

DIGITAL SERVICES IN EUROPE

AN EVIDENCE REVIEW

NOVEMBER 2020

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November 2020

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EXECUTIVE SUMMARY

THE ECONOMIC BENEFITS OF DIGITAL SERVICES IN EUROPE

Over the last two decades the rapid growth of digital services has had a transformative impact on daily lives and economic activity across Europe. In 2019, more than three-quarters of individuals in the EU used the internet daily, whether to find information, interact with others, shop online, watch videos, or for a multitude of other reasons. Almost half of EU businesses used social networks and one-quarter paid for online advertising; one-fifth of businesses sold goods and services online.¹ COVID-19 lockdowns during 2020 appear to have led Europeans to turn to digital services to an even greater extent in order to work, study, shop and stay in touch with friends and relatives.

Much of Europeans' online activity is enabled by a dynamic and innovative network of online platforms. The European Commission has estimated that there are more than 10,000 EU digital platforms, the vast majority of them small and medium-sized enterprises (SMEs).² Platforms provide services across almost all economic sectors according to a range of business models. The most successful European platforms have scaled up extremely rapidly and earn global revenues of hundreds of millions of euros, or even billions of euros (e.g. Spotify and Zalando).³

These revenues accrue to the platforms themselves, and also to the ecosystems of businesses and individuals who use the platforms to make transactions. For example, the Android app ecosystem supports €11.7 billion of revenues for European developers and more than 1.4 million jobs.⁴ Based on a 2019 survey of 7,700 businesses, Facebook apps and technologies were estimated to help businesses in 15 EU markets generate €208 billion of gross value added (GVA) and support 3.1 million jobs.⁵ And by 2020 more than

10,000+

EU digital platforms, most of which are small and medium-sized businesses.



¹ Eurostat, "Digital economy and society" <<https://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database>> [accessed August 2020].

² European Commission, *How do online platforms shape our lives and businesses?* (Publication Office of the European Union, 2019), p.1.

³ Music Ally, "Spotify ended 2019 with 271m listeners and 124m subscribers" <<https://musically.com/2020/02/05/spotify-ended-2019-with-271m-listeners-and-124m-subscribers/#:~:text=In%202019%20as%20a%20whole,over%202.3%20million%20a%20month.&text=For%202019%20as%20a%20whole,from%20%E2%82%AC78m%20in%202018.>>> [accessed October 2020]. Statista, "Annual revenue of Zalando from 2009 to 2019" <<https://www.statista.com/statistics/260450/annual-revenue-of-zalando/>> [accessed September 2020].

⁴ Public First, Google's Economic Impact in Europe (2020), p.28.

Michael Mandel and Elliott Long, *The App Economy in Europe: Leading Countries and Cities* (Progressive Policy Institute, 2017), p.10.

⁵ Sigurd Næss-Schmidt et al., Empowering the European business ecosystem – An impact study of businesses using Facebook apps and technologies (Copenhagen Economics, 2020).

270,000 jobs had been created by small and medium businesses selling on Amazon.⁶

270,000+
jobs

Created by small and
medium businesses selling
on Amazon by 2020.



Digital services provide wider benefits which enhance the competitiveness of the EU economy.

They reduce barriers to growth for SMEs, enabling them to immediately access infrastructure and customers without needing to make large up-front investments. For similar reasons, digital services support cross-border trade within the EU and beyond. For example, Facebook apps and technologies helped EU businesses generate an estimated €98 billion of international sales in 2019.⁷

THE CONSUMER AND SOCIAL BENEFITS OF DIGITAL SERVICES

Digital services democratise economic opportunities and support social objectives.

They offer flexible working opportunities for all groups. They support geographical equality by providing access to national and international markets for businesses and consumers in remote areas. E-commerce can be particularly valuable for elderly and disabled customers, but has recently enabled all consumers to continue to access goods and services during lockdown periods.

Shopping online brings benefits to consumers over traditional alternatives.

Users can quickly search for goods and services, compare offerings and prices across competing sellers, and read reviews from other consumers. The competitive and transparency benefits of e-commerce ultimately lead to greater choice and lower prices.

Other benefits of digital services have been in evidence during 2020 as platforms have provided virtual alternatives to essential everyday activities.

For example, platforms have been widely used by EU citizens for home schooling, home working, and virtual social interactions.

Many digital services such as search engines, online maps, social media and communication tools are provided to consumers free of charge.

Users save time when searching for and accessing information; save money from not having to purchase alternatives (such as a paper map or reference book); and may enjoy much greater functionality than from traditional alternatives. These benefits have a substantial value to consumers. For example, Google's Search, Maps and YouTube services are estimated to generate €420 billion of value per year for European consumers.⁸

€420bn

Annual value generated by
Google Search, Google
Maps and YouTube to
European consumers.



⁶ Amazon, "Small business success in challenging times – 2020 Amazon European SMB impact report" <<https://d39w7f4ix9f5s9.cloudfront.net/bf/78/0bfc1dda40b181b7dcc91638b351/amazon-eu-smb-report-2020.pdf>> [accessed November 2020].

⁷ Sigurd Næss-Schmidt et. al., Empowering the European business ecosystem – An impact study of businesses using Facebook apps and technologies (Copenhagen Economics, 2020), p.14.

⁸ Public First, Google's Economic Impact in Europe (2020).

7.9m

Problematic videos removed by YouTube between July and September 2020, of which 43% had never been viewed.



1.5bn

Fake accounts disabled by Facebook in the second quarter of 2020.



BEST PRACTICE IN CONTENT MODERATION

While digital services have delivered wide-ranging economic and social benefits, the technologies have been misused by some users for purposes which are harmful, or even illegal. Digital services providers recognise the challenge this poses and have developed a range of individual and collective initiatives to address these issues.

Platforms remove millions of items of illegal or harmful content each year and in many cases they proactively remove material before it is reported by users.

In the fight against illegal hate speech online, 90% of notifications were reviewed within 24 hours and 71% of the content was subsequently removed.⁹ YouTube has reported that between July and September 2020, it removed 7.9 million problematic videos. Of these, 43% had not been viewed, and 76% had received fewer than 11 views.¹⁰

Online marketplaces work with brand owners to counter the sale of counterfeit goods. They have developed brand registration programmes to enable the rapid identification of fakes; streamlined reporting procedures; and increasingly use technology to track individual products from seller to marketplace to end-consumer. Evaluations of the European Commission's Memorandum of Understanding (MoU) on the sale of counterfeit goods found that between 90% and 98% of listings removed for alleged IP infringements had been removed proactively by online platforms. Some 2.4 million listings were removed for an alleged infringement of intellectual property in May and June 2019.¹¹

E-commerce marketplaces have policies in place to prohibit the sale of unsafe products and proactively engage with sellers and authorities to ensure safety. The most recent evaluation of the European Commission's Product Safety Pledge found that more than 99% of product listings identified were removed within two working days.¹²

Digital services providers have introduced a voluntary code of practice to address the spread of disinformation and misinformation. Efforts in this area include the 600,000 online adverts per month tackled by Facebook, and the 1.5 billion fake accounts disabled by the company in the second quarter of 2020.¹³ In the third quarter of 2020, YouTube removed more than 2 million videos and over 1.5 million channels for violating its spam, misleading content

⁹ European Commission, "The EU Code of conduct on countering illegal hate speech online", <https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combating-discrimination/racism-and-xenophobia/eu-code-conduct-countering-illegal-hate-speech-online_en> [accessed September 2020].

¹⁰ Google, "YouTube Community Guidelines enforcement" <<https://transparencyreport.google.com/youtube-policy/removals?hl=en>> [accessed November 2020].

¹¹ European Commission, Report on the functioning of the Memorandum of Understanding on the sale of counterfeit goods on the internet (2020).

¹² European Commission, 3rd Progress Report on the Implementation of the Product Safety Pledge (2020).

¹³ European Commission, Code of practice on disinformation - First annual reports – October 2019 (2019). Facebook, "Community Standards Enforcement Report" <<https://transparency.facebook.com/community-standards-enforcement#fake-accounts>> [accessed August 2020].

and scams policies.¹⁴ Platforms have also taken steps to increase transparency around political advertising.

Many digital services providers publish transparency reports on their content moderation practices. The steps providers need to take to tackle illegal or harmful content vary according to many factors, including the services they provide, their business model, and the type of content in question. As such, transparency reports vary in terms of both content and form, reflecting the specific circumstances of each provider and the challenges they face.

Automated tools are an important part of the content moderation process but are most effectively used in conjunction with human moderators.

Automated tools enable vast amounts of information to be processed, often in almost real time. However, despite rapid advances in artificial intelligence, automated systems are not yet effective at identifying harmful content which requires contextual understanding. Automated moderation should be seen as a tool to improve the effectiveness of human moderators, and not as a standalone solution. Given the limitations, mandating the use of automated tools could lead to over-moderation, potentially hindering freedom of expression. And since most tools are tailored to the specific circumstances of a provider, there would be considerable practical and technical challenges in identifying which tools should be mandated in which circumstances.

CONSIDERATIONS FOR THE DIGITAL SERVICES ACT

Our review has identified a number of points for the European Commission to consider as it devises new rules for the Digital Services Act:

- (1) Digital services providers already work individually and in collaboration with others to tackle illegal content. It would seem logical that any new rules should seek to build on these existing frameworks, rather than start from scratch.
- (2) Differences in rules across Member States create complexity for online platforms and those who use them. It is important that any new rules are harmonised across the EU so that businesses can continue to capitalise on the benefits of digital services in facilitating access to the entire Single Market.
- (3) Some of the most successful examples of initiatives to tackle illegal or harmful content have emerged where there is collaboration between digital services providers and other stakeholders, including governments, civil society organisations, users and rights holders. All of these groups have a role to play in tackling illegal content.

¹⁴ Google, “YouTube Community Guidelines enforcement” <<https://transparencyreport.google.com/youtube-policy/removals?hl=en>> [accessed October 2020].

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1. INTRODUCTION

The rapid digitalisation of services has had a transformative impact across the European economy and society, delivering substantial benefits for businesses, consumers and governments. The benefits of digital services have perhaps never been more in evidence than during recent lockdowns, when increasing numbers of Europeans have turned to online options in order to work, study, shop and stay in touch with friends and relatives.

At the same time, the extremely rapid pace of innovation has inevitably created new challenges. The European Commission is seeking to address some of these challenges with new rules relating to online safety and liability through its upcoming Digital Services Act (DSA).

Against this backdrop, Oxford Economics has been asked to review evidence in two topic areas:

- The economic and social benefits that digital services deliver for Europe, since it is important that any new regulations applied to the digital services industry are balanced against the benefits the industry provides (Chapters 2 and 3).
- The efforts that digital services providers already make to tackle illegal and harmful content and to report their actions in this space, so that any new regulations can take account of and, where relevant, build on these existing initiatives (Chapter 4).

The evidence in this paper is primarily based on literature reviews, although we have also gathered insights from digital services companies through written feedback and from six videoconference consultations.

2. THE ECONOMIC BENEFITS OF DIGITAL SERVICES IN EUROPE

In this chapter we explore how digital services providers generate economic value for Europe, through their own activities; through the activities they enable for others; and through wider “spillover” benefits.

2.1 DIVERSITY OF THE PLATFORM ECONOMY

The European Commission defines digital services as “services provided through electronic means, at a distance, at the request of the user”.¹⁵ Our focus in the first part of the chapter is on a subset of digital services referred to as “online platforms”.

Researchers have proposed many typologies to describe the online platform economy,¹⁶ but they commonly include:

- **App stores**, from which users can download apps for a specific device, such as a smartphone, games console, smart watch, etc. (e.g. the Apple App or Google Play stores).
- **Collaborative economy platforms**, which match supply and demand for goods and services, e.g. for mobility services (Lyft, BlaBlaCar), labour (Twizzi), or accommodation (Airbnb).¹⁷
- **E-commerce marketplaces** which bring together buyers and sellers in an electronic marketplace. Third-party marketplaces do not sell their own products, but connect buyers with sellers who operate independently to conduct transactions and deliver items (e.g. eBay). In contrast, first-party marketplaces sell their own products (e.g. brands’ e-commerce interfaces such as Zara or IKEA’s websites and apps). Certain platforms provide a mixed model under which they sell both their own products and facilitate transactions by third-party sellers (e.g. Amazon and Zalando).
- **Search engines and other online advertising platforms** that generate traffic by publishing free content and selling advertising space alongside it (e.g. DuckDuckGo, Ecosia, Google, Lilo and Qwant).¹⁸
- **Social media platforms** which provide a forum for sharing and consuming content with other users who may or may not be known to the person posting material (e.g. Dailymotion, Vimeo and YouTube).¹⁹
- **Social networks** where users can search for and communicate with people online and which provide a “rich social experience”. This may

¹⁵ European Commission, *Digital Services Act package: Open public consultation* (2020).

¹⁶ Sara Riso, *Mapping the contours of the platform economy* (Eurofound, 2019), p.19.

¹⁷ Joris van Hoboken et al., *Hosting Intermediary Services and Illegal Content Online* (Publications Office of the European Union, 2018), p.13.

Neston Duch-Brown, *The Competitive Landscape of Online Platforms* (Joint Research Centre, 2017).

¹⁹ Jerrold Nadler et. al., *Investigations of Competition in Digital Markets* (U.S. House of Judiciary, 2020), p.91.

include the sharing of content, but with specific contacts.²⁰ Examples include Facebook, LinkedIn, Snapchat and TikTok.

Platforms operate across a wide range of industries and sectors. The Centre for Global Enterprise has identified that the largest number of platforms operate services relating to retail, financial services, internet software and services, social media and messaging, media, transport, and travel.²¹

Platforms may earn revenue through a range of models, including:²²

- **Advertising-funded** platforms which enable users to access them for free. Some may offer a “freemium” service under which users pay to remove advertising or access additional features (e.g. Spotify).
- **Commission-based** platforms which charge a percentage of the revenue generated by those selling services through the platform (e.g. Booking.com).
- **Flat rate for service** under which the platform sets a fixed price for a standardised service from which both the platform and those selling services receive income.
- **No profit models** may be used by non-profit enterprises, or those seeking to build a customer base during the early stages of operation.
- **Membership fees.**

Platforms may operate under a combination of the above models, and do not necessarily stick to a single revenue model over time. For example, Uber started as a ride-sharing platform but, at a global level, has evolved to offer additional services such as Uber Eats, Uber Health, Uber Jump and Uber Freight²³ (in Europe the company currently operates Uber Rides and Uber Eats).

²⁰ Jerrold Nadler et. al., *Investigations of Competition in Digital Markets* (U.S. House of Judiciary, 2020), p.91.

²¹ Peter C. Evans and Annabelle Gawer, *The Rise of the Platform Enterprise: A Global Survey* (The Center for Global Enterprise, 2016).

²² See Appendix A for data on the business models used by platforms trading services.

²³ Holger Schmidt, “What do you see as the key factors to drive digitalization?”, in *dotmagazine*, <<https://www.dotmagazine.online/issues/going-digital/industry-4-0-paving-the-way/business-models-in-the-platform-economy>> [accessed October 2020].

2.2 THE SIZE OF THE EUROPEAN PLATFORM ECONOMY

The diversity of online platforms and the lack of a single agreed definition of what they include means that tracking the evolution of the platform economy is challenging. Studies have tended to look at this issue at a single point in time based on different approaches, definitions and geographies. Many have focused on larger platforms. For example, KPMG estimated that in 2018 there were 242 platforms with a valuation greater than \$100 million across the world.²⁴ Demary and Rusche highlighted the importance of online platforms amongst unicorns (unlisted companies with a market capitalisation of at least US\$1 billion), finding that out of 268 companies identified in 2017, 110 were digital platforms.²⁵ Of those, just 4.5% were in Europe, compared to 65.5% in Asia and 30% in the US.

