possible violation of intellectual property rights). The apparent abuse and exploitation of third-party app developers might even go as far as to exclude rival or competing applications directly. For instance, after having launched its parental control app ‘Screen Time,’ Apple reportedly removed several similar apps from its App Store for allegedly violating the store’s terms and conditions.

Many app developers also complain about (allegedly) opaque App Store guidelines and their arbitrary enforcement. Based on those allegations, Apple exerts a high discretionary leeway (i.e., arbitrary interpretation) regarding the approval or rejection of apps and app updates. The App Store guidelines also change frequently – most often to the advantage of Apple and the disadvantage of third-party app developers. E.g., in multiple cases, Apple has arbitrarily decided that a particular app – all of a sudden – does no longer meet the App Store rules – without providing further explanation. Third-party app developers also accuse Apple of granting special treatment to specific companies, e.g., Amazon and Baidu, including better customer service, while discriminating against others, e.g., against direct competitors (those companies often face serious issues to make it through the App Store’s review process).

Finally, the E.U. is also investigating digital (e.g., voice) assistants and other smart home products or IoT devices by Apple and other companies, including Amazon and Google<sup>52</sup>: The estimated global market share of *Siri* is 35%.<sup>53</sup> It is integrated as the default voice assistant in all Apple hardware products. It is thus the hub of Apple’s smart-home-device ecosystem – which also includes the smart speaker HomePod. The E.U. is mainly concerned with Apple’s (allegedly) anticompetitive business practices in the market for IoT devices, including limiting interoperability and engaging in self-preferencing. It is noteworthy that one of Apple’s main competitors in the music streaming business, Spotify, filed an antitrust

complaint against Apple in Europe, accusing the company of restricting the company’s access to Siri.

### 3.3 Facebook

Facebook Inc. is a ‘five-ecosystem company’ which offers the following (main) services – Facebook, Instagram, Messenger, WhatsApp, and Oculus. The company owns one of the most trafficked websites globally (i.e., Facebook) and four of the most popular mobile applications (i.e., Facebook, Instagram, Messenger, WhatsApp). In the U.S., Facebook, Messenger, and Instagram are among the seven most popular mobile apps as measured in monthly active users, percentage of active users, reach and market penetration, and time spent on (social networking/media) apps. The market share of Facebook in the U.S. is more than 60%<sup>54</sup> (note that similar numbers are reached in other countries/regions as well) making it a global market leader in social networking – in addition to being one of the most prominent players in the instant messaging, photo sharing, and digital advertising markets.

Noteworthy is that Facebook’s market position is insulated from competitive pressure and threats. The only ‘pressure’ the company experiences comes from within the company, e.g., Facebook Messenger competing with WhatsApp. This can be explained by high market entry barriers, e.g., due to network effects, high switching costs, and the company’s big data advantages: I.e., attracting a critical mass of users is crucial in the social networking (and media) market. The market also lacks genuine portability of personal data; that is, users cannot (quickly/easily) transfer their ‘social graph’ to other platforms. Consequently, users are de facto locked into Facebook’s ecosystem. The company also benefits from several types of positive feedback loops: First, Facebook collects more personal data than any of its competitors. This data advantage is then used to create a more targeted user experience (note that the company’s data advantage also gives Facebook insights into other [competing] corporations’ usage trends and patterns). Second, there is the monetization feedback loop, which means that more and more revenue is generated with the help of targeted advertising.

Facebook’s market power has been maintained and expanded (mostly) with the help of a series of M&As. Since 2004, the company’s founding year, more than sixty M&As have occurred so far. The most notable ones include Facebook’s acquisition of Instagram, WhatsApp, and Oculus. Noteworthy is that Facebook has created market or business intelligence tools to identify

51 Cp. Subcommittee on Antitrust, 2020.

52 Cp. European Commission, 2021d.

53 Cp. Futuresource, 2019.

54 Cp. Hovenkamp, 2021.

potential competitive threats. Once rivals are identified, Facebook either acquires those companies or clones their products, thereby eliminating (i.e., neutralizing) the competitive threat. Based on internal documents cited in the report of the Subcommittee on Antitrust<sup>55</sup>, the primary goal of M&As is to protect and expand Facebook's market dominance in the social networking market. For instance, Instagram was internally viewed as a competitive threat before Facebook decided to acquire the company. The same is reportedly true for WhatsApp, which was acquired to defend Facebook's dominant market position. Notable is also that Facebook threatens potential M&A target companies: That is, small start-ups and other rival companies are pressured to either agree to an M&A or they will be 'crushed' – using the company's so-called 'destroy mode'.<sup>56</sup>

Due to Facebook's dominant market position in the social networking – and other related – markets (e.g., digital advertising), the company is considered by many experts as a gatekeeper. From a *consumer(-ethics)* perspective, Facebook's algorithms shape what users see, hear, feel, and want. The company thus controls a digital filter that can control user behavior or steer decision-making, behavior, and emotions.<sup>57</sup> Section 4 picks up the discussion on filter bubbles and echo chambers and discusses other (related) ethical issues that come with Facebook's gatekeeping power, such as dangerous and hate speech and the spread of dis-/misinformation.<sup>58</sup> From a *business(-ethics)* perspective, the gatekeeping role also allows Facebook to pick winners and losers – and to discriminate against companies perceived as competitive threats (or to favor its own products and services). One way to do this is via prioritizing – or cutting off – access to the company's data and social graph – which is essential, among others, for gaming companies.

