Study on "Support to the Observatory for the Online Platform Economy"

Analytical paper #6

Analytical paper on the structure of the online platform economy post COVID-19 outbreak

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>9</td>
</tr>
<tr>
<td>Rationale and objectives</td>
<td>9</td>
</tr>
<tr>
<td>Methodological approach</td>
<td>9</td>
</tr>
<tr>
<td>Short, medium and potential long-term economic and behavioural impacts of the COVID-19 crisis</td>
<td>10</td>
</tr>
<tr>
<td>Effects on mergers and acquisition activities</td>
<td>11</td>
</tr>
<tr>
<td>Political impacts of the COVID-19 crisis</td>
<td>11</td>
</tr>
<tr>
<td><strong>1.</strong> Rationale and objectives</td>
<td>12</td>
</tr>
<tr>
<td><strong>2.</strong> Methodological approach</td>
<td>13</td>
</tr>
<tr>
<td>2.1. Research framework</td>
<td>13</td>
</tr>
<tr>
<td>2.2. Data collection</td>
<td>15</td>
</tr>
<tr>
<td><strong>3.</strong> Economic and behavioural impacts of the COVID-19 crisis</td>
<td>17</td>
</tr>
<tr>
<td>3.1. Lockdown measures and macro-economic situation</td>
<td>17</td>
</tr>
<tr>
<td>3.2. Consumer behaviour</td>
<td>20</td>
</tr>
<tr>
<td>3.2.1. Online traffic</td>
<td>21</td>
</tr>
<tr>
<td>3.2.2. Online shopping</td>
<td>23</td>
</tr>
<tr>
<td>3.2.3. Online subscriptions and services</td>
<td>25</td>
</tr>
<tr>
<td>3.2.4. Potential medium to long-term impacts</td>
<td>27</td>
</tr>
<tr>
<td>3.3. Business users of online platforms</td>
<td>28</td>
</tr>
<tr>
<td>3.3.1. Demand, supply and revenues</td>
<td>28</td>
</tr>
<tr>
<td>3.3.2. Employment</td>
<td>34</td>
</tr>
<tr>
<td>3.3.3. Dependence and support from online platforms</td>
<td>36</td>
</tr>
<tr>
<td>3.4. Changes in the online platform economy</td>
<td>42</td>
</tr>
<tr>
<td><strong>4.</strong> Effects on merger and acquisition activities</td>
<td>46</td>
</tr>
<tr>
<td>4.1. Mergers and acquisition activities before the COVID-19 crisis</td>
<td>46</td>
</tr>
<tr>
<td>4.2. Trends of mergers and acquisitions post COVID-19 crisis</td>
<td>52</td>
</tr>
<tr>
<td>4.3. Potential revisions of merger review</td>
<td>57</td>
</tr>
<tr>
<td><strong>5.</strong> Political impacts of the COVID-19 crisis</td>
<td>60</td>
</tr>
<tr>
<td>5.1. Recent developments and impacts of the COVID-19 crisis</td>
<td>61</td>
</tr>
<tr>
<td>5.1.1. Unsafe products and unfair practices in e-commerce</td>
<td>61</td>
</tr>
<tr>
<td>5.1.2. Hate speech and disinformation on social media</td>
<td>63</td>
</tr>
</tbody>
</table>
Tables
Table 1: Research questions and methodology ................................................................. 13
Table 2: Supporting measures by some online platforms .................................................. 18
Table 3: M&A overview and strategy of GAFAM .............................................................. 19
Table 4: announced Acquisitions by top online platforms companies in 2020 (values when disclosed) ................................................................. 48
Table 5: overview of platforms’ response to COVID-19 misinformation .................................. 53

Figures
Figure 1: COVID-19 restriction measures as of 6 April 2020 ................................................ 18
Figure 2: Oxford stringency index and gdp, eu Member states, h1 2002 ..................................... 19
Figure 3: GDP and employment growth rates, % change over the previous quarter, based on seasonally adjusted data, 2020 Q2 ................................................................. 20
Figure 4: Consumer confidence index (CCI) ........................................................................ 21
Figure 5: Traffic share % change, March 2020 vs August 2019 .............................................. 22
Figure 6: E-commerce: COVID impact on online traffic of selected industries worldwide in week ending June 14, 2020 (Change %) ................................................................. 23
Figure 7: Year on year growth in weekly online orders in retail industry during the COVid-19 in selected countries in europe (2020) ................................................................. 24
Figure 8: products and services people spend more than usual on due to covid-19 (May 2020, %) .... 25
Figure 9: Year on year change in subscription and convenience services ......................... 26
Figure 10: Consumer spending in Europe and globally online and offline, June 2020 .............. 28
Figure 11: Change in demand across countries (% of respondents) ...................................... 29
Figure 12: Mosaic plot: change in consumer demand and consumption and level of businesses’ dependency on the online platforms (% of respondents) .................................. 30
Figure 13: Change in revenue across sectors (% of respondents) ........................................ 32
Figure 14: Year on year weekly growth in the revenue of online-only retailers in europe (jan-jun 2020) in % ........................................................................................................ 33
Figure 15: Impact of the Covid-19 crisis and measures on supply chains (% of respondents) .............................................................................................................. 33
Figure 16: Impact of the COvid-19 crisis and measures on production (% of respondents) .... 34
Figure 17: Unemployment rates in EU-27 and EUrozone, seasonally adjusted (January 2005 – July 2020) ................................................................. 35
Figure 18: business confidence index (BCI) in EU27 .......................................................... 36
Figure 19: Switching and multihoming trends (% of respondents) ....................................... 38
Figure 20: Financial support received by business users from platforms (% of respondents) .... 40
Figure 21: Mosaic plot: level of dependency on the online platforms and financial support received (% of respondents) ................................................................. 41
Figure 22: Mosaic plot: change in revenue from online platforms and financial support received (% of respondents) ................................................................. 42
Figure 23: % change of traffic share of 50 top online platforms in April 2020 compared to August 2019 ................................................................. 43
Figure 24: GAFAM quarterly revenues 2020 (USD million) ................................................ 44
Figure 25: Emerging marketplaces ..................................................................................... 45
Figure 26: Number of acquisitions by parent companies (2013-2019) ............................... 46
Figure 27: Overview of Mergers and acquisitions (2013-2019) ........................................... 47
Figure 28: Country split of business survey respondents ..................................................... 96
Figure 29: Sector split of business survey respondents ...................................................... 97
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCC</td>
<td>Australian Competition &amp; Consumer Commission</td>
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<td>ADR</td>
<td>Alternative dispute resolution</td>
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<tr>
<td>AI</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>API</td>
<td>Application Programming Interface</td>
</tr>
<tr>
<td>AVMSD</td>
<td>Audiovisual Media Services Directive</td>
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<tr>
<td>B2B</td>
<td>Business to business</td>
</tr>
<tr>
<td>B2C</td>
<td>Business to consumer</td>
</tr>
<tr>
<td>CCI</td>
<td>Consumer Confidence Index</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CMA</td>
<td>UK Competition and Market Authority</td>
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<tr>
<td>CPC</td>
<td>Consumer Protection Cooperation</td>
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<td>DESI</td>
<td>Digital Economy and Society Index</td>
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<tr>
<td>DoJ</td>
<td>Department of Justice</td>
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<tr>
<td>EEAS</td>
<td>European External Action Service</td>
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<tr>
<td>ENISA</td>
<td>European Network and Information Security Agency</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EUCJ</td>
<td>European Union Court of Justice</td>
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<tr>
<td>FCA</td>
<td>French Competition Authority</td>
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<tr>
<td>FTC</td>
<td>Federal Trade Commission</td>
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<tr>
<td>GAFAM</td>
<td>Google, Amazon, Facebook, Apple, Microsoft</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>HPC</td>
<td>High Performance Computing</td>
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<tr>
<td>IAB</td>
<td>Interactive advertising bureau</td>
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<tr>
<td>IoT</td>
<td>Internet of things</td>
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<tr>
<td>IPPR</td>
<td>Institute for Public Policy Research</td>
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<tr>
<td>KPI</td>
<td>Key performance indicators</td>
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<td>KYBC</td>
<td>Know Your Business Customer</td>
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<td>M&amp;A</td>
<td>Mergers and acquisitions</td>
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<td>NCT</td>
<td>New Competition Tool</td>
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<tr>
<td>NetzDG</td>
<td>Network Enforcement Act</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>OTA</td>
<td>Online travel agency</td>
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<tr>
<td>P2B</td>
<td>Platform to business</td>
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<tr>
<td>PEPP-PT</td>
<td>Pan-European Privacy-Preserving Proximity Tracing</td>
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<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and development</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium sized Enterprise</td>
</tr>
<tr>
<td>TMT</td>
<td>Technology, media and telecoms</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>US</td>
<td>United States of America</td>
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<tr>
<td>WFA</td>
<td>World Federation of Advertisers</td>
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<td>WHO</td>
<td>World Health Organisation</td>
</tr>
</tbody>
</table>
Executive summary

Rationale and objectives

The COVID-19 pandemic has created a unique situation where confinement measures and closure of frontiers have led all sectors of industry and society to digitise at lightning speed in order to be able to pursue their activities. Although digitalisation of traditional sectors could already be observed before the COVID-19 pandemic, the latter has significantly accelerated its pace, and exposed the opportunities and weaknesses of the platform economy.

This analytical paper focuses on the structure of the online platform economy post COVID-19 outbreak and is prepared in the context of the Study on “Support to the Observatory for the Online Platform Economy”. This analytical paper will analyse three key dimensions of impact:

1. Assessment of COVID-19 effect on online platforms, businesses and other users: the immediate, medium and potential long-term effect;
2. Possible impact on the structure of digital markets and existing incentives for M&A activities by large gatekeeper players;
3. Assessment of existing or potential political impacts of COVID-19.

Methodological approach

The analytical paper is based on literature review and desk research, complemented by semi-structured interviews and a survey with business users of online platforms.

As a first step, we conducted a review of literature following systematic principles using the EBSCO, ISI Web of Science and Scopus databases, complemented by extensive online desk research to gather all relevant (non-academic) publications, including “grey” sources, related to the research questions. We covered publications derived from a variety of information sources, including reports from national and EU public authorities, international organisations, business or consumer associations, expert blogs and market research reports. In addition, we conducted a review of data and statistics to support the research questions. We explored data from official sources such as Eurostat (e.g. Structural business statistics (SBS) and annual national accounts), Eurobarometer, Dealroom, the OECD, the World Bank, the World Economic Forum, as well as other market databases and sources such as Statista, Crunchbase, Facebook/OECD Future of Business survey, Internet Live Stats, SimilarWeb, Statcounter, etc.

As a second step, we conducted semi-structured interviews with stakeholders and experts to collect additional evidence and perceptions to inform the three research dimensions. In total, we conducted 22 interviews with stakeholders from various groups, including large and medium online platforms, platform associations, business associations, consumer associations and experts. The interview guides were developed based on the research questions and on the type of stakeholders.

In addition, we used the results of the business survey (second wave) conducted by the Consortium for this Observatory support study. The survey was carried out in October 2020 and collected 1,990 responses from business users of online platforms across Belgium, the Czech Republic, Germany, Spain, France, Ireland,
Lithuania, the Netherlands and Sweden. This survey wave followed a first wave carried out in November-December 2019 which had collected 1,667 responses. For the purpose of the present analytical paper, the survey included questions regarding the short term and medium-term impacts of the COVID crisis on the business users’ demand, supply, production, revenues, revenues from online platforms, support received from platforms during the crisis, multi-homing and switching.

The finding from the literature review and desk research were then triangulated with the by semi-structured interviews and the business survey results to carry out the analysis and address the research questions.

There were inherent limitations to analysing the medium to long-term impacts of the COVID-19 crisis on the economy and behaviours. First of all, this is due to the lack of robust data and consensus to establish any prediction. Secondly, the current crisis lacks points of comparison due to its scale and different dimensions (sanitary and economic). Finally, as the crisis is still ongoing and vaccines are only starting to be rolled out, there is still uncertainty on how long the effects of the crisis will last.

**Short, medium and potential long-term economic and behavioural impacts of the COVID-19 crisis**

The COVID-19 pandemic and the preventive measures implemented by governments have had economic and behavioural impacts on consumers, businesses and online platforms. With the lockdown measures, most activities (work, communication, education, entertainment) have moved online. Due to the impact of the crisis on the economy and employment, consumers have consumed less or prioritised products more aligned with their immediate needs or values. The COVID-19 crisis has increased the use of online services and the breadth of users. It is difficult to forecast the extent to which these changes will last, but new habits may have formed during the pandemic, and due to the lasting uncertainty, consumers expect that the COVID-19 crisis will continue to affect their life, work and finances for an undefined period of time. At the same time, the restrictive measures have highlighted the importance of certain face to face activities, therefore it can be expected that consumers will go back to a mix of online and offline activities post COVID.

The pandemic and restrictions are severely affecting labour markets, economies and companies, including global supply chains, leading to different business disruptions across sectors in terms of sales, revenues and employment. Overall, at least half of businesses have experienced a decrease in demand and revenues in spring 2020 due to the restrictions. Businesses in the tourism, hospitality, transportation and event-focused sectors have experienced the hardest economic shocks from the pandemic and social distancing measures. The crisis also affected the operations of supply chains and led to a reduction of production. Although unemployment rates have been contained by government interventions, future economic outlooks appear negative and will depend on the duration of the COVID-19 crisis, the rebound in demand after the crisis, and the government support measures. While the digitalisation of businesses was already underway, the pandemic has considerably accelerated this transition and it can be expected that that the businesses that have digitalised their processes, moved to online business models or increased their use of online platforms will keep these in place beyond the crisis. The successive business surveys conducted for the Observatory study show an increasing dependency of business users on online platforms in 2020, with limited switching and multihoming during the COVID-19 crisis despite a decrease of revenue generated through the platforms. Recognising that their success is often linked to their business users, several platforms implemented measures to support their business users during the crisis, ranging from written guidelines to reduction of fees.

Overall, the impact of the COVID-19 crisis on online platforms has been linked to the changes in consumer behaviour and businesses users’ economic situation and dependence. Data suggest that the traffic share and revenues have increased for social media, search engines and some national marketplaces while they have decreased for platforms in the tourism and travel sectors. The top 5 platforms (Google, Apple, Facebook, Amazon, Microsoft) have been quite resilient and recorded profits in 2020. In addition, the pandemic led to
an acceleration of the digital transition of sectors that were still very much offline (e.g. health, education), and to the emergence of new platforms in these fields.

**Effects on mergers and acquisition activities**

Before the current crisis, the top online platforms such as Google, Amazon, Facebook, Apple, Microsoft (GAFAM), but also Verizon, demonstrated a high activity in the field of M&A, purchasing a large number of companies to either strengthen their current products and services or expand into adjacent markets and consolidate their ecosystem. Despite the COVID-19 crisis, the GAFAM have maintained the pace of their M&A activities over 2020, and the announced deals reflect a continuation of their previous strategy. Considering that the COVID-19 crisis has increased the reliance on online platforms and did not affect their revenues, one can expect that the large online platforms will be able to continue their M&A activities in the future.

Since the threshold for EU merger review is based on the monetary turnover of the firms involved in the concentration, many acquisitions of small promising firms may occur below the radar of the EU competition authorities. However, the recent Digital Market Act proposes to introduce the obligation for large platforms designated as gatekeepers to notify the Commission of any intended concentration with another digital provider within the meaning of the EU Merger Regulation. This should enable the Commission to detect any acquisition of nascent potential rival that could foreclose competition.

**Political impacts of the COVID-19 crisis**

Digital issues have been high on the EU political agenda for the past decade, and continue to be with the Digital strategy of the Von der Leyen Commission ‘Shaping Europe’s digital future’. During the COVID-19 pandemic, as companies and consumers moved online for work, communication and entertainment, the response from online platforms to the spread of illegal and harmful content became even more scrutinised by regulatory and consumer protection authorities. With the pandemic, some illegal activities become even more harmful when they can affect consumers’ health, for example with unsafe products or false claims of cures. Other practices such as the spread of disinformation may limit the effectiveness of the official efforts by health authorities and fuel hatred or violence. The surge of phishing and cyber-attacks towards essential activities have also exposed the weaknesses and risks of digital services. The measures put in place by online platforms to protect consumers from COVID-19 related scams and to tackle illegal content and disinformation have demonstrated their capacity to detect and take down illegal goods and content, although the measures have been inconsistently applied across platforms and did not fully contain the flow of illegal and harmful goods and content online.

The pandemic has highlighted the dependence on online services and exposed their weaknesses, amplifying existing issues and confirming the need to regulate online platforms to mitigate the issues encountered with more obligations, transparency and accountability. The crisis has also highlighted the need to increase digital preparedness with better access to digital infrastructure and digital literacy to avoid excluding some parts of the population and enabling citizens to identify disinformation. The recently announced EU legislative and policy initiatives in the digital area already aim to tackle the short-term impacts of the crisis in terms of emerging risks and needs, while the long-term impacts remain to be assessed to define any additional long-term policies.
1. Rationale and objectives

The COVID-19 pandemic has created a unique situation where confinement measures and closure of frontiers have led all sectors of industry and society to digitise at lightning speed in order to be able to pursue their activities. Although digitalisation of traditional sectors could already be observed before the COVID-19 pandemic, the latter has significantly accelerated its pace, and exposed the opportunities and weaknesses of the platform economy.

This analytical paper focuses on the structure of the online platform economy post COVID-19 outbreak and is prepared in the context of the Study on “Support to the Observatory for the Online Platform Economy”. This analytical paper will analyse three key dimensions of impact:

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2. Possible impact on the structure of digital markets and existing incentives for M&A activities by large gatekeeper players;
3. Assessment of existing or potential political impacts of COVID-19.

The present report is based on a literature review, complemented by semi-structured interviews and the results of the second wave of the business survey. The next section (Chapter 2) describes our methodological approach for this analytical paper. The following sections (Chapters 3, 4, 5) present our findings on the three dimensions of impacts, and Chapter 6 presents our conclusions. Annex 1 provides the list of references for this paper, Annex 2 the list of stakeholders consulted, Annex 3 the interview guides and Annex 4 the survey questions related to this analytical paper.
2. Methodological approach

2.1. Research framework

Based on the study objectives and questions guiding this analytical paper, the table below presents our research framework including the research questions with the corresponding overall indicators and methodological approach to address them.