Nonetheless, there is a substantial platform economy in Europe and it is a particularly important sector for SMEs. In 2019, the European Commission reported there were more than 10,000 EU platforms, of which 9,700 were high-growth SMEs.^{26,27,28} A separate study estimated that there were 651 collaborative economy platforms operating in the transport, accommodation, finance and online skills sectors alone.²⁹

Major European platforms have achieved exceptionally strong growth over the last two decades or so. For example, Spotify and Zalando both launched in 2008 and by 2019 had each grown to achieve global revenues in excess of €6 billion.

²⁴ KPMG, *Unlocking the value of the platform economy* (Transformation Forums, 2018), p.9.

²⁵ Vera Demary and Christian Rusche, *The Economics of Platforms* (Institut der deutschen Wirtschaft Köln Medien GmbH, 2018), p.23.

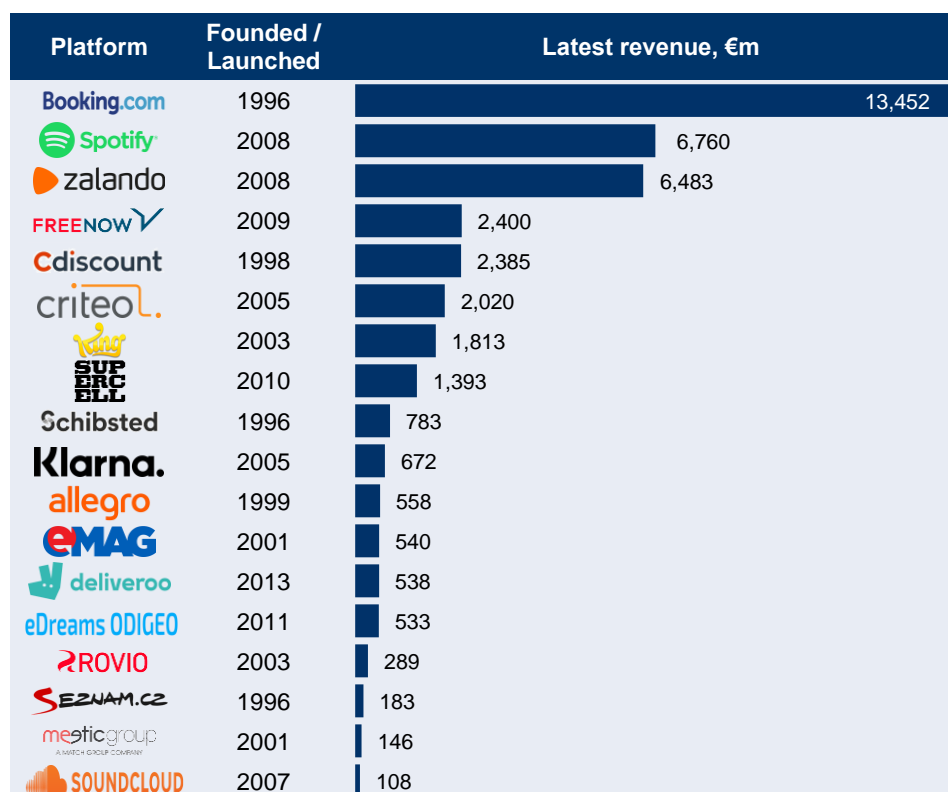
²⁶ European Commission, "Digital Services Act Package – 21st meeting of the eCommerce Expert Group" <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=41347>> [accessed August 2020].

²⁷ European Commission, *How do online platforms shape our lives and businesses?* (Publication Office of the European Union, 2019), p.1.

²⁸ Figures are based on Dealroom database and represent hosting services having received venture funding in 2018.

²⁹ European Commission, *Study to monitor the economic development of the collaborative economy at sector level in the 28 EU Member States* (Publications Office of the European Union, 2018), p.14.

Fig. 1. Global revenues of major European platforms, 2019^{30,31}



The rapid growth of the examples above is consistent with the OECD's observation that "scale without mass" is a common characteristic of online platforms.³² Unit costs for storing and processing data are typically low, and the internet can deliver global reach quickly. So once fixed costs have been incurred to set up a platform, the marginal cost of expansion tends to be low and platforms can grow very quickly and more cheaply than many businesses selling physical goods.

As platforms grow they increase revenue for both the platform operator and the individuals and businesses transacting through the platforms. The latter can be significantly larger in absolute terms. Though now slightly dated, PwC showed that between 2013 and 2015, revenues to collaborative economy platforms in five sectors in Europe increased from €1 billion to €3.6 billion, while the value of transactions handled increased from €10 billion to €28 billion.³³

³⁰ Platform revenues refer to 2019, except for Deliveroo and SoundCloud, for which revenue data was only publicly available for 2018. Schibsted was founded in 1839 as a printer and since then, they have established several subsidiaries, including Blocket, the Swedish marketplace founded in 1996. Schibsted revenue refers to online revenues of Schibsted excluding Adevinta.

³¹ See Appendix for sources.

³² OECD, *An Introduction to Online Platforms and their Roles in the Digital Transformation* (2019).

³³ PwC, *Assessing the size and presence of the collaborative economy in Europe* (Publications Office of the European Union, 2016).

THE IMPACT OF THE DIGITAL SERVICES ACT ON THE PLATFORM ECONOMY

Certain stakeholders have expressed concerns that an inappropriate execution of the Digital Services Act (DSA) could harm the growth prospects of the EU platform economy.

For example, the European Tech Alliance (EUTA) reiterated the importance of smart regulation that does not damage the ability of European digital services firms to compete locally and internationally. They highlighted the importance of proportionate legislation; ensuring an environment which is investor-friendly; and creating a level playing field, including through the single taxation of profits.³⁴

Allied for Startups has suggested the DSA provides an opportunity for a “digital and green” post-COVID-19 recovery. They highlighted the importance of retaining the limited liability exemption under which startups are not liable for the illegal activities of users; the country of origin principle, so that companies can scale up across the EU under one set of regulations; and ensuring that new measures do not inhibit the ability of startups to compete with incumbents and provide consumer choice.³⁵ In modelling for Allied for Startups, Oxera found that the impact of increased liability rules could be particularly harmful to small and local businesses. They estimated that such firms in four EU countries could lose €14 billion to €23 billion in revenue each year if new rules meant that platforms had greater legal responsibility for content posted on their sites.³⁶

2.3 HOW PLATFORMS ARE USED

2.3.1 European consumers’ use of online platforms

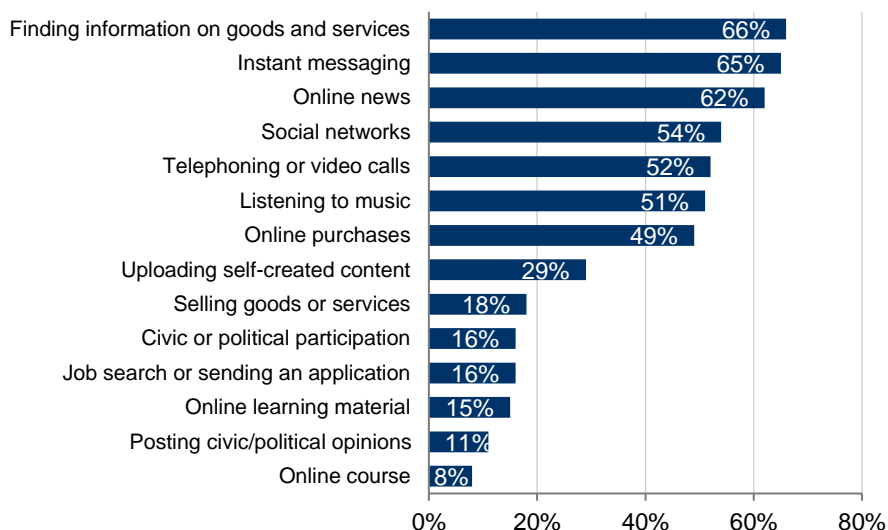
More than three-quarters of individuals in the EU27 use the internet daily, rising to 95% for those aged 16-24. The reasons cited for using the internet highlight the importance of online platforms in daily life: in the three months prior to the survey, around two-thirds of individuals had been online to find information on goods and services or use instant messaging services. More than half had used the internet to listen to music, use social networks or make calls.

³⁴ Sifted, ““Regulation is not a means to all ends,” EU tech companies tell Brussels” <<https://sifted.eu/articles/eu-tech-companies-warn-brussels/>> [accessed October 2020].

³⁵ Allied for Startups, “Our take on the European Parliament’s Initiative Reports on the Digital Services Act” <<https://alliedforstartups.org/2020/09/29/our-take-on-the-european-parliaments-initiative-reports-on-the-digital-services-act/>> [accessed October 2020].

³⁶ Oxera, *The impact of the Digital Services Act on business users*, for Allied for Startups (2020), p.11.

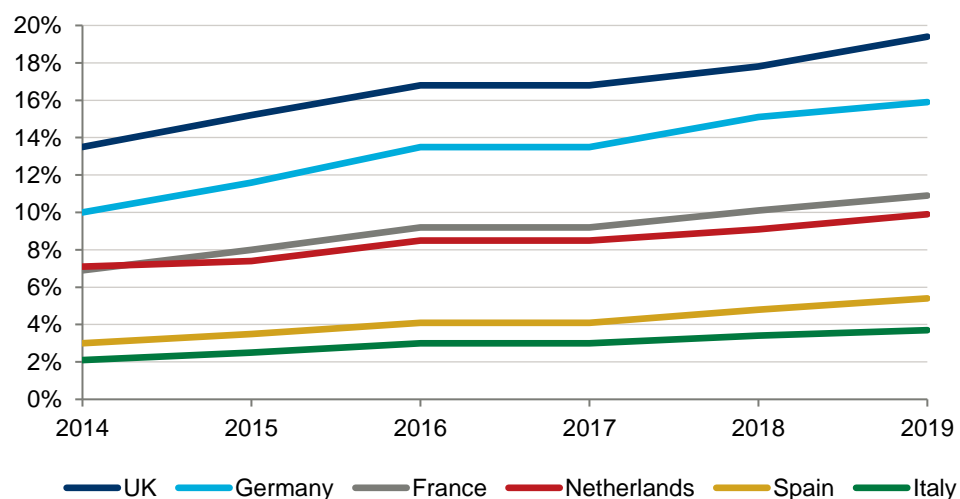
Fig. 2. Share of EU27 individuals who used the internet for each reason in the three months prior to being surveyed, 2019³⁷



Source: Eurostat Community Survey on ICT usage in households and by individuals

The survey also identified that 49% of individuals use the internet to make purchases, up from 27% in 2010. By 2019, the share of retail spending conducted online had reached 19% in the UK, 16% in Germany and 11% in France. These data pre-date the COVID-19 crisis, which is likely to have impacted online shopping habits, at least temporarily.

Fig. 3. Retail e-commerce sales as a share of retail trade, 2014-19³⁸



Source: Statista & Centre for Retail Research (2014-19)

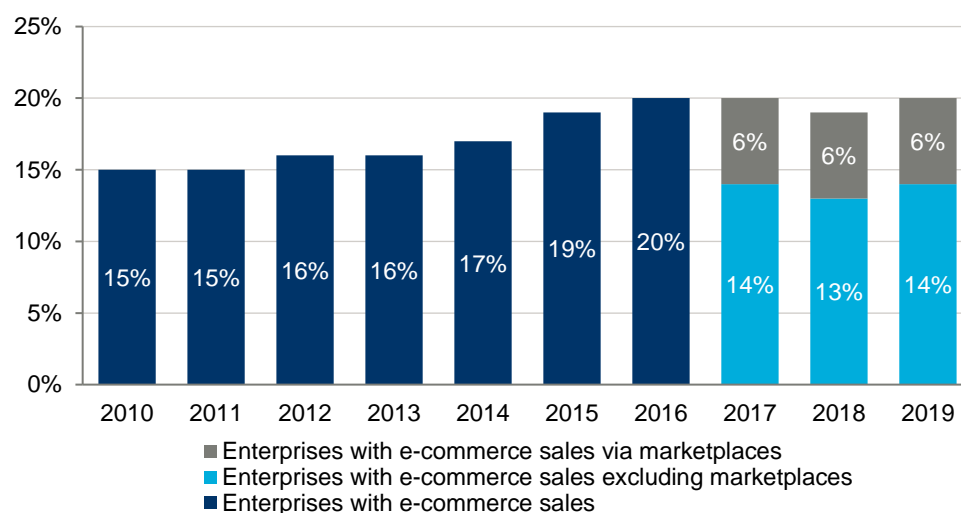
³⁷ Eurostat, "Individuals – internet activities" <https://ec.europa.eu/eurostat/web/products-datasets/-/isoc_ci_ac_i> [accessed August 2020].

³⁸ Statista, "Retail e-commerce sales as share of retail trade in selected countries from 2014 to 2019, with a forecast for 2020 and 2021" <<https://www.statista.com/statistics/281241/online-share-of-retail-trade-in-european-countries/>> [accessed September 2020].

2.3.2 European businesses' use of online platforms

Businesses have also made increasing use of e-commerce over the last decade. The share of businesses making e-commerce sales, either through marketplaces or other means, rose from 15% in 2010 to 20% in 2019 (Fig. 4). Around a third of enterprises that had e-commerce sales make them via marketplaces.

Fig. 4. Share of enterprises with e-commerce sales in the EU27, 2010–2019³⁹



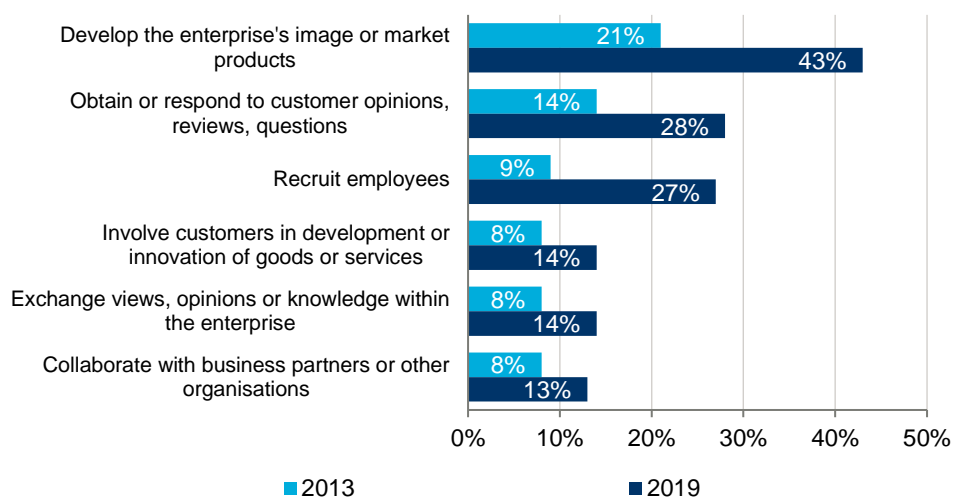
Source: Eurostat Community Survey on ICT usage and ecommerce in enterprises

Businesses do, of course, conduct many other activities online. The internet is used as a vehicle for advertising and to communicate with current and potential customers. In 2019, nearly half of all enterprises used social networks and one-quarter engaged in online paid advertisements.

Fig. 5 shows that in 2013, 21% of all enterprises used social media to develop their image or market products and 14% used them to obtain customer opinions and reviews. Six years later, those figures had doubled.

³⁹ Eurostat, "E-commerce sales" <https://ec.europa.eu/eurostat/web/products-datasets/product?code=isoc_ec_eseln2> [accessed August 2020].