Besides its powerful position in the social networking market, Facebook also wields enormous power in the *online advertising* market where it forms a duopoly together with Google (note that the third biggest player in the digital ad market is Amazon). Both companies make use of identity-based ad targeting – and those targeted ads are highly profitable (in the case of Facebook, almost all its revenues come from selling personalized and targeted ads<sup>59</sup>). They also have in common to leverage their monopoly position in their primary market segment – i.e., search and social networking, respectively – to dominate the market for online ads.

Remarkable is also that, according to Srinivasan (and others), Facebook's service quality has decreased over time.<sup>60</sup> That is, Facebook and its 'family of products' users have experienced a steady decline in data protection and an erosion of privacy over the past few years: The company is known for having relatively weak privacy policies and data protection measures in place; furthermore, it reserves the right to change the (privacy) rules of the game at any time – sometimes even retroactively.<sup>61</sup> Noteworthy in this regard is that the WhatsApp policies have changed significantly – especially after Facebook acquired the company (note that WhatsApp used to have relatively strong privacy measures and the company's founders were against an ad-based business model; yet after Facebook's acquisition of WhatsApp, the company plans to merge WhatsApp data with Facebook's). Facebook has also been involved in numerous data and security breaches – and privacy violations – with hundreds of millions of users being affected. The most important and famous one is the Cambridge Analytica scandal.<sup>62</sup> Based on the previous evidence, Srinivasan (and others) conclude that the bigger and more powerful the company has got (mainly with the help of M&As) – and the less competition it was exposed to –, the less privacy and data protection it has offered.<sup>63</sup> Nowadays, Facebook is (allegedly) just another powerful player that is extracting monopoly rent with the help of various surveillance measures, i.e., user tracking, targeted advertisement, and the selling of data to third parties.

### 3.4 Google

Google is part of Alphabet Inc., the holding or conglomerate structure of a group of individual companies run independently. It specializes in internet-related services such as search engine, web-based services, software, hardware, cloud computing, and digital advertising (technologies). Especially ad sales are of particular importance for the company as they generate a significant stream of revenue. Google – and particularly Google Ads – contribute the most to the overall revenue and net income of Alphabet (over the past few years, Alphabet has pursued a diversification strategy, including acquiring companies operating in the areas of communications devices, life sciences, autonomous vehicles, and smart home devices; yet Google is still the most crucial subsidiary in the Alphabet universe).

55 Cp. Subcommittee on Antitrust, 2020.

56 Cp. Subcommittee on Antitrust, 2020.

57 Cp. Wörsdörfer, 2018.

58 Cp. Frenkel & Kang, 2021.

59 Cp. Glick et al., 2020.

60 Cp. Srinivasan, 2019.

61 Cp. Wörsdörfer, 2018.

62 Cp. Frenkel & Kang, 2021; Wörsdörfer, 2018.

63 Cp. Srinivasan, 2019.

Nine Google products – Android, Chrome, Gmail, Search, Drive, Maps, Photos, Play Store, and YouTube – have more than one billion users each.<sup>64</sup> In many of those markets, Google holds a very – if not *the* most – dominant market position. The Subcommittee on Antitrust thus refers to the company as an “ecosystem of interlocking monopolies.”<sup>65</sup> Noteworthy is that Google has acquired more than 260 companies over the past two decades – including Android, YouTube, Double Click, Waze, Nest, and Fitbit.

From an antitrust perspective, it is critical to note that *Google Search* and Chrome are often set as default options or (exclusively) pre-installed on Android devices; in fact, contractual agreements prohibit the installation of alternative apps or the deinstallation of Google apps. Noteworthy is that Google pays Apple billions of dollars each year to ensure that Google Search is the standard or default search engine across iOS devices.<sup>66</sup> Due to the stickiness of default options, users tend to keep the presented default options; that is, they rarely change device settings – resulting in Google’s unfair advantage over its competitors (other advantages Google possesses are the superior crawling and indexing of the internet and the self-reinforcing advantages of click-and-query data [i.e., big data advantage]).

Additionally, Google functions as a gatekeeper to the Internet: Google Search is literally the start page for millions of internet users/customers. Thus, millions of companies depend on Google for traffic. Some of those companies fear Google’s regular algorithm updates, given that algorithmic changes can cause irreparable damage, especially for small and medium-sized firms.

Google is also known for using aggressive and anti-competitive business tactics. For instance, the company leverages its market dominance through self-preferencing and other unfair search practices. By adjusting the search algorithm, the company can automatically elevate the ranking of Google’s own services – which often receive a top position or placement on the search results page. The goal is to promote or privilege Google’s services (including those that are inferior), e.g., Google Shopping, while at the same time demoting those of competitors. This way, Google harms competitors, perceived as a threat, and boosts Google’s traffic and ad revenues. It also harms consumers, e.g., by preventing them from seeing the best or cheapest products.

Google can also impose an ‘algorithmic penalty’ – e.g., in the form of an algorithmic downranking – for websites deemed ‘low quality.’ This is another way for

the company to demote rivals such as comparison-shopping providers (and to pick winners and losers). As a side effect, this business tactic benefits Google in terms of ad revenues too – simply because those downranked companies would have to spend additional money on ad placement to regain their visibility and to make up for eventual losses caused by the downranking.

Another business tactic applied by Google is the misappropriation of data and third-party content: E.g., the company blackmailed Yelp to surrender valuable internet content to Google’s competing product, Google Local, or else getting delisted or removed from the general search results – which would have resulted in heavy traffic and revenue losses.<sup>67</sup> Thus, Google can source third-party content and display it in Google Search’s information boxes (shown on the result page) – often without the consent of third parties. In other words, Google free rides on other companies’ ideas and innovations (and investments).