**TABLE 1: RESEARCH QUESTIONS AND METHODOLOGY**

<table>
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<th>Research questions</th>
<th>Indicators</th>
<th>Methodology</th>
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| 1. Assessment of COVID-19 effect on online platforms, businesses and other users: the immediate, medium and potential long-term effect | • What was the immediate effect of the COVID-19 pandemic on the different sectors and business models of the online platform economy, such as social media, e-commerce, on-line conferencing and e-learning providers, apps, etc.  
  o What were the effects on, in particular SME, businesses using online platforms to reach their customers (B2B and B2C)? How has the uptake of digital services been affected by the crisis in terms of new users as well as earlier users?  
  o What kind of support (or absence thereof) did platforms provide to their business users e.g. financial assistance (direct donations, waivers of fees, commission), strategic or technical assistance (training, guidelines)?  
  o How were other platform users including consumers affected, e.g. changing user behaviour, dependencies, data collection policies, mobile location data, health data, tracing apps etc.  
  • What are the more medium to long-term impacts of the crisis? (e.g. sustained changes in e-commerce, emergence of new/alternative platforms, issues such as the creation of new dependencies, lock-in situations, problems with multi-homing and switching, sustained user and consumer behavioural changes? | • Restrictions and lockdown measures in place across countries  
  • General indicators (GDP, employment)  
  • Changes in consumer behaviour (e.g. consumer confidence index, bandwidth usage, online traffic, online shopping activity, online subscriptions)  
  • Effects on businesses and SMEs using online platforms (e.g. demand/supply, revenue, sales, impacts on supply chain and production, jobs, business confidence index, dependence on platforms, multi-homing and switching, support received from platforms)  
  • Effects on Online Platforms activity (e.g. traffic share, revenues, profits, emerging platforms) | • Literature and desk research  
  • Specialized market data sources (e.g. Similarweb, Statista, Eurostat, etc.)  
  • Interviews with business and consumer associations, platforms and experts  
  • Online survey with business users |
| 2. Possible impact on structure of digital markets and existing incentives for M&A activities by large gatekeeper players | • What is the dimension of target companies in terms of different possible criteria (turnover, user base, acquisition value) and have any emerging trends been observed post COVID-19 crisis?  
  • What is the main activity of the target company, also in comparison with that of the acquirer (research or not, degree of vicinity of the services/markets served, client/outsourcing, overlap of user base)? | • Characteristics of mergers and acquisitions before and after the COVID crisis in terms of target companies (activity, turnover, user base, acquisition value), type of investment (purely financial investment or controlling-stake), destiny of the acquired company (remains | • Literature review and desk research  
  • Specialized market data sources (e.g. Crunchbase data on M&A)  
  • Interviews with online platforms, experts |
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<tr>
<th>Research questions</th>
<th>Indicators</th>
<th>Methodology</th>
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<tr>
<td>• To what extent acquisitions observed have involved purchase of non-controlling</td>
<td>autonomous, integrated within the platform ecosystem, discontinued)</td>
<td>• Literature review and desk research</td>
</tr>
<tr>
<td>stakes by the acquirer (possibly excluding purely financial investments)?</td>
<td>• Mergers and acquisitions reviewed under mergers or antitrust scrutiny</td>
<td>• Specialized market data sources (Similarweb, Statista, Eurostat, etc.)</td>
</tr>
<tr>
<td>• In case of pure financial investments, how many cross-shareholding examples can</td>
<td>procedures at EU and national level</td>
<td>• Interviews with business and consumer associations, platforms and experts</td>
</tr>
<tr>
<td>be observed? In how many cases did the financial investment include an option to</td>
<td>• Criteria and threshold for merger review in digital field</td>
<td></td>
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<td>acquire control at a later stage?</td>
<td>• Changes in mergers &amp; acquisitions strategies</td>
<td></td>
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<tr>
<td>• Which portion of these acquisitions and cooperations have been assessed at EU/</td>
<td>• Changes in investment activity of large online platforms</td>
<td></td>
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<td>national level in the context of merger scrutiny procedures or subject to antitrust</td>
<td>• Changes in competition landscape resulting from mergers and acquisitions</td>
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<td>scrutiny?</td>
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<td>• What has been the destiny of the target company/service (along different time</td>
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<td>benchmarks, i.e. 1-3-5 years?), e.g. the company/service remained in the market</td>
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<td>autonomously, with no substantive changes in terms of service policy, including</td>
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<td>data management and/or provision of services/technologies to third parties; it</td>
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<td>was integrated in the wider ecosystem of the gatekeeper company, in terms in</td>
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<td>particular of data management, interoperability of services, access by third</td>
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<td>parties/professional users, identification policies, etc...; it was discontinued</td>
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<td>(&quot;killer acquisition&quot;).</td>
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3. Assessment of existing or potential political impact of COVID-19

| • Could the economic recovery from the COVID-19 crisis represent an opportunity    | Legislation and co-regulation applicable to online services               | • Literature review and desk research                                       |
| for policy makers to set more ambitious goals for the digital agenda?             | • Sectors under scrutiny and prevalence of issues during the COVID crisis | • Specialized market data sources (Similarweb, Statista, Eurostat, etc.)    |
| • What potential political responses can be observed or expected (e.g. enhanced   | (e.g. scams, price gouging, disinformation, hate speech, cybersecurity     | • Interviews with business and consumer associations, platforms and experts |
| responsibility of online platforms for illegal or harmful content)?              | issues, etc), and related responses from platforms and from public        |                                                                          |
| • Are there any signs that certain sectors are under stricter scrutiny than      | authorities                                                                |                                                                          |
| others? Which and how? (E.g. e-commerce (including the spread of illegal goods, | • Upcoming legislation in digital policy and lessons from the COVID crisis |
| services and content as well as harmful content), online conferencing and e-      |                                                                          |                                                                          |
| learning, social media (including control of misinformation, hate speech, illegal |                                                                          |                                                                          |
| goods, services and content), public administration and voting, cybersecurity    |                                                                          |                                                                          |
| risks.)                                                                          |                                                                          |                                                                          |
| • What are the potential long-term drawbacks (e.g. accessibility of online facilities, | • Legislation and co-regulation applicable to online services               | • Literature review and desk research                                       |
| data policies (collection, access and sharing), sustained dependencies, increasing | • Sectors under scrutiny and prevalence of issues during the COVID crisis | • Specialized market data sources (Similarweb, Statista, Eurostat, etc.)    |
| monopolies and conglomerates of companies that could strengthen their network   | (e.g. scams, price gouging, disinformation, hate speech, cybersecurity     | • Interviews with business and consumer associations, platforms and experts |
| effects during and through the crisis (including owing to the breakdown of other  | issues, etc), and related responses from platforms and from public         |                                                                          |
| channels) and raise entry barriers for rivals and newcomers).                    | authorities                                                                |                                                                          |

Source: own elaboration
2.2. Data collection

The analytical paper is based on literature review and desk research, complemented by semi-structured interviews and a survey with business users of online platforms.

As a first step, we conducted a review of literature following systematic principles using the EBSCO, ISI Web of Science and Scopus databases. Since very few relevant scientific reports and articles could be identified in academic databases due the recency of the pandemic and lack of sufficient hindsight, we complemented our literature review by extensive online desk research to gather all relevant (non-academic) publications, including “grey” sources, related to the research questions. The complementary desk research exercise was conducted by a general web search and snowballing from identified literature. We covered publications derived from a variety of other information sources, including reports from national and EU public authorities, international organisations, business or consumer associations, expert blogs and market research reports. The full list of references reviewed and used in this paper are presented in Annex 1. All references were reviewed and categorised according to the three dimensions of the paper, to facilitate comparison and analysis. In addition, we conducted a review of data and statistics to support the research questions. We explored data from official sources such as Eurostat (e.g. Structural business statistics (SBS) and annual national accounts), Eurobarometer, Dealroom, the OECD, the World Bank, the World Economic Forum, as well as other market databases and sources such as Statista, Crunchbase, Facebook/OECD Future of Business survey, Internet Live Stats, SimilarWeb, Statcounter, etc.

As a second step, we conducted semi-structured interviews with stakeholders and experts to collect additional evidence and perceptions to inform the three research dimensions. In total, we conducted 22 interviews with stakeholders from various groups, including large and medium online platforms, platform associations, business associations, consumer associations and experts. The list of stakeholders consulted for this analytical paper is presented in Annex 2. The interview guides, available in Annex 3, were developed based on the research questions and on the type of stakeholders. Following the interviews, we centralised the notes from the interviews in an interview matrix, to easily compare and analyse the responses by stakeholder type and question.

In addition, we used the results of the business survey (second wave) conducted by the Consortium for this Observatory support study. The survey was carried out in October 2020 and collected 1,990 responses from business users of online platforms across Belgium, the Czech Republic, Germany, Spain, France, Ireland, Lithuania, the Netherlands and Sweden. This survey wave followed a first wave carried out in November-December 2019 which had collected 1,667 responses. The second wave questionnaire included a common block of questions from the first wave to compare some indicators over time, and additional questions to inform the new analytical papers on the impact of COVID-19, multihoming and B2B platform services, as well as questions to monitor the implementation of the EU Regulation on platform-to-business relations (P2B regulation).³ For the purpose of the present analytical paper, we included questions regarding the short term and medium term impacts of the COVID crisis on the business users’ demand, supply, production, revenues, revenues from online platforms, support received from platforms during the crisis, multi-homing and switching. The distribution of respondents across countries and sectors and the survey questions used for this analytical paper are available in Annex 4.

The finding from the literature review and desk research were then triangulated with the interviews minutes and the business survey results to carry out the analysis and address the research questions.

There were inherent limitations to analysing the medium to long-term impacts of the COVID-19 crisis on the economy and behaviours. First of all, this is due to the lack of robust data and consensus to establish any

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prediction. Secondly, the current crisis lacks points of comparison due to its scale and different dimensions (sanitary and economic). Finally, as the crisis is still ongoing and vaccines are only starting to be rolled out, there is still uncertainty on how long the effects of the crisis will last.
3. Economic and behavioural impacts of the COVID-19 crisis

The COVID-19 pandemic and the preventive measures implemented by governments have moved most activities online (work, communication, education, entertainment) and impacted consumers’ behaviour, but also affected businesses’ activities and economic situation. While it is too early to say whether these changes will last, consumers have certainly adopted new habits. On the other hand, the economic uncertainty affects both consumers’ consumption and businesses’ activity, which may result in medium- and long-term effects on employment and investment. The impact on online platforms is the result of these changes in consumer behaviour and businesses users’ economic situation and dependence towards platforms.

The following sub-sections present the short, medium and potential long-term impacts on consumers’ behaviour and activities, businesses’ economic situation and the online platform economy. First, we briefly present the lockdown measures implemented in the wake of the COVID-19 outbreak, and the macro-economic situation. Then, we describe changes in consumers’ behaviour, including in online traffic, online shopping and online subscriptions. Then we present the effects of the COVID-19 crisis on businesses, including the impact on demand/supply, revenues and sales, jobs, the dependence on online platforms and support received from platforms during the crisis, as well as switching/multihoming behaviours. Finally, we report the impact of the pandemic on online platforms, as well as the emergence or success of alternative platforms during the crisis.

3.1. Lockdown measures and macro-economic situation

This section presents the preventive measures taken by governments in spring 2020 following the COVID-19 outbreak, and the macro-economic situation in terms of GDP and employment, which affected consumers’ behaviour and businesses’ economic situation during the pandemic.

The COVID-19 pandemic is an ongoing global pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first cases were identified in December 2019 in Wuhan, China, followed by a global spread.

As of 13 March 2020, the number of new cases became greater in Europe than in China. In order to slow the spread of COVID-19, governments adopted unprecedented measures to restrict contact between people, ranging from closures of shops and educational facilities, to restrictions of travel, movement and social gathering. On March 17, when all countries within Europe had at least one confirmed case of COVID-19, EU Member States agreed on a 30-day ban on non-essential travel of non-EU citizens inside the Union. The timing and restrictiveness of other preventive measures differed across EU Member States but as a result, as of 18 March, more than 250 million people were in lockdown in Europe.

The map below illustrates the different restrictions across EU Member States as of 6 April 2020. Although it can be difficult to cluster the countries by type of measures, considering that the restrictions kept evolving at a different pace across countries, a tentative attempt would distinguish:

- Countries with full lockdown or strict restrictions: Cyprus, France, Greece, Italy, Ireland, Malta, Poland, Romania, Slovenia, Spain.
• Countries with a mix of strict and partial restrictions: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Germany, Hungary, Ireland, Luxembourg, Netherlands, Portugal, Slovakia.
• Countries with mostly partial restrictions or no restrictions: Latvia, Lithuania, Sweden.

FIGURE 1: COVID-19 RESTRICTION MEASURES AS OF 6 APRIL 2020

Due to the restrictions and lockdown measures, the public health crisis started impacting the global economy and the labour market. As illustrated below, clear connections can be noted between the level of stringency of government measures (measured by the Oxford Stringency Index) and the overall level of economic disruption in the first half of 2020.
Overall, the EU GDP contracted by 3.2% in Q1 2020 and by 11.4% in Q2 2020 compared to each previous quarter, mainly due to the decrease in household consumption and investment.\(^2\) The European Economic Forecast estimates an overall 2020 drop of GDP of 7.4% in the EU and a rebound by 4% in 2021, with a return to pre-pandemic levels in 2022.\(^3\)

The figure below demonstrates that GDP growth rates were heavily affected by the COVID-19 pandemic for most countries. It points out some divergence of trends across countries: while most countries showed a significant drop in their GDP growth compared to the previous quarter, some Member States experienced a lower decrease, in particular the Baltic and Nordic countries or Ireland. On the other hand, Mediterranean countries have experienced the biggest GDP drops in Q2 2020. These results can be associated with the stringency level of measures put in place by national governments to address the pandemic (see Figure 2). Comparing the GDP disruptions with the level of digital competitiveness of Member States measured by the Digital Economy and Society Index (DESI)\(^4\) it also appears that countries with a high level of digital preparedness (Nordic, Baltic countries, Ireland) have experienced a less severe economic shock than countries with a lower DESI score (Mediterranean, Balkan countries). However, the level of digital preparedness may only be one of the factors impacting the economy during the COVID-19 crisis, along with the level of restrictions put in place, and the structure of national economies including the prominence of sectors that could easily or not move online during lockdown.


Despite a sharp decline in the economic activity, the impact on unemployment has been somewhat contained. During Q1 2020, unemployment in the EU only fell by 0.1% and by 2.7% in Q2 2020, due among others to government-supported short-time work schemes (see also section 3.3.2). The OECD Employment Outlook 2020 warns of “unprecedented and long-lasting effects” of the pandemic and forecasts a 6% annual decline in global GDP for 2020 and a 9.4% plunge in OECD-wide unemployment rate in 2020 and still 7.7% in 2021.

### 3.2. Consumer behaviour

The impact of the pandemic on the economy and employment affects consumers’ economic situation, including their consumption and savings but also their confidence in the future. Based on the OECD’s Consumer Confidence Index (CCI), consumers’ confidence towards their future economic situation has started decreasing significantly in February 2020 before improving in May and decreasing again in October, thus following the COVID-19 waves, as shown in the figure below. This indicator provides an indication of future developments of households’ consumption and saving, based on answers regarding their expected financial situation, their sentiment about the general economic situation, unemployment and capability of savings. The drop till lowest values in the confidence index is observed in Latvia and Slovenia, although they experienced low or moderate restrictions and economic disruptions. In Spain, the CCI has plunged in February and remained at a low level since May, reflecting very strict restrictions during the first wave and an important GDP drop. On the other hand, the highest CCI levels over 2020 were in Lithuania, Denmark and Sweden, which experienced only few restrictions and economic disruptions during the COVID-19 crisis.

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5 Short-time work (STW) schemes are defined as ‘public programmes that allow firms experiencing economic difficulties to temporarily reduce the hours worked while providing their employees with income support from the State for the hours not worked’. [https://www.eurofound.europa.eu/observatories/eurwork/industrial-relations-dictionary/short-time-work](https://www.eurofound.europa.eu/observatories/eurwork/industrial-relations-dictionary/short-time-work)


The COVID-19 pandemic and the preventive measures implemented by governments have fundamentally impacted not only the global economy but also the way consumers behave, shop, work or play. Due to the lockdown measures, most businesses and consumers had to move online to be able to pursue their activities. Although digitalisation of businesses and consumers was already well underway, the pandemic accelerated this trend, by increasing the number of online users and the breadth of users, including segments of the population that were not using such services before or not as much. It is hard to forecast how long and how deep these changes are, but short- and medium-term consumer behaviour has certainly been significantly affected by the pandemic and the lockdown measures.

As presented in the sections below, data on online traffic share of marketplaces, online retail sales and usage of online services illustrate the recent changes in consumers’ behaviour and shifts in consumption.

3.2.1. Online traffic

With the lockdown measures, almost everyone moved online for work, communication and entertainment, which translated in an increase in internet traffic and demand for broadband. Some broadband operators experienced as much as a 60% increase in Internet traffic compared to before the crisis. Between December 2019 and March 2020, bandwidth increased by 22.3%, more than four times that of the prior quarter. For example, Germany experienced an increase from 11.2% to 16.5% while Italy, handled 39.9% more bandwidth between December 2019 and March 2020.9

Online traffic share data from before and during the lockdown measures indicates some significant changes. When comparing the data on traffic share of online platforms by sector in March 2020 vs August 2019, we can see that people started using more search engines, social media and online entertaining media, while the

traffic share of marketplaces (that include OTAs) decreased. The increase in the traffic shares of search engines, online media and social media reflect the fact that people spent more time at home due to lockdown and looked for information, communicated and entertained themselves online more than before. On the other hand, the traffic share of marketplaces decreased as one of its components, OTAs, were less used due to travel restrictions, while consumers may have consumed less on marketplaces due to the economic uncertainty.

FIGURE 5: TRAFFIC SHARE % CHANGE, MARCH 2020 VS AUGUST 2019

![Traffic share % change graph]

Source: Own elaboration of data from Similarweb (August 2019, March 2020)
Note: Traffic share is % of a website traffic in the traffic of a whole country.

Recent data show strong shifts in the distribution of online traffic across different sectors. While online traffic for supermarkets increased by over 60% in June compared to the reference period in January and February 2020, the online traffic of tourism websites dropped by almost 50%. Surprisingly, online traffic in retail healthcare decreased by almost 40%, while, for example, sports equipment, cosmetics and jewellery websites have grown their online audience.
In the tourism sector, which has been severely hit by the lockdown measures and travel restrictions, data show a decrease in the use of OTAs and an increase in direct bookings via phone or hotel websites. This trend reflects the need of travellers to establish direct contact with hotels to potentially ask questions in the context of the pandemic. In addition, while OTAs tend to target international trips, over the summer 2020 most people travelled domestically, where direct bookings are more common.

3.2.2. Online shopping

The pandemic and lockdown measures have resulted in changes in consumers’ shopping behaviour. The uncertainty in the economic outlook has led many consumers to be mindful of their spending and to cut non-essential shopping. Consumers focused on value, availability and quality and sometimes tried different brands or retailers than they were used to before the lockdown. Based on surveys, the pandemic has created a priority for local shopping, and also shifts to more organic suppliers.

According to research, consumers started spending less during the lockdown and retail sales went down, although those who were shopping online before tend to use online marketplaces more often. On the one hand, the closure of physical outlets has boosted the services of online marketplaces and online grocery or

11 Skift Research (2020). Hotel distribution 2020 PART I The channel mix
14 Hartman M. (2020). Consumers are buying less while shopping online more. Retrieved from https://www.marketplace.org/2020/05/14/consumers-are-buying-less-while-shopping-online-more/
food delivery. For example, since mid-March of 2020, Amazon has hired 175,000 workers in the US\textsuperscript{15} to meet the increasing demand for online shopping and expects 125,000 to be turned into permanent jobs. On the other hand, in Europe most national e-commerce associations assume that the COVID-19 crisis will lead to a decline in sales and a release of staff.\textsuperscript{16}

Growth trends in online retail have followed drastic changes due to the COVID-19 pandemic and lockdown measures (Figure 7), as consumers shifted from offline to online purchases, mainly in food and sanitizing products (Figure 8). Grocery e-commerce particularly increased in the second week of March when the lockdown restrictions were just announced or imposed in some countries, while the rest of e-commerce experienced a slight increase compared to the data from last year.\textsuperscript{17}

\textbf{FIGURE 7: YEAR ON YEAR GROWTH IN WEEKLY ONLINE ORDERS IN RETAIL INDUSTRY DURING THE COVID-19 IN SELECTED COUNTRIES IN EUROPE (2020)}

\begin{center}
\includegraphics[width=\textwidth]{figure7.png}
\end{center}

Source: COVID-19 Global Economic Impact on Online Retail (Statista)\textsuperscript{18}

With the lack of clarity and information on how long the restrictions would last, consumers started making reserves in case of shortages of certain goods in the future, leading actually to supply disruptions in food, hygiene products and other goods. In the UK and Germany, for example, health and hygiene products were at the top of the shopping list among consumers, followed by cleaning supplies, food and drinks and home entertainment products (Figure 8). Although the online traffic share of retail healthcare decreased (Figure 6), it is likely that consumers continued to buy health and hygiene products offline since supermarkets and pharmacies remained open even during lockdown.