Fig. 5. Reason for using social media (share of enterprises, EU27)⁴⁰



Source: Eurostat Community Survey on ICT usage and ecommerce in enterprises

2.4 THE CONTRIBUTION OF DIGITAL SERVICES TO THE EUROPEAN ECONOMY

Digital services contribute to the European economy through a number of channels. Most directly, digital services businesses earn revenues, from which they earn profits and pay wages to their staff. Further activity is facilitated by platforms in their role as intermediaries: those selling or publishing on the platforms earn revenues and create further value. All of these activities create “multiplier effects” through supply chains and workers’ spending. There can also be wider “dynamic” effects as digital services enhance productivity, stimulate the growth of SMEs, support international trade and drive innovation.

THE VALUE OF THE YOUTUBE CREATIVE ECOSYSTEM IN GERMANY⁴¹

YouTube provides a platform for “creative entrepreneurs” to publish videos and receive a share of the income from adverts placed alongside their videos. This income supports further activity as creators purchase goods and services to support their online activity, and as creators and workers within their supply chains spend their wages. Platforms like YouTube can also help creators to earn income from other sources, whether that be from promoting brands in their videos, or from increased sales of their goods and services. Oxford Economics has estimated that, in total, the YouTube creative ecosystem contributed around €775 million to Germany’s GDP and supported 25,000 full-time equivalent jobs in 2019.

⁴⁰ Eurostat, “Social media use by purpose” <https://ec.europa.eu/eurostat/web/products-datasets/-/isoc_cismp> [accessed August 2020]. Enterprises with 10+ employees.

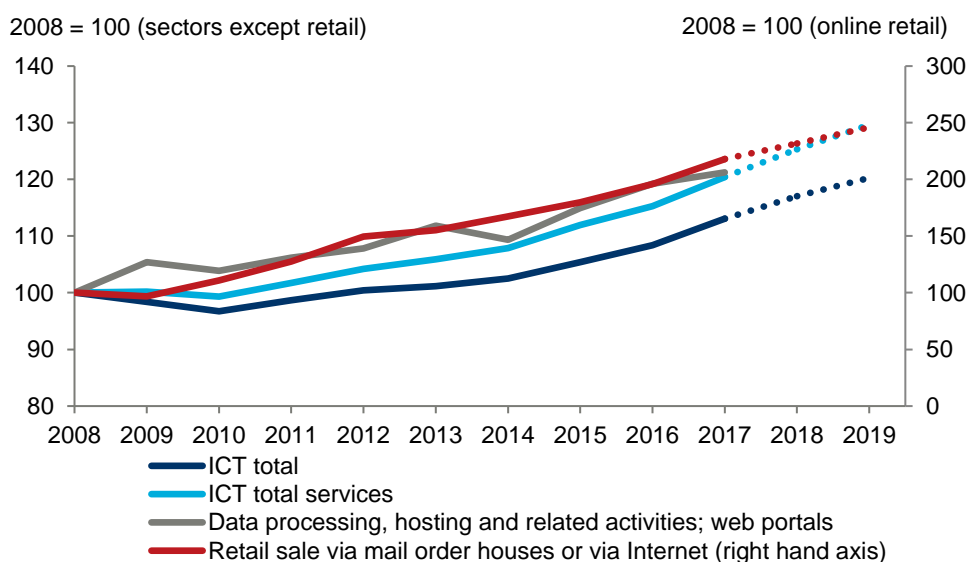
⁴¹ Andrew P. Goodwin, “Oxford Economics: YouTube leistet einen signifikanten Beitrag zur deutschen Wirtschaft” in *YouTube Official Blog* <<https://blog.youtube/intl/de-de/news-and-events/oxford-economics-youtube-leistet-einen-signifikanten-beitrag-zur-deutschen-wirtschaft/>> [accessed October 2020].

2.4.1 Contribution to employment

While there are no regularly published estimates of the employment supported by digital services or online platforms specifically, broader datasets provide an indication of the dynamism of closely-related sectors.

Between 2008 and 2017, employment in ICT services and the sub-category of web portals and data processing, hosting and related activities each grew by around 20%. Over the same period, employment in online retailing more than doubled—an increase of 275,000 jobs across the EU27, with an estimated further increase of 65,000 between 2017 and 2019.

Fig. 6. Change in employment by sector in the EU27, 2008–2017⁴²



Source: PREDICT dataset (European Commission), Eurostat and Oxford Economics
 Note: Dotted lines are European Commission Joint Research Centre and CNECT DG estimates.

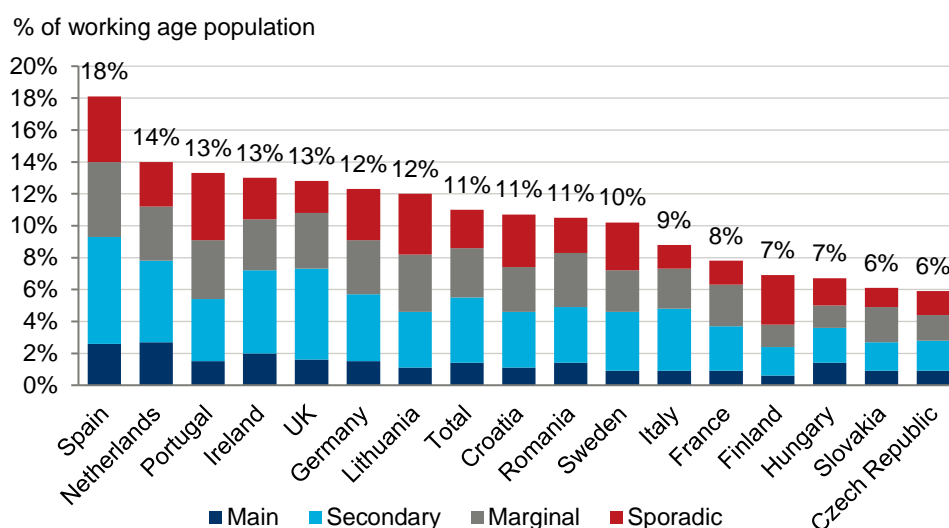
The data above only reflect employment within the respective sectors themselves. In most cases these figures will not include jobs supported amongst those who use platforms as a source of work. The European Commission's COLLEEM survey provides insights into the prevalence and characteristics of digital labour platform (DLP) workers. Examples of DLPs identified include Appen, Amazon Mechanical Turk, Clickworker, ClixSense, Crowdfunder, Deliveroo, Figure Eight, Fiverr, Foodora, Freelancer, PeoplePerHour, TaskRabbit, Taxify, Uber and UpWork.

The study categorises participants according to hours worked and share of income received. In 2018, 5.5% of the working age population across the 16 countries in the study engaged in platform work as a main or secondary source of income. A similar proportion were estimated to be “marginal” or “sporadic” participants (those spending less than 10 hours per week and earning less than

⁴² EU Science Hub, “PREDICT” <<https://ec.europa.eu/jrc/en/predict/ict-sector-analysis-2020/data-metadata>> [accessed August 2020].

one-quarter of their income from DLPs). There was considerable variation across countries, with platform work particularly prevalent in Spain.

Fig. 7. Platform workers in 16 European countries as a share of working age population, 2018⁴³



Source: Brancanti et al (2020)

Multiplying these estimates by the working age population suggests that almost 4 million people across the 16 countries relied on DLPs as their main job in 2018, with a further 11.7 million using DLPs for secondary employment.

DLPs offer services that can be either web-based, where work is done remotely, or local to a specific area. As such, DLPs may not only increase job opportunities in a given region, but also expand the geographical areas a service provider may serve.⁴⁴ This larger pool of workers and potential jobs would be expected to result in better labour market “matching” and increased participation as workers are more likely to find a role that matches their expertise and circumstances.

2.4.2 Supporting productivity growth

Productivity growth is a key driver of long-run economic growth and living standards. Online platforms can enhance it in a number of ways. Platforms facilitate e-commerce, enabling firms to sell goods and services more effectively and cheaply. They allow firms to purchase inputs more cheaply by providing access to a wider choice of suppliers. Platforms reduce the costs of finding information, which can be particularly valuable for firms in knowledge intensive sectors.⁴⁵ Platforms may also enable the development of new and more efficient business models (see box below).

⁴³ Maria C.U. Brancati et al., *New evidence on platform workers in Europe* (2020), p.16.

⁴⁴ Maria C.U. Brancati et al., *Digital Labour Platforms in Europe: Numbers, Profiles, and Employment Status of Platform Workers* (2019).

⁴⁵ Martin H. Thelle et. al., *Assessing the economic impact of the EU’s online liability regime* (Copenhagen Economics, 2012), p.8.

UBER: INCREASING EFFICIENCY IN TRANSPORT⁴⁶

A 2016 study compared the efficiency of ride-sharing services to traditional taxi operators. The authors found that, on average, UberX drivers are more efficient since they are transporting passengers for a larger proportion of both the time spent working and the distance travelled. These findings may reflect Uber's matching technology; its larger scale; or its business model, which enables flexibility in the supply of drivers and pricing to align demand with supply. Taxi regulations may also prevent traditional operators from realising equivalent productivity gains.

2.4.3 Supporting the growth of SMEs

Online platforms link SMEs to potential customers in domestic and overseas markets, without the need to make costly up-front investments in infrastructure such as technology, marketing and payment systems.⁴⁷ As such, platforms reduce the entry and growth barriers faced by SMEs and drive competition.

Platforms offer SMEs access to a large pool of potential customers at home and abroad. SMEs can build trust with these customers through feedback systems and simplified processes for overseas transactions (e.g. an SME might ship their product to a platform's fulfilment centre, and the platform transports the product to the customer and handles customer service). Another benefit is that online platforms can reduce recruitment costs and help SMEs become visible to a larger pool of potential workers. This improves "labour market matching", helping to achieve a better fit between workers and jobs.⁴⁸

The International Trade Centre concludes that "Platforms have levelled the playing field considerably for SMEs by lowering the barriers to entry and extending to companies of all sizes the advantages of cost and speed that can be gained from trading online."⁴⁹

Research for Google found that "64% of new European businesses (less than five years old) agreed that the costs of starting a business have reduced substantially because of internet tools", and "61% of small businesses (fewer than 250 employees) in Europe agreed that online tools have made it easier for their business to compete with larger enterprises".⁵⁰

⁴⁶ Judd Cramer and Alan Krueger, *Disruptive Change in the Taxi Business: The Case of Uber* (American Economic Review, 2016).

⁴⁷ Martin H. Thelle et. al., *Assessing the economic impact of the EU's online liability regime* (Copenhagen Economics, 2012).

⁴⁸ Sigurd Næss-Schmidt et al., *Digital Transformation in Business - The Facebook Company* (Copenhagen Economics, 2020).

⁴⁹ International Trade Centre, *SME Competitiveness Outlook 2018: Business Ecosystems for the Digital Age* (2018), p.28.

⁵⁰ Public First, *Google's Economic Impact in Europe* (2020), p.26.

EXAMPLES OF PLATFORMS PROVIDING INFRASTRUCTURE TO SMES

Amazon offers a “Fulfilment by Amazon” (FBA) service whereby businesses selling in its store can choose to have Amazon store, pick, pack, ship and provide customer service for a seller’s products (even if those products were not sold in the Amazon store). There is also an “FBA Export Tool” under which Amazon exports orders to customers in countries around the world.⁵¹

Facebook Shops enables businesses to easily create an online store on Facebook and Instagram at no up-front cost. The service enables small businesses to connect with their customers through WhatsApp, Messenger or Instagram Direct.⁵²

Due to **Google’s Grow programme**, which provides free training courses and tools to individuals and businesses, over 32,000 European businesses (mostly SMEs) have taken on more staff and more than 505,000 have reported growth in revenue and customers.⁵³ This programme has also helped over 7 million Europeans learn new skills to find a job or grow their career.⁵⁴

YouTube offers opportunities for creators to publish content without needing to invest in broadcasting infrastructure or work through the traditional media industry. In doing so it creates opportunities for the media companies of the future. For example, Play Sports Network operates six YouTube channels focused on cycling. It has grown to build a community of more than 10 million followers and its content has received almost three billion views.⁵⁵ By 2019 Play Sports Network employed around 120 people.⁵⁶

2.4.4 Supporting cross-border trade

The World Trade Organization has highlighted how digital technologies are transforming global commerce, noting their role in reducing barriers to entry and enabling firms to produce, promote and distribute products at a lower cost.⁵⁷ Reduced trade costs are particularly beneficial for micro-, small- and medium-sized enterprises and firms from developing countries (assuming that appropriate policies are put in place).

As discussed above, online platforms mean that SMEs (and firms of all sizes) can quickly access a wider pool of customers from a range of countries that they otherwise might not have been able to reach. Online platforms enable exporters to overcome the cultural, linguistic and trust factors they might

⁵¹ Amazon, “Statement of Dharmesh Mehta Vice President, Worldwide Customer Trust and Partner Support Amazon.com, Inc. before the United States House of Representatives Committee on Small Business” <https://smallbusiness.house.gov/uploadedfiles/11-14-19_mr._mehta_testimony.pdf> [accessed October 2020].

⁵² Facebook Business, “Introducing Facebook Shops, a new online shopping experience” <<https://en-gb.facebook.com/business/news/announcing-facebook-shops>> [accessed October 2020].

⁵³ Google, “Grow with Google” <http://services.google.com/fh/files/misc/gwg_impact_brochure.pdf> [accessed September 2020].

⁵⁴ Google, “Impact to date” <<https://grow.google/intl/europe/impact>> [accessed October 2020].

⁵⁵ Play Sports Network, “About us” <<https://playsportsnetwork.com/>> [accessed October 2020].

⁵⁶ Play Sports Network Limited, *Financial statements information for filing with the registrar for the year ended 31 December 2019* (2020).

⁵⁷ WTO, *World Trade Report 2018: The future of world trade* (2018).

otherwise face in selling to clients in other countries.⁵⁸ In short, distance is less important in the trade of online services.^{59,60}

Many SMEs have benefitted from the functionality of digital services and tools when undertaking their international transactions. A 2017 survey of more than 49,000 SMEs found that 45% of exporting SMEs active on Facebook relied on online tools for international sales.⁶¹

eBay reports that 98% of small businesses on their platform are exporters, and that two-thirds of all eBay-enabled small businesses in the EU export to 10 or more markets.⁶² In contrast, Eurostat data suggest that around 6% of EU SMEs make export sales.^{63,64}

Copenhagen Economics estimates that Danish SMEs are connected to 60 million consumers outside of Denmark through Facebook, 24 times greater than the number of connections with Danish consumers.⁶⁵ Given that Denmark has a relatively small domestic market, this represents a significant growth opportunity for the country's businesses. Another study estimated that Facebook apps and technologies helped businesses across 15 EU countries generate €98 billion of export sales over a 12-month period.⁶⁶ Of these sales, €58 billion were sales within the EU and €40 billion were to other countries.

2.4.5 Supporting innovation

Digital services are important drivers of innovation. For example, platforms such as Airbnb and Uber have deployed new business models which have disrupted traditional accommodation and taxi markets. This increases competition and may drive further innovation amongst traditional operators.⁶⁷ Digital services can also have a wider positive impact on innovation right across the economy since they provide new ways to help people find and share ideas and information.⁶⁸ For example, platforms enable users to play a more direct role in the innovation process by providing very specific feedback on goods and services, supporting product innovation.⁶⁹ Platforms may also

⁵⁸ Bruno Basalisco, *Enabling Export Growth for Danish SMEs: The Role of Social Media, for Facebook* (Copenhagen Economics, 2019), p.11.

⁵⁹ Georgios Alaveras and Bertin Martens, *International Trade in Online Services* (Joint Research Centre, 2015).

⁶⁰ Andrew Lendle et al., *There Goes Gravity: How eBay Reduces Trade Costs* (2012).

⁶¹ Facebook Data for Good, *Future of Business Survey – Trade Report* (2017), p.8.

⁶² eBay, *European Union Small Online Business Trade Report* (2020).

⁶³ Eurostat, "Trade by NACE Rev. 2 activity and enterprise size class"

<<https://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database>> [accessed August 2020].