According to critics, Google is also actively undermining the open internet order and threatening innovation: The company’s anticompetitive conduct has led to increased prices for market access via Google Search. Note that the prices for search ads have increased substantially over the past few years. One reason that helps to explain this trend is that Google’s market share in the search ad market is more than 70% as of 2019.<sup>68</sup> Not only have the prices for search ads increased in the recent past, but internet users are nowadays also more exposed to ads: Google Search shows more ads at the top, and users need to scroll down to see non-paid (i.e., organic) search results. The search quality has also decreased – and critics blame Google’s monopoly power for this.

Noteworthy is also that Google often ranks search results based on what is suitable for the company, not what is in the best interest of the search user. This includes, among others, more space for paid search results at the top of the search results page (i.e., an increased number *and* higher prominence of ads or paid listings) or links to Google’s services. However, organic (i.e., non-paid) search results are downranked; consequently, they are frequented less. Research has shown that organic click-through rates have fallen substantially, especially when compared with paid click-through rates. This forces the affected companies to spend more money on ads to (re-)gain a favorable search position – which benefits Google once again. Google thus functions as a gatekeeper that extracts monopoly rent and

64 Cp. McCracken, 2019.

65 Subcommittee on Antitrust, 2020, p. 15.

66 Cp. Fortune, 2018.

67 Cp. Subcommittee on Antitrust, 2020.

68 Cp. CNBC, 2019.

revenue from companies that depend on it to get market access and user traffic.

The related problem is that the distinction between organic and paid listings (and ads) is blurred. In the early years of Google Search, ads used to be labeled with a shaded background. Yet, over the years, ads have become more subtle. In addition, certain paid listings – e.g., for hotels – are not labeled as ads at all – a business practice that misleads and deceives consumers. As a result, companies need to spend (more) money on ads to be (better) visible to their users (note that those additional costs often come at the expense of product investments and hence quality and innovation). Due to its dominant market position, Google can charge 30-40% higher ad prices than other search engines.<sup>69</sup> This price increase harms not only publishers and advertisers but – in the end – also users, e.g., when those costs are passed on in the form of higher product prices.

Another antitrust (and privacy) issue is the combination of user data across Google services: It has already been mentioned that Google has nine products that reach more than one billion users each. All those products generate substantial user data, e.g., personal identity, location, mobility (profiles), search history, and email correspondence. Having all this data in the hands of a single company can not only (further) undermine privacy, but it can also be used to leverage Google's power into adjacent markets.

Google applies anticompetitive business practices also to its mobile OS, *Android*. Here, the company requires manufacturers – via contractual restrictions and exclusivity provisions – to pre-install certain Google apps or to guarantee a prominent placement of those apps, including corresponding default settings (note that the number of mandatory Google apps on Android devices has significantly increased over time). Google thus uses those contracts to extend its search monopoly and privileges – e.g., via self-preferencing – its own products at the expense of the best possible user experience. Besides, Google also tries to prevent the rise of rival OS and app stores by leveraging its power over manufacturers and service providers.

Notable is also that Google can access real-time market data and that the Android OS can surveil and track users. This is achieved with Android OS requiring a client I.D. or a Google Account as an identifier (the same is true for Google's app store) and the corresponding generation of user profiles. Google has thus access to those profiles and can monetize the data, e.g., via targeted ads.

In addition, Google has created the Lockbox, which allows the company to monitor (i.e., surveil) competing applications. The tool provides valuable market intelligence data, e.g., about the popularity of apps. This information is then used to assess the strengths and weaknesses of third-party applications. It also allows for the possible imitation of successful apps and the launch of competing products. Lastly, Lockbox can be used to inform business transactions such as M&As.

Antitrust agencies in Europe and the U.S. have recently focused their attention on Google's app store, i.e., *Google Play Store*, and its (allegedly) anticompetitive and exclusionary business conduct.<sup>70</sup> One of the main reasons for this heightened scrutiny is that the Play Store functions as a gatekeeper for distributing software on all Android devices, i.e., most mobile devices in the world. The app store is thus the primary way for users to install apps, hence the terms 'gatekeeper' or 'bottleneck.' Antitrust agencies are mainly concerned with recent fee hikes in the app store: Google – same as Apple – functions as a middleman between app and software developers, on the one hand, and app users, on the other hand. Given that the Play Store is the only app store on Android devices, the company can extract monopoly profits. For instance, the company charges a 30% commission for downloads and a 30% fee for in-app purchases. Antitrust agencies are also concerned that Google favors its apps and exploits, excludes, or discriminates against competitors and their products. Other antitrust issues concerning the Play Store include the following: To maintain its monopoly on Android devices, Google de facto blocks the side-downloading of alternative app stores: That is, the downloading of such a store is *theoretically* possible, but essential functions are missing, e.g., automatic app updates, and users receive misleading security warnings and must overcome technical barriers and difficulties. Additionally, an increasing number of app developers are forced to use Google's in-app payment system exclusively. Lastly, the company reportedly enforces its app store policies in a somewhat arbitrary, unaccountable, and intransparent manner. For instance, the store policies allow to ban apps and to impose other forms of retaliation.<sup>71</sup>

Besides Search and Android, another essential Google product is *Chrome*, the company's web browser. Chrome offers automatic sign-ins, e.g., into Gmail and YouTube, two other Google products, thereby providing the company with more detailed user profiles. The browser also serves as an entry point for Google's core

69 Cp. CMA, 2020.

70 Cp. DOJ, 2020a, 2020b; European Commission, 2020, 2021a, 2021b, 2021c; FTC, 2020.

71 Cp. Subcommittee on Antitrust, 2020.

products, search, and advertising, and Google Search is set as the default search engine on Chrome. Chrome's global market share is approximately 65% as of mid-2021.<sup>72</sup> Noteworthy is that Chrome is the default browser on all Android devices – which represents yet another way how Google leverages its power into adjacent market segments.