\textsuperscript{15} Amazon (2020). Amazon has hired 175,000 additional people. Retrieved from https://blog.aboutamazon.com/company-news/amazon-hiring-for-additional-75-000-jobs


A UNCTAD survey shows that increases in online purchases were stronger among women and people with tertiary education, and for people aged 25 to 44 compared to younger ones.\(^{20}\)

### 3.2.3. Online subscriptions and services

Another important indicator that reflects behavioural changes in consumers is the usage of online services. Online entertainment media and video streaming have been on the rise for over a decade, but the number of subscribers drastically increased lately, as people spent more time at home due to lockdown measures.\(^{21}\) For example, this year Netflix has seen a significant increase in subscriber numbers: almost 16 million people created accounts in the first three months of 2020, what is almost double the final months of 2019, and the company hired an additional 2,000 customer support staff to handle the increased interest.\(^{22}\)

Since in many countries, food and beverage outlets were closed or with restricted capacity following the COVID-19 restrictions, the food delivery and takeaway business has gained momentum and continues to


grow. Supermarkets have seen an unprecedented demand for food, causing a short circuit of the delivery system, and meal delivery platforms have seen an enormous increase in apps downloads.\(^{23}\)

Many other services switched to online platforms or apps during the pandemic, such as education, sports, communication, etc. In particular, the calling and videoconferencing applications saw a large increase in take up. In March 2020, the cloud-based videoconferencing application Cisco Webex was peaking at 24 times higher volume than usual. In the same period, Facebook experienced increases of 100% on voice calls and 50% on text messaging over its WhatsApp, Facebook Messenger and Instagram platforms. Google reported similar increase of its videoconferencing products.\(^{24}\)

According to the performance branding company WITHIN, there have also been significant upward trends in both revenue and conversion of subscription services and convenience (pay as you go) services (e.g. online media, fitness-subscription services, educational subscription etc.). For example, the number of health and fitness apps installs peaked in May 2020 with a 5.6% year on year increase, and 94% of users of such apps declared that they would continue to use these apps post COVID.\(^{25}\)

**FIGURE 9: YEAR ON YEAR CHANGE IN SUBSCRIPTION AND CONVENIENCE SERVICES**

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3.2.4. Potential medium to long-term impacts

Some of the observed changes in consumers’ behaviour are expected to last as many people anticipate that COVID-19 will continue to affect their work, finances and many other aspects for an undefined period of time. According to psychological research, on average it takes 66 days to form a new habit.\(^{27}\) In many countries, the lockdown period lasted even longer, therefore certain new habits have been formed, e.g. avoiding crowded places, keeping distance in queues, higher tendency for online purchases etc. Since the COVID-19 pandemic emerged nearly a year ago and there is no certainty on how long the new reality will last, it is likely that many new habits have been adopted and may last in the long-term. Indeed, it takes time to acquire new habits, but once consumers have adopted them, it may be difficult to go back to prior behaviours. In particular, using digital tools to work, connect, buy, learn and play has become more normal. According to surveys with consumers, about 10% of respondents shopped online for the first time due to the COVID-19 crisis, and 37% of consumers have considered shifting to online shopping after COVID-19.\(^{28}\) More people expect to make a portion of their purchases online post-COVID-19 than before in France, Germany, Spain and Italy.\(^{30}\)\(^{19}\) However, another survey shows that half of consumers in Germany and Italy intend to equally use online shops and physical stores once the pandemic is over.\(^{31}\)

According to the OECD, the increase in platform usage and number of active users during the pandemic varies across countries according to the level of digital preparedness, that can be based on the level of technological and economic development, access to digital infrastructure and digital literacy. The Digital Economy and Society Index (DESI) is a composite index based on a set of indicators organised around five dimensions: connectivity, human capital, use of internet, integration of digital technology, and digital public services. Digital preparedness may have facilitated the shift to online services to mitigate the disruptions of physical activities, and could influence the durability of new digital habits. As mentioned in section 3.1, countries with a higher DESI score appeared to have experienced a less severe economic shock during the crisis than countries with a lower DESI score. The OECD research also shows that the activity of online platforms not requiring physical contact (e.g. marketplaces, food delivery) increased during the pandemic while the activity of platforms requiring physical contact (e.g. restaurant booking, accommodation, transportation) decreased over the same period. The increase in platform activity not requiring physical contact appears more persistent in countries with strict containment measures than in soft-containment countries, suggesting that stricter containment measures may have induced more long-lasting changes in how people and businesses use online platforms and digital technologies.\(^{32}\)

As presented in the graph below, markets that used to be mainly offline, such as food groceries, education and health, have experienced high digital adoption rates and it is likely that these trends will continue after the COVID-19 crisis.

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3.3. Business users of online platforms

As discussed in the previous section, the COVID-19 crisis is impacting not only people’s health but also businesses and the economy due to the restrictions and lockdown measures put in place across countries. The pandemic is severely affecting labour markets, economies and companies, including global supply chains, leading to different business disruptions in terms of sales, revenues and employment. The pandemic and related restrictions have also accelerated business digitalisation and the use of platforms, and it can be expected that once new processes or business models are developed, these will remain in place in the medium to long term.

3.3.1. Demand, supply and revenues

The lockdown restrictions have forced many businesses to terminate in-person operations. According to the Facebook/OECD/World Bank survey, between January and May 2020 26% of SMEs closed — in some countries, more than 50%. Consumer-focused sectors have faced the most difficulties: 54% of
tourism agencies and 47% of hospitality and event-focused SMEs were closed during the observed period.32

According to our business survey conducted for the Observatory, in spring 2020 half of companies experienced a strong or moderate decrease of demand, and 19% reported a decrease of their revenues by half. In the summer 2020, 38% of companies experienced a strong or moderate decrease of demand and 12% reported a decrease by more than half of their revenues, showing a slight improvement after the lifting of restrictions. Country-wise, the responses to our business survey show that the strongest decreases in demand were experienced in Spain and the Czech Republic, where lockdown restrictions were particularly strict, while the lowest share of businesses registering a strong decrease were in Sweden and the Netherlands which could be linked to softer restrictions (see also the relation between the stringency index and GDP in Section 3.1). In all countries, the situation improved in the summer after restrictions were lifted.

FIGURE 11: CHANGE IN DEMAND ACROSS COUNTRIES (% OF RESPONDENTS)

Did you experience a change in end-user (consumer) demand and consumption of your products or services compared to the pre-covid-19 period?

<table>
<thead>
<tr>
<th></th>
<th>Strong decrease</th>
<th>Moderate decrease</th>
<th>No change</th>
<th>Moderate increase</th>
<th>Strong increase</th>
<th>Don’t know/ Not applicable</th>
</tr>
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<tbody>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>25.2</td>
<td>22.6</td>
<td>35.5</td>
<td>9.6</td>
</tr>
<tr>
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<td>24.3</td>
<td>22.5</td>
<td>36.7</td>
<td>9.8</td>
</tr>
<tr>
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<td>28.2</td>
<td>20.8</td>
<td>32.5</td>
<td>13.3</td>
<td>8.6</td>
</tr>
<tr>
<td>IE</td>
<td>22.8</td>
<td>19.3</td>
<td>19.6</td>
<td>21.8</td>
<td>16.2</td>
<td>7.8</td>
</tr>
<tr>
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<td>24.3</td>
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<th>Moderate decrease</th>
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<th>Moderate increase</th>
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</tr>
<tr>
<td>FR</td>
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<td>23.3</td>
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<td>10.9</td>
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<tr>
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<td>1.3</td>
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</table>


In order to explore the relation between the change in demand and certain characteristics of the companies we produced a two-dimensional mosaic plot below, which represents the conditional relative frequency for a cell in the contingency table and helps to discover the association between two variables. The size of the tile is proportional to the percentage of cases in that combination of levels.

Based on the Observatory business survey, we explored the relation between the level of businesses’ dependency on the online platforms and changes in consumer demand for these companies’ products/services during spring and summer 2020 compared to the same periods of the previous year.

FIGURE 12: MOSAIC PLOT: CHANGE IN CONSUMER DEMAND AND CONSUMPTION AND LEVEL OF BUSINESSES’ DEPENDENCY ON THE ONLINE PLATFORMS (% OF RESPONDENTS)

![Mosaic Plot](image)

Note: Spring: March – May 2020. Summer: June – August 2020. The values inside the boxes show the percentages share of groups of companies. See share of respondents by country in Annex 4.

As we can see from the graphs above, the largest shares of companies are those that are somewhat and very dependent on the online platforms and experienced strong or moderate decrease in demand of their products or services. It is important to note that in spring more companies experienced a decrease compared to the summer period. For example, in spring 12.8% of companies were in the group of “very dependent” on the online platforms experiencing moderate decrease in demand and 11.1% experienced a strong decrease, whereas in summer these values changed to 12.5% and 6.4% respectively. Interestingly, in the summer the largest group of companies (12.8%) are those that are very dependent on the online platforms and having a moderate increase in the consumer demand. These results confirm the findings of Section 3.2 on consumer behaviour during the COVID-19 crisis, showing that although people spent more time on online platforms during lockdown, they also reduced their spending during the first wave to focus on essential products, due to the restrictions of physical activities (e.g. travel) and economic uncertainty.

The global Facebook/OECD/World Bank survey with small and medium businesses conducted in May 2020 showed that the majority of respondents (62% globally, and 61% in Europe) reported that they generated lower
sales in the previous 30 days compared to the corresponding period in 2019. According to a survey by SMEunited, more than 90% of SMEs reported a decrease in turnover as a consequence of the crisis, due to the partial or complete interruption of activities, problems with supply chains or unavailable employees. As a result, about 40% of SMEs report liquidity problems, especially in the hospitality, retail and construction sectors.

Similarly, in the Observatory business survey, 59% of companies reported a decrease in revenues in spring 2020 and 48% in the summer 2020 compared to previous year. Country-wise, the trends are similar as for the decrease in demand (Figure 11). The sectors with the largest number of companies reporting a decrease in demand during spring and summer 2020 were the accommodation and hospitality sector, the arts, entertainment and recreation sector and restaurant/cafés and food services. As shown in the figure below, at least one third of companies in these sectors experienced a decrease of revenue by more than 50% in spring 2020. The situation slightly improved for most companies in summer 2020, but these sectors remained the most affected.

---

On the other hand, pure e-commerce businesses in Europe experienced positive fluctuations in their weekly growth rates since the start of 2020. The highest growth in revenue took place in the week ending May 17, with a decrease in June reaching the level of January and below. In Germany, data from the e-commerce association BEVH show an increase of e-commerce sales of 10% in the first half of 2020 compared to 2019.\textsuperscript{35}

Source: Second wave of the Observatory business survey, October 2020 (N= 1990)
Note: See share of respondents by sector in Annex 4.

The lockdown measures and travel restrictions have also disrupted global value chains, affecting B2B activities and especially the production and delivery of goods. In the industrial sectors, such disruptions have highlighted the dependency of European businesses on non-EU suppliers and may lead the former to diversify or relocate their supply chains.\textsuperscript{37} In the Observatory business survey, 59% of companies reported that the COVID-19 crisis and lockdown measures affected the operation of their supply chain. Across countries, three quarters of businesses in Ireland saw their supply chain affected and 71% in Spain, which were both among the countries with the strictest restrictions. On the contrary in Sweden, where restrictions were the softest, nearly half of respondents did not see their supply chain affected.

\textbf{FIGURE 15: IMPACT OF THE COVID-19 CRISIS AND MEASURES ON SUPPLY CHAINS (% OF RESPONDENTS)}

<table>
<thead>
<tr>
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<th>Yes</th>
<th>Don’t know</th>
</tr>
</thead>
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<td>SE</td>
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<tr>
<td>NL</td>
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<td>59.5</td>
<td>5.2</td>
</tr>
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<td>LT</td>
<td>25.4</td>
<td>70.6</td>
<td>4.2</td>
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<td>61.7</td>
<td>10.2</td>
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<td>FR</td>
<td>32.3</td>
<td>62.2</td>
<td>5.4</td>
</tr>
<tr>
<td>ES</td>
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<td>71.2</td>
<td>7.7</td>
</tr>
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<td>DE</td>
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<td>57.2</td>
<td>7.7</td>
</tr>
<tr>
<td>CZ</td>
<td>28.8</td>
<td>61.7</td>
<td>10.2</td>
</tr>
<tr>
<td>BE</td>
<td>43.5</td>
<td>28.3</td>
<td>28.2</td>
</tr>
</tbody>
</table>


Note: See share of respondents by country in Annex 4.


In addition, 40% of businesses reported in the Observatory business survey that they reduced the production of their products or services due to the COVID-19 crisis and measures. Across countries, the share of businesses having reduced or stopped the provision of their products or services was the highest in Spain, France, Czech Republic and Ireland, all of which were affected by strict to very strict restrictions. On the contrary, the highest share of respondents not having seen their production affected by the COVID-19 crisis were in Germany, Netherlands and Sweden, where there was no severe lockdown.

**FIGURE 16: IMPACT OF THE COVID-19 CRISIS AND MEASURES ON PRODUCTION (% OF RESPONDENTS)**

Did the COVID-19 crisis and lockdown measures affect the production of products or services by your business?

- Yes, we reduced the production of our products and services
- Yes, we stopped the production of our products and services
- Yes, we increased the production of our products and services
- No, it did not affect the production of our products and services
- Don't know

<table>
<thead>
<tr>
<th>Country</th>
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<th>LT</th>
<th>IE</th>
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<tr>
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<tr>
<td></td>
<td>46.4</td>
<td>35.4</td>
<td>12.4</td>
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</tr>
</tbody>
</table>

Source: Second wave of the Observatory business survey, October 2020 (N= 1990)

Note: See share of respondents by country in Annex 4.

### 3.3.2. Employment

The lockdown measures led to a reduction in business activity and in the number of hours worked. The impact on unemployment has been somewhat contained, with only a 0.1% increase of unemployment in the EU in Q1 2020 and by 2.7% in Q2 2020, thanks to government measures such as short-time work schemes implemented to decrease the burden on businesses (see Section 3.1). However, 22% of European SMEs in operation reported that they had reduced their workforce as a result of business closures and reduced sales with the COVID-19 pandemic. The number of hours worked decreased by 11.2% in Q2 2020 in the EU compared to the previous quarter.

Overall, the average unemployment rate across the EU-27 started increasing in the Q1 2020 for the first time since 2013 (Figure 17). Across Member States, similar patterns as before the crisis can be observed, with Greece...
and Spain showing the highest unemployment rates, while Czechia, Poland and the Netherlands registered the lowest rates in the first quarter of 2020.

**FIGURE 17: UNEMPLOYMENT RATES IN EU-27 AND EUROZONE, SEASONALLY ADJUSTED (JANUARY 2005 – JULY 2020)**

![Unemployment Rates Chart](image)

Source: Eurostat (une_rt_m)

The summer\(^{41}\) and autumn\(^{42}\) economic forecasts from the European Commission predict that several factors may slow the employment rate’s return to the pre-pandemic level. First, governments may not be able to indefinitely offer short-term work schemes across all sectors. In the sectors hit hardest by the crisis, business downsizing and bankruptcy may be unavoidable if the demand level does not come back to pre-crisis levels, which can be hindered by the prolongation of restriction measures and consumer uncertainty. Hiring decisions may be affected by this same uncertainty. Finally, the impact of the shift to remote work remains to be seen but could favour certain sectors and high-skilled workers.

The extent of the impact of COVID-19 on businesses will depend on the duration and seriousness of the outbreak, as well as on when the economic activity restarts and by how much it rebounds, both of which will be influenced by the extent of government interventions.\(^{43}\) The future outlook will also depend on the sectors, the restrictions affecting them and the ability to regain consumer trust. For example, World Travel and Tourism Council estimates that 197 million travel industry jobs could be eliminated worldwide (including 18.3 million in the EU) in 2020 as a result of the COVID-19 pandemic, which would represent about 60% of jobs in

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According to OECD business confidence index\(^4\), which is based on opinion surveys on developments in production, orders and stocks of finished goods in the industry sector, in the first quarter of 2020 businesses have lowered significantly their expectations of future revenues and sales, especially in Estonia, Slovakia and Ireland, (Figure 18), the latter having experienced strict restrictions. On the other hand, the highest business confidence in 2020 was registered in Latvia, Lithuania and Sweden, that experienced lower restrictions and economic disruptions. Business confidence has further consequences in terms of future investment and employment.

**FIGURE 18: BUSINESS CONFIDENCE INDEX (BCI) IN EU27**

![Business Confidence Index](https://data.oecd.org/graphs/business-confidence-index-bci.htm)

Source: OECD
Note: OECD total highlighted, grey lines present EU-27 Member States. Numbers above 100 suggest an increased confidence in near future business performance, and numbers below 100 indicate pessimism towards future performance

### 3.3.3. Dependence and support from online platforms

In some sectors, businesses and especially SMEs are dependent on online platforms for sales, advertising or communication. During the pandemic, several online platforms took measures to guide or support businesses.

Small businesses are becoming increasingly reliant on online platforms to reach customers. The online advertising services offered by large platforms (e.g. Google, Facebook) enable small businesses to access a broader audience, better target consumers and increase the efficiency of their advertising at low cost.

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Businesses use social media to present their products and communicate with customers. In addition, online travel agencies (OTAs) or online marketplaces enable small hotels and businesses to reach a larger and more diverse range of customers than what they could have reached by their own means.

According to the first wave of the Observatory business survey conducted in 2019, around half of enterprises that use the services of online platforms derived more than 25% of their revenues from online platforms. For almost 10% of companies using online platforms, online platform sales exceeded 75% of all their revenues. In the second Observatory business survey conducted in October 2020, around 60% of respondents declared that they are either very dependent or completely dependent on online platforms. In this second survey wave, 60% of companies generate more than 25% of their annual revenues from online platforms, and 13% of companies generate more than 75% of their annual revenues via these platforms. These figures illustrate the increased dependency of business users on online platforms during 2020 and their vulnerability to the platforms' policies. According to this second business survey, nearly half of disputes or disagreements with platforms were related to the impacts of the COVID-19 crisis.

While business digitalisation was already underway before the crisis, the pandemic has considerably accelerated this transition. During the crisis, with shop closure and lockdown measures, many businesses had to move their activities online. Offline retailers continued their sales via their own website or turned to e-commerce platforms. According to platform representatives consulted, online platforms enabled small entrepreneurs to pivot quickly to reach demand and respond to emerging needs (e.g. facemasks). It can also be expected that the businesses that have digitalised their processes, moved to online business models or increased their use of online platforms will keep these in place beyond the crisis.

According to the Observatory business survey, 61% of companies continued using the same platform(s) during the COVID-19 crisis and 22% started using additional platform(s). As presented in the figure below, the sectors where more companies switched to a new platform were education services and human health services, while the sectors where more companies started using multiple platforms included publishing, media production and broadcasting, human healthcare services and personal services.

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According to the Observatory business survey, in spring 2020, 39% of companies using platforms saw a decrease in their share of revenues coming from the provision of their products or services through platforms, while in summer 2020, 35% of companies did not perceive changes in the share of revenues generated through online platforms, showing a situation closer to normal. Several platform interviewees noted that the success of their platforms is closely linked to the success of their business users. Therefore, due to the economic difficulties faced by business users during the pandemic and their increasing dependence on platforms to continue their activities, several online platforms implemented different measures to support their business users, ranging from written guidelines to reduction of fees.