⁶⁴ Eurostat, "Annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2)" <<https://ec.europa.eu/eurostat/web/structural-business-statistics/data/database>> [accessed August 2020].

⁶⁵ Martin H. Thelle et al., *Online Intermediaries: Impact on the EU economy* (Copenhagen Economics, 2015), p.4.

⁶⁶ Sigurd Næss-Schmidt et. al., *Digital Transformation in Business - The Facebook Company* (Copenhagen Economics, 2020), p.13.

⁶⁷ OECD, *An Introduction to Online Platforms and their Roles in the Digital Transformation* (2019).

⁶⁸ OECD, *An Introduction to Online Platforms and their Roles in the Digital Transformation* (2019).

⁶⁹ Irene Bertschek and Reinhold Kesler, *Let the User Speak: Is Feedback on Facebook a Source of Firms' Innovation?* (ZEW – Leibniz Centre for European Economic Research, 2017).

facilitate other kinds of collaboration.⁷⁰ One example of this is GitHub, which started in 2008 as an open source network for software developers to work collaboratively on projects and share their knowledge. It is now the largest social coding repository in the world, with over 15 million projects and 38 million projects.⁷¹

The large customer bases of platforms can create a powerful incentive for innovation, since new products or services may only become financially viable with a certain number of potential customers. Furthermore, platforms can match investors with start-up projects and enable projects to take place which otherwise might have not received funding.⁷²

2.5 SUMMARY

In this chapter we have shown that digital services have become an integral part of daily life for European consumers and businesses. Much of this activity is enabled by a dynamic, diverse and innovative network of online platforms. The most successful European platforms have grown rapidly to achieve global revenues of hundreds of millions of euros or even billions of euros, reflecting that once successful platforms have been established the costs of expansion are typically much lower than for traditional business models.

Growing revenues accrue to the platforms themselves, but also sustain wider ecosystems of business and individuals who use platforms to make transactions, and other associated businesses such as their suppliers.

Digital services are also an important source of jobs. Employment in online retailing more than doubled between 2008 and 2017 (an increase of 275,000 jobs across the EU27), while almost 4 million people relied on digital labour platforms for their main job in 2018, with many more using platforms as a secondary source of employment.

Perhaps even more importantly, digital services enhance the competitiveness of the EU economy. They reduce barriers to entry for SMEs, enabling them to immediately access infrastructure and customers without incurring large set-up costs. The infrastructure and customer bases that digital services provide enable exporters to overcome cultural, linguistic and trust factors so that they can much more easily export to large overseas markets.

And digital services providers are important innovators, delivering new tools and business models. They also provide new ways for people to find and share ideas and information, supporting innovation right across the economy.

A number of recent studies have investigated the economic contribution of digital services. While they adopt a range of approaches and measure different impacts, they provide an indication of the magnitude of the economic benefits that platforms operating within Europe can make. Some of the key findings are summarised below.

⁷⁰ Martin H. Thelle et al., *Online Intermediaries: Impact on the EU economy* (Copenhagen Economics, 2015).

⁷¹ Digital Social Innovation, "GitHub" <<https://digitalsocial.eu/case-study/7/github>> [accessed October 2020].

⁷² OECD, *An Introduction to Online Platforms and their Roles in the Digital Transformation* (2019).

Fig. 8. The contribution of major online platforms to the European economy⁷³



⁷³ See Appendix B for sources.

3. THE CONSUMER AND SOCIAL BENEFITS OF DIGITAL SERVICES

In addition to the economic benefits outlined in the previous chapter, digital services generate broader value for users and society.

3.1 THE ROLE OF DIGITAL SERVICES IN SUPPORTING ECONOMIC EQUALITY

Technology-based online platforms are typically automated and open to anyone. They do not discriminate or require participants to have contacts in an industry. Effectively, they democratise economic opportunity.

The flexibility offered by online platforms can be a particularly beneficial to certain individuals seeking work.⁷⁴ Many groups, including those with ill-health, lone parents and carers may rely on flexible work as the only available route into the labour market. Individuals in such groups may have significant potential to benefit from online platforms: the International Labour Organisation notes that platforms enable “workers who would normally be excluded from the labour market on account of disability, care responsibilities or illness, to participate.”⁷⁵

E-commerce can also promote geographical equality. For example, it can enhance the purchasing power of consumers in rural areas who might otherwise face a limited range of outlets and higher prices. Consumers in these areas may also disproportionately benefit from the time savings and convenience benefits of e-commerce (discussed further below).⁷⁶

For similar reasons, digital services can support business growth in more remote regions by providing access to a larger customer base, helping rural businesses to overcome the constraints of a small local market. The European Parliament cites research suggesting that online platform connectivity appears to increase the number of businesses established in the four poorest regions of Germany.⁷⁷

3.2 SOCIAL BENEFITS OF DIGITAL SERVICES

Digital services can bring further benefits which are more social in nature. Many of these are particularly pertinent at present as Europe continues to work through the effects of the COVID-19 pandemic.

⁷⁴ Ben Dobson, *Gainful gigging: Employment services for the platform economy* (Reform Research Trust, 2017).

⁷⁵ International Labour Organization, *Job quality in the platform economy* (2018).

⁷⁶ Marie Sicat, “E-commerce for Rural Development: Global Trends”, for *UNCTAD* <https://unctad.org/system/files/non-official-document/dtl_eweek2016_MSicat_en.pdf> [accessed September 2020].

⁷⁷ Hanne Melin Olbe, “How online commerce can help fight inequality”, <<https://www.weforum.org/agenda/2018/01/ebay-e-commerce-fight-inequality-hanne-melin/>> [accessed August 2020].

For example, the convenience of online shopping can be particularly valuable for the elderly and the European Parliament points out that this could become increasingly important in light of an ageing EU population.⁷⁸ Similar benefits can be important for those with disabilities and other groups who may not easily be able to travel to traditional shops (although websites need to ensure they are accessible to such users to fully realise the benefits of online shopping).⁷⁹

Similar arguments can be applied to other types of digital services. For example, social networking platforms can help encourage interaction for people who otherwise find it difficult to maintain interpersonal relationships.⁸⁰

Specifically during 2020, digital services have had a key role to play in enabling and supporting virtual alternatives to everyday activities for large shares of the EU population, whether that be through home schooling, home working or social interactions with friends and relatives.

Online intermediaries may also help further societal goals such as democracy and freedom of speech.^{81,82} For example, platforms provide the opportunity to exchange views and connect with likeminded individuals, helping to empower users with a public voice and contribute to public discourse. Oxford Economics' study for YouTube found that 69% of YouTube's "creative entrepreneurs" in Germany said that YouTube has increased their ability to influence the causes they care about, while 60% of minority creators agreed that YouTube provides a platform to share life experiences and educate others.⁸³

Platforms can also play a role in improving health outcomes.⁸⁴ For example, data taken from internet searches have been used to track the spread of diseases and social media platforms can be used to share information and co-ordinate relief efforts during emergency situations.

THE ROLE OF DIGITAL SERVICES IN RESPONDING TO COVID-19

Platforms are providing support to consumers during the current pandemic. Central to this has been their capacity for innovation and ability to roll out new services at speed. Just a few examples are outlined below.

⁷⁸ Insights emarsys, "Online transaction trends by location" <<https://insights.emarsys.com/consumer-geography-insights/>> [accessed October 2020].

⁷⁹ Muhammad Azhar Hussain et al., *Assisting Disabled Persons in Online Shopping: A Knowledge-Based Process Model* (Journal of Basic & Applied Sciences, 2016), pp.23-31.

⁸⁰ Martin H. Thelle et al., *Online Intermediaries: Impact on the EU economy* (Copenhagen Economics, 2015), p.44.

⁸¹ Martin H. Thelle et al., *Online Intermediaries: Impact on the EU economy* (Copenhagen Economics, 2015), p.45.

⁸² OECD, *An Introduction to Online Platforms and their Role in the Digital Transformation* (2019), p.48.

⁸³ Andrew P. Goodwin, "Oxford Economics: YouTube leistet einen signifikanten Beitrag zur deutschen Wirtschaft" in YouTube Official Blog <<https://blog.youtube/intl/de-de/news-and-events/oxford-economics-youtube-leistet-einen-signifikanten-beitrag-zur-deutschen-wirtschaft/>> [accessed October 2020].

⁸⁴ OECD, *An Introduction to Online Platforms and Their Role in the Digital Transformation* (2019), p.44.

- **Apple and Google** jointly developed a free contact-tracing app to help manage outbreaks and support the easing of lockdowns. As of August 2020, 15 European countries had launched apps based on this technology.⁸⁵
- **eBay** reduced listing fees for new businesses and introduced a seller protection programme, preventing highly rated companies from being downgraded in case of delivery delays.⁸⁶ In the UK eBay partnered with the government to help mitigate the shortage of Personal Protective Equipment for primary and social care providers.⁸⁷
- **Facebook** created a COVID-19 Information Centre where individuals could find the latest news, information from health authorities, resources and tips to stay healthy and safe. In April 2020 more than 49 million people in the EU visited the Centre. It also launched Get Digital—a digital literacy programme for young people as a resource for educators and families to help with online learning. Facebook’s Data for Good launched three free-to-access Disease Prevention Maps for researchers to inform disease forecasting and protective measures.⁸⁸ Another Facebook initiative is its Community Help page for people to request or offer help to neighbours, such as by volunteering to deliver groceries.⁸⁹
- **Google Search** modified the way it presents results to provide specific information for shops, restaurants (e.g. dine-in, takeout, delivery options) and temporary closures, and enabled users to purchase gift cards from, or to donate to, local businesses.⁹⁰ Google also launched a Teach from Home hub to provide information, training and tools to help instructors continue teaching from home.
- Along similar lines, **YouTube** provides Learn@Home to gather family resources from the platform’s most popular learning channels, and the YouTube Learning Hub to centralise high-quality educational content from across YouTube.⁹¹
- **TikTok** has worked with government ministries and health authorities across Europe to provide information to users. For example, in France TikTok provided free advertising to the government to display health messages and direct users to an official government site.⁹²
- **Twitter** released a COVID-19 tool to enable authorised developers and researchers to study the public discourse on the pandemic in real-time.⁹³

⁸⁵ Google, "Digital Services Act package: open public consultation"

<http://blog.google/documents/89/Googles_submission_on_the_Digital_Services_Act_package_1.pdf> [accessed September 2020].

⁸⁶ eBay, "eBay support for your business during COVID-19 situation" <<https://sellercentre.ebay.co.uk/news/covid-19>> [accessed November 2020].

⁸⁷ eBay, "eBay partners with NHS and Department for Health and Social Care (DHSC) to pilot new platform to supply PPE" <<https://www.ebayinc.com/stories/press-room/uk/ebay-partners/>> [accessed September 2020].

⁸⁸ Facebook, "Facebook response to the European Commission Communication on Covid-19 Disinformation" <https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=69158> [accessed September 2020].

⁸⁹ Kang-Xing Jin, "Keeping People Safe and Informed About the Coronavirus" <<https://about.fb.com/news/2020/10/coronavirus/>> [accessed October 2020].

⁹⁰ Google, "Digital Services Act package: open public consultation" <http://blog.google/documents/89/Googles_submission_on_the_Digital_Services_Act_package_1.pdf> [accessed September 2020].

⁹¹ Google, "Digital Services Act package: open public consultation" <http://blog.google/documents/89/Googles_submission_on_the_Digital_Services_Act_package_1.pdf> [accessed September 2020].

⁹² TikTok, "Response from TikTok to the European Commission Communication on Covid-19 Disinformation" <https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=69159> [accessed September 2020].

⁹³ Twitter, "Twitter Report: Staying safe and informed on Twitter during COVID-19", <https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=69160> [accessed September 2020].

3.3 THE VALUE OF E-COMMERCE TO CONSUMERS

E-commerce platforms enable users to quickly search for goods and services, compare offerings from sellers, and read reviews from users. Price comparison sites make it quick and easy to compare prices across providers.

Platforms therefore increase transparency for buyers and, as discussed in Section 2.4, reduce barriers to entry for sellers. These factors ultimately mean greater choice and lower prices. Price comparison sites can also lead to lower prices and reduced price dispersion (the difference between average and minimum prices).⁹⁴

Researchers have previously estimated the “consumer surplus” resulting from these effects—that is, the difference between what consumers are willing to pay and what they actually pay. While such studies are now dated, they provide insights into the potential magnitude of value generated for consumers. For example, Duch-Brown and Martens found that e-commerce increased EU consumer surplus by €34 billion in 2009 across 10 household appliance product categories relative to a world with no e-commerce.⁹⁵ Further increases in the share of online sales (as have occurred in the years since the research) would lead to further gains for consumers. In another study, Civic Consulting estimated the welfare gains for EU consumers from increasing internet retailing to 15% of retail sales (from 3.5% at the time of the study) and introducing a single EU consumer market in e-commerce goods. They estimated this to be worth €204.5 billion per year.⁹⁶

3.4 THE VALUE TO CONSUMERS OF NON-PRICED DIGITAL SERVICES

Many digital services are funded through advertising and so consumers can enjoy the benefits they provide free of charge. Examples include search engines, Google Maps, YouTube and WhatsApp, to name but a few. Such services often provide greater functionality than traditional alternatives (see WhatsApp case study below).

Many digital services provide users with instant access to a vast array of information, data and media content. Users save time in searching for and accessing this information, and they often save money since they do not have to pay for alternatives (e.g. they may no longer need to travel to a reference library, or buy a paper map or CD).

To ascribe a monetary value to such benefits researchers have again used the concept of consumer surplus. Most recently, Public First estimated that Google’s core services of Search, Maps and YouTube support a surplus of around €420 billion per year for European consumers.⁹⁷ This value is based on

⁹⁴ Zhulei Tang et al., *The impact of shopbot use on prices and price dispersion: Evidence from online book retailing* (International Journal of Industrial Organization, 2010).

⁹⁵ Nestor Duch-Brown and Bertin Martens, *Consumer Benefits from the EU Digital Single Market: Evidence from Household Appliances Markets* (Joint Research Centre, 2014).

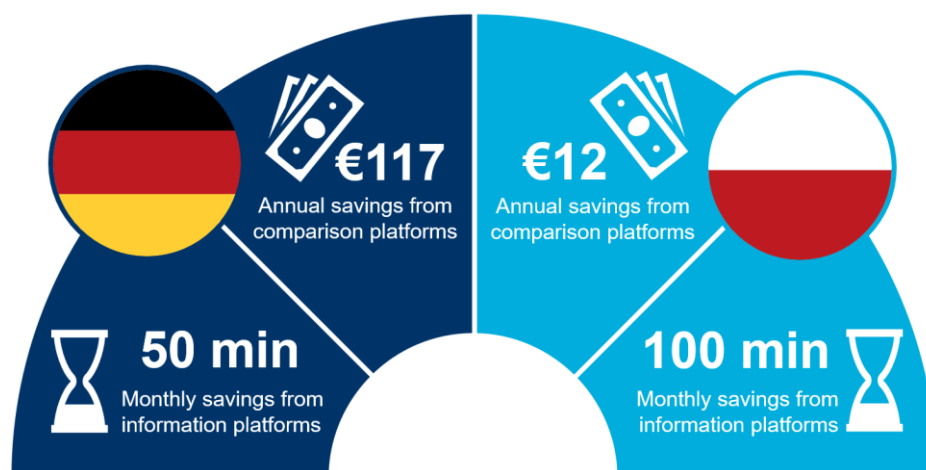
⁹⁶ Civic Consulting, *Contribution of the Internal Market and Consumer Protection to Growth* (Publications Office of the European Union, 2014), p.164.

⁹⁷ Public First, *Google’s Economic Impact in Europe* (2020).

a combination of the value of time saved by consumers using the services and the amount they would be willing to accept to forgo access.