Relevant from an antitrust perspective is Chrome's gatekeeping power: The browser can be used to manage and monitor users' browsing and search activities (i.e., Chrome and Search are the entry points to the internet) and exploit information asymmetries (e.g., between users and the company or between competing browsers/search engines and Chrome/Search): E.g., Google (Chrome) can observe (competing) browser growth rates and performances via the various Google products and apps. Furthermore, the company is actively favoring and promoting its products in adjacent markets (i.e., self-preferencing): For instance, the dominance of Google Search is used to boost the company's browser, and Chrome is also pre-installed on (most) Android devices or set as a default browser. Lastly, Google can unilaterally set industry standards for web browsers – most of which – directly or indirectly – benefit the company (e.g., the upcoming phase-out of third-party cookies might shift even more advertisers to Google).

Another market segment dominated by Google is the one for digital maps. The market for navigation apps has more than one billion regular users, and *Google Maps* is by far the most dominant market player. Google's only meaningful competitor used to be Waze, an Israeli start-up company, specializing in GPS navigation applications and software – until 2013, when Google decided to acquire the rival company. Both services have since then been monetized through location-based ad selling, and their combined market share nowadays is circa 80%.<sup>73</sup> It is expected that Map's dominance will continue primarily due to the high market entry barriers prevalent in the digital maps market segment. Among those barriers are high up-front investments and fixed costs and Google's advantages in tracking and processing location data, e.g., via tracking-enabled Android devices. Because of Google's market dominance, businesses have seen significant price increases, e.g., regarding volume-based fees (note that those companies not only pay fees, but they also pay with their valuable usage data [the latter also applies to app users]).

In addition, Google engages in tying and other exclusionary business conduct: For instance, app developers are contractually prohibited from using specific

components of Google Maps Core Service with the mapping services provided by other companies. Google presents those companies with a 'choice' – either to use all Google Maps components or none. Furthermore, the company de facto forces developers to have a Google Cloud Platform (GCP) account and to use this platform – otherwise, they might experience low-resolution maps or other forms of improper functioning of mapping services. In short, Google Maps is tied to the use of GCP and vice versa.<sup>74</sup>

Another related (antitrust) issue is that Google Maps contains millions of fake or fraudulent listings and profiles, including false business names and addresses. This not only poses risks for consumer safety – e.g., when services are provided by fraudulent companies – but it might also lead to higher consumer prices or lower service quality and disadvantage legitimate business owners.

The fastest-growing business segment of Google is *Google Cloud (Platform)* or GCP, which grows twice as fast as AWS, the current market leader.<sup>75</sup> The cloud market is also one of the biggest company priorities, and Google plans to invest heavily in M&As. Among the main antitrust concerns are the possible bundling and leveraging of dominant business products to promote GCP.

Section 4 continues the discussion on the four tech companies and analyzes them and their respective business conduct from a distinct business ethics, i.e., ordoliberal perspective.

## 4. An Ordoliberal Evaluation of Big Tech

After laying out the main ordoliberal principles related to competition policy in Section 2, the upcoming paragraphs apply those principles to the digital economy and take an in-depth look at some of its most crucial antitrust issues. Section 4.1. summarizes the key characteristics of digital markets, followed by an ordoliberal criticism of big tech and their anticompetitive and exclusionary business practices in Section 4.2.

### 4.1 Key Characteristics of Digital Markets

The digital economy is characterized by the following five features:

- (Near-)zero marginal and distribution costs,
- Economies of scale and scope,
- Special role of big data,

72 Cp. StatCounter, 2021.

73 Cp. Statista 2021c; Subcommittee on Antitrust, 2020.

74 Cp. Subcommittee on Antitrust 2020.

75 Cp. Subcommittee on Antitrust, 2020.

- Strong network effects, and
- Concentration tendencies.

In most digital markets, corporations need to invest in and cover substantial up-front costs – e.g., for data centers, servers, and storage –, yet they also experience decreasing average unit costs (i.e., [*near-zero marginal and distribution costs*]<sup>76</sup>) and – most importantly – increasing returns to scale, which are (mainly) achieved through data collection. That is, data-rich companies can generate increasing marginal returns from data usage simply because the value of data tends to be higher the more data a company possesses, pointing to additional competitive advantages for incumbent firms. Besides these *economies of scale*, tech companies also benefit from *economies of scope*, which means that they can extend their business models across adjacent markets for relatively little cost: I.e., digital data is often non-rivalrous, which means that it can be used by several parties an infinite number of times; in addition, the use by one party does not prevent or diminish the use by another party. Hence the ‘non-rivalry of data’ allows for data-driven economies of scope – and the versatile use across multiple markets.<sup>77</sup>

*Big data* thus plays a crucial role in the digital and information economy for several reasons – one is that they lead to and reinforce economies of scale and scope. Moreover, data-driven feedback loops lead to incumbency advantages: That is, incumbent firms possess a competitive (data) advantage over their rivals due to their (privileged) access to and control over big data – which is beneficial in terms of data analytics, machine learning, and targeted advertising. In other words: The ‘3Vs’ of big data – variety, velocity, and volume – create a positive or self-reinforcing feedback loop, that is, more users lead to more data (and better data access) which can be used for better ad targeting, more revenue, and better service quality – which attracts even more users which are generating more data, and so on (hence the saying ‘data is power’).