### TABLE 2: SUPPORTING MEASURES BY SOME ONLINE PLATFORMS

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>SUPPORT MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon</td>
<td>Amazon support to selling partners included waiving certain fees, pausing loan repayments, providing regular updates and guidance via direct communication channels, and relaxing policies around shipping-related performance metrics. Established a USD 25 million (EUR 21 million) relief fund for partners (e.g. delivery drivers) and seasonal associates facing financial hardship or quarantine.</td>
</tr>
<tr>
<td>Booking</td>
<td>Ramped up its customer service to help business users deal with the wave of cancellations, provided refunds in cases of disputes between hosts and customers where it was not clear if the booking was refundable.</td>
</tr>
<tr>
<td>eBay</td>
<td>Moratorium on or waiver of final value fee invoicing, free listings and other eBay ‘virtual shop’ support for new sellers, guidance towards government support programs and dedicated onboarding support.</td>
</tr>
</tbody>
</table>

Source: Second wave of the Observatory business survey, October 2020 (N= 1990)

Note: See share of respondents by sector in Annex 4.
<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>SUPPORT MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etsy</td>
<td>Waived certain seller fees, provided sellers a one-month grace period to pay their bills, provided listing credits for mask sellers. Invested over USD 5 million in Offsite Ads through the end of April 2020 to help sellers promote their products on Google, Facebook, Instagram, Pinterest, and Bing at no cost to sellers. Provided a guide to shop management strategies, emerging shopping trends, and small business resources for sellers during the crisis.</td>
</tr>
<tr>
<td>Expedia</td>
<td>For non-flexible bookings that could not be executed due to COVID-19 restrictions, Expedia proposed to hotels to offer either a refund or a voucher ring-fenced to the specific hotel. Reduced the commission and extended payment terms to their business users to 90 days. Started the Expedia Group Academy with online courses to upskill furloughed/made-redundant staff from their business partners and the travel industry in general.</td>
</tr>
<tr>
<td>Facebook</td>
<td>Ensuring everyone has access to accurate information and helpful resources; tackling exploitative tactics in ads; supporting health and economic relief efforts (Donations); empowering partners with data tools; launch of Shops (a new feature enabling businesses to display and sell their products on the platform); launch of the ‘Business Resource Hub’ to support those being affected by the pandemic (the free-to-access hub includes a ‘resilience toolkit’, which has information about preventing business disruptions, and a ‘quick action guide’ to help coordinate response activities). Offered USD 100 million (EUR 84 million) for both ad credits and cash for 30,000 small businesses. Facebook Journalism Project and the European Journalism Centre have launched the European Journalism COVID-19 Support Fund, in which Facebook is investing USD 3 million (EUR 2.56 million) to small and mid-sized news organizations and journalists. This commitment builds upon the USD 100 million (EUR 85.4 million) to support the news industry during the COVID-19 crisis, as well as the USD 1 million (EUR 0.9 million) in grants for local news, USD 1 million (EUR 0.9 million) in grants for fact-checking organizations, and a USD 1 million (EUR 0.9 million) donation to the International Fact-Checking Network.</td>
</tr>
<tr>
<td>Google</td>
<td>Information &amp; resources page (with safety and prevention tips, response efforts etc.); Promoting official information and websites on their search engine; Providing aggregated and anonymised data &amp; useful insights to help track the success of lockdown measures on restricting movement; Donations etc. Offered USD 340 million (EUR 285 million) of ad credits to SMEs.</td>
</tr>
<tr>
<td>Instagram</td>
<td>New feature to help small businesses make sales, which this time comes in the form of gift card, food order, and fundraiser stickers which they can share on their profile or in Stories.</td>
</tr>
<tr>
<td>Netflix</td>
<td>Relief fund to help members of the creative community who are now unemployed.</td>
</tr>
<tr>
<td>Pinterest</td>
<td>Pinterest Shop started to highlight small and sustainable brands in order to bring increased visibility and exposure to these businesses, and to capitalise on the growing interest in shopping on the platform.</td>
</tr>
<tr>
<td>Snapchat</td>
<td>Launch of creative tools to share best practices with their community (e.g. Global filter with advice on how to stay safe); ensuring everyone has access to accurate information and helpful resources; providing mental health support, etc.</td>
</tr>
<tr>
<td>Tiktok</td>
<td>Committed to providing USD 100 million (EUR 84 million) in ad credits to help small businesses once economies are able to restart normal activity.</td>
</tr>
<tr>
<td>Twitter</td>
<td>Preventing platform manipulation; extending search prompt; direct engagement (e.g. their Global Public Policy is seeking ways to integrate their platform with organisations that are fighting the virus (experts, NGOs, governments)), etc.</td>
</tr>
<tr>
<td>Uber</td>
<td>Provided personal protective equipment worth more than USD 50 million (EUR 43 million) to more than 450,000 drivers by May 2020, including 28.5 million masks, 1 million of cleaning supplies and hand sanitizers. Provided up to 14 days of financial assistance to 48,892 drivers and delivery people diagnosed with COVID-19 or who had to quarantine, for a total of USD 19 million (EUR 16 million).</td>
</tr>
<tr>
<td>YouTube</td>
<td>Launch of Video Builder Tool’, which allows small businesses to create video content for free.</td>
</tr>
<tr>
<td>Zalando</td>
<td>Quicker onboarding of new business users, change of the pay-out frequency from a monthly basis to a two weekly basis, temporarily removed commission fees for new business partners. Expanded its Connected Retail Programme in Germany, the Netherlands, Spain and Poland, which enables offline retailers to sell products on Zalando.</td>
</tr>
</tbody>
</table>

According to the OECD, the main support measures provided by platforms to platform workers were measures to promote social distancing and/or safe provision of services (58%), followed by the provision or reimbursement of personal protective equipment (PPE) and hygiene products (25%) and full or partial pay for those sick or self-isolating (23%).

The Observatory business survey shows that during the COVID-19 crisis 20% of companies received written guidelines and personal assistance from the main platform that they use, and 15% received training. In addition, 18% were offered a reduction in fee or charge but one third did not receive any financial support.

FIGURE 20: FINANCIAL SUPPORT RECEIVED BY BUSINESS USERS FROM PLATFORMS (% OF RESPONDENTS)

Source: Second wave of the Observatory business survey, October 2020 (N= 1990)
In order to explore the relation between the financial support received by business users and certain characteristics of the companies we produced two-dimensional mosaic plots below, which represent the conditional relative frequency for a cell in the contingency table and help to identify associations between two variables. The size of the tile is proportional to the percentage of cases in that combination of levels.

FIGURE 21: MOSAIC PLOT: LEVEL OF DEPENDENCY ON THE ONLINE PLATFORMS AND FINANCIAL SUPPORT RECEIVED (% OF RESPONDENTS)


Note: the values inside the boxes show the percentages share of groups of companies.

In this case we can observe the strongest relation between businesses that are very dependent on online platforms and no financial support received. At the same time, very dependent and somewhat dependent companies received reductions of fees. The largest groups of companies are: very dependent and no support (16.1% of all companies), somewhat dependent and no support (11.7%), very dependent and reduction of fees (9.2%). Considering that 50% of businesses in our survey declare using mainly one of the platforms (Amazon, Facebook/Instagram, eBay, Google services, Booking) that announced support measures to their business users (see Table 2 above), it appears that these actions have not reached all business users, including those that are particularly dependent on the platforms for their activities.

Another interesting variable to check is the change in revenue of the companies from the online platforms during the COVID period compared to same period of the previous year and its relationship with the financial support received from the platform.
As we can see here, the largest share of companies is those that experienced a decrease in their revenues from the online platforms and haven’t received any financial support (14.4%), followed by companies with no change in revenues and no support received.

### 3.4. Changes in the online platform economy

The impact of the COVID-19 crisis on online platforms is the result of the changes in consumers’ behaviour and businesses’ economic situation presented in the sections above.

The majority of the top 50 online platforms have experienced a decrease in traffic share during the beginning of the COVID-19 crisis in April 2020. The most significant drop-down was experienced by travel websites, such as Booking.com, Tripadvisor etc, and also to online marketplaces such as Amazon, eBay, Zalando, as consumers postponed non-essential shopping. The highest increases were recorded for search engines, social media, advertising platforms and some national marketplaces (Figure 23). As presented in Section 3.2.1, people started using more search engines, social media and online entertaining media, while the traffic share of marketplaces (including OTAs) decreased.
FIGURE 23: % CHANGE OF TRAFFIC SHARE OF 50 TOP ONLINE PLATFORMS IN APRIL 2020 COMPARED TO AUGUST 2019

Source: Own elaboration based on SimilarWeb.
Note: The platforms are sorted by normal size of traffic share from left to right (i.e. Google usually has the largest traffic share).

Following a conversation with Commissioner for Internal Market Thierry Breton, Netflix and Youtube took actions to reduce the pressure on internet traffic. Netflix reduced its bit rates for 30 days across Europe thus reducing its traffic on European networks by 25%, while YouTube temporarily switched all traffic in the EU to standard definition by default.48

Although data on the revenues of all 50 platforms in 2020 is not available yet, preliminary information suggests that the top platforms still made profits in 2020. The figure below shows that the GAFAM’s revenues have remained steady and even increased despite the pandemic (except for a large plunge of Apple’s revenues in Q2).

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Google’s parent company, Alphabet, had a decline in revenue of about 2% in the first quarter of 2020, mostly due to a decline in search ads, but YouTube revenue rose to USD 3.8 billion (EUR 3 billion). Facebook revenue rose to USD 18.7 billion (EUR 15.7 billion). During the crisis, Facebook adapted to emerging needs by launching Facebook Shops which enables businesses to set up an online store. Apple made USD 11.25 billion (EUR 9.4 billion) in profit in Q1 2020.

Amazon doubled its profit with USD 5.2 billion (EUR 4.4 billion) in Q1 2020 compared to USD 2.6 billion (EUR 2.2 billion) the previous year. Amazon’s turnover registered a 40% increase in the second quarter and a 37% increase in the third quarter of 2020, compared to the same quarters in 2019. Market participants have reported that at the beginning of the COVID-19 crisis, Amazon refused to accept or deliver non-essential supplies from its third-party sellers while continuing to ship its own non-essential items. Amazon confirmed that it did give preferential treatment to its own products for a period of time, but claimed it was “unintentional.”

Other e-commerce platforms such as Zalando and Etsy also recorded increases in their site visits and revenues in the first half of 2020. Although these results reflect an underlying trend of increased online shopping, the shift of demand from brick and mortar retail shops to e-commerce services has been accentuated by the lockdown measures.

In terms of share price, Amazon and Netflix have outperformed the tech market in March 2020, while Google, Facebook and Apple have performed roughly in line. Across sectors, platforms for video-conferencing (Zoom), food delivery (Ocado) and telemedicine (Teladoc) have outperformed the start-up and tech market, while travel (Expedia), advertising (WPP) and mobility (Lyft, Uber) platforms have been hit the hardest. For example, platform representatives reported that Booking experienced a 85% decrease of its revenue in the first

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54 The Verge (2020). In the pandemic economy, tech companies are raking it in. Retrieved from https://www.theverge.com/2020/7/30/21348652/pandemic-earnings-antitrust-google-facebook-apple-amazon
59 Dealroom (2020). Impact of the Corona crisis on startups & tech
half of 2020, Uber saw a 80% decrease in its ride hailing income, and Expedia registered a 82% decrease of its revenues in Q2 2020.

Platforms also had to adapt their activities to the lockdown measures, and ensure sensitive services could be performed from home (e.g. customer service call centres, content moderation) while experiencing pressure on these services due to the increased use of online services by businesses and consumers, booking cancellations or the rise of scams and disinformation (see Section 5.1).

According to the analysis of Dealroom and Adevinta, the COVID-19 crisis has accelerated the use of online platforms in some sectors that were already becoming more digital (marketplaces, job platforms), and other sectors that were still very much offline (health, education). For example, new marketplace models have emerged to address the unmet demand from millennials and generation Z and unlock scarce supply, such as in regulated services and programming.

**FIGURE 25: EMERGING MARKETPLACES**

While healthcare was one of the least digitised sectors, the COVID-19 pandemic has forced 10 years of change in a matter of weeks with the rise of tech companies and apps for telemedicine, pharmacies, diagnostics, connected health sensors or drug development with AI. A Doctolib survey with its customers showed that 74% of doctors plan to continue using video consultation after the pandemic passes, and 80% of patients as well. However, as we saw in Section 3.2.4, it is difficult to predict the long term impacts of the pandemic on consumer behaviour and it is likely that people will return to a mix of online-offline activities post-COVID-19.

The transition to remote working has accelerated the demand for job search and candidate sourcing platforms, with sectoral job marketplaces expected to play a major role in the rehiring process after the recession, due to cost effective matching. The pandemic has also forced several hundred millions of students to learn from home, leading to a surge in the use of EdTech start-ups. However, it is unclear whether this trend will continue once students are back in class, since it may be hard to convert freemium users and some households may lack the technology to access remote learning.

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55 Dealroom and Adevinta (2020). Online marketplaces entering the next phase.
56 Dealroom and Adevinta (2020). Online marketplaces entering the next phase.
4. Effects on merger and acquisition activities

In this section we will explore whether the COVID-19 crisis impacted the merger and acquisition (M&A) activities of large online platforms. The volume and value of deals have stalled due to the crisis, however a rebound can already be observed in particular in the digital sector. We will first present the trends of M&A, acquisition strategies of online platforms and the merger review practices before the COVID-19 crisis, before comparing with the latest trends and strategies since the crisis outbreak. We then reflect on potential revisions of the merger review regime to better cover the acquisitions of start-ups by large platforms.

4.1. Mergers and acquisition activities before the COVID-19 crisis

Based on our work to estimate the size of the platform economy and our monitoring of the top online platforms, the 50 major online platforms reached a total of 432 acquisitions in the period 2013-2019, with Google being an absolute leader, followed by Verizon Communications, Amazon and Facebook.

FIGURE 26: NUMBER OF ACQUISITIONS BY PARENT COMPANIES (2013-2019)

Source: own elaboration based on Crunchbase data.

57 See Observatory of the Online Platform Economy, State of Play https://platformobservatory.eu/state-of-play/
As depicted in the next figure, most of the companies acquired by the 50 top platforms were from the US, while 19% of the acquired companies were European and 6% of the acquirers were European.


Source: Own elaboration.

Notes: Middle East (Israel, UAE), Asia (India, Singapore, China, Taiwan, Japan, Thailand, Philippines, Uzbekistan), South America (Chile), non-EU European countries (Belarus, Iceland, Switzerland).

According to Gautier and Lamesch (2020)\(^8\), there are three main reasons for online platforms and especially the GAFAM (Google, Amazon, Facebook, Apple, Microsoft) to acquire innovative start-ups. First, the platform may be interested in the products and services offered by the target company to enrich or develop its own ecosystem of products and thus retain a higher share of consumers’ attention. Second, the platform may be interested in the company’s input and valuable assets, such as talent, patent, innovation, user base. Third, acquisition may be a way of consolidating the platform’s position on the market by restricting competition.

The assessments of Argentesi et al (2019) and of Gautier and Lamesch (2020) show that over the 2008-2018 period, the GAFAM have acquired companies spanning a wide range of sectors and whose products and services are either in their core segment or complementary to their own products and services. This suggests that **M&As are used to reinforce the platforms’ position and to expand their ecosystem.** In this regard, Google, and to a lesser extent Amazon, have the most diversified acquisition profile, which clearly shows their intention to extend their activities beyond their core business. Google, Amazon, and to a lesser extent Apple, have made substantial acquisitions in the business segments (e.g. analytics, collaboration tools, cloud services, sales software), potentially to compete with Microsoft in these fields. Amazon, Google, and Facebook have all invested in companies that have helped them with advanced data analytics techniques (machine learning, artificial intelligence, analytics and big data), confirming the fact that these platforms rely heavily on predictions to provide their services. Google and Facebook tend to acquire younger companies on average (less than 5 years) than Apple, Microsoft and Amazon. The ACCC analysis also points to a more recent trend

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of large platforms integrating vertically into various parts of the telecommunications infrastructure supply chain (e.g. telecommunication companies, satellites, submarine cables, mobile network infrastructure), either by acquisition or organic expansion. Given the reliance of platforms on telecommunication networks, this trend reflects their objective to ensure the reliability of networks, and may bring efficiencies to the platforms through lower costs and more control over the quality and capacity of the network.59

Among the 175 acquisitions from GAFAM in the years 2015, 2016, 2017, Gautier and Lamesch60 report that the majority of the acquired brands (105) were discontinued within a year after the acquisition. This may indicate that the platforms were more interested in acquiring the assets of the companies (e.g. talent, intellectual property) or in integrating specific functionalities into their own products and services. On the other hand, 47 brands out of 175 continued to be offered just as before the acquisition. In these cases, the motives for acquisition may have been the revenues and/or users (or user growth) that the product was able to attract and might continue to do so. In general, younger firms are more likely to be bought for their knowledge and to be discontinued. GAFAM’s acquisitions in their core segment are more likely to be knowledge driven and discontinued in order to be integrated into their own processes or functionalities, while acquisitions outside their core segments tend to be more product oriented with lower chances of being discontinued.

The comparison across GAFAM shows that Apple and Facebook shut down most of the acquired brands, mainly to improve their existing products, while Amazon, Google and Microsoft keep about a third of their target products up and running. For Amazon and Microsoft, this could demonstrate their intention to diversify their products within their segments, while for Google, this could be a consequence of its expansion to new segments, whereby an acquirer could have incentives to keep the acquired products on the market.

Table 3 below summarises the main strategy and notable acquisitions of the GAFAM platforms in the last two decades.