In a study by Oxera, French and German consumers estimated that information platforms saved them an average of 50 minutes in the month preceding the survey, while Polish consumers estimated 100 minutes on average.⁹⁸ Consumers estimated that during the year preceding the survey, comparison platforms had saved them an average of €12 in Poland and €117 in Germany.

Fig. 9. Money and time saved from using online platforms⁹⁹



Source: Oxera (2015)

Finally, Copenhagen Economics estimated that free social networking services, wikis, search engines and price comparison sites provide €22 billion of consumer surplus to European consumers per year, while online search platforms generate time savings worth €140 billion per year.¹⁰⁰

⁹⁸ Oxera, *Benefits of online platforms*, for Google (2015).

⁹⁹ Oxera, *Benefits of online platforms*, for Google (2015).

¹⁰⁰ Martin H. Thelle et al., *Online Intermediaries: Impact on the EU economy* (Copenhagen Economics, 2015), p.7.

WHATSAPP: IMPROVING CONNECTIVITY FOR CONSUMERS

Before the evolution of digital messaging, mobile users relied on voice calls and text messages. Apps such as WhatsApp have since revolutionised mobile communications. Initially the service competed with text messages, but it gradually expanded its offering to incorporate a wider range of functionality such as location sharing (2010), group chats (2011), voice notes (2013) and a desktop app (2016).¹⁰¹ WhatsApp services are free of charge, allowing users to make phone calls and send text messages as long as they are connected to the internet.

In 2017, a survey found that for two-thirds of respondents, WhatsApp improved their relationship with friends. More than 40% of respondents thought the app had improved their relationship with their family.¹⁰² A separate study found that the benefits of WhatsApp can extend to a medical setting. Among 191 nurses and physicians surveyed, 42% agreed the use of WhatsApp helps facilitate the doctor-patient relationship. It allows patients to send messages and images to physicians prior to, or even instead of a visit, increasing efficiency in hospitals. Respondents also found WhatsApp helpful in sharing clinical and scientific information, as well as in sending and receiving patient data from other hospitals.¹⁰³

¹⁰¹ Priya Pathak, "WhatsApp is now 10 years old and here is a look at how it grew, changed the world ", in *India Today* <<https://www.indiatoday.in/technology/features/story/whatsapp-is-now-10-years-old-and-here-is-a-look-at-how-it-grew-changed-the-world-1465208-2019-02-26#:~:text=The%20next%20biggest%20update%20that,of%20hitting%20500%20million%20users.>> [accessed September 2020].

¹⁰² Naveen Kumar and Sudhahsh Sharma, *Survey Analysis on the usage and Impact of WhatsApp Messenger* (Global Journal of Enterprise Information System, 2017), p.52.

¹⁰³ Anna De Benedictis et al., *WhatsApp in hospital? An empirical investigation of individual and organizational determinants to use* (PLoS One, 2019).

4. BEST PRACTICE IN CONTENT MODERATION

While the rapid growth of digital services has delivered a wide range of economic and social benefits, some users have adopted and adapted the technologies for purposes which are harmful, or even illegal. In this section we start by outlining the main types of illegal and harmful content, before summarising steps the industry is taking to address these issues in several key areas.

4.1 DEFINING ILLEGAL AND HARMFUL CONTENT

According to the European Commission, illegal content refers to “any information which is not in compliance with Union law or the law of a Member State, such as content inciting people to terrorism, racist or xenophobic, illegal hate speech, child sexual exploitation, illegal commercial practices, breaches of intellectual property rights and product safety. What is illegal offline is also illegal online”.¹⁰⁴

However, only four types of content are considered illegal across all EU member states: child sexual abuse material (CSAM), racism and xenophobia, terrorism and Intellectual Property Rights (IPR) infringements. For other types of content there is no consistent categorisation across EU member states and the same content could be considered illegal in one EU country, legal but harmful in another, or even legal and not harmful in another.¹⁰⁵

For example, only hate speech relating to racism and xenophobia is illegal across the EU, but certain Member States go beyond this within national law. The German Network Enforcement Act established a set of online content types that are illegal to publish on social networks, including “insult, malicious gossip, defamation, public incitement to crime, incitement to hatred, disseminating portrayals of violence and threatening the commission of a felony”.¹⁰⁶ In Poland, an insult “against the Polish nation, against the Polish President, insult of the religious feelings (profaning the subject of religious worship or place), insult of a monument or other public place decorated to commemorate historical events or honour individuals” are illegal.¹⁰⁷

¹⁰⁴ DG Connect, “A Europe that protests: Countering illegal content online” <<https://ec.europa.eu/digital-single-market/en/news/europe-protects-countering-illegal-content-online>> [accessed October 2020].

¹⁰⁵ Alexandre de Streel et al., *Online Platforms' Moderation of Illegal Content Online* (Policy Department for Economic, Scientific and Quality of Life Policies, 2020).

¹⁰⁶ Federal Ministry of Justice and Consumer Protection, “Act to Improve Enforcement of the Law in Social Networks (Network Enforcement Act, NetzDG) - Basic Information (2017)” <https://www.bmjjv.de/DE/Themen/FokusThemen/NetzDG/NetzDG_EN_node.html> [accessed October 2020].

¹⁰⁷ European Parliament, *Hate speech and hate crime in the EU and the evaluation of online content regulation approaches* (2020), p.66.

FRANCE'S "AVIA LAW"

In France, the proposed "Avia Law" targeted any hateful attack on someone's "dignity" on the basis of race, religion, sexual orientation, gender identity or disability.¹⁰⁸ However, the French Constitutional Court declared the "Avia law" unconstitutional in June 2020, noting that the legislation "infringed freedom of expression and communication which is not appropriate, necessary and proportionate to the aim pursued."¹⁰⁹ Overall, it found that the text was not compatible with the French constitution.

Differing approaches and definitions also create complications for citizens reporting illegal content. Europol's website provides links to national hotlines for reporting illegal content.¹¹⁰ As an example, the online reporting form for Belgium only enables the reporting of child pornography,¹¹¹ while the equivalent form for Italy enables reporting of CSAM, cyberbullying, pornography for minors, different types of discrimination, incitement to self-harm or suicide, incitement to drug use, incitement to violence, online gambling accessible to minors, and online crimes such as identity theft.¹¹²

Certain other types of content may not be illegal, but could still be regarded as harmful. There is no generally agreed definition of harmful content, reflecting that what is harmful can vary between individuals, even within the same country, depending on cultural sensitivities and personal preferences. Harmful content may include, though is not limited to, material containing disinformation (the presentation of incorrect information with the intention to mislead), misinformation (which may be unintentionally misleading), bullying and certain types of violent content.

4.2 ILLEGAL CONTENT

Digital service providers recognise the need to tackle illegal content and have engaged in various initiatives to address the challenge, both individually and collaboratively with others in the industry. In this section we focus on three types of illegal content which are expected to be the addressed under the Digital Services Act, highlighting the main actions already underway to tackle them.

¹⁰⁸ French National Assembly, "Legislative proposal to combat hate content on the internet"

<http://www.assemblee-nationale.fr/dyn/15/textes/115t0388_texte-adoptee-seance> [accessed October 2020].

¹⁰⁹ Constitutional Council, "Decision n ° 2020-801 DC of June 18, 2020 - Law to combat hateful content on the internet" <<https://www.conseil-constitutionnel.fr/decision/2020/2020801DC.htm>> [accessed October 2020].

¹¹⁰ Europol, "Report Illegal Content on the Internet" <<https://www.europol.europa.eu/report-a-crime/report-illegal-content-on-the-internet>> [accessed August 2020].

¹¹¹ E-cops, "Child pornography reporting platform" <<https://www.ecops.be/request.php?Lang=EN>> [accessed August 2020].

¹¹² Telefono Azzurro, "Segnalazione sito web" <<https://azzurro.it/clicca-e-segnala/segnalazione-sito-web/>> [accessed October 2020].

4.2.1 Illegal hate speech

Major platforms have systems and policies in place to take action against content containing illegal hate speech. A number of platforms report the volume of content removed for reasons related to hate speech, although typically such reporting does not separately identify hate speech which is illegal from that which is harmful, though not necessarily illegal. One exception is YouTube, which separately reports removals of content which is illegal under Germany's Network Enforcement Law. The volumes of content removed, as reported in platforms' most recent transparency reports, are presented below.

Fig. 10. Hate speech content reported in most recent platform transparency reports

Platform	Number of actions related to hate speech	Source
Facebook (Q2 2020)	22.5 million items of content actioned for reasons related to hate speech, of which 94.5% were identified before users reported them. ¹¹³	Community Standards Enforcement Report
Instagram (Q2 2020)	3,300,000 items of content related actioned for reasons related to hate speech, of which 84.2% were identified before users reported them.	Community Standards Enforcement Report
Twitter (H2 2019)	970,109 accounts actioned, of which 170,994 were suspended. 1,445,469 items of content removed. ¹¹⁴	Rules Enforcement
YouTube (Q3 2020)	85,134 videos and 54,292 channels removed for hateful or abusive content.	YouTube Community Guidelines enforcement
YouTube Germany (H1 2020)	102,812 items of hate speech or political extremism content reported under the Network Enforcement Law, of which 29,197 were removed. 94% of the content removed was taken down in less than 24 hours.	Removals under the Network Enforcement Law

In 2016, the European Commission agreed with Facebook, Microsoft, Twitter and YouTube a "Code of conduct on countering illegal hate speech online".¹¹⁵ Further companies, including Instagram and Snapchat joined in 2018.

The fifth evaluation of the Code of Conduct was undertaken in November and December 2019. It found that 90% of notifications were reviewed within 24

¹¹³ For both Facebook and Instagram, "actioning" content corresponds to "removing a piece of content from Facebook or Instagram, covering photos or videos that may be disturbing to some audiences with a warning, or disabling accounts."

Facebook Transparency, "Understanding the Community Standards Enforcement Report" <<https://transparency.facebook.com/community-standards-enforcement/guide>> [accessed November 2020].

¹¹⁴ In Twitter's Transparency report, actioned accounts "reflects the number of unique accounts that were suspended or had some content removed for violating the Twitter Rules."

Twitter Transparency, "Rules Enforcement" <<https://transparency.twitter.com/en/reports/rules-enforcement.html#2019-jul-dec>> [accessed November 2020].

¹¹⁵ European Commission, "The EU Code of conduct on countering illegal hate speech online" <https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combating-discrimination/racism-and-xenophobia/eu-code-conduct-countering-illegal-hate-speech-online_en> [accessed September 2020].

hours and 71% of the content was subsequently removed.¹¹⁶ These figures represent a significant increase since the first evaluation in 2016, when the equivalent figures were 40% and 28%, respectively.

4.2.2 Counterfeit goods

While digital services providers recognise that they have a role to play in efforts to combat counterfeit goods sold online, in common with other major players in the retail and distribution sector, in consultations they highlighted that it can be challenging for them to tackle this issue by themselves. Third-party e-commerce platforms highlighted the difficulties they face in identifying counterfeits sold online, both because they do not usually hold or see the goods, and because identifying counterfeits requires specialised expertise. The situation can be particularly complex when products do not purport to be genuine articles but possess characteristics copied from branded items. Such situations can be subject to complex legal interpretations.

For these reasons, digital services providers stressed the importance of collaboration with brand owners and they do this in a number of ways. At the industry-wide level, e-commerce platforms, rights owners and industry associations are signatories to the European Commission's Memorandum of Understanding (MoU) on the sale of counterfeit goods. Signatories agree to a series of commitments to prevent the online sale of counterfeits through the use of notice-and-takedown procedures and voluntary measures.¹¹⁷

In their 2017 review, the European Commission noted "that the MoU has effectively contributed to removing counterfeit products from online marketplaces and that it is a useful forum which allows trust and cooperation between parties to be strengthened."¹¹⁸ Throughout the six evaluation rounds to date, between 90% and 98% of listings removed for alleged intellectual property infringements have been removed proactively by online platforms. The total number of listings removed for an alleged infringement of intellectual property rights has risen from 0.1 million in November and December 2016 to 2.4 million during the most recent evaluation round in May and June 2019.¹¹⁹

Alongside the MoU, online marketplaces engage with rights holders and brand owners to counteract the sale of counterfeit and pirated goods. Measures include brand registration programmes, such as eBay's Verified Rights Owner (VeRO) programme¹²⁰ and Amazon's Brand Registry,¹²¹ whereby rights owners

¹¹⁶ European Commission, "The EU Code of conduct on countering illegal hate speech online" <https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combating-discrimination/racism-and-xenophobia/eu-code-conduct-countering-illegal-hate-speech-online_en> [accessed September 2020].

¹¹⁷ European Commission, "Memorandum of understanding on the sale of counterfeit goods on the internet," <https://ec.europa.eu/growth/industry/policy/intellectual-property/enforcement/memorandum-understanding-sale-counterfeit-goods-internet_en> [accessed October 2020].

¹¹⁸ European Commission, *Overview of the functioning of the Memorandum of Understanding on the sale of counterfeit goods via the internet* (2017).

¹¹⁹ European Commission, *Report on the functioning of the Memorandum of Understanding on the sale of counterfeit goods on the internet* (2020).

¹²⁰ eBay, "Verified Rights Owner (VeRO)" <<https://www.ebay.com/help/policies/listing-policies/selling-policies/intellectual-property-vero-program?id=4349>> [accessed October 2020].

¹²¹ Amazon, "Why Amazon Brand Registry" <<https://brandservices.amazon.com/>> [accessed October 2020].

enrol and share information with platforms to enable them to more easily identify and remove counterfeit products.

Online marketplaces have also sought to simplify their notice-and-takedown procedures to improve the ease with which rights owners can report suspected IP infringements, such as Facebook's Commerce and Ads IP Tool for verified rights holders.¹²²

"Product serialisation" tools are increasingly used to attribute a unique code to each product which online marketplaces and consumers can use to verify its authenticity.^{123,124} Providing information to educate users on counterfeits and intellectual property is another proactive measure adopted by marketplaces.¹²⁵

PLATFORMS' EFFORTS TO TACK COUNTERFEIT GOODS

eBay¹²⁶

In 1998 eBay launched its **Verified Rights Owner (VeRO)** programme, which allows owners of intellectual property (IP) rights and their authorised representatives to report eBay listings that may infringe on those rights. eBay was one of the first platforms to implement a notice-and-takedown procedure for this purpose.

"VeRO now counts among its members over 50,000 companies and individuals representing every type of intellectual property owner—from major software companies to video game developers to rock bands to luxury goods manufacturers." The programme involves collaborative activity such as:

- identifying and remediating emerging and ongoing issues that the IP owner is experiencing;
- sharing information needed to identify bad products and bad actors;
- sharing information about "trending" infringing products or sellers;
- evaluating and improving the efficacy of eBay's current enforcement measures; and
- sharing anti-counterfeiting processes and best practices.

Amazon¹²⁷

In 2017, Amazon launched **Brand Registry**, a worldwide system that now has more than 350,000 brands registered worldwide. Amazon reports that enrolled brands report 99% fewer suspected infringements than before the launch of Brand Registry.

¹²² Facebook, "What tools does Facebook provide to help me enforce my intellectual property rights in advertisements and sale posts?" <<https://www.facebook.com/help/835772913244854>> [accessed October 2020].

¹²³ Amazon, "Proactively prevent counterfeits" <<https://brandservices.amazon.co.uk/transparency>> [accessed October 2020].

¹²⁴ Dharmesh Mehta, "Amazon Project Zero launches in 7 new countries" <<https://blog.aboutamazon.com/company-news/amazon-project-zero-launches-in-7-new-countries>> [accessed October 2020].

¹²⁵ Facebook, "Facebook & IP Protection" <<https://fbnewsroomus.files.wordpress.com/2018/12/facebook-ip-protection.pdf>>, p.5.

¹²⁶ eBay, "Protect your IP with VeRO" <<https://sellercentre.ebay.co.uk/protection/protect-your-intellectual-property>> [accessed October 2020].