Lastly, *network effects* are of particular importance in the digital economy: That is, platforms become more valuable to consumers as they grow, and this growth makes them even more attractive and might potentially lead to improved service quality. The academic literature distinguishes between two types of digital network effects – *direct* ones, where the usefulness of the network increases with the number of participants or the size of the user group, and *indirect* ones, where an

increasing number of users on one side is beneficial for the other side as well.<sup>78</sup>

Research shows that markets which possess the above features are prone to tipping – especially when they reach a critical mass of users. This means that initially competitive markets might turn into monopolistic or oligopolistic ones<sup>79</sup>, dominated by one or only a couple of powerful and dominant firms. A further characteristic feature of digital markets is thus the high level of concentration (i.e., *concentration tendencies*) and a ‘winner-takes-all/most’ market environment: A monopoly or duopoly can be found in multiple market segments, including search (dominated by Baidu, Google), mobile OS (Apple, Google), social networking (Facebook, Tencent), digital ads (Google, Facebook), app stores (Apple, Google), e-commerce (Alibaba, Amazon), e-books/audiobooks (Amazon), voice assistant (Amazon, Google), cloud computing (AWS), and digital mapping (Google).

A related problem is that the above characteristics of digital markets (i.e., network externalities, scale and scope economies, the role of big data, etc.) create substantial market entry barriers for competitors and newcomers. Furthermore, the revival of conglomerate structures in the digital economy has led to an expansion of market power into other (neighboring) markets – i.e., those not directly related to a company’s core business. Such leveraging of power into adjacent markets occurs, e.g., with the help of M&As, and has the potential to impede competition.

From an ordoliberal perspective, it is essential to note that highly concentrated markets often lead to higher consumer prices, lower product quality, a lower level of innovation, and less consumer choices – all of which negatively impact consumer welfare (and sovereignty). Also, conglomerate structures tend to encourage anti-competitive and exclusionary business conduct or lead to possible abuses of market power.

## 4.2 Ordoliberalism and Antitrust

As Section 2 has shown, (Eucken’s) ordoliberalism is about keeping markets open and ensuring competitive market processes. It is also about preventing companies from becoming too dominant and influential – including monopolies, oligopolies, and cartels – and minimizing possible abuses of market power. The following paragraphs apply the principles derived in Section 2 to big tech and critically evaluate the digital platforms’

76 Cp. Rifkin, 2015.

77 Cp. Commission ‘Competition Law 4.0’, 2019.

78 Cp. Commission ‘Competition Law 4.0’, 2019; Crémer et al., 2019; Furman et al., 2019; Stigler Center, 2019.

79 Cp. Petit, 2020.

business conduct from an ordoliberal (i.e., Euckenian) perspective. Of particular importance are the following (interrelated) issues:

- Structural dominance,
- Leveraging,
- Gatekeeping,
- Self-preferencing,
- Copycat expropriations,
- Discriminatory platform access,
- Predatory pricing,
- ‘Killer applications,’
- Monopsony power,
- Novel consumer harm, and
- Socio-political harm.<sup>80</sup>

*Structural dominance:* The analysis so far has shown that many tech companies control a substantial share of industry output and possess a large corporate size, product portfolio, or market capitalization. (Big data – often considered the ‘new currency’ or ‘oil of the 21<sup>st</sup> century’ – plays a significant role and is one of the main reasons behind big tech’s structural dominance (and market power [see Eucken’s Regulating Principle 1]). The problem – as seen from an ordoliberal perspective – is not the sheer size of big tech; instead, it is that many tech companies have created ‘data-opolies,’ that is, conglomerates formed around and based upon big data. It is this data control and ownership which allows tech companies to leverage their dominant and powerful market position across market segments.

*Leveraging:* Big tech companies tend to use their market power and dominance to establish a monopoly or oligopoly position in other (adjacent) market segments (thereby violating key ordoliberal principles such as the ‘competitive economy’ and ‘open markets’ principles). That is, they can cross-leverage data – and financial means – to tilt specific markets in their favor rather than ‘competing on the merits’, as ordoliberalism envisions. Furthermore, they can carry out market research, monitor competitive software products, or copy successful apps. This way, they can easily outcompete their rivals.

*Gatekeeping:* Dominant and powerful tech companies also tend to function as gatekeepers to consumers and markets. They are mediating – and to a certain degree – controlling multiple ways of communication, interaction, and transaction. For instance, Amazon (and Alibaba) are the primary gateways for online shopping, Facebook (and Tencent) for networking and socializing, Google (and Baidu) for searching things on the internet, and Apple and Google for the distribution of apps and

software on iOS and Android devices. Companies with gatekeeping powers hence not only control the primary digital filters – which implies that enormous powers are concentrated in the hands of a limited number of companies and that there is a corresponding risk of potential abuse of power (i.e., violation of Eucken’s Constituent Principles 1 and 3 and Regulating Principle 1)<sup>81</sup>; in addition, they also control the fate of other companies which depend on them as intermediaries, thereby multiplying already existing business risks (according to the Subcommittee on Antitrust, gatekeepers have the power to ‘coerce,’ ‘tax,’ ‘squeeze,’ or ‘expropriate’ other companies<sup>82</sup>). Noteworthy is also that GAFAM – same as their Chinese counterparts – not only functions as intermediaries (i.e., regulators and rule-setters) for third-party companies but also as direct competitors. This dual function raises antitrust concerns especially when big tech exploits this role, e.g., via abrupt changes to the platform’s terms and conditions, data extraction, appropriation of technologies, self-preferencing, and other forms of exploitative business conduct.