### TABLE 3: M&A OVERVIEW AND STRATEGY OF GAFAM

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>OVERVIEW OF M&amp;A DEALS AND STRATEGY</th>
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| Google   | Most active and diversified M&A profile, with 168 acquired companies during 2008-2018, spread across the years and sectors, especially in the categories of tools for developers, communication apps and tools, physical goods and services, artificial intelligence and analytics. The median age of acquired companies is 4 years old. Relevant deals:  
- Android (2005, USD 50 million): example of expansion of the ecosystem with development of an existing product, which has become the leading smartphone operating system (80% of global market share). Google integrated all its tools into Android and the Google Play Store. To acquire the Android license for the Google Play Store, smartphone manufacturers are required to emphasise Google apps and services. In 2018, Google was fined by the European Commission for pre-installing its search and browser apps on Android phones. |

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<th>PLATFORM</th>
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<tr>
<td>• YouTube (2006, USD 1.65 billion): example of expansion of the ecosystem and development of an existing product. Became the reference streaming platform with nearly 2 billion active monthly users while representing more than 6% of Alphabet’s revenues.</td>
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<tr>
<td>• DoubleClick (2007, USD 3.1 billion): example of neutralisation of competition and integration within existing products. Google integrated the advertising agency DoubleClick into its in-house ad tech solution AdSense. Google’s ad server for publishers is now the leader with about 90% of market share.</td>
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<tr>
<td>• AdMob (2009, USD 750 million): example of expansion to an adjacent market with development of an existing product. Google became the leader in mobile advertising with AdMob.</td>
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<tr>
<td>• Waze (2013, USD 966 million): example of acquisition of competitor, this mobile GPS navigation app based on user-definable mapping remained a standalone app. By exploiting their complementarities, Google and Waze improved their apps and realized some efficiencies. Since 2012, the number of Waze’s active users has increased. Google uses Waze’s data to improve the real-time content offered by Google Maps.</td>
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<tr>
<td>Facebook</td>
<td>Acquired 71 companies between 2008 and 2018, first focusing on the category of communication apps and tools (e.g. messaging app Beluga in 2011 later transformed into Facebook Messenger, Instagram in 2012) to attract and retain more users on its ecosystem, and later on virtual reality technologies (e.g. Oculus in 2014, Surreal Vision in 2015) which could also aim at increasing the attractiveness of its platform. The median age of acquired companies is 2.5 years old. In a 2019 decision, the German Bundeskartellamt prohibited Facebook from combining user data from its different services (Facebook, Instagram, WhatsApp) without the user’s voluntary consent.(^1) Relevant deals:</td>
</tr>
<tr>
<td>• Instagram (2012, USD 1 billion): example of neutralisation of a competitor, while maintaining and developing the product. Instagram quickly evolved into a full-fledged social network with functionalities such as direct messaging, photo tagging, and advertising. Facebook contributed to Instagram’s growth by providing improved physical infrastructures and its expertise in social networks and advertising markets. Facebook also improved its functionalities and its targeted advertising thanks to Instagram. While the number of Facebook users remained stable or decreased, the number of Instagram users doubled between 2015-2018.</td>
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<tr>
<td>• WhatsApp (2014, USD 19 billion): example of acquisition of a competitor, while continuing the product. Facebook uses and merges data from its own website and WhatsApp. In July 2014, WhatsApp had close to 600 million users and Facebook Messenger’s user base was 250-350 million worldwide. The number of WhatsApp users has slightly increased in the 2015-2018 period, equalling the number of Instagram users.</td>
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<tr>
<td>Amazon</td>
<td>Acquired 60 companies in the 2008-2018 period with a particular focus on retail operators (e.g. Buy VIP in 2010, LoveFilm and The Book Depository in 2011, Whole Foods Market in 2017), online content and business services, with a view to strengthening its core segment and developing services in the business segment. The median age of target companies is 6.5 years. Relevant deal:</td>
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<tr>
<td>• The Book Depository (2011, undisclosed deal): example of acquisition of a competitor with continuation of an existing product. The Book Depository is present in countries</td>
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\(^1\) Bundeskartellamt (2019). Bundeskartellamt prohibits Facebook from combining user data from different sources. Retrieved from https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemeldungen/2019/07_02_2019_Facebook.html
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<td>where Amazon was not or less present. It has kept its own website and distribution centre but other aspects such as the billing system and the technology employed have been integrated with Amazon. The Book Depository benefited from Amazon’s expertise to modernize its infrastructure and back-end technology and acquire the appropriate tools to deal with seasonal sale peaks.</td>
</tr>
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</table>
| Apple    | Undertook 33 acquisitions in the 2015-2017 period, mostly in the category of devices and operating systems and interfaces with a view to reinforcing its core segment, and in the content editor and consumer services to improve the features offered on its devices. The average age of target companies is 6.5.  
**Relevant deal:**  
- Shazam (2018, estimated at USD 400 million): example of acquisition and continuation of a complementary product. Apple can benefit from the data and referral of Shazam users. Beside audio recognition, Shazam had also developed visual recognition functions to enable marketers to engage with audiences, and augmented reality features. With Shazam inside Apple, iOS can further integrate visual recognition and augmented reality features as well as benefit from the partnership with marketers established by Shazam. |
| Microsoft | Carried out 40 acquisitions in the 2015-2017 period, with a focus on the business segment (cloud services, productivity suites, collaboration tools, analytics software) to reinforce its offering of products and services for business clients. The average age of target companies was 7.  
**Relevant deals:**  
- Skype (2011, USD 8.5 billion): example of acquisition of a competitor and continuation of an existing product. Microsoft’s Windows Live Messenger and Lync overlapped with the video calling features of Skype, although Skype also enables paid telephone calls. Skype provided a larger user base to Microsoft, and has been integrated into Microsoft services and applications while keeping its own name.  
- LinkedIn (2016, USD 26 billion): example of expansion into an adjacent market with continuation of the existing product. Microsoft can use LinkedIn as a database of professional information and distribution channel for its software systems. LinkedIn gains additional financing and access to millions of people who could potentially join its network. |


The last acquisition announcements in January-March 2020 before the pandemic hit Europe and the US (AppSheet by Google Cloud, Xnor.ai by Apple, Scape Technologies by Facebook, Affirmed Networks by Microsoft) reflect investments in technologies such as AI, 5G connectivity, location, to improve their services.62

The above analysis and examples show that most acquisitions in the digital sector are not “killer acquisitions” since even when the acquired companies are shut down, the acquirer often integrates the underlying technology or intelligence within its ecosystem. According to Bourreau and de Streel63, the incumbent may have more incentives to develop the innovation than the potential entrant due to possible economies of scope between the product and the incumbent’s existing products (supply-side synergies) and

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consumption synergies for consumers (demand-side synergies). In addition, the incumbent may have more funding available than the entrant to develop the technology. The acquisition of innovative firms by an incumbent can therefore result in a trade-off for society: on the one hand, (potential) competition can be eliminated, but on the other, the development or the diffusion of the innovation can be accelerated.

Further, Bourreau and De Streel argue that an entrant has more incentives to enter the market if it anticipates that it will be bought out by an incumbent firm than in a counterfactual situation where acquisitions would not be possible or allowed. For example, the entrant may negotiate a takeover price that compensates at least the profit it would have obtained by entering the market directly. Thus, the prospect of being possibly acquired makes it more likely that innovation by entrants emerges in the first place. The chance for start-ups to be acquired by larger companies is also an important element of venture capital markets: it is among the main exit routes for investors and it provides an incentive for the private financing of high-risk innovation. The trend of start-ups being developed with the objective of getting bought by a larger firm was confirmed by experts and platform representatives interviewed. However, a possible effect is that a start-up entering the market with the plan to be acquired eventually may orient its R&D in directions that maximise its future acquisition (e.g. towards the development of the incumbent’s technology) rather than the value of the innovation itself. Some industry associations called for a more favourable framework for the development of competitive start-ups in Europe, by reducing administrative burdens and fostering digital innovation.

Currently, the threshold for merger notification at EU level is based on the monetary turnover of the firms involved in the concentration. However, online platforms often acquire firms with no or small monetary turnover as their acquisitions often take place at early stage of acquired firms’ development. Many acquisitions of promising start-ups thus occur below the radar of competition authorities. For example, the acquisition of Instagram by Facebook was not reviewed by the European Commission. The US Federal Trade Commission reviewed the deal but declined to prosecute, partly because US antitrust legislation is based on consumer harm measured largely through price increases, which is not applicable in the case of free services offered by Facebook and Instagram. The UK Office of Fair Trading also reviewed the deal but did not find a reason to block it. Moreover, without the specific referral by national competition authorities, the acquisition of WhatsApp by Facebook would not have been reviewed by the European Commission.

The merger reviews by competition authorities in the digital field have been based on several theories of harm.

- **Theories of harm for horizontal mergers (i.e. acquisition of competitors):**
  - Loss of competition with network effects and multi-homing: network effects may enable the acquirer to raise barriers to entry and foreclose competition, while multi-homing may mitigate the negative impact of network effects on competition. This theory of harm was reviewed and dismissed by the Commission in the Microsoft/Skype case.
  - Loss of competition in markets for attention: mergers involving companies competing for consumer attention may increase their ability to exert market power on advertising markets. This theory of harm was reviewed by the Commission in the

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Facebook/WhatsApp case, although WhatsApp was not selling advertising space or user data.

- **Loss of potential competition**: even if the merging parties do not significantly constrain each other at the time of the merger, competition authorities investigate whether they are likely to do so in the future and whether there would remain a sufficient number of other competitors after the merger. This theory of harm was reviewed by the Commission in the Google/DoubleClick case, assessing whether DoubleClick would have become a competitive force in ad intermediation services and Google in display ad serving tools. The Commission estimated that it was unlikely in both cases, and that there was a sufficient number of other competitors. The loss of competition was also reviewed by the UK Office of Fair Trading in its reviews of the Facebook/Instagram and Google/Waze transactions.

- **Loss of innovation**: since innovation is an important element of competition, when a merger combines two important innovators or eliminates a firm with promising pipeline products, this may decrease innovation and reduce competition.

**Theories of harm for vertical mergers (i.e. acquisition of complementary products or services):**

- **Foreclosure with network effects and multi-homing**: network effects, with their potential to raise barriers to entry, can exacerbate the anticompetitive effects of the acquirer’s exclusionary strategies. This theory of harm was considered by the Commission in the Microsoft/LinkedIn case. The merging parties submitted one set of commitments to address the concerns related to the possible pre-installation of a LinkedIn application on Windows PCs; and another set of commitments aimed at removing the concerns related to the possible integration of LinkedIn features into Office and denial of access to Microsoft APIs.

- **Big data as an essential input to compete**: the combination of data from the merging parties can create a larger and more diverse dataset that can give the acquirer a competitive advantage to potentially foreclose rivals. Access to data was the main concern in the Commission’s review of the Apple/Shazam transaction. The Commission analysed whether the transaction could give Apple access to information about competing music streaming platforms since Shazam was able to access data about which apps were installed on a user’s Android device. The Commission also reviewed whether the data collected by Shazam could be used to improve functionalities on Apple Music, but concluded that this would be unlikely to foreclose competition.

Despite the assessment of these different theories of harm for digital mergers, competition authorities remain often focused on the users’ side of the market and price effects, while competition issues can also lead to non-price effects on users. In addition, investigating other sides of the market, such as monetisation strategies, could potentially unveil additional anti-competitive effects of the mergers and shed light on the rationale of the merger and the estimated value brought by the acquiree to the acquirer.68

4.2. Trends of mergers and acquisitions post COVID-19 crisis

During the COVID-19 crisis and the (still ongoing) economic recovery phase, several trends in M&A activities can be observed. First, there is one trend of companies putting ongoing deals on hold and not engaging in new deals. Secondly, some companies are concluding their previously engaged deals and conducting new

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acquisitions. Thirdly, there may be acquisitions concerning failing firms affected by the crisis or already falling before.

While the pandemic resulted in a massive drop in M&A activity globally in the first six months of 2020, as strategic buyers have been forced to refocus their energy and teams towards the immediate health of their own companies, the M&A activity has continued in some sectors and in particular the digital sector. As a significant proportion of the world’s population went into lockdown, people turned to digital solutions for work, education and entertainment—which can explain why the technology, media and telecoms (TMT) sector has been among the most resilient for M&A in 2020. Although the TMT M&As registered a 25% and 31% year-on-year decline in volume and value respectively, it is still the highest total volume and value of any sector over this period. Based on Crunchbase data, in 2020, companies from the digital media and digital entertainment sectors conducted 149 deals, compared to 166 in 2019.

A number of significant deals were announced over 2020 in the online platform sector. Some of the deals announced by online platforms confirm the previous trends with the acquisitions of new technologies (e.g., AI, IoT, 5G, robotics, cloud, virtual reality) to improve their existing services or support the launch of new products. In addition, some acquisitions of adjacent products or services demonstrate the platforms’ continuous strategy to expand their ecosystems. For instance, Amazon and Apple acquired podcast providers to develop their streaming services and compete with Spotify. Facebook and Microsoft acquired video game developers. Amazon acquired a company specialised in autonomous driving. Google acquired the smart glasses maker North after the failure of Google Glass. Facebook acquired two companies active in mapping and accurate location. Apple acquired a contactless payment company that could turn iPhones into payment terminals. An overview of the announced deals by the main big tech platforms is presented in the table below.

TABLE 4: ANNOUNCED ACQUISITIONS BY TOP ONLINE PLATFORMS COMPANIES IN 2020 (VALUES WHEN DISCLOSED)

<table>
<thead>
<tr>
<th>ACQUIRER</th>
<th>ACQUISITIONS IN 2020</th>
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<tbody>
<tr>
<td>Google</td>
<td></td>
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<tr>
<td>• Pointy (14/01, USD 163 million): Irish retail inventory software enabling to know what local stores have in physical stock. Integrated into Google Maps.</td>
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<td>• Cornerstone Technology B.V. (19/02): Dutch software helping customers migrate their mainframe workloads to Google Cloud.</td>
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<td>• North (30/06, USD 180 million): Canadian company of smart glasses similar to Google Glass. The North team will remain in Canada and join the Google office in their hometown.</td>
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<tr>
<td>• Stratozone (25/08): US software for cloud migration. The team and technology will be integrated into Google Cloud to ramp up cloud migration discovery and assessment. Dealroom estimated firm valuation: EUR 30—45 million (2001).</td>
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</tr>
<tr>
<td>• Neverware (11/12): US firm that developed CloudReady, a distribution of Google’s Chromium OS designed to be installed on existing computers operating system. First CloudReady will continue to be available as-is, before becoming an official Chrome OS</td>
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### Amazon

- **Zoox** (26/06, USD 1.2 billion): US autonomous driving company. Zoox will continue to operate as a standalone business within Amazon to continue developing an autonomous taxi.
- **Wondery** (30/12, USD 300 million): US podcast curator, to be integrated into Amazon Music but users would still access Wondery via different providers.

### Facebook

- **Sanzaru Games** (25/02): US video game development company developing VR games. To be integrated as part of Oculus studios.
- **Scape Technologies** (19/02, USD 40 million): Facebook surpassed a 75% majority share in this UK-based computer vision start-up that determines location with more accuracy than a GPS. To be integrated in Facebook Reality Labs.
- **Giphy** (15/05, USD 400 million): US gif database and search engine. The product and team will be integrated into Instagram.
- **Mapillary** (18/06): Swedish street-level imagery crowdsourced platform. The Mapillary team and project will become part of Facebook’s broader open mapping efforts. Dealroom estimated firm valuation: EUR 55—82 million (2018).
- **Kustomer** (30/11, USD 1 billion): US customer relationship management company. With Kustomer, Facebook will be providing small businesses that use its service to advertise and sell goods more features to close sales through the social network’s services.

### Microsoft

- **Affirmed Networks** (26/03, USD 1.35 billion): US cloud-native mobile network solutions. Will improve Microsoft Azure cloud platform and contribute to 5G deployment.
- **Metaswitch Networks** (14/05): UK cloud native provider of network software and voice, data and communications solutions. Will improve Microsoft Azure cloud platform and contribute to 5G deployment.
- **ADRM Software** (18/06): US developer of enterprise data models. Will be combined with storage and compute from Azure. The team will join Azure’s engineering arm.
- **CyberX** (22/06, USD 165 million): US IoT/OT security company. Will be integrated into Azure IoT stack and the team will join Microsoft IoT security business unit.
- **Orions Systems** (07/07): US provider of smart vision systems. Will offer additional tools to Dynamics 365 Connected Store and the Microsoft Power Platform to help retailers train their own AI models to learn from their physical space.
- **ZeniMax Media** (21/09, USD 7.5 billion): US video game holding company. Will be integrated into the Team Xbox.

### Apple

- **Xnor.ai** (15/01, USD 200 million): US edge-based AI tools provider. These tools would improve data privacy by keeping AI data securely on mobile devices instead of on the cloud. The team likely joined Apple’s office.
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<tr>
<th>ACQUIRER</th>
<th>ACQUISITIONS IN 2020</th>
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<tbody>
<tr>
<td></td>
<td>• Dark Sky (31/03): US weather forecasting app. The app will remain available on iOS but not on Android.</td>
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<td></td>
<td>• NextVR (14/05, USD 100 million): US provider of virtual reality events. May help the development of Apple VR and AR headsets.</td>
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<td></td>
<td>• Mobeewave (31/07, USD 100 million): Canadian contactless payment company. May turn iPhones into payment terminals. The team is retained and will continue to work in its Montreal headquarters.</td>
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<td></td>
<td>• Camerai (20/08): Israeli AR photography and image processing graphics startup. The company may have been purchased already in 2019 when Apple announced acquiring 25 startups, and the team was integrated into Apple’s computer vision team. Dealroom estimated firm valuation: EUR 9-14 million (2017).</td>
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<tr>
<td></td>
<td>• Spaces (25/08): US location-based VR technologies startup. Ceased operations and may contribute to the VR/AR headset projects of Apple.</td>
</tr>
<tr>
<td>Twitter</td>
<td>• Chroma Labs (19/02): US app to create layout templates for stories and posts on social media. Chroma Labs will be shut down and its team will join Twitter’s product, design and engineering teams.</td>
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<tr>
<td></td>
<td>• CrossInstall (12/05): US mobile interactive ad firm. In the short term, CrossInstall will operate as a standalone unit but may be integrated into Twitter’s ad stack in the long term.</td>
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<tr>
<td></td>
<td>• Squad (14/12): US app enabling screen sharing in live group video calls. Squad will be shut down and the team will be joining Twitter’s design, engineering and product departments.</td>
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</table>

Source: Dealroom, Carey S., Wikipedia.

The above deals show that the COVID-19 crisis has not affected the M&A activity of the GAFAM, with Apple concluding nine deals, Google eight, Microsoft seven and Facebook six acquisitions over 2020. Despite record profits in 2020, Amazon concluded only two deals compared to nine in 2019. The timing of the platforms’ acquisitions shows a spread over the year without noticeable gap during the COVID-19’s first wave except for Google. Since the terms of the deals were often not revealed, limited information was available on the financing sources of these acquisitions (e.g. own cash, stocks). Considering that the large platforms still recorded profits in 2020, one could assume that they were able to use their own resources to a large extent. For example, the purchases of Zoox by Amazon and of ZeniMax Media by Microsoft were concluded in cash. Beyond the GAFAM, some acquisitions in the field of videoconferencing seem directly influenced by their increased use during the lockdown (e.g. Zoom acquired the encryption specialist Keybase to solve security issues, Verizon acquired BlueJeans, Cisco acquired ThousandEyes).22

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Competition authorities also had to move their work online and some had more limited capacity to examine the new mergers.\textsuperscript{73} Nevertheless, the announcement of Google’s plan to acquire the wearable devices company Fitbit for USD 2.1 billion received specific attention from antitrust authorities. The Australian Competition & Consumer Commission (ACCC) and the European Commission expressed concerns about the use of Fitbit’s unique dataset of health and fitness data by Google for advertising and analytics, and the foreclosure of wearable manufacturers competing with Google. On 17 December 2020, following an in-depth investigation of the proposed transaction, the European Commission approved the acquisition conditional on full compliance with a set of commitments offered by Google. Among these, Google commits not to use the health and wellness data collected from Fitbit for advertising, to silo Fitbit data from other Google data used for advertising, and to ensure the interoperability of Fitbit with web and Android APIs. The duration of these commitments will be ten years and a trustee will be appointed to monitor the implementation of the commitments.\textsuperscript{74} Meanwhile, on 22 December 2020, the ACCC announced that it would not accept the behavioural undertaking offered by Google and would continue its investigation with a new decision expected in March 2021.\textsuperscript{75} Several other competition authorities, including the U.S. Department of Justice, are yet to make a decision.

The pandemic may give rise to acquisitions of failing firms that suffer from the economic crisis or were already in difficulty earlier. In its Guidelines on the assessment of horizontal mergers\textsuperscript{76}, the European Commission authorises mergers that would otherwise be considered problematic if one of the companies is a failing firm. For that to happen, three cumulative conditions should be met: i) absent the merger, the failing firm would exit the market in the near future as a result of its financial difficulties; ii) there is no feasible alternative transaction or reorganisation that is less anti-competitive than the proposed merger; iii) absent the merger, the assets of the failing firm would inevitably exit the market.