¹²⁷ Amazon, "Progress report" <<https://brandservices.amazon.co.uk/progressreport>> [accessed September 2020].

Over 2.5 million bad actor accounts have been stopped before they published a single listing for sale and over 6 billion suspected bad listings have been blocked before they were published in the Amazon store.

Amazon has also launched **Transparency** whereby sellers enrol their products and apply a code to them. Once a customer buys a product, Amazon scans the Transparency code so that only authentic products reach the customer. More than 7,500 brands and 25,000 products have enrolled in Transparency and more than 400,000 suspected counterfeits have been prevented from reaching customers.

Project Zero is a collaboration between Amazon and brands with the aim of driving counterfeits down to zero. It uses automated tools to continuously scan listings and remove suspected counterfeits, and product serialisation which allows individual scans to confirm the authenticity of a brand's products. Brands also have the ability to remove counterfeit listings using a self-service tool. More than 10,000 brands have enrolled in Project Zero to date.

In 2019 Amazon launched **IP Accelerator** to help emerging brands obtain trademarks and IP protection from the early stages of their product lifecycles. The programme connects brands with vetted IP law firms to help them more quickly obtain IP rights at pre-negotiated rates. Once trademark applications are filed through IP Accelerator, Amazon provides access to features which help to protect and grow brands months, or even years, before their official trademark registration. So far, more than 1,500 brands have connected with law firms and more than 500 have submitted applications and received accelerated brand protection.

4.2.3 Product safety

Major e-commerce marketplaces have product safety policies prohibiting third-party sellers from selling goods in the EU that do not meet EU safety standards, which have been recalled, or which are prohibited.¹²⁸ They may also run seller education initiatives to increase compliance with product safety requirements and work with authorities across jurisdictions to ensure safety.

Over-and-above such activities, Amazon, eBay, Rakuten and AliExpress, signed the European Commission's Product Safety Pledge in 2018, followed by Allegro, Cdiscount, Bol.com and eMAG in 2020.¹²⁹ This is a voluntary commitment which aims to improve the detection of unsafe products marketed in the EU before they are sold to consumers. Performance is monitored against two metrics:

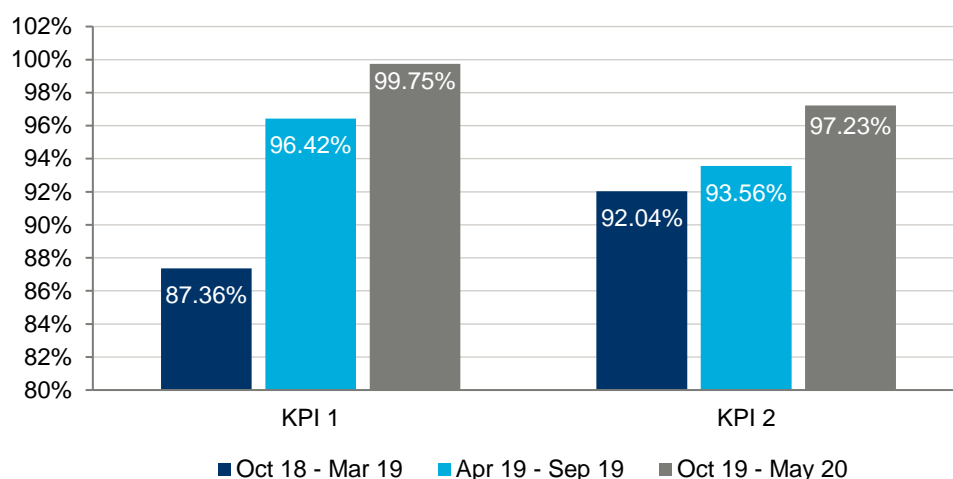
- The proportion of identified product listings removed within two working days, based on governmental notices provided to the established single contact points (KPI 1).
- The proportion of identified product listings removed within two working days found through the monitoring of public recall websites, such as the EU Safety Gate (KPI 2).

¹²⁸ See, for example, <https://www.ebay.co.uk/help/policies/prohibited-restricted-items/product-safety-policy?id=4300> and https://sellercentral.amazon.co.uk/gp/help/external/GUH6FA4XSJ2LZFLY?language=en-GB&ref=efph_GUH6FA4XSJ2LZFLY_cont_521.

¹²⁹ European Commission, "Product Safety Pledge" <https://ec.europa.eu/info/sites/info/files/voluntary_commitment_document_2020_2signatures_v2_003.pdf> [accessed September 2020].

The European Commission's progress reports highlight that these KPIs are met in the vast majority of cases, and that performance has improved over time.^{130,131,132}

Fig. 11. Progress against Product Safety Pledge KPIs¹³³



Source: European Commission

The second and third assessment reports also highlight other actions taken by the signatories. For example, setting up single contact points and dedicated portals to exchange information with authorities; seller education initiatives; the development of a new automated tool to identify products with a high likelihood of raising safety concerns; and special processes for all COVID-19 related products.

HOW EBAY EDUCATES SELLERS ON PRODUCT SAFETY¹³⁴

To increase product safety compliance on its platform, eBay has designed Product Safety Guidance to educate sellers who list on its EU, US and Australian sites. The guidance is presented as a series of easy-to-read flashcards which present official information from government agencies to help sellers ensure their products meet legislative and safety requirements.

There is a particular focus on products which authorities have identified as having a high level of non-compliance with mandatory standards (e.g. child car safety seats, Chinese health products, carbon monoxide detectors, etc.). The guidance also refers to the products recalled by the authorities.

¹³⁰ European Commission, *1st Progress Report on the Implementation of the Product Safety Pledge* (2019).

¹³¹ European Commission, *2nd Progress Report on the Implementation of the Product Safety Pledge* (2020).

¹³² European Commission, *3rd Progress Report on the Implementation of the Product Safety Pledge* (2020).

¹³³ European Commission, *2nd Progress Report on the Implementation of the Product Safety Pledge* (2020).

¹³⁴ eBay, "Product Safety Guidance for Sellers listing on the US, EU and AU sites"

<https://ir.ebaystatic.com/pictures/HelpHub/Product_Safety_Guidance.pdf> [accessed October 2020].

4.3 HARMFUL CONTENT

4.3.1 Disinformation, misinformation and mal-information

In this part of the report we focus on the steps digital services providers are taking to tackle those who misuse platforms to spread disinformation, misinformation and mal-information. The Council of Europe has defined these terms as follows:¹³⁵

- **Disinformation** is false information that is created with the intention of causing harm to a person, social group or country. This could include imposter, manipulated or fabricated content.
- **Misinformation** is also false, but is not created and spread with the intention of causing harm.
- **Mal-information** is based on reality but is disseminated to cause harm to an individual, organisation or country. This category could include leaks, harassment or hate speech.

The first two categories above sometimes fall under the term “fake news”, although the Council of Europe argue against using this term since it oversimplifies the challenge of “information pollution” and due to the way it is used by politicians to describe news coverage they find disagreeable.¹³⁶

In 2018, online platforms and the advertising industry agreed a self-regulatory Code of Practice on Disinformation to address the spread of online disinformation.¹³⁷ The Code of Practice sets out a range of commitments and best practices that signatories will apply to meet those commitments with annual self-assessments conducted to assess performance. Under the Code, signatories have committed to take action in five areas:¹³⁸

- **Scrutiny of ad placements**—including the restriction of advertising services on platforms and limitations to ad placements for accounts that violate platforms’ advertising policies and spread disinformation.
- **Political advertising and issue-based advertising**—signatories have enacted policies and systems to ensure transparency around political advertising, including a requirement that all political ads be clearly labelled as sponsored content.
- **Integrity of services**—platforms provide insights into actions they have undertaken to address fake accounts and malicious, bot-driven activity as well as terms of service enforcement.
- **Empowering consumers** to report disinformation and access different news sources, while making authoritative content more visible and easier to find.

¹³⁵ Claire Wardle and Hossein Derakhshan, *Information Disorder: Towards an interdisciplinary framework for research and policy making* (Council of Europe, 2017), p.5.

¹³⁶ Claire Wardle and Hossein Derakhshan, *Information Disorder: Towards an interdisciplinary framework for research and policy making* (Council of Europe, 2017), p.5.

¹³⁷ European Commission, “The Code of Practice on Disinformation” <<https://ec.europa.eu/digital-single-market/en/news/code-practice-disinformation>> [accessed September 2020].

¹³⁸ European Commission, *Statement by Commissioner Gabriel on the Code of Practice on Online Disinformation* (2018).

- **Empowering the research community** by providing researchers with access to platform data to monitor disinformation.

In their summary of the self-assessed reports, the European Commission highlights that there have been “comprehensive efforts by the signatories to implement their commitments over the last 12 months.”¹³⁹ Examples of actions taken by signatories are outlined below.

In March and April 2019, **Facebook** took action against over 600,000 adverts per month in the EU which violated its policies on low quality or disruptive, misleading or false content.¹⁴⁰ And in the second quarter of 2020, Facebook disabled 1.5 billion fake accounts, of which 99.6% were found and flagged by the platform before users reported them.¹⁴¹ Facebook also launched an Ad Library, providing a comprehensive collection of all active ads in Facebook and Instagram and their reach, for example according to users’ age or gender group.¹⁴² Political ads must be identified with a “Paid for by” disclaimer and if users believe they have found an ad that should have such a disclaimer, they are able to report it. Using the information on the Ad Library, Facebook now publishes a report with statistics on ads related to social and political issues.¹⁴³ To deal with misinformation, Facebook works with fact checkers who apply labels to flag factually incorrect content.¹⁴⁴

Similarly, **Google** has added in-ad “paid for by” disclaimers to political ads and launched an ads library specifically focused on election ads.¹⁴⁵ Between September 2018 and August 2019, Google reported 314,286 actions against EU-based Google Ads accounts for violations of its Google Ads Misrepresentation policy.¹⁴⁶ In the third quarter of 2020, **YouTube** removed more than 2 million videos and more than 1.5 million channels for violating its spam, misleading content and scams policies.^{147,148}

During the EU elections period, **Twitter** implemented a certification process for political advertisers. The platform also looks at other types of advertising, for instance, obliging business advertisers to create an account that has to meet specific criteria including being the account of someone who represents the

¹³⁹ European Commission, “Annual self-assessment reports of signatories to the Code of Practice on Disinformation” <<https://ec.europa.eu/digital-single-market/en/news/annual-self-assessment-reports-signatories-code-practice-disinformation-2019>> [accessed October 2020].

¹⁴⁰ European Commission, *Code of practice on disinformation - First annual reports – October 2019* (2019).

¹⁴¹ Facebook, “Community Standards Enforcement Report” <<https://transparency.facebook.com/community-standards-enforcement#fake-accounts>> [accessed October 2020].

¹⁴² Facebook, “Ad Library” <<https://www.facebook.com/ads/library>> [accessed October 2020].

¹⁴³ Facebook, *Facebook Baseline Report on Implementation of the Code of Practice on Disinformation* (2019).

¹⁴⁴ Facebook for Business, “Fact-Checking on Facebook” <<https://www.facebook.com/business/help/2593586717571940>> [accessed October 2020].

¹⁴⁵ Google, *EC EU Code of Practice on Disinformation* (2019).

¹⁴⁶ Google, *EC EU Code of Practice on Disinformation* (2019).

¹⁴⁷ Google, “YouTube Community Guidelines enforcement” <https://transparencyreport.google.com/youtube-policy/removals?hl=en_GB&total_removed_videos=period:Y2020Q2;exclude_automated:all&lu=total_channels_removed&total_channels_removed=period:Y2020Q2> [accessed October 2020].

¹⁴⁸ Google, *EC EU Code of Practice on Disinformation* (2019).

brand and product.¹⁴⁹ Similar to Facebook and Google, Twitter also provides a repository of all running ads and past political campaign ads for the EU elections, the Ads Transparency Center.

TACKLING DISINFORMATION AND MISINFORMATION DURING COVID-19

The COVID-19 pandemic has led to the rapid spread of disinformation about COVID-19 across the internet. This has included attempts by foreign actors to influence debates, the publication of misleading healthcare information, the advancement of conspiracy theories and consumer fraud.¹⁵⁰ Digital services providers have undertaken a number of actions to respond to these issues.

Signatories to the Code of Practice on Disinformation released reports detailing their actions to curtail the spread of disinformation related to COVID-19.¹⁵¹ Platforms have increased the visibility of authoritative sources—for example **Google Search** and **YouTube** have given more prominence to articles and videos from EU fact-checking organisations, while **LinkedIn** sent a “European Daily Rundown” news summary by an experienced journalist to nearly 10 million EU members.

Facebook and **Instagram** directed more than 2 billion people to resources from health authorities, including the WHO. **Twitter** challenged more than 3.4 million suspicious accounts targeting discussion of COVID-19. The COVID-19 information page that **TikTok** launched to answer frequent questions, demystify concepts and provide advice on how to remain safe has received 52 million views from users in the UK, Germany, France, Italy and Spain.¹⁵²

Other actions taken by online platforms include the re-direction of users to information from the WHO in response to searches related to COVID-19 (**Facebook**, **Instagram**, **Pinterest**, **TikTok** and **YouTube**). **Facebook**, **Google** and **Twitter** have also given the WHO and national health authorities free advertising to help disseminate critical information regarding COVID-19.¹⁵³

Facebook partnered with the International Fact-Checking Network (IFCN) to launch a US\$1 million programme to increase capacity to check and remove false content.

4.3.2 Other types of harmful content

As well as disinformation, misinformation and mal-information, platforms must deal with a wide range of other content that may be harmful. This may include material related to bullying and harassment, hate speech, fake reviews, violent and graphic content, and so on. Major platforms seek to address such issues through their own community standards.

¹⁴⁹ Twitter, *Twitter Progress Report: Code of Practice against Disinformation* (2019).

¹⁵⁰ European Commission, "Tackling coronavirus disinformation" <https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/fighting-disinformation/tackling-coronavirus-disinformation_en> [accessed September 2020].

¹⁵¹ European Commission, "Disinformation: EU assesses the Code of Practice and publishes platform reports on coronavirus related disinformation" <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1568> [accessed September 2020].

¹⁵² European Commission, "Tackling coronavirus disinformation" <https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/fighting-disinformation/tackling-coronavirus-disinformation_en> [accessed September 2020].

¹⁵³ European Commission, "First baseline reports - Fighting COVID-19 disinformation Monitoring Programme" <<https://ec.europa.eu/digital-single-market/en/news/first-baseline-reports-fighting-covid-19-disinformation-monitoring-programme>> [accessed September 2020].

For example, Facebook prohibits bullying and harassment, violent and graphic content, cruel and insensitive content, misrepresentation and inauthentic behaviour. Along similar lines, YouTube prohibits harassment and cyberbullying, violent or graphic content, and impersonation.