*Self-preferencing:* Monopolists or oligopolists can use their position of power in tipped markets to favor their products in *untipped* markets. E.g., they can give preferential treatment to their own downstream or upstream services, thereby extending their dominant position into related markets or consolidating their power (and violating Eucken’s Constituent Principle 5 [i.e., non-exclusionary contracts]). As was the case in the Google Shopping probe<sup>83</sup>, companies might even use their leverage influence and market power to promote qualitatively inferior products, thereby distorting competition and leading to a reduction in service quality.

*Copycat expropriation:* (Some) big tech firms copy, imitate, or replicate third-party products. E.g., Apple and Google copy successful apps from independent software developers in their app stores, and Amazon copies successful products offered by third-party sellers on Amazon.com.

*Discriminatory platform access:* Exclusionary or discriminatory business conduct can come in many forms and ways, including, but not limited to:

- Imposing MFN clauses (i.e., exclusivity or price-parity clauses),
- Impeding multi-homing,
- Preventing switching (e.g., via bundling and tying),
- Limiting data portability, and

81 Cp. Wörsdörfer, 2018.

82 Cp. Subcommittee on Antitrust, 2020.

83 Cp. Kornelakis, 2021; Wörsdörfer, 2020.

80 Cp. Petit, 2020; Scott Morton, 2019.

- Restricting interoperability (e.g., via technical barriers).<sup>84</sup>

Those and similar practices prevent independent sellers from offering their products cheaper elsewhere; they also inhibit the simultaneous use of multiple services, impose switching costs, and lead to data-driven or induced lock-ins. Together, they have an anticompetitive effect given that they create additional market entry barriers and harm consumer welfare (e.g., when they prevent users from using a qualitatively superior product). In short, this form of business conduct violates the ordoliberal principles of non-exclusionary contracts and open (and competitive) markets.

*Predatory pricing:* Amazon (e.g., Amazon Echo), Apple (e.g., Apple TV+), and others engage in ‘below-cost pricing’ strategies which means that prices are cut to a level that does not cover all costs – at least not in the short run – to eliminate potential rivals. (Some) tech companies hence show a clear (initial) preference for growth and scale over revenue and profit and deliberately forgo profits in the hope to establish market dominance and realize ‘winner-takes-all/most effects.’

*‘Killer applications’<sup>85</sup>:* The term ‘killer M&As’ refers to powerful and dominant (tech) firms that acquire successful start-ups simply to keep them from becoming a future competitor. Wu refers in this context to the so-called ‘Kronos effect,’ where “efforts [are being] undertaken by a dominant company to consume its potential successors in their infancy.”<sup>86</sup> In some cases, big tech has made use of so-called ‘sell or be ruined’ threats to force – or coerce – start-ups or smaller rivals into M&As. The acquisition of start-up companies by big tech has contributed to the vanishing of small companies, thereby reducing the incumbent’s competitive – and disciplining – pressures. M&As have thus the potential to impede competition through horizontal, vertical, or conglomerate effects – and other forms of market coordination and collusion – mainly via the concentration of power and control over data (access) (i.e., violation of Constituent Principles 1 and 3). The strategic use of M&As also prevents the future entry and expansion of possible (future) rivals – which could potentially undermine the incumbent’s dominance – and make innovations less likely. More importantly, those killer acquisitions reduce the incentive to create – and finance – small firms in the first place: Many investors – e.g., venture capitalists – prefer not to finance (start-up) companies operating in market segments dominated by a single power-

ful and dominant player due to the risk of replication or ‘killer M&As.’ Experts refer to the immediate zones surrounding big tech companies – those where we have a near-complete absence of competition – as so-called ‘innovation kill zones.’<sup>87</sup> According to the Subcommittee on Antitrust, ‘killer M&As’ have fostered the decline in new business formation and start-up funding and led to a declining rate of entrepreneurship and job creation. In short, the dominance of online platforms has weakened innovation and entrepreneurship in the U.S. economy (and elsewhere).<sup>88</sup>

*Monopsony power:* Corporate consolidation can also negatively impact labor markets, e.g., when monopsony power affects wages and labor conditions. For instance, due to its sheer size, Amazon possesses substantial bargaining power over its workers, especially delivery, seasonal, warehouse, and storage workers. Not only has the company immense wage-setting power and is thus able to drive down or depress wages; it can also dictate working conditions in the entire industry<sup>89</sup> – both of which could exacerbate the ‘social question’ and the problem of ‘working poor’ as discussed by Eucken<sup>90</sup> and other ordoliberals (in addition, it represents a potential violation of key ordoliberal principles such as Constituent Principles 1 and 3 and Regulating Principles 1 and 4).