Despite these conditions, in a period of crisis it can be difficult to distinguish whether some buyers are acquiring failing firms or opportunistically getting hold of a competitor in difficulty. In a post-pandemic crisis in which small firms may be in particular danger of going bankrupt due to a lack of funds, the opportunities for killer acquisitions are greater.\textsuperscript{77} A survey suggests that the strategy of skilled corporate acquirers is to simultaneously shop across multiple different strategic deal-types, with 49% indicating their intent to opportunistically buy distressed companies and 23% targeting entirely new solutions or segments to further diversify future revenue mix.\textsuperscript{78}

The European Commission has so far shown little flexibility in the application of the failing firm defence, even in the face of previous economic recessions. However, the failing firm defence may gain greater traction in front of competition authorities due to the unprecedented scale of the current crisis affecting nearly all sectors.

\textsuperscript{73} Bluhm M. (2020). The pandemic is setting off a wave of mergers. And that’s a problem. Retrieved from https://www.linkedin.com/pulse/big-business-may-get-even-bigger-post-pandemic-heres-why-michael?trackingId=IJFh5eVERpK22R7EtpZ96Q%3D%3D
\textsuperscript{76} European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, (2004/C 31/03).
and businesses, which means more companies will be failing and fewer firms may have the resources to make major acquisitions.\textsuperscript{79}

In April 2020, the UK Competition and Market Authority (CMA) provisionally cleared Amazon’s investment in Deliveroo in light of the seriousness and urgency of Deliveroo’s financial situation and the conclusion that its exit of the market would have been worse for competition and customers than allowing the investment to go ahead. However, since April, Deliveroo’s finance recovered much more sharply than originally expected and the CMA concluded that Deliveroo could no longer be considered a failing firm. After further assessment, the CMA finally cleared the investment of 16% of shareholding by Amazon in August 2020. The CMA found that this level of investment would not substantially lessen competition in either the restaurant delivery or the online convenience grocery delivery markets. However, if Amazon were to acquire a greater level of control over Deliveroo – through, for example, acquiring a controlling interest in the company – this could trigger a further investigation by the CMA.\textsuperscript{80}

Looking ahead, considering that the pandemic has not altered the revenues of large online platforms and the pace of their M&amp;A activities, one can expect that they will continue their strategy of consolidation of core segments and expansion to adjacent products and services in the coming months. Despite the probable credit crunch resulting from the economic crisis, platforms should be able to use their cash reserves to continue their strategic investments. Large platform interviewees declined to comment on their M&amp;A approach or indicated that the COVID-19 crisis would not impact their M&amp;A strategy. Apple’s response to any media request about M&amp;A information is the standard statement “Apple buys smaller technology companies from time to time, and we generally do not discuss our purpose or plans.” Facebook announced in early June 2020 that it was creating a venture capital fund to inject more money into acquiring start-ups.

4.3. Potential revisions of merger review

In light of the specificities of the digital sector, characterised by network effects and gatekeeping power, some proposals are emerging to reform the rules for merger reviews by competition authorities.

The Commission Proposal for a Digital Market Act (DMA)\textsuperscript{81} adopted on 15 December 2020 would oblige large platforms qualified as gatekeepers on the basis of objective criteria to notify the Commission of any intended concentration with another digital provider within the meaning of the EU Merger Regulation (Regulation 139/2004). The notification should include the turnover, numbers of yearly active business users and monthly active end users of the target as well as the rationale for the intended concentration.

The digital gatekeepers designated in the DMA would be akin to what the Furman report\textsuperscript{82} named firms with ‘strategic market status’, or that the French Competition Authority (FCA) called ‘structuring’ firms. Prior to the adoption of the DMA, the FCA had also proposed an obligation to inform the European Commission or the concerned national competition authorities of any concentration in the scope of Regulation 139/2004 conducted in the EU by a ‘structuring’ firm. Similarly in Australia, the ACCC is working towards a voluntary


merger notification protocol according to which large online platforms would also give the ACCC advance notice of the proposed transactions.\textsuperscript{83}

In addition, the FCA proposed to \textit{supplement the current thresholds for mandatory notification with an additional notification mechanism that could be initiated by a competent authority on the basis of competition monitoring}, as is already the case in some countries (Estonia, Hungary, Ireland, Lithuania, Sweden, US, Japan). Under this mechanism, a competition authority could ask the merging parties to notify the operation if three conditions are met: i) the combined global turnover of the parties is above EUR 150 million; ii) the operation raises substantial competition concerns on the concerned territory and; if applicable iii) the operation is not under the competence of the European Commission.

Bourreau and De Streeel also propose additional notification thresholds to complement the monetary thresholds in order to allow the Commission to review M&A by large online platforms that may be detrimental for welfare:\textsuperscript{84}

\begin{itemize}
  \item \textbf{The value of the acquisition}, as is the case in Austria and Germany since 2017. This may inform the Commission on the expected future revenue from the diffusion of the innovation (which is welfare enhancing) but could also reflect the insurance premium for market stability and monopoly rent with a potential competitor being eliminated (which is welfare detrimental).
  \item \textbf{The market shares of the firms involved} in the concentration on the basis of the market notified by the firms, as is the case in Portugal, Spain and the UK.
  \item \textbf{The characteristics of the acquirer}. The companies designated as ‘gatekeepers’, ‘structuring’ firms or having ‘strategic market status’, as proposed respectively by the Commission, the FCA and the Furman report, should notify all their acquisitions to the relevant competition authority.
\end{itemize}

Further, the expert report on ‘Competition policy for the digital era’ proposes a new theory of harm that may be needed to capture the potential adverse competition effects of acquisitions by large digital platforms of innovative, quickly growing start-ups. This theory of harm would involve an analysis of the strategic relevance of such mergers in shielding broader ecosystems from competitive threats from the fringe to secure a ‘users’ space’.\textsuperscript{85}

In the US, the merger regime allows the Federal Trade Commission (FTC) or Department of Justice (DoJ) to investigate and challenge mergers and acquisitions (whether notified or not) if the transaction would violate the relevant antitrust provisions (e.g. section 7 of the Clayton Act, Section 5 of the FTC Act and Sections 1 and 2 of the Sherman Act) even if the transaction has already been concluded and even if the transaction does not meet the relevant mandatory notification thresholds. For example, the FTC has recently used its powers to undertake ex-post assessments of past mergers to request information on hundreds of acquisitions made by Google, Apple, Facebook, Amazon and Microsoft over a 10-year period. In doing so, it has noted the possibility that this might lead to ex-post merger enforcement action. Other countries have some degree of ex-post review powers, including Hungary, Ireland, Sweden and Lithuania, the UK.\textsuperscript{86}

While updates to the merger review regime could be needed to investigate potentially harmful acquisitions of nascent rivals, it would be interesting to first assess the effectiveness of the additional merger review tools available. For example, Germany and Austria have introduced a size of transaction threshold into their merger control regimes, but this has not translated into a radical change in the number of notified transactions. The German Bundeskartellamt reported that it received eight notifications based on the transaction value thresholds in 2017 and 10 in 2018, out of more than 2686 notifications received in 2017/18, and similar results were reported in Austria. It is also interesting to note that competition authorities that already have more flexible notification or threshold regimes (e.g. Sweden, UK) have rarely used this flexibility to investigate mergers of potential nascent rivals. Therefore, beyond having the right merger review tools in place, another important question is their use by competition authorities and their effectiveness in preventing potentially harmful mergers. The upcoming frameworks from the European Commission and the ACCC requiring an advance notification directly from the large platforms would reverse the responsibility and increase transparency on the M&As from these platforms, allowing to detect acquisitions of emerging potential rivals that could foreclose competition.

5. Political impacts of the COVID-19 crisis

Digital issues have been high on the European political agenda over the past decade, with the Digital Agenda for Europe, the Digital Single Market, and the Digital strategy ‘Shaping Europe’s digital future’. A range of legislative measures and policy initiatives have been put in place to support the digital transformation of businesses, citizens and public administrations, and tackle the new challenges posed by the digital economy.

The rules governing activities and content on online platforms are mainly set by the e-Commerce Directive\(^{88}\), adopted in 2000. The e-Commerce Directive exempts intermediary service providers from liability for the content they manage if they only provide a technical and passive role of transmission or storage of information and expeditiously remove or disable access to illegal content if they become aware of such content, and dispenses service providers from any general monitoring obligation with regard to potential illegal content. The e-Commerce Directive is supported by provisions on the liability of online platforms in the revised Audiovisual Media Service Directive\(^{89}\) and Copyright Directive\(^{90}\), and non-binding guidelines on tackling illegal content online.\(^{91}\) This framework is complemented by recent provisions supporting fairness in the relations between platforms and their business users and end-users, set out respectively in the so-called P2B Regulation\(^{92}\) and the ‘Omnibus Directive’.\(^{93}\)

The COVID-19 crisis has clearly confirmed the importance of digital services and online platforms in mitigating the disruptions of physical activities, but also their vulnerabilities in containing illegal and harmful practices online. During the pandemic, some illegal activities are even more harmful when they can affect consumers’ health, for example by offering unsafe products or false claims of cures. Other practices such as the spread of disinformation may curb the official efforts from health authorities and fuel hatred or violence.

While public authorities, online platforms and businesses took actions to contain illegal activities during the pandemic, more efforts could have been done to ensure safety and rightful information to all. On the other hand, the lessons learnt from the measures and new practices adopted during the COVID-19 crisis could influence the design of future digital policies.

This section will first present the latest policy developments and impacts of the COVID-19 crisis in particular on e-commerce (unsafe products, unfair practices), social media (disinformation, hate speech), contact tracing


\(^{91}\) 2017 Communication on tackling illegal content online, 2018 Recommendation on measures to effectively tackle illegal content online


and cybersecurity. Then, we will introduce the upcoming legislative initiatives that take into account the lessons learnt from the COVID-19 crisis as well as emerging policy needs.

5.1. Recent developments and impacts of the COVID-19 crisis

This section presents the recent developments and impacts of the COVID-19 crisis on illegal activities, illegal and harmful content online, as well as the main responses from online platforms and public authorities, including the effectiveness of self-regulatory measures. Overall, according to business associations, consumer associations, platforms and experts interviewed, by increasing digitalisation and reliance on online platforms, the COVID-19 crisis has highlighted the weaknesses and risks of online services and amplified pre-existing issues.

5.1.1. Unsafe products and unfair practices in e-commerce

The main issues affecting e-commerce are the proliferation of illegal and unsafe products and unfair commercial practices. According to BEUC, the Product Safety Pledge, through which Alibaba, Amazon, eBay and Rakuten France committed to a faster removal of dangerous products sold on their sites, is not leading to satisfactory results. Six consumer groups tested 250 products bought from online marketplaces such as Amazon, AliExpress, eBay and Wish throughout 2019 and found that two thirds fail EU safety laws with possible consequences such as electric shock, fire or suffocation. The consumer association Which? has also warned about eBay’s failure to remove unsafe smoke alarms from its site, despite being a signatory of the Product Safety Pledge. In addition, although Allegro and Cdiscount joined the initiative in 2020, BEUC regrets that not all relevant players are part of the Pledge.

During the COVID-19 pandemic, as consumers became even more reliant on online services, several national consumer associations identified an increase in potentially illegal business practices of online platforms including price gouging of certain products and an unprecedented volume of scams across different sectors. On 23 March 2020, the European Competition Network, which consists of the European Commission and Member States’ national competition authorities, issued a joint statement on the application of antitrust law during the COVID-19 outbreak, identifying excessive pricing as a particular area of concern where the network is ready to take action, and pointing out that manufacturers are allowed to set maximum prices to limit unjustified price increases at distribution level. In the UK, the analysis of complaints received by the CMA in March-April 2020 shows a large increase in prices for products ranging from rice (50% increase), toilet

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95 Which? (2019). Which? investigation prompts 100s of unsafe CO alarms to be removed from sale: do you have one? Retrieved from https://www.which.co.uk/news/2019/10/which-investigation-prompts-100s-of-unsafe-co-alarms-to-be-removed-from-sale-do-you-have-one/
paper (101%), flour (150%), to hand sanitisers (367%). At the same time, the enforcement of consumer rights in Europe has become all the more challenging at a time where courts may have been shut down (temporarily) and many alternative dispute resolution (ADR) bodies are not equipped to fully migrate online, which reveals the limits of public enforcers to combat cross-border online unfair practices during the pandemic. According to Riefa (2020), controlling price gouging could be done by applying the “general clause” of the Unfair Commercial Practices Directive 2005/29/EC since the practice is contrary to the requirements of professional diligence and materially distorts (or is likely to materially distort) the economic behaviour of the average consumer.

On 20 March 2020, the consumer protection authorities of the Member States (CPC), with the support of the Commission, issued a Common Position highlighting the most reported scams and unfair practices breaching consumer law in the COVID-19 context:

- Unsupported claims that products prevent or cure a COVID-19 infection.
- Pressure selling techniques and excessive pricing.

The CPC Common Position calls on online platforms to take concrete and effective measures to better identify such illegal practices, take them down and prevent similar ones from reappearing, in line with their obligations under the Unfair Commercial Practices Directive and e-Commerce Directive. Following the publication of the Common Position, Commissioner for Justice and Consumers Didier Reynders wrote to a number of platforms (Allegro, Amazon, Alibaba, Cdiscount, eBay, Facebook, Microsoft, Google, Rakuten, Wish and Verizon Media), to require their cooperation in taking down scams from their platforms. The platforms responded positively and informed Commissioner Reynders about a vast array of measures that they undertook to protect consumers from COVID-19 related scams, including:

- Automated, and where necessary, human monitoring of content using various keywords and categories of products at risks of scams;
- Using algorithms to address price gouging;
- Informing traders and consumers on how to flag these unfair practices to the platforms;
- Temporary bans on the selling or advertising of specific products such as masks or sanitizers;
- White listing of confirmed and reputable providers of certain products and delisting of traders who ignore requests to amend their offers;
- Cooperation with various national authorities, including with the police, where necessary.

In addition, national CPC authorities engaged in targeted investigations (e.g. in Italy, Spain, Poland) and enforcement actions such as issuing fines and even taking down websites of rogue traders. Some Member States proactively conducted broad checks of market practices of online platforms and their compliance with consumer law. In France, specific legislation was adopted fixing a price ceiling for the sale of hand sanitisers.

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On 30 April 2020, the CPC network, under the coordination of the Commission, launched a broad screening (“sweep”) of coronavirus-related products advertised on websites and online platforms. CPC authorities of 27 countries participated in this first high-level screening of online platforms, focusing on offers linked to protective masks and caps, sanitizing gels, testing kits as well as food, food supplements and non-food products with alleged healing effects related to the coronavirus. In 38 cases, CPC authorities found a number of dubious offers or adverts concerning products misleadingly promoted in the context of the coronavirus, broad claims that a product was able to prevent or cure infection, and excessive prices. In the in-depth follow-up sweep, 22 participating CPC authorities checked 268 websites (61 internet platforms and 207 web-stores), among which 206 were flagged for further investigation for potential breaches of EU consumer law, including more than 30% for products containing claims of alleged healing or preventive effects against the coronavirus. A second sweep was conducted in June 2020 by CPC authorities from 17 countries, with 73 checks of major platforms. In almost one third of these cases, CPC authorities found that the checked platforms still contained a significant number of dubious offers and advertisements.\footnote{European Commission, Sweeps. Retrieved from https://ec.europa.eu/info/live-work-travel-eu/consumers/enforcement-consumer-protection/sweeps_en}

The screenings also showed the efforts of online platforms to remove scams from their websites. Google reported having blocked or removed over 200 million coronavirus-related ads globally over the past months and eBay reported having blocked or removed more than 31 million listings that violated their coronavirus policies. Facebook said they removed at least 2.3 million pieces of content from Facebook and Instagram worldwide related to coronavirus, including 27,000 removed within the EU during May. By the beginning of May 2020, Amazon had stopped more than 6.5 million products with inaccurate claims, removed over 1 million offers for suspected price gouging, suspended more than 10,000 selling accounts globally for suspected price gouging and referred the most egregious offenders to law enforcement.\footnote{Interview with Amazon on 20/11/2020.} Most platforms reported a sharp decline in coronavirus-related product listings in June. For example, Amazon reported a 95% decrease in the weekly number of new product listings attempting to make coronavirus-related claims as compared to the March average, and Rakuten and Allegro reported similar trends.\footnote{European Commission (2020). Coronavirus: EU Consumer Protection authorities and the Commission complete checks to protect consumers from scams online. Retrieved from https://ec.europa.eu/info/news/coronavirus-eu-consumer-protection-authorities-and-commission-complete-checks-protect-consumers-scams-online-2020-jul-29_en}

On 6 November 2020, Commissioner Reynders met with the 11 online platforms participating in the structured dialogue on tackling online consumer scams to encourage platforms to reinforce their preparedness to address the resurgence or emergence of new scams during the second wave of the pandemic.\footnote{European Commission (2020). Coronavirus: Commission urges online platforms to collaborate and continue fighting consumer scams. Retrieved from https://ec.europa.eu/info/news/coronavirus-commission-urges-online-platforms-collaborate-and-continue-fighting-consumer-scams-2020-nov-06_en}

### 5.1.2. Hate speech and disinformation on social media

Illegal hate speech\footnote{Council Framework Decision 2008/913/JHA of 28 November 2008 on combating certain forms and expressions of racism and xenophobia by means of criminal law. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008F0913} is defined by the Framework Decision 2008/913/JHA of 28 November 2008 and national laws transposing it, as any conduct publicly inciting to violence or hatred directed against a group of persons or a member of such a group defined by reference to race, colour, religion, descent or national or ethnic origin.
While liability for hate speech is mostly defined at national level, in 2016 the European Commission agreed with Facebook, Microsoft, Twitter and YouTube a Code of conduct on countering illegal hate speech online setting out commitments on processes for notice review and removing of illegal hate speech, and for awareness raising, training and cooperation with authorities, civil society organisations and other platforms. Since then, Instagram, Google+, Snapchat, Dailymotion and Jeuxvideo.com also joined the Code and TikTok announced their participation to the Code in September 2020. The fifth evaluation on the Code conducted in December 2019 shows that on average 90% of the notifications are reviewed within 24 hours and 71% of the notified content is removed, with the highest percentages of removed content for Jeuxvideo.com, Facebook and YouTube and below 50% for Twitter and Instagram. The most commonly reported grounds for hate speech in this monitoring exercise were sexual orientation and xenophobia. At the same time, the messaging app Telegram, not part of the Code, has become a staging ground for extremist groups such as white supremacists, with an increase in racist messages surrounding the COVID-19 crisis. Telegram declared that while removing terrorist content, they would not engage in “politically-motivated censorship”.

The COVID-19 pandemic has seen the emergence or exacerbation of hate speech towards certain individuals and groups, from scapegoating, stereotyping, stigmatization, to the use of misogynistic, racist, xenophobic, Islamophobic or antisemitic language. Since the COVID-19 outbreak, individuals perceived as ethnically Asian or Chinese, or belonging to certain ethnic or religious minorities have been blamed or subject of conspiracy theories for spreading the virus. In some instances, journalists, whistle-blowers, medical and health care professionals, human rights defenders and peacebuilders, have also been targeted by unlawful attacks as a result of their work in addressing or reporting on the pandemic. The United Nations issued guidance towards national and international authorities, online platforms, media and civil society on addressing and countering COVID-19 related hate speech.

Misinformation consists in false information that is spread regardless of intent to mislead, whereas disinformation is understood as verifiably false or misleading information that is created, presented and disseminated for economic gain or to intentionally deceive the public.