Fig. 12. Examples of harmful content reported in most recent platform transparency reports

Platform	Bullying and harassment	Violent and graphic content	Source
Facebook (Q2 2020)	2.4 million items of content actioned for reasons related to bullying and harassment, of which 13.3% were identified before users reported them	15.1 million items of content actioned for reasons relating to violent and graphic content, of which 99.5% were identified before users reported them	Community Standards Enforcement Report
Instagram (Q2 2020)	2.3 million items of content actioned for reasons related to bullying and harassment, of which 37.7% were identified before users reported them	3.1 million items of content actioned for reasons relating to violent and graphic content, of which 97.0% were identified before users reported them	Community Standards Enforcement Report
YouTube (Q3 2020)	43,699 videos, 13,786 channels and over 196 million comments were removed for harassment and cyberbullying	1,119,163 videos were removed for violent and graphic content	YouTube Community Guidelines enforcement
Twitter (H2 2019)	Over 600,000 accounts actioned for abuse/harassment, of which 94,608 were suspended. Over 2.8 million items of content were removed for reasons relating to abuse/harassment	45,447 accounts actioned for reasons relating to violence, of which 34,196 were suspended. 49,172 items of content were removed for reasons relating to violence	Rules Enforcement

4.4 NOTICE-AND-TAKEDOWN PROCEDURES

4.4.1 Context

In 2000, the European e-Commerce Directive set the rules for platform liability around the concept of “active” and “passive” intermediaries.¹⁵⁴ The Directive stipulates that hosting service providers are liable when they are made aware of an item of illegal content, by receiving a request (or “notice”) to remove or block the content.¹⁵⁵ In 2018, the European Commission issued a Recommendation on measures to tackle illegal content.¹⁵⁶ In particular “online platforms should set out easy and transparent rules for notifying illegal content, including fast-track procedures for ‘trusted flaggers’. Content providers should be informed about such decisions and have the opportunity to contest them in order to avoid unintended removal of legal content.”¹⁵⁷ An earlier Commission consultation on the future of e-commerce found that there was a consensus amongst stakeholders with regards to developing EU- harmonised notice-and-takedown procedures (although there was less agreement on exactly what the rules should be).¹⁵⁸

Notice-and-takedown procedures may result in the blocking or removal of content if, upon review, that is deemed to be illegal. Online platforms typically follow four steps:¹⁵⁹

- (1) Inform interested parties
- (2) Evaluate the content and decide whether to block or remove it
- (3) Report their assessment and outcomes to the notifier
- (4) Inform the content provider (or seller in the case of a counterfeit) in the case of blocking or removal and explain further steps for an appeal.

Notices may be provided by a wide range of organisations such as market surveillance authorities, government or law enforcement agencies, non-governmental organisations or users.

Notice-and-takedown procedures are a key tool that online platforms use to identify illegal content online. A survey of platforms identified that several rely on these procedures since “it is not possible to detect the majority of illegal

¹⁵⁴ European Commission, *Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (Directive on electronic commerce)* (Official Journal of the European Communities, 2000).

¹⁵⁵ Fieldfisher, “European framework for ‘notice and take down’ procedures” <<https://www.fieldfisher.com/en/insights/european-framework-for-notice-and-take-down-procedures#:~:text=The%20European%20Commission%20has%20announced,a%20request%20to%20do%20s>o> [accessed September 2020].

¹⁵⁶ European Commission, *Commission recommendation of 1.3.2018 on measures to effectively tackle illegal content online* (2018).

¹⁵⁷ European Commission, “Illegal content on online platforms” <<https://ec.europa.eu/digital-single-market/en/illegal-content-online-platforms>> [accessed September 2020].

¹⁵⁸ European Commission, *Summary of the results of the Public Consultation on the future of electronic commerce in the Internal Market and the implementation of the Directive on electronic commerce (2000/31/EC)* (2010), p.10.

¹⁵⁹ European Commission, *Report on the functioning of the Memorandum of Understanding on the sale of counterfeit goods on the internet* (2020).

content online by technical means and is impractical to do so at scale through human moderation".¹⁶⁰

4.4.2 The quality of notices

In consultations digital services companies expressed concerns about the notices they receive, and the extent to which the information contained within them enables them to take action.

Firstly, there is no single, agreed list of information that notices should contain. What constitutes a "valid" notice legally requiring a platform to take action varies between Member States. Such complexities may be particularly challenging for SMEs who may not have the resources to adapt to each national rule.

Secondly, notices frequently do not contain sufficient information to enable a platform to take action. At a very simple level, notices may not contain a hyperlink to the content in question. In the case of online marketplaces, for example, notices may not provide sufficient detail for problematic products to be identified and removed. This can be a significant problem for larger marketplaces—e.g. eBay has around 1.3 billion listings¹⁶¹ at any point in time, so specific and accurate information is needed to identify products.

This point has been examined in research by the European Centre for International Political Economy (ECIPE) who reviewed 1,020 unsafe product notifications from the European Union RAPEX¹⁶² system.¹⁶³ They found that notifications often lack information to identify products, such as brand names, model numbers, sizes, and even product names. Along similar lines, research in the US has found that a lack of information on the location of material was the most common weak point in notices.¹⁶⁴

Finally, the legal basis for a claim may not be clear from the information in a notice. For example, a notifier may not explain why they think a piece of content should be removed. In the case of intellectual property issues, rights holders may not provide evidence that they actually own the rights to the content in a particular market.

4.4.3 Best practice in notice-and-takedown procedures

The issues identified above suggest a need to standardise notices and ensure they provide sufficient information to enable platforms to act rapidly. Digital

¹⁶⁰ Alexandre de Streel et al., *Online Platforms' Moderation of Illegal Content Online* (Policy Department for Economic, Scientific and Quality of Life Policies, 2020), p.44.

¹⁶¹ Oberlo, "Number of eBay Listings" <<https://www.oberlo.co.uk/blog/ebay-statistics#:~:text=There%20are%201.3%20billion%20listings,on%20over%20250%20million%20listings.>> [accessed October 2020].

¹⁶² In full, the Rapid Alert System for Dangerous Non-Food Products.

¹⁶³ Joana Purves and William Echikson, *Combating Unsafe Products: How to improve Europe's SafetyGate* (European Centre for International Political Economy, forthcoming).

¹⁶⁴ Jennifer M. Urban et al, *Notice and Takedown in Everyday Practice* (2017).

services providers suggested in consultations that notifications should contain the following information as a minimum:

- A very specific description of the content to be removed, including a URL and/or a video stamp indicating the time during a video where the problematic content appears.
- The rationale and an indication of the legal basis for removing content. This is particularly important within the EU where what is illegal may vary from one member state to another.
- Details of the notifier and their status.
- An attestation that the claim is being made in good faith to deter fraudulent or false claims.
- In the case of intellectual property and copyright issues, rights holders should provide evidence that they hold the rights to the content in the jurisdiction the notice applies to.

In the case of dangerous products ECIPE suggest improvements to the format of notices to give greater prominence to the product description; ensure all of the details needed to identify a product are provided; check image quality; and ensure the reporting system is sufficiently user-friendly for consumers to use.¹⁶⁵

Some services grant special status to “trusted flaggers,” i.e. organisations that have a good track record for effectively detecting illegal content. Examples include Google’s Trusted Copyright Removal program, which had more than 170 partners as of 2017,¹⁶⁶ and YouTube’s Trusted Flagger programme.¹⁶⁷ But while there appears to be a role for the greater involvement of users in streamlined flagging processes, in consultations digital services providers emphasised the importance of them retaining full control over content on their platforms.

¹⁶⁵ Joana Purves and William Echikson, *Combating Unsafe Products: How to improve Europe’s SafetyGate* (European Centre for International Political Economy, forthcoming).

¹⁶⁶ Google, *How Google Fights Piracy* (2018).

¹⁶⁷ YouTube Help, “YouTube Trusted Flagger programme”

<https://support.google.com/youtube/answer/7554338?ref_topic=7124235> [Accessed October 2020].

4.5 TRANSPARENCY IN CONTENT MODERATION

The debate around the Digital Services Act has led to calls from some quarters for greater transparency concerning digital service providers' actions in dealing with illegal content. At issue is how best to deliver the benefits of greater transparency while avoiding disclosing information that could enable rogue players to "game the system". In this section we explore the extent to which major digital services providers already publish transparency reports.

Google was the first internet firm to publish a transparency report in 2010.¹⁶⁸ This example was followed in subsequent years by others including LinkedIn, Microsoft and Twitter. In 2013, Facebook launched its first transparency report¹⁶⁹ and since then this has become a much more common practice, with many other platforms joining the list, including TikTok in 2019.¹⁷⁰

Many digital services providers have published reports to provide details of government requests for user data, and some have expanded the scope of reports to include details of takedowns for intellectual property-related reasons; government and legal requests for content to be moderated or removed; and the enforcement of community guidelines. The OECD found that amongst 50 popular content-sharing services, 23 now publish transparency reports.¹⁷¹ Civil society organisation Access Now suggests that a total of 70 companies have released transparency reports to date.¹⁷²

Digital services companies explained in consultations that the measures they need to take to tackle illegal or harmful content vary considerably depending on the services they provide, their business model and the type of illegal or harmful content in question. As such, providers take different approaches in terms of the types of information they present in transparency reports and the way it is presented, reflecting the specific challenges they each face. As the OECD notes in relation to terrorist and violent extremist content (TVEC) "There would be significant challenges to achieving absolute uniformity in voluntary transparency reporting on TVEC."¹⁷³

For this study we reviewed the transparency reports published by nine major digital services providers. Our findings are summarised below. Eight

¹⁶⁸ OECD, *Current Approaches to Terrorist and Violent Extremist Content among the Global Top 50 Online Content-sharing Services* (2020), p.11.

The 23 services that produce transparency reports are Facebook, YouTube, Apple, Instagram, TikTok, Reddit, Twitter, LinkedIn, Skype, Snapchat, Pinterest, LINE, Twitch, Tumblr, Medium, Discord, KaKaoTalk, Meetup, Google Drive, Dropbox, OneDrive, WordPress.com and Wikipedia. A full list of services included in the study is presented in Annex A of the OECD's report.

¹⁶⁹ Facebook, "Our continuing commitment to transparency" <<https://about.fb.com/news/2020/05/transparency-report/>> [accessed October 2020].

¹⁷⁰ TikTok, "TikTok Transparency Report 2019 H2" <<https://www.tiktok.com/safety/resources/transparency-report?lang=en>> [accessed October 2020].










¹⁷¹ OECD, *Current Approaches to Terrorist and Violent Extremist Content among the Global Top 50 Online Content-sharing Services* (2020), p.11.

¹⁷² AccessNow, "Transparency Reporting Index" <<https://www.accessnow.org/transparency-reporting-index/>> [accessed October 2020].

¹⁷³ OECD, *Current Approaches to Terrorist and Violent Extremist Content among the Global Top 50 Online Content-sharing Services* (2020), p.12.

companies report details of information requests received, and eight provide at least some information on removals, with Facebook, Google, Twitter and YouTube publishing some of the most detailed information within this group.

Fig. 13. Examples of transparency reports published by major digital services providers

CCIA member	Information requests	Information responses	Removal/blocking requests	Effective removals/blocks
	Requests from different authorities	Full and partial responses to national authorities' requests	-	-
	Data disclosure requests by country	-	Requests to take down material from bt.com	Child sexual abuse images blocked
	Requests for user data from different authorities	Domains and accounts affected by the information request	Requests for content removal due to copyright	Domains and accounts affected by the removal request
	Government user data requests	Government requests where some data was produced	IP infringement reports	Pieces removed by reason and share detected by users
	Government agencies' user information requests	Government agencies' requests where some information was disclosed	Copyright infringement reports	Items removed in Germany by submitter, reason and turnaround time
	Government user information requests	Government request where some information was produced	Government removal requests	Removals and local restrictions following governments' requests
	Government user information requests	Government request where some information was produced	Users reports on content potentially violating Twitter Rules	Suspended accounts and removed tweets by reason
	Government user information requests	Government requests where some information was disclosed	Government removal requests	Content removals following governments' requests
	-	-	Items reported potentially illegal in Germany by submitter and reason	Channels, videos and comments removed by reason, source of first detection, views and geography

4.6 THE USE OF AUTOMATED TOOLS FOR CONTENT MODERATION

Content moderation may be carried out by human moderators (either staff members or users) or automated tools. The OECD found that at least 21 out of 50 major online content-sharing services employed automated tools.¹⁷⁴

From our consultations with digital services companies, it was clear that each company uses automated tools in different ways, depending on the nature of their services and the type of content they are seeking to identify.

4.6.1 Benefits and limitations of automated moderation tools

The main advantage of automated tools is that they are faster and cheaper than human moderators (although set up costs can be high) and so they can deal with much larger volumes of content.¹⁷⁵ Automated tools can often operate in virtual real time. In consultations one provider described automated tools as indispensable given the vast volumes of content on platforms—it would be impossible for humans acting alone to screen everything.

Yet while automated tools have an important role to play, their effectiveness varies according to the type of content they are used to review. For certain types of material there may be clear parameters which tools can work within. The clearest cut cases may be where content has previously been flagged and removed by a human moderator and technology is used to identify other instances of such content.

However, in many cases determining whether content is illegal requires an understanding of context, as well as the nature of the content itself.¹⁷⁶ Despite rapid advances in artificial intelligence (AI), it is still very challenging for automated systems to accurately identify illegal content which requires contextual understanding.¹⁷⁷ For example, an algorithm cannot distinguish between combat footage used by a terrorist organisation and the same footage used by human rights advocates. As noted by Cambridge Consultants, “Human input will be required to augment AI systems for the foreseeable future”.¹⁷⁸

The issue of context is particularly important within the EU, where definitions of certain types of illegal content vary between EU member states. For instance, in Austria, content which “vilifies religious teachings” can be rendered illegal.¹⁷⁹ In Poland content which insults the President is illegal. In Germany, Italy and Malta “public officials have a higher threshold of duty to refrain from extreme

¹⁷⁴ OECD, *Current Approaches to Terrorist and Violent Extremist Content among the Global Top 50 Online Content-sharing Services* (2020), p.13.

¹⁷⁵ OECD, *Current Approaches to Terrorist and Violent Extremist Content among the Global Top 50 Online Content-sharing Services* (2020), p.13.

¹⁷⁶ Cambridge Consultants, *Use of AI in online content moderation* (2019).

¹⁷⁷ Kent Walker, “A more responsible, innovative and helpful internet in Europe”, for *Google in Europe* <https://blog.google/around-the-globe/google-europe/more-responsible-innovative-and-helpful-internet-europe/?_ga=2.169865889.1236417482.1603793594-641114090.1596710805> [accessed October 2020].

¹⁷⁸ Cambridge Consultants, *Use of AI in online content moderation* (2019), p.55.

¹⁷⁹ End Blasphemy Laws, “Austria” <<https://end-blasphemy-laws.org/countries/europe/austria/>> [Accessed October 2020].

political activity and racism”.¹⁸⁰ Such legal nuances introduce further complexities in the use of automated tools and require the moderator to know the location of users posting or viewing that content.¹⁸¹

The digital services providers we spoke to emphasised that there is generally not a binary choice to be made between using automated tools or human moderators. Rather, the question is how automated tools can be best used by human moderators to increase their effectiveness.

4.6.2 Mandating the use of automated tools

Given the uncertainties and limitations of automated tools, mandating their use may lead to over-blocking and over-removals, as companies err on the side of caution and deploy systems which remove too much content to reduce the risk of legal disputes or reputational damage.^{182,183} Digital services providers suggested that mandating time limits for content removal could have a similar effect and argued that in more complex cases it would be better to have the discretion to take longer to properly investigate matters.

There is a fine balance to be struck. Under-moderating can lead to reputational damage for digital services firms if users come into contact with illegal content, but over-moderating may also lead to damage if users perceive that moderation is limiting freedom of speech and preventing valuable dialogue.¹⁸⁴ Platforms must therefore seek to avoid both too many “false negatives” (whereby harmful content is not removed) and too many “false positives” (whereby non-harmful content is removed).¹⁸⁵

Digital services providers highlighted that since different platforms provide different services and handle different types of content, it is very difficult to mandate the use of particular tools or ways of applying them which will be effective in all cases. Along similar lines, the pace of innovation is such that whichever technologies are mandated may risk becoming quickly obsolete. Firms also expressed concern that mandating a technology could create an incentive for the industry to meet that standard but not to innovate to bring in better approaches.

A final consideration is that it may be more difficult for smaller platforms to deploy automated tools if they have less access to AI developers, datasets and financial resources. This could potentially increase set up costs and delay the growth and development of new platforms.¹⁸⁶

¹⁸⁰ European Parliament, *Hate speech and hate crime in the EU and the evaluation of online content regulation approaches* (2020), p.114.

¹⁸¹ Cambridge Consultants, *Use of AI in online content moderation* (2019), pp.60-61.