*Novel consumer harm<sup>91</sup>:* Harm to consumers can arise in many forms: As discussed in previous sections, dominant and powerful market players tend to not only extract monopoly rents, but they also tend to restrict market entry (e.g., by regulating access to or excluding competitors from specific gateways or platforms); moreover, they pursue strategic M&As which de facto block new entrants (and market segments dominated by a single company might see less venture capital investments). These factors combined often lead to a reduced pace of innovation and thus harm to consumers. Besides, consumers also experience an increased volume of advertising, higher product prices (e.g., ads, apps, and software), fewer consumer choices, and lower service quality. Of particular importance are the quality harm and welfare losses that come in the form of decreased data *security* and the erosion of data *protection* (see, for instance, Facebook’s [various] data breach scandals and violations of privacy/misuse of data).<sup>92</sup> Lastly, consumers might also be negatively affected by big tech exploiting information asymmetries or behavioral and cognitive biases such as psychological inertia and

84 Cp. Crémer et al., 2019.

85 Cp. Glick et al., 2020, Subcommittee on Antitrust, 2020, appendix; Washington Post, 2021a.

86 Wu, 2011, p. 25.

87 Cp. Commission ‘Competition Law 4.0’, 2019.

88 Cp. Subcommittee on Antitrust, 2020.

89 Cp. Subcommittee on Antitrust, 2020.

90 Cp. Eucken, 1952/2004; Wörsdörfer, 2013b.

91 Cp. Petit, 2020.

92 Cp. Srinivasan, 2019; Zuboff, 2019.

status quo bias (i.e., preference or tendency to maintain default options; brand loyalty), salience bias (i.e., preference or tendency to focus on apparent or emotionally unique products), and lack of self-control (i.e., addiction vulnerability).<sup>93</sup> Commonly used tools in the digital economy include for instance:

- Digital advertising (i.e., subliminal messaging and advertising, morphing of [personalized] website layouts),
- Captology' (i.e., computer-aided persuasive technology),
- Digital nudging (i.e., technocratic way of steering and influencing [i.e., nudging] behavior and decision making with the help of AI-algorithms), and
- Gamification (i.e., use of game designs in non-game contexts to enhance engagement).<sup>94</sup>

As a result, consumers might not only experience (status-quo) stickiness but also discrimination, manipulation, and exploitation (e.g., of personal vulnerabilities), and mental health issues (e.g., addiction). Especially the advertising-supported business model and online gaming might harm consumers, e.g., by negatively impacting users' physical and emotional well-being.

*Socio-political harm:* Consumers might also experience socio-political harm caused – or at least not prevented – by big tech<sup>95</sup>, e.g., in the form of filter bubbles or echo chambers, 'fake news,' or dangerous and hate speech<sup>96</sup>:

- For many people in the U.S. and elsewhere, their personalized newsfeed, e.g., on Facebook, is their primary – and often only – news source. One of the main issues is that this newsfeed represents a sole reflection of people's interests and desires and mirrors already familiar ideas (it equals in a way an invisible auto-propaganda

or indoctrination); yet it suppresses alternative worldviews and blocks things that are important but either (too) complex or unpleasant – and renders them invisible. Consequently, people rarely encounter new ideas that deviate from their currently held ideological beliefs and values. Hence, (many) social networking/media users are trapped or imprisoned in a so-called 'You Loop' where they only read the 'Daily Me.' Here, every like or link sharing triggers additional self-enhancing echo effects, hence the term *echo chamber* or *filter bubble*.<sup>97</sup> The possible societal consequences range from self-justification and confirmation bias (i.e., overconfidence) to enhanced passivity and conformism, a reduction in open-mindedness (i.e., lack of thinking outside the box), and a decrease in diversity of ideas and opinions – mostly because filter bubbles rule out random ideas and encounters and suppress discoveries and explorations (i.e., the control over what we are exposed to effects thus also the way we think and learn which might negatively impact innovation, creativity, and critical thinking). Most importantly, however, filter bubbles contribute to the further fragmentation of society and undermining of social cohesion. They help manifest existing tensions and gaps – e.g., stereotypes and xenophobia – and lead to the creation of ideological sub-cultures and ghettos. That is, filter bubbles confine us to our information neighborhood, where we become increasingly unable to see or explore the rest of the (digital) world. Eventually, they lead to increased bonding, yet decreased bridging capital – to use Putnam's terms<sup>98</sup> – and erode the public sphere and prevent Habermasian<sup>99</sup> discursive dialogues.<sup>100</sup>

- The spread of *misinformation* (i.e., dissemination of false information without the attempt to deliberately mislead) and *disinformation* (i.e., deliberate spread of false information to mislead the audience) – commonly referred to as 'fake news' – comes with high social costs and negative externalities, especially when a decreased news accuracy leads to the undermining of the ability of democratic processes to select truthful outcomes on which citizens (i.e., voters) could base their decisions. It hence has the potential to undermine the public's trust in democracy and the

93 Cp. Commission 'Competition Law 4.0', 2019; Stigler Center, 2019; see Klump/Wörsdörfer, 2015 for more information on ordoliberalism and (libertarian) paternalism (i.e., nudging).

94 Cp. Helbing et al., 2017; Wörsdörfer, 2018.

95 In fall 2021, Haugen, a former Facebook employee, revealed that the company *knowingly* amplifies hate, violence, mis-/disinformation, and other divisive and polarizing content across its platforms and that it prioritizes profits over public safety (and health). That is, Facebook has not only known about the problems of dangerous and hate speech and the spread of dangerous mis-/disinformation for a very long time (e.g., that anger and hate entice more user engagement and are therefore more profitable); it has also (deliberately[?]) decided not to intervene to maximize its profits at the expense of the public good (cp. CBS News, 2021).

96 Note that the following aspects are discussed from a consumer sovereignty (or welfare) perspective – similar to the one adopted by Eucken and other ordoliberals (cp. Wörsdörfer, 2013a).