As part of the proposed measures from the Commission Action Plan Against Disinformation (2018), a self-regulatory EU Code of Practice on disinformation was agreed in 2018 between prominent online platforms (Google, Facebook, Twitter, Mozilla, later joined by Microsoft and TikTok) and advertising associations (e.g. IAB, WFA), setting a range of commitments and best practices to address the spread of online disinformation. The first annual assessment from the Commission shows that the Code has provided a framework for structured dialogue between stakeholders and prompted concrete effective actions. However, the Code’s implementation could be further strengthened by the adoption of common definitions, clearer

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procedures, more precise and comprehensive commitments as well as transparent key performance indicators (KPIs) and appropriate monitoring.\textsuperscript{114}

Eurobarometer 503\textsuperscript{115} conducted in December 2019 shows that just before the pandemic, half of respondents were reporting coming across fake news at least once a week and one third every day or almost every day, with a higher proportion among highly educated people and frequent internet users. According to the respondents, the responsibility to combat disinformation should rest with the media, followed by public authorities and social media platforms, and public authorities should help citizens better identify disinformation and prevent those who spread disinformation from abusing social media platform services.

Already early in the coronavirus crisis, the WHO acknowledged the threat of the “infodemic” i.e. the over-abundance of information about the pandemic – some accurate and some not, and engaged WHO technical risk communication and social media teams in tracking and responding to myths and rumours.\textsuperscript{116} According to a survey conducted in March-April 2020 in Germany, Spain and the UK, one in three people say that they have seen a lot of false or misleading information on social media and messaging apps.\textsuperscript{117} The main harms caused by disinformation related to COVID-19 include fear mongering, limits to the effectiveness of the official efforts to curb the pandemic, threat to the physical safety of individuals (by not following sanitary recommendations or trying bogus treatments), and increase in racism. The main subjects of misinformation identified around COVID-19 are potential cures, factors that contribute to the disease’s transmission, and conspiracies about the root causes of the virus (e.g. role of 5G and of elites such as Bill Gates).\textsuperscript{118} An April 2020 study from King’s College London showed a statistical link between belief in three prominent conspiracy theories around coronavirus and non-compliance with related public health guidelines.\textsuperscript{119} Some countries, including the UK, Ireland, Belgium and the Netherlands have witnessed a rise in conspiracy-fuelled violence against 5G infrastructure and personnel during the pandemic.

Since March 2020, the Commission made a webpage available addressing false claims and conspiracy theories related to COVID-19, separating facts from fiction and promoting authoritative information.\textsuperscript{120} On 10 June 2020 the European Commission and the European External Action Service (EEAS) issued a Communication on Disinformation\textsuperscript{121} to describe the problems in the COVID-19 period, including false claims, conspiracy theories, illegal hate speech, consumer fraud, cybercrime and targeted influence from foreign actors, and proposed a set of actions in these different areas. The Commission called on online platforms to ensure the full implementation of the Code of practice on Disinformation, to report monthly on their policies and actions to address COVID-19 related disinformation, and to intensify their collaboration with fact-checkers.

\textsuperscript{118} Macpherson L. (2020). How Are Platforms Responding to This Pandemic? Retrieved from https://misinfotrackingreport.com/
Already on 17 March 2020 the main online platforms (Facebook, Google, LinkedIn, Microsoft, Reddit, Twitter, and YouTube) published a joint statement to demonstrate their commitment to combat fraud and misinformation about the virus and elevate authoritative content on their platforms. According to the EU Disinfo Lab’s monitoring of the platforms’ responses to COVID-19 misinformation and disinformation, five trends can be identified in the platforms’ policies:

- **Prioritising content from authoritative sources** such as public health authorities and redirecting users to these sources.
- **Closer cooperation with fact-checkers and health authorities** to flag disinformation and proactive removal of content promoting false cures, denial of public health authorities’ recommendations and of proven scientific facts.
- **Increased use of automated content moderation** to address the increase in the use of platforms and the fact that many moderators could not do their work from home for security reasons. The increase of AI filters to moderate content led to a large number of bugs and to legitimate information being removed or blocked (e.g. on Facebook).
- **Offering free advertising to authorities**, including free advertising credit or ad grants from Google, Facebook, Twitter and Tiktok to the WHO and national health authorities.
- **Banning advertising for scams**, although many scams passed the filters.

The main measures taken by online social media platforms to tackle COVID-19 misinformation are presented in Table 5.

**TABLE 5: OVERVIEW OF PLATFORMS’ RESPONSE TO COVID-19 MISINFORMATION**

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>MAIN ACTIONS AGAINST COVID-19 MISINFORMATION</th>
</tr>
</thead>
</table>
| Facebook and Instagram | - Policy and newsroom on combating COVID-19 misinformation.  
| | - Educational pop-ups and redirection to information from the WHO and health authorities.  
| | - Dedicated section of the COVID-19 Information Centre called Facts about COVID-19, to debunk common myths identified by the WHO.  
| | - Granted free advertising to WHO and advertising credits to health ministries and similar organisations.  
| | - Reliance on third-party fact checkers and public health authorities.  
| | - Removes harmful COVID-19 misinformation and false claims flagged by public health authorities, including claims on false cures or prevention methods or claims that create confusion about available health resources.  
| | - Displays misinformation warning on posts flagged by fact-checkers.  
| | - Increase of automated filters for content moderation.  
| | - Ban ads with false claims on COVID-19.  
| | - Removed its “pseudoscience” category from the list of categories that advertisers can use to target people.                                                                 |
| WhatsApp           | - Whatsapp Coronavirus Information Hub™ in partnership with WHO, UNICEF, and UNDP.  
| | - Opened a channel with the WHO help to automatically answer questions and give information.  |

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<tr>
<th>PLATFORM</th>
<th>MAIN ACTIONS AGAINST COVID-19 MISINFORMATION</th>
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<tbody>
<tr>
<td>Google and YouTube</td>
<td>- Imposed limits for “highly forwarded” messages, so that they can only be sent onward to one group rather than five.</td>
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<td></td>
<td>- Google’s COVID-19 policies.</td>
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<tr>
<td></td>
<td>- Google homepage promotes measures to limit the spread of the virus (e.g. washing hands), Google Search includes an “SOS Alert” promoting information from official sources.</td>
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<td></td>
<td>- COVID-19 hub in Google news from authoritative sources.</td>
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<td></td>
<td>- Videos from public health agencies on YouTube’s homepage.</td>
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<td></td>
<td>- YouTube removes videos that promote medically unproven cures, groundlessly link 5G to COVID-19 and “medically unsubstantiated” videos.</td>
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<tr>
<td></td>
<td>- Provided ad grants to the WHO, governments and non-profit organisations.</td>
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<tr>
<td></td>
<td>- Bans ads for price-gouging, capitalising on global medical supply shortages and making misleading claims about cures.</td>
</tr>
<tr>
<td>Twitter</td>
<td>- Twitter’s strategy against COVID-19 misinformation.</td>
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<td></td>
<td>- Covid-19 event page with the latest from trusted sources appears on top of the timeline.</td>
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<td>- Increase in automated filtering to moderate content.</td>
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<tr>
<td></td>
<td>- Broadened the definition of harms on the platform, to include denial of public health authorities recommendations, description of treatment known as ineffective, denial of scientific facts about the transmission of the virus, claims that Covid-19 intends to manipulate people and related conspiracy theories, incitement to actions that could cause widespread panic, or claims that specific groups would be more or never susceptible to Covid-19.</td>
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<tr>
<td></td>
<td>- Affixes labels and warnings to tweets containing information about COVID-19 that goes against the advice and knowledge of public health experts, and links the flagged tweets to a Twitter-curated page or external trusted source containing additional information on the claims made within the Tweet.</td>
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<tr>
<td></td>
<td>- Commits to deleting “unverified claims” on 5G and Coronavirus that could lead directly to the destruction of critical infrastructure or cause widespread panic, and tweets or trends about #COVID19 that include a call to action that could potentially cause someone harm.</td>
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<tr>
<td></td>
<td>- Commits to taking down ads violating their COVID-19 policy.</td>
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<tr>
<td></td>
<td>- Ad grants to WHO, health ministries and non-profit organisations working to counter the pandemic, promote mental health, fight domestic and gender-based violence and debunk fake news.</td>
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<tr>
<td>Microsoft (Bing, LinkedIn)</td>
<td>- Bing prioritises results from trusted news sources for search results related to COVID-19 and shows “task panes” on the first result page with credible, authoritative information.</td>
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<tr>
<td></td>
<td>- Bans ads that seeks to exploit the COVID-19 crisis for commercial gain, spread misinformation, or that may pose a danger to user health or safety.</td>
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<tr>
<td></td>
<td>- Dedicated information page “Coronavirus official updates and sources”, curated by Linkedin editors.</td>
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<tr>
<td>Snapchat</td>
<td>- Used its “Discovery” function to highlight information from partners.</td>
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<tr>
<td></td>
<td>- Partnered with WHO to create filters and stickers that promote tips on how to prevent the spread of the virus.</td>
</tr>
<tr>
<td>Reddit</td>
<td>- Dedicated subreddit page as a reliable source of information with posts being verified by moderators and contributions from renowned scientists.</td>
</tr>
<tr>
<td>Telegram</td>
<td>- New process to verify channels from official governmental sources.</td>
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In August 2020, the platform signatories of the EU Code of Practice on Disinformation published their first monthly report on the steps taken to combat COVID-19 disinformation. According to these reports, in terms of advertising, since January 2020, Google has blocked or removed over 68 million coronavirus-related ads from EU-based advertisers and buyers for policy violations including price-gouging, capitalizing on global medical supply shortages and making misleading claims about cures. In July 2020, Microsoft prevented a total of 827,178 advertiser submissions directly related to COVID-19 from being displayed to users globally, including 183,075 users located in European markets. In terms of removed content, since introducing its COVID-19 guidance, Twitter has removed 14,900 tweets and challenged 4.5 million accounts. In Q2 of 2020, more than 7 million pieces of content were removed on Facebook and Instagram globally for containing misinformation that may lead to imminent physical harm, such as content relating to fake preventative measures or exaggerated cures. TikTok removed approximately 29,000 violating videos across EU Member States and the UK, including about 3,000 videos that were specifically assessed as medical misinformation. Since the outbreak of the crisis, YouTube has reviewed over 100,000 videos related to dangerous or misleading coronavirus information and has removed over 15,000 of them. From November 2020 onwards, on the Commission’s request, the Code signatories added in their monthly reports their actions to fight disinformation and misinformation around COVID-19 vaccines.

The EU Disinfo Lab observed that content moderation has been inconsistent across platforms and functions, from mobile to the desktop version, as well as for sharing content from one platform to another. This means that the same post or profile may have been blocked on one platform but not on another. University of Oxford’s Reuters Institute examined a sample of 225 pieces of misinformation posted between January and the end of March, and found that on Twitter, 59% of posts rated as false by fact-checkers remained up, on YouTube 27% remained up, and on Facebook, 24% of false-rated content remained up without warning labels. Similarly, a team of fact checkers from Youth Against Misinformation reported 649 posts to Facebook, Google, Instagram, and Twitter between January and the end of March, of which 61 were removed by Google, 48 by Facebook, 103 by Instagram, and 7 by Twitter.

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<thead>
<tr>
<th>PLATFORM</th>
<th>MAIN ACTIONS AGAINST COVID-19 MISINFORMATION</th>
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<tbody>
<tr>
<td>- Searches for “Coronavirus” redirect to a dedicated channel with a list of news sources by country.</td>
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</tr>
<tr>
<td>Pinterest - Searches for “Coronavirus” send to a dedicated page with information from the WHO. - Preventing ads from trying to benefit from the crisis, although scams were still found on the platform.</td>
<td></td>
</tr>
<tr>
<td>TikTok - Searches for “Coronavirus” send to a WHO information banner. - Provides links to authoritative sources to users using hashtags related to coronavirus. - Policies to remove non-verifiable medical information and tackle the spread of COVID-related conspiracy theories. - Donated prominent ad space to trusted organisations and local health authorities and NGOs.</td>
<td></td>
</tr>
<tr>
<td>WeChat - Removed most of the Coronavirus-related content, disregarding the veracity of the information shared through automated filtering of a combination of keywords.</td>
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Instagram and Twitter between April and May 2020, out of which only 6.3% were removed entirely by the platforms and 1.1% were labelled as false but remained on the platform with a disclaimer. Facebook removed 10.2% of the posts reported to them, while just one tweet out of the 179 reported was removed by Twitter.127

A report from the Institute of Structural Dialogue128 assesses the responses of Facebook, Google and Twitter and their effectiveness between March and May 2020 and draws some relevant conclusions and recommendations. Regarding content moderation, the report shows that the systems for content promotion and amplification enable a fast and uncontrolled spread of misinformation on social media, rendering ex-post fact-checking ineffective. This could be tackled by an earlier detection of posts with ‘stage-gates’ to prevent disinformation from reaching a tipping point of engagement on platforms. Platforms could ensure more consistency in their moderation policies around the coronavirus by building on cooperation established for other areas of online harm (e.g. on terrorist material and images of child sexual exploitation). Platforms should also expand their efforts to detect and remove inauthentic accounts that seek to exploit the crisis to manipulate the population on behalf of foreign states or non-state actors. In addition, health authorities and experts could adapt their communication strategies to reach a wider audience and could engage with influencers to spread official recommendations to audiences that may be harder to reach via traditional channels.

For Maréchal et al (2020), the issues with moderating COVID-19 related misinformation are linked to the business models of platforms based on targeted advertising. Any attention-grabbing or controversial content attracting views and clicks generates more advertising revenues for platforms, thus disinformation content may benefit platforms indirectly. In addition, the personalisation of content and advertising enabled by the vast collection of user data and targeting algorithms makes it possible to show misinformation-related ads to people who have higher chances to believe them. For example, the Markup found that one of the categories of misinformation most likely to be exposed to the public was misinformation about the differences between other ‘good’ and ‘bad’ information is clearer, the infodemic was actually characterised by the same patterns of creation and distribution as previous misinformation waves but may have just been amplified by the increase in information sharing during the pandemic. According to Public Knowledge, this means that the strategies and tools used by platforms to counter disinformation during the pandemic could be used effectively against other types of disinformation including political misinformation.

The approaches to tackle COVID-19 misinformation by redirecting to authoritative sources or debunking websites have also highlighted the importance of media literacy. Platforms could adopt the same approach.

127 Centre for countering digital hate (2020). How social media giants have failed to live up to their claims on the Coronavirus 'infodemic. Retrieved from https://252f2edd-1c8b-49f5-9bb2-cb57bb47e4ba.filesusr.com/ugd/f4d9b9_17e9f74e84414524bbe9a5b45afdf77e.pdf
for other types of misinformation, and media literacy activities and training conducted by fact checking organisations and civil society organisations could be supported by public authorities and platforms. As an example, the European Union, UNESCO and Twitter launched a European social media campaign #ThinkBeforeSharing to promote media and information literacy with best practices to critically analyse information and navigate the amount of information amid the COVID-19 disinformation crisis.

Some challenges remain to tackle misinformation and disinformation, including:

- The opacity of private messaging apps such as WhatsApp, Telegram, WeChat, Viber and others, where encryption and group chat pose challenges to the spread of misinformation.
- The emergence of new forms of manipulation such as “deepfake” (AI-doctored video in which the facial movements of an actor are transferred to that of a target such as celebrities and politicians).
- The rate of false positives linked to automated content moderation, whereby legitimate content ends up being removed or blocked.
- Difficulty in defining harm for other subjects of misinformation, such as climate change and political campaigns.

The Forum on Information and Democracy, created in 2019 and endorsed by 38 States, released a report in November 2020 in the context of its working group on infodemics, proposing general principles and recommendations to States and online service providers. The report calls for public regulation and enforcement to impose transparency requirements on platforms’ core functions such as content moderation, content ranking, content targeting and social influence building. Other recommendations include principles for content moderation, the introduction of quality and safety standards in the design of platforms, and measures to contain the spread of illegal or misleading content on closed messaging services.

5.1.3. Contact tracing apps and cybersecurity

Different contact tracing apps have emerged in the midst of the COVID-19 crisis to easily trace and contact those who have been around contaminated people. However, concerns have also been raised about the amount of personal data collected and their nature (e.g. health data) as well as the degree of privacy. The OECD recommended to ensure privacy-by-design for such apps, so that personal data protections are built into the system, by default. Privacy-by-design may, for example, involve the use of aggregated, anonymised, or pseudonymous data to provide added privacy protection, or the deletion of data once its purpose is served.

The eHealth Network, which consists of EU Member States’ competent authorities dealing with digital health supported by the Commission, have developed an EU toolbox for the use of mobile applications for contact tracing and warning, accompanied by a Commission guidance on data protection for such mobile apps, and

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guidelines to ensure interoperability between mobile tracing apps across the EU. The Commission and the Body of European Regulators of Electronic Communications (BEREC) have set up a special reporting mechanism and regularly monitor the internet traffic situation in each Member State, as well as other measures taken by national regulatory authorities (NRAs), public institutions and market players, such as the development of mobile tracing apps or measures related to disinformation.

A relevant non-profit initiative is Pan-European Privacy-Preserving Proximity Tracing (PEPP-PT), bringing together scientists, technologists and experts from eight European countries, providing standards, technology and services to countries and developers to develop proximity tracing apps that are interoperable across countries and preserve privacy.

In April 2020, Apple and Google announced a partnership to enable the use of Bluetooth low energy technology for COVID-19 contact tracing, by collecting and storing signals from nearby phones while respecting consent and privacy, by not revealing the user’s location or personal data. The partnership follows a decentralised approach, whereby all the data processing takes place on the user’s device without external storage on a central database. In May, the two companies released the system’s APIs to enable interoperability between Android and iOS devices using apps from public health authorities. In the EU, at least 20 Member States have already released or are developing COVID-19 contact tracing apps based on the Apple and Google Exposure Notification API (Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Slovenia, Spain). In September 2020, Apple and Google announced that they would integrate their contact tracing technology into their next mobile operating systems so that health authorities do not need to build their own tracing apps but can simply configure the basic software framework to their country’s needs. While the precedent exposure notification system remains available, Apple will incorporate the new settings into its iOS 13.7 contact system and Google will offer it on Android 6.0 with an automatically generated custom Android app. Users will be able to opt in or out of the tracing programme.

The EU Member States and the Commission have also set up a Federation Gateway operational since September 2020 so that the national contact tracing apps can talk to each other and users only need to install one app that can work across borders.

In addition, since April 2020, Google publishes bi-weekly COVID-19 Community Mobility Reports to show movement trends over time by geography, across different high-level categories of places such as retail and recreation, groceries and pharmacies, parks, transit stations, workplaces, and residential. The reports are using aggregated, anonymized data from users who have turned on the Location History setting on Google Maps. The objective is to provide useful insight to public health authorities to support decision making related to the current crisis and to identify changes resulting from the policies aimed at flattening the curve of the


pandemic. Within the Data for Good project, Facebook publishes several maps and datasets on population movement, symptoms, and conducted a user survey on COVID-19 beliefs, behaviours and norms.

The European Commission also liaised with eight European telecommunications operators to obtain from them anonymised aggregate mobile geolocation data, in order to coordinate measures tracking the spread of COVID-19. To address privacy concerns, the data will be deleted once the crisis is over.

When it comes to cybersecurity issues, since February 2020, a surge of phishing campaigns has been noted in several countries, with Italy witnessing a 70% increase of phishing attacks between February and March 2020. The most common COVID-19 related phishing includes emails with a coronavirus theme in the subject field or as an attachment filename, emails or SMS impersonating the government (e.g. in the UK), or leaders and institutions (e.g. WHO), and emails or links mimicking legitimate initiatives. In April, nearly 20% of the daily malware and phishing emails blocked by Gmail were related to COVID-19, meanwhile more than 240 million coronavirus-related spam messages were registered every day. Cybercriminals also leveraged the popularity of tools used for teleworking and videoconferencing such as Zoom. For example, phishing campaigns with malicious attachments containing zoom in the filename were detected, and over 1,700 new Zoom domain names have been registered since the onset of the pandemic, likely for malicious use.