¹⁸² Tambiama Madiaga, *Reform of the EU liability regime for online intermediaries* (Publications Office for the European Union, 2020), p.16.

¹⁸³ Thomas Riis and Sebastian Felix Schwemer, *Leaving the European Safe Harbor, Sailing Towards Algorithmic Content Regulation* (Journal of Internal Law, 2019), p.2.

¹⁸⁴ In consultations one platform pointed out that over-moderation might also reduce consumers’ access to particular goods.

¹⁸⁵ Cambridge Consultants, *Use of AI in online content moderation* (2019).

¹⁸⁶ Cambridge Consultants, *Use of AI in online content moderation* (2019).

EXAMPLES OF AUTOMATED TOOLS IN ACTION

Google introduced machine learning for the detection of extremist content in June 2017, having reviewed more than 2 million pieces of content to train their system. In the period before the new system was introduced, 8% of videos removed for violating Google’s violent extremism policy had received fewer than 10 views when they were removed. This figure increased to more than 50% a year later, and by the end of 2019 it was 90%.¹⁸⁷

YouTube reports that in the three months from July 2020 to September 2020, nearly 7.9 million videos were removed for breaching its community guidelines. Of those removed, 94% were first detected by automated flagging. The use of automated moderation tools could be an important factor in limiting the viewership of such videos, with over 75% of these videos viewed no more than 10 times before being removed.¹⁸⁸

Prior to 2017 (when adult content was still allowed on the platform), **Tumblr** users could filter content using “safe mode”, but that also filtered out non-adult content, including LGBTQ+ posts. There have been further reports of erroneous takedowns (or “false positives”) such as a removal of a cartoon scorpion with the hashtag #TooSexyForTumblr.¹⁸⁹

¹⁸⁷ Google, “Information quality & content moderation”

<https://blog.google/documents/83/information_quality_content_moderation_white_paper.pdf> [accessed September 2020].

¹⁸⁸ Google, “YouTube Community Guidelines Enforcement” <<https://transparencyreport.google.com/youtube-policy/removals?hl=en>> [accessed October 2020].

¹⁸⁹ Cheyenne MacDonald, “What isn’t ‘too sexy for Tumblr’? New algorithms designed to ban porn flag everything from a ‘puking unicorn’ to Joe Biden” <<https://www.dailymail.co.uk/sciencetech/article-6464497/What-ISNT-sexy-Tumblr-New-algorithms-flag-puking-unicorn-Joe-Biden.html>> [accessed August 2020].

5. CONSIDERATIONS FOR THE DIGITAL SERVICES ACT

In this report we have highlighted the substantial economic and social benefits that digital services deliver to European consumers and business. We have also highlighted some of the steps digital services providers are taking to address the challenges created by those who use online platforms to disseminate illegal or harmful content.

The European Commission is scheduled to propose new rules in December 2020—the “Digital Services Act”. Based on the evidence reviewed, we have identified three key points which should be considered as new rules are developed.

Firstly, digital services providers are already taking many actions, both individually and in collaboration with others, to tackle illegal content. It would seem logical that any new rules build on these existing frameworks, rather than start from scratch.

Secondly, differences in national rules create complexity. It is important that any new rules are harmonised across the EU, so that European businesses can continue to reap the benefits of digital services in helping them to sell right across the Single Market. Harmonised rules will be simpler for both businesses and consumers to understand than different rules set by individual Member States.

And finally, some of the most successful examples of initiatives to tackle illegal or harmful content have emerged where there is collaboration between digital services providers and other stakeholders, including governments, rights holders, civil society organisations and users. All of these groups have a role to play in tackling illegal content.

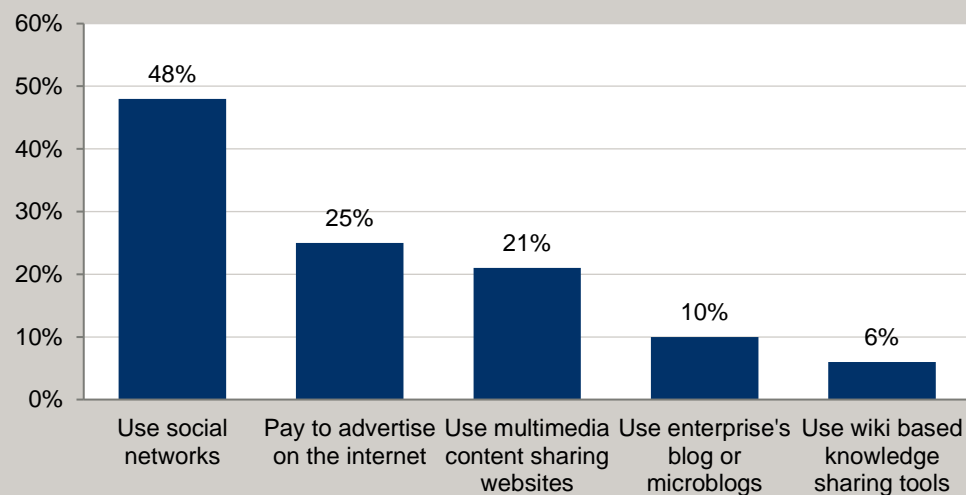
APPENDIX A: BACKGROUND DATA

Fig. 14. Estimates of the size of the European platform economy

Study	Definition and geography	Number of platforms identified
European Commission (2019) "How do online platforms shape our lives and businesses?"	High-growth SME hosting services that have received venture funding in 2018. European Union	9,700
KPMG (2018) "Unlocking the value of the platform economy"	Platforms are businesses that "provide an 'open' digital infrastructure to an ecosystem of distinct but mutually dependent group of users." Global coverage, focusing only on platforms with a valuation exceeding \$100 million.	242
Institut der deutschen wirtschaft (2018) "The economics of platforms"	"A digital platform is an enterprise that uses the internet to facilitate economically beneficial interactions between two or more independent groups of users." Global, only focusing on companies with a market capitalisation of at least US\$1 bn that are not publicly traded.	110
European Commission (2017) "Study to monitor the economic development of the collaborative economy at sector level in the 28 EU Member States"	Business models meeting the following criteria were included in the study: <ul style="list-style-type: none"> • There are three parties in business transactions – the service provider, the online platform and the customer; • The service provider offers access to goods, services or resources on a temporary basis; • The goods, services or resources offered by the service provider are otherwise unused; • The goods, services and resources are offered with or without compensation (i.e. for profit or non-profit/sharing) European Union, only focusing on the transport, accommodation, finance and online skills sectors.	651
European Commission (2017) "An overview of European platforms: Scope and business models"	European Union. Only focused on platforms trading transportation, online and offline services. List aimed at capturing platforms covered by mainstream media and known to individual countries.	200 (169 of which originate within Europe)
Centre for Global Enterprise (2015) "The rise of the platform enterprise"	Platforms characterised by network effects and are predominantly digital. Includes transaction, innovation, investment and integrated platforms Global coverage, focusing on platforms with a market value of at least \$1 bn.	176

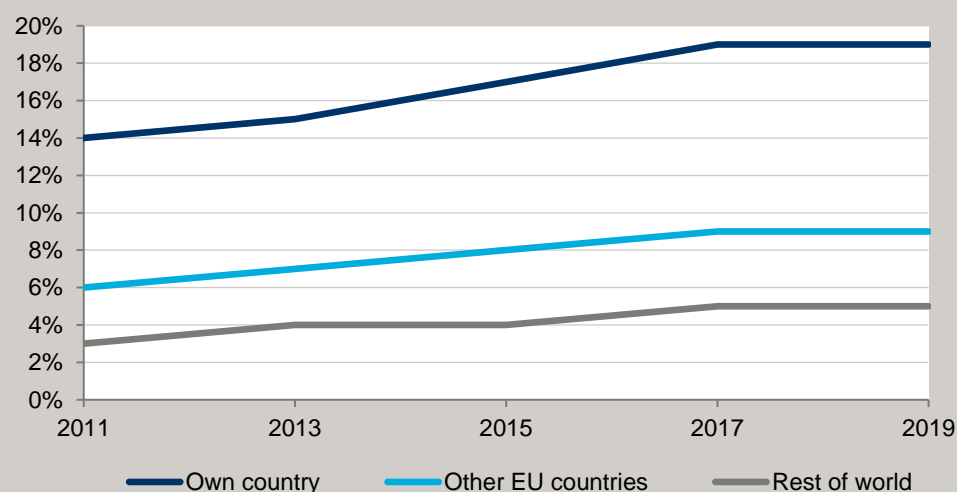
Fig. 15. Share of enterprises advertising online and using social media, by type, EU27, 2019¹⁹⁰

Share of enterprises



Source: Eurostat Community Survey on ICT usage and ecommerce in enterprises

Fig. 16. Share of enterprises with e-commerce sales in their own country and in other EU Member States or the rest of the world in the EU27, alternative years 2011-2019¹⁹¹



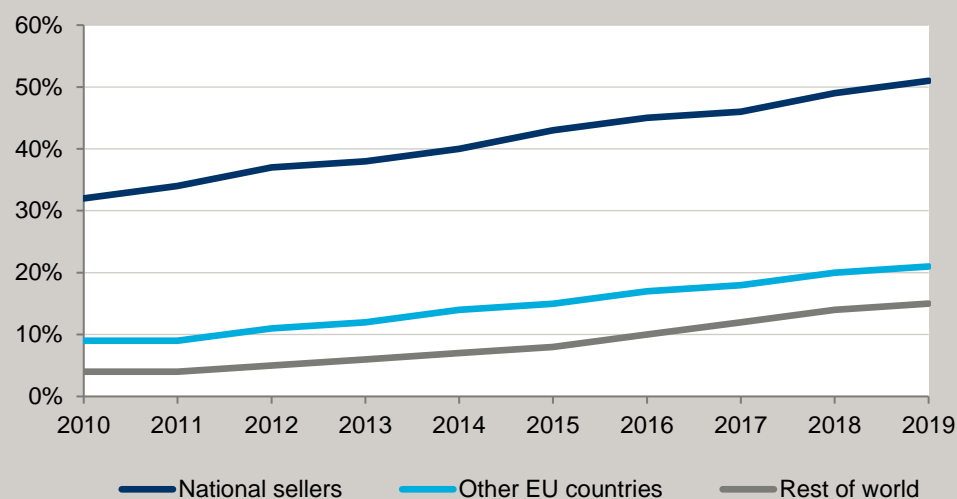
Source: Eurostat Community Survey on ICT usage and ecommerce in enterprises (2011, 2013, 2015, 2017 and 2019)

¹⁹⁰ Data for "pay to advertise on the internet" relates to 2018 which is the latest year available.

Eurostat, "Social media use by type, internet advertising" <http://ec.europa.eu/eurostat/web/products-datasets/-/isoc_cismt> [accessed August 2020].

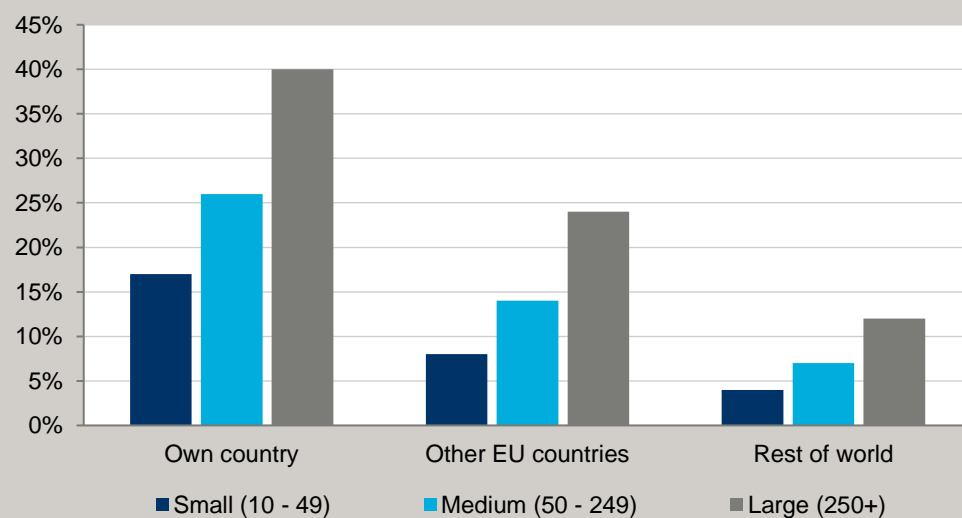
¹⁹¹ Eurostat, "E-commerce sales" <https://ec.europa.eu/eurostat/web/products-datasets/product?code=isoc_ec_eseln2> [accessed August 2020].

Fig. 17. Share of individuals who made online purchases from their own country, other EU member states and the rest of the world, 2010-2019¹⁹²



Source: Eurostat Community Survey on ICT usage and ecommerce in enterprises

Fig. 18. Enterprises with e-commerce sales to own/other country, by business size in the EU27, 2019¹⁹³



Source: Eurostat Community Survey on ICT usage and ecommerce in enterprises

¹⁹² Eurostat, "Internet purchases by individuals (until 2019)" <https://ec.europa.eu/eurostat/web/products-datasets/product?code=isoc_ec_ibuy> [accessed August 2020].

¹⁹³ Eurostat, "E-commerce sales" <https://ec.europa.eu/eurostat/web/products-datasets/product?code=isoc_ec_eseln2> [accessed August 2020].

APPENDIX B: DATA SOURCES

Platform	Founded / Launched	Latest revenue, €m	Latest revenue year	Source
Booking.com	1996	13,452	2019	Macrotrends, Booking Holdings Revenue 2006-2020
Spotify	2008	6,760	2019	Musically, Spotify ended 2019 with 271m listener and 124m subscribers
Zalando	2008	6,483	2019	Statista, "Annual revenue of Zalando from 2009 to 2019"
FreeNow	2009	2,400	2019	BMW BLOG, FreeNow, BMW's and Daimler's ride-sharing app, to double revenue in 2019
Cdiscount	1998	2,385	2019	eCommerce DB, eCommerce Revenue Analytics – cdiscount.com
Criteo	2005	2,020	2019	ExchangeWire, "Criteo Announces Financial Results for Q4 2019 and FY2019"
King.com	2003	1,813	2019	Statista, Annual revenue of King.com from 2010 to 2019
Supercell	2010	1,393	2019	Statista, Revenue generated by Supercell from 2012 to 2019
Schibsted	1996	783	2019	Schibsted, Q4 2019 reporting
Klarna	2005	672	2019	Klarna, annual report for 2019
Allegro	1999	558	2019	AIM Group, Allegro.pl increases revenue and profit in FY2018
eMAG	2001	540	2019	eCommerce DB, e-commerce revenue analytics - emag.ro
Deliveroo	2013	538	2018	Statista, Annual revenue of Roofoods (Deliveroo) worldwide from 2015 to 2018
eDreams ODIGEO	2011	533	2019	eDreams ODIGEO, Integrated annual report FY 2019
Rovio	2003	289	2019	Statista, Annual revenue generated by Rovio Entertainment from 2010 to 2019
Seznam	1996	183	2019	Seznam Blog, Seznam.cz increases year-on-year revenue by almost 9% to 4.48 billion CZK
Meetic Group	2001	146	2018	Dun & Bradstreet, Meetic
SoundCloud	2007	108	2018	Business of Apps, SoundCloud revenue and usage statistics (2020)

Sources for data quoted in Fig. 8

Public First, *Google's Economic Impact in Europe* (2020).

Michael Mandel and Elliott Long, *The App Economy in Europe: Leading Countries and Cities* (Progressive Policy Institute, 2017), p.10.

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Amazon, "Amazon announces it now has over 5,500 tech roles across 25 development centers throughout Europe, with more to come" <<https://www.aboutamazon.eu/press-release/amazon-announces-over-5500-tech-roles-across-25-development-centers-throughout-europe>> [accessed October 2020].

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