97 Cp. Ash, 2016; Pariser, 2011; Wörsdörfer, 2018.

98 Cp. Putnam, 1993a, 1993b, 2000.

99 Cp. Habermas, 1983, 1991.

100 Cp. Ash, 2016; Pariser, 2011; Wörsdörfer, 2018.

rule of law.<sup>101</sup> ‘Fake news’ is inextricably tied to the emergence of big tech firms in search engines and especially social networking/media. Critics claim that their business models are flawed as they tend to favor the spread of dis-/misinformation (e.g., with the help of bots) – simply because more traffic is being generated on false or misleading news sites compared to mainstream news sites. As such, clickbait is more profitable, especially in so-called ‘attention markets,’ and attention-seeking headlines are more monetarily valuable than content or substance; hence an incentive exists for many tech companies to prioritize addictive or exploitative content to increase user engagement and ad revenues (which harms consumer welfare/sovereignty).<sup>102</sup> An additional problem related to social networking/media is that the speed of news dissemination online leaves only a little time for fact checking.<sup>103</sup>

- *Dangerous* speech includes the intended, likely, and imminent threat of violence; typical examples include direct harassment and intimidation. *Hate* speech, on the other hand, refers to verbal insults – without an imminent threat of violence. It is noteworthy that only dangerous speech is legally banned in the U.S., whereas hate speech is not. The distinction between the legitimate (hate speech) and illegitimate use (dangerous speech) of free speech goes back to the U.S. Supreme Court decision in *Brandenburg v. Ohio* in 1969.<sup>104</sup> While hate speech is largely unregulated in the U.S., many E.U. member states pursue a different strategy and have passed laws that prohibit not only dangerous but also hate speech (e.g., Germany’s Network Enforcement Act<sup>105</sup>). Those laws try to balance the freedom of expression against the dignity and rights of (possible) victims of dangerous and hate speech, thereby protecting offline rights in the digital sphere. In the U.S., however, the focus is clearly on the First Amendment rights – which are often perceived as absolute or unconditional rights; that is, any form of restriction of free speech, including (dangerous and) hate speech, is often decried as censorship. Hence, big tech firms have complete discretion over the control of online content, and they are viewed more like neutral platforms rather



**Figure 1.** Big Tech’s Anticompetitive Business Conduct

than as editors or publishers – which have specific social responsibilities, e.g., to ensure a democratic and public-spirited platform or to cultivate a public space with a certain degree of decency. Section 230 of the U.S. Communications Decency Act gives those platforms immunity from liability based on user-generated content.<sup>106</sup>

Figure 1 summarizes and illustrates the main points of ordoliberal criticism of big tech.

## 5. Concluding Remarks

The past few years have seen a renewed interest in big tech and competition law and policy – as can be seen by the latest antitrust investigations in China, Europe, and the U.S. and the corresponding policy discourses. This paper adds to those debates by taking an in-depth and ordoliberal-inspired look at the business strategies of four major digital platforms – Amazon, Apple, Facebook, and Google – and the related antitrust concerns: That is, Section 2 provided an overview of key ordoliberal principles such as Eucken’s Constituent and Regulating Principles and his Principles of Economic (State) Policy. Section 3 analyzed the business models of big tech companies, and Section 4 applied the ordoliberal principles derived in Section 2 to the companies discussed in Section 3. It became clear that digital markets are not only characterized by (near-)zero marginal costs, economies of scale and scope, the special role of big data,

101 Cp. Snyder, 2017; Wörsdörfer, 2018.

102 Cp. CBS News, 2021.

103 Cp. Frenkel & Kang, 2021; Subcommittee on Antitrust, 2020.

104 Cp. Ash, 2016.

105 Cp. Wörsdörfer, 2018.

106 Cp. Frenkel & Kang, 2021.

and strong network effects, but also by concentration tendencies. Those trends toward the monopolization or 'refeudalization' of the economy – to use Eucken's terminology – are often accompanied and amplified by big tech's anticompetitive and exclusionary business strategies such as leveraging, gatekeeping, self-preferencing, copycat expropriations, discriminatory platform access, predatory pricing, 'killer applications,' and the abuse of monopsony power – to name a few. The question that remains is what could be done about those concentration tendencies and anticompetitive business conduct? Antitrust and competition policy experts recommend adopting – at least some of – the following measures:

- Updating and revising existing antitrust laws (i.e., making them fit for the digital age),
- Strengthening merger guidelines (i.e., strengthening merger review, including blockage),
- Scrutinizing the effects of conglomerate mergers (and horizontal shareholding),
- Establishing a look-back mechanism (i.e., ex-post merger control),
- Making use of corporate break-ups or divestitures (as ultima ratio),
- Lowering market entry barriers, e.g., via ensuring data portability and interoperability,

- Preventing predatory pricing, tying and bundling, and self-preferencing,
- Guaranteeing platform (and gatekeeper) neutrality,
- Enhanced funding and staffing of antitrust agencies (i.e., cartel offices, M&A commissions),
- Introducing adequate penalties/fines for anticompetitive and exclusionary business conduct,
- Better protecting whistleblowers, and
- Engaging in international, cross-border cooperation and collaboration.<sup>107</sup>

Many of those measures are ordoliberal in nature – or at least compatible with ordoliberalism. Yet additional research is needed to develop them further and translate them into concrete policy proposals. For this, we need a close collaboration and exchange of ideas between economists, legal scholars, and business ethicists as well as a stakeholder dialogue between academia, industry, politics, and society.

<sup>107</sup> Cp. Baer et al, 2020; Commission 'Competition Law 4.0', 2019; Crémer et al., 2019; Furman et al., 2019; Klobuchar, 2021; Stigler Center, 2019.

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