Zoom has been emblematic for some cybersecurity challenges that emerged with COVID-19. In March 2020, Zoom reached more than 200 million daily meeting participants and surpassed 300 million in April compared to 10 million meeting participants at the end of December 2019. However, in March Zoom had an important privacy and security incident (i.e. videoconferences hijacking, also called “Zoom-bombing”), which led the CEO and founder of Zoom to apologize. The company was also found to be using a questionable definition of ‘end-to-end encryption’ and was sending unauthorized data to Facebook. At the end of April, Zoom claimed to have resolved all these issues.

There has also been a surge in cases of cyber-attacks, ransomware and DDoS attacks targeting essential activities such as hospitals, including in France, Spain and the Czech Republic. Cybercriminals exploited the period of stress and crisis to draw individuals and organisations into scams and ransoms, especially those that

146 Phishing is the fraudulent practice of sending emails purporting to be from reputable organisations to lure individuals into revealing personal data, providing credentials, opening malicious attachments, etc.
150 Ransomware is a type of malware that most often encrypts users’ data and threatens to block access to data unless a ransom is paid.
151 A DDoS attack floods a target’s service (e.g. a website) with requests from a large number of IP addresses, resulting in the unavailability of the service for legitimate users, lasting from a few minutes to entire days.
lack good digital security practice or face organisational disruptions. The motives of cyber-attacks included, among others:

- targeting crisis-relevant infrastructure, such as hospital networks, to extort money or cause chaos,
- threatening the leakage of personal data,
- conducting scams on short supply medical equipment,
- running cyberespionage campaigns to steal valuable information for the elaboration of a vaccine or even conducting state-sponsored attacks on research facilities.

Applying digital security measures and raising awareness can effectively prevent such attacks. Across OECD countries, government agencies in charge of digital security are responding to the cybersecurity issues by raising awareness, monitoring the threat landscape, providing assistance where appropriate, and cooperating with all relevant stakeholders. The European Commission, ENISA, CERT-EU and Europol released a statement on 20 March highlighting their cooperation to track COVID-19 related malicious activities, alert their respective communities and help protect confined citizens.

5.2. Upcoming legislation and policies

A range of new legislation and policies have been announced in the Digital Strategy of the Von der Leyen Commission, that are progressively being unveiled and submitted to public consultation. While these new policies address issues and needs identified already before the pandemic, they take into account the fact that some of these issues have been amplified by the crisis and that new habits and challenges emerged with the pandemic, especially with regard to the increased use of online platforms. The announced legislative initiatives therefore already attempt to address the short-term impacts of the crisis, while the long-term impacts on the economy and consumer behaviours remain to be assessed to shape additional long-term policies.

The “Digital strategy Shaping Europe’s digital future” published in February 2020 outlines three key objectives for the Von der Leyen Commission:

- **Technology that works for people**: connectivity is a building block of digital transformation, and the Commission aims to foster investment in innovation and cybercrime prevention.
- **A fair and competitive economy**: a frictionless single market with fair competition, facilitated by a European single market for data, and effective enforcement of rules offline and online to prevent gatekeeping from platforms with market power.
- **An open, democratic and sustainable society**: A trustworthy environment in which citizens are empowered in how they act and interact, and of the data they provide both online and offline. This includes clarifying the roles and responsibilities of online platforms regarding data flows and issues such as illegal content and the sale of dangerous or counterfeiting goods.


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The Digital Services Act (DSA)\(^{55}\), which complements the e-Commerce Directive, aims to create a safer digital space where the fundamental rights of all platform users are protected and establishes a transparency and accountability framework for online platforms. The DSA sets out rules for online intermediary services offering their services in the single market, whether established in the EU or not, differentiating the obligations according to the role, size and impact of the platforms in the online ecosystem. The DSA clarifies the conditions for liability exemption of intermediary services, sets out due diligence and transparency obligations on the removal of illegal content or contrary to the providers’ terms and conditions, and puts in place safeguards for users to be able to challenge platform content moderation decisions. The proposal includes new obligations on traceability of business users in online marketplaces to help identify sellers of illegal goods. Very large platforms, reaching more than 10% of 450 million consumers in Europe, are imposed additional obligations to manage systemic risks. These include conducting risk assessments of the systemic risks and to submit themselves to external and independent audits, as well as disclosing the main parameters used in their recommender systems, and providing access to key data for vetted researchers. To improve the oversight of the online environment, the DSA requires Member States to designate national Digital Services Coordinators for the application of the Regulation, and establishes a European Board For Digital Services. The Commission and the Board may facilitate the drawing up of codes of conduct for the application of the Regulation, in association with the intermediary service providers. The DSA provides intervention powers to the Commission in case of persisting infringements from the very large platforms, including investigations and the possibility to take interim measures and binding commitments. In case of non-compliance, the Commission may impose fines of up to 6% of the annual turnover of very large platforms and periodic penalty payments not exceeding 5 % of their average daily turnover.

In what seems a direct provision to take into account the lessons of the COVID-19 crisis, Article 37 of the DSA entitles the Board to recommend the Commission to initiate, and online platforms to participate in, the drawing up of crisis protocols for addressing crisis situations strictly limited to extraordinary circumstances affecting public security or public health. These protocols may include displaying prominent information on the crisis situation provided by Member States’ authorities or at Union level; ensuring that the platform point of contact is responsible for crisis management; and where applicable, adapting the resources dedicated to compliance with the obligations set out in Articles 14, 17, 19, 20 and 27 to the needs created by the crisis situation.

The various actions taken by online marketplaces after the requests from the CPC Common Position and from Commissioner Reynders to take down COVID-19 related scams, and the measures from online platforms and social media to apply the Code of Practice on disinformation, show that online platforms were already considered more than passive host providers by public authorities, and have the technology and resources to scale up the detection and take down of illegal goods and content.

The Digital Market Act (DMA)\(^{56}\) establishes criteria to qualify a large online platform of “gatekeeper” and lays down rules to ensure fair and contestable digital markets where gatekeepers are present, namely by setting “do’s” and “don’t” that gatekeepers must comply with. The DMA also obliges the designated gatekeepers to notify the Commission of any intended concentration with another digital provider within the meaning of the EU Merger Regulation. The Commission may conduct market investigations to qualify companies as gatekeepers, dynamically update the list of obligations of gatekeepers when necessary, and investigate systemic non-compliance. In case of non-compliance, the Commission may impose fines of up to


10% of the company’s total worldwide annual turnover, and periodic penalty payments not exceeding 5% of their average daily turnover. In case of systematic non-compliance, the Commission may impose behavioural and structural remedies (e.g. divestiture of (parts of) a business) proportionate to the offence committed.

The DMA addresses competition concerns anterior to the COVID-19 crisis but that could have been reinforced by the increasing importance of online platforms during the pandemic. A paper from the Institute for Public Policy Research (IPPR)\textsuperscript{57} notes that the pandemic may aggravate pre-existing problems such as rising market concentration and the growing power of digital platforms, and that competition authorities will need to ensure that the temporary subordination of competition to other policy objectives in the context of the coronavirus crisis – public health, security of supply, the protection of jobs – does not become entrenched. For example in March 2020, the network of Member States competition authorities had issued a joint statement\textsuperscript{158} saying that they would not intervene against temporary and necessary cooperation of companies to ensure the supply and fair distribution of scarce products to all consumers. However, competition authorities should ensure that such co-operation does not spill over into restrictions of competition by “cartels”, such as price fixing, output restriction or capacity reduction.\textsuperscript{159}

In some cases, market concentration will be a normal process resulting from failures of businesses due to the crisis and the reallocation of production assets in some sectors, in other cases, concentration driven by anti-competitive mergers should be closely monitored. To handle both kinds of concentration, the IPPR paper recommends strong merger control, robust advice to government to avoid inefficient bailouts of troubled firms and industries, and close monitoring of how markets and consumer outcomes are changing across the economy. As for online platforms, since the crisis has either left them untouched in terms of revenue or has benefited them, the pandemic may result in reduced competition, increased gatekeeper power over suppliers, and a stronger position in digital advertising. This confirms the need for increased regulatory scrutiny and pro-competition regulation.

As a follow up to the \textbf{European Strategy for Data} published in February 2020, the European Commission adopted a Proposal for a Regulation on European data governance (\textit{Data Governance Act})\textsuperscript{160} on 25 November 2020 that aims to foster the availability of data for use by increasing trust in data intermediaries and by strengthening data-sharing mechanisms across the EU. The proposed Regulation provides conditions to facilitate the reuse of certain public sector data that cannot be made available as open data, a notification and supervisory framework for the provision of data sharing services, and a framework to make it easier for citizens and businesses to make their data available for altruistic purposes. \textbf{The COVID-19 crisis has illustrated the importance of access to data and data sharing to foster scientific research and inform public decision making.} During the pandemic, scientific data have been shared across the world to support the research of cures and vaccines. Some platforms shared mobile location data to support authorities’ decisions, and many national health authorities launched contact tracing apps to facilitate the tracing of individuals having been in contact with contaminated people. To mitigate data protection concerns from the general public regarding contact tracing apps and health data sharing, privacy by design should be ensured. The European Strategy for Data will also drive the creation of \textbf{European data spaces} in key areas planned for 2021.


The New Consumer Agenda communication\textsuperscript{161} adopted on 13 November 2020 presents a vision for EU consumer policy from 2020 to 2025 and aims to strengthen consumer resilience in the face of the COVID-19 crisis. The Agenda covers five key priority areas including the green transition, digital transformation, redress and enforcement of consumer rights, specific needs of certain consumer groups, and international cooperation. The Communication acknowledges changes in consumption and mobility patterns linked to the pandemic (e.g. buying more locally, booking travel less in advance, using on-line services more often) and ponders over the durability of such changes, in particular those linked to digitalisation (e.g. increase of online purchase of food, use of streaming services). The increased digitalisation induced by the sanitary crisis also revealed inequalities in internet access and digital literacy, that call for policy initiatives focused on supporting digital inclusiveness and education, in line with the Digital Education Action Plan 2021-2027.\textsuperscript{162} By 2022, the Commission plans to engage in foresight to explore the longer-term impact of COVID-19 on the consumption patterns of people in the EU as a basis for future policy initiatives. To tackle consumer scams, unfair marketing practices and fraud that proliferated during the pandemic, the Commission will continue to support and facilitate cooperation between the Consumer Protection Cooperation network and other networks and stakeholders (e.g. platforms, business associations, advertisers and consumer organisation).

In light of the new consumer patterns, opportunities and risks posed by increased digital transformation, the New Consumer Agenda also lays down the planned revision of the General Product Safety Directive, the review of the Geo-blocking Regulation and eIDAS Regulation, as well as the update of guidance documents on the Unfair Commercial Practices Directive and the Consumer Rights Directive. The Commission also plans to analyse whether additional legislation or other action are needed in the medium-term in order to ensure equal fairness online and offline. As announced in the White Paper on AI, in 2021, the Commission foresees to make a proposal for a horizontal legal act laying down requirements for AI to guarantee the protection of consumers’ interests and fundamental rights.

The Communication on the European Democracy Action Plan\textsuperscript{163} adopted on 2 December 2020, proposes measures to promote free and fair elections and strong democratic participation, support free and independent media, and counter disinformation. To prevent the manipulative amplification of harmful content, the Commission will put in place a new protocol strengthening existing cooperation structures to fight disinformation, both in the EU and internationally. In order to reduce economic incentives for spreading disinformation, the Commission will introduce deterrence by imposing costs on actors engaged in influence operations and foreign interference. To tackle the spread of disinformation on online platforms, the Commission will issue guidance to overhaul the Code of Practice on Disinformation into a co-regulatory framework of obligations and accountability of online platforms with a more robust monitoring framework, building on the experience of the COVID-19 disinformation monitoring exercise. The objectives of the strengthened Code of Practice would be:

- to establish KPIs for monitoring the impact of disinformation and the effectiveness of platforms’ policies;
- to support the visibility of reliable information of public interest and maintain a plurality of views;
- to reduce the monetisation of disinformation linked to sponsored content;

• to foster collaboration between fact-checkers and platforms with transparent standards and procedures;
• to develop measures to limit the artificial amplification of disinformation campaigns and to ensure data disclosure for research on disinformation.

The European Democracy Action Plan also proposes to support innovative projects to fight disinformation under various EU programmes, in particular by civil society organisations and higher education institutions, with journalists’ involvement, as well as to increase support and funding to initiatives to promote media literacy and help citizens identify disinformation.

Overall, the provisions of the DSA, DMA, Data Governance Act and the actions proposed in the New Consumer Agenda and the European Democracy Action Plan indicate that the Commission is already taking into account the lessons learnt from the COVID-19 crisis, including the challenges posed by digitalisation and the increased reliance on online platforms for e-commerce, information, communication, entertainment, etc. According to some experts and consumer representatives interviewed, the COVID-19 crisis has highlighted the dependence on online services and exposed their weaknesses, confirming the need to regulate online platforms to mitigate the issues encountered (e.g. disinformation, scams, cybersecurity). Moreover, the pandemic has highlighted the need to continuously improve digital literacy and web accessibility to avoid digital exclusion, especially in a time where most activities have moved online. While the durability of the changes in consumption patterns (e.g. increase of e-commerce) and of the digitalisation of work and education should be assessed in the medium to long term, the recent EU legislative proposals already aim to tackle the short-term impacts of the crisis with a view to making the online platform environment safer, fairer and more transparent for business users and end-users. The need for further policy measures will depend on the length and consequences of the sanitary and economic crisis and on the adoption and impacts of the above proposed measures.
Conclusions

Short, medium and potential long-term impact on consumers, businesses and platforms

The COVID-19 pandemic and the preventive measures implemented by governments have not only impacted business activities and the global economy but also the way consumers behave, shop, work or play. Due to the lockdown measures, most activities (work, communication, education, entertainment) have moved online. Due to the impact of the crisis on the economy and employment, consumers have consumed less or prioritised products more aligned with their immediate needs or values. The COVID-19 crisis has increased the use of online services and the breadth of users. It is difficult to forecast the extent to which these changes will last, but new habits may have formed during the pandemic, and due to the lasting uncertainty, consumers expect that the COVID-19 crisis will continue to affect their life, work and finances for an undefined period of time. At the same time, the restrictive measures have highlighted the importance of certain face to face activities, therefore it can be expected that consumers will go back to a mix of online and offline activities post COVID.

The crisis is impacting not only people’s health but also businesses and the economy due to the restrictions and lockdown measures put in place across countries. The pandemic is severely affecting labour markets, economies and companies, including global supply chains, leading to different business disruptions across sectors in terms of sales, revenues and employment. Overall, at least half of businesses have experienced a decrease in demand and revenues in spring 2020 due to the restrictions. Businesses in the tourism, hospitality, transportation and event-focused sectors have experienced the hardest economic shocks from the pandemic and social distancing measures. The crisis also affected the operations of supply chains, and led to a reduction of production. Although unemployment rates have been contained by government interventions, future economic outlooks appear negative and will depend on the duration of the COVID-19 crisis, the rebound in demand after the crisis, and the government support measures. While the digitalisation of businesses was already underway, the pandemic has considerably accelerated this transition and it can be expected that that the businesses that have digitalised their processes, moved to online business models or increased their use of online platforms will keep these in place beyond the crisis. The successive business surveys conducted for the Observatory study show an increasing dependency of business users on online platforms in 2020, with limited switching and multihoming during the COVID-19 crisis despite a decrease in revenue generated through the platforms. Recognising that their success is often linked to their business users, several platforms implemented measures to support their business users during the crisis, ranging from written guidelines to reduction of fees.

Overall, the impact of the COVID-19 crisis on online platforms has been linked to the changes in consumer behaviour and businesses users’ economic situation and dependence. Data suggest that the traffic share and revenues have increased for social media, search engines and some national marketplaces while they have decreased for platforms in the tourism and travel sectors. The top 5 platforms (Google, Apple, Facebook, Amazon, Microsoft) have been quite resilient and recorded profits in 2020. In addition, the pandemic led to an acceleration of the digital transition of sectors that were still very much offline (e.g. health, education), and to the emergence of new platforms in these fields.

Effects on merger and acquisition activities

Before the current crisis, the top online platforms such as Google, Amazon, Facebook, Apple, Microsoft (GAFAM), but also Verizon, demonstrated a high activity in the field of M&A, purchasing a large number of companies to either strengthen their current products and services or expand into adjacent markets and
consolidate their ecosystem. A majority of the brands acquired is discontinued within a year, however the platforms usually integrate the acquired technologies and functions into their own products. Where the acquired companies continue to exist, this reflects the platforms’ plan to acquire a new user base or revenue source, and often leads to synergies between the acquired firm and the acquiring platform.

Over 2020, large online platforms maintained their pace of M&A activities and the announced deals indicate a continuation of their previous strategy of consolidation of core services and expansion into adjacent products and services to enlarge their ecosystem. Considering that the COVID-19 crisis has increased the reliance on online platforms and did not affect their revenues, one can expect that the large online platforms will be able to continue their M&A activities. Competition authorities also had to move their activity online but reviewed some of the most important deals (e.g. Google/Fitbit). One can also expect a surge in the acquisitions of ‘failing firms’ due to the economic crisis, for which competition authorities have strict conditions.

Since the threshold for EU merger review is based on the monetary turnover of the firms involved in the concentration, many acquisitions of small promising firms may occur below the radar of the EU competition authorities. However, the recent DMA proposes to introduce the obligation for large platforms designated as gatekeepers to notify the Commission of any intended concentration with another digital provider within the meaning of the EU Merger Regulation. This should enable the Commission to detect any acquisition of nascent potential rival that could foreclose competition.

**Political impacts**

Digital issues have been high on the EU political agenda for the past decade, and continue to be with the Digital strategy of the Von der Leyen Commission ‘Shaping Europe’s digital future’. During the COVID-19 pandemic, as companies and consumers moved online for work, communication and entertainment, the response from online platforms to the spread of illegal and harmful content became even more scrutinised by policy makers, regulatory and consumer protection authorities. With the pandemic, some illegal activities become even more harmful when they can affect consumers’ health, for example with unsafe products or false claims of cures. Other practices such as the spread of disinformation may limit the effectiveness of the official efforts by health authorities and fuel hatred or violence. The surge of phishing and cyber-attacks towards essential activities have also exposed the weaknesses and risks of digital services. The measures put in place by online platforms to protect consumers from COVID-19 related scams and to tackle illegal content and disinformation have demonstrated their capacity to detect and take down illegal goods and content, although the measures have been inconsistently applied across platforms and did not fully contain the flow of illegal and harmful goods and content online.

The pandemic has highlighted the dependence on online services and exposed their weaknesses, amplifying existing issues and confirming the need to regulate online platforms to mitigate the issues encountered with more obligations, transparency and accountability. The crisis has also highlighted the need to increase digital preparedness with better access to digital infrastructure and digital literacy to avoid excluding some parts of the population and enabling citizens to identify disinformation. The recently announced EU legislative and policy initiatives in the digital area already aim to tackle the short-term impacts of the crisis in terms of emerging risks and needs. The long-term impacts of the crisis on the economy and behaviours remain to be assessed, as well as the effects of the announced initiatives, before defining any additional long-term policy needs and objectives.
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Annex 2: List of stakeholders consulted

The table below presents the list of stakeholders interviewed or who provided written answers.

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<td>Platform</td>
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<td>Expert</td>
<td>Wolfgang Kerber</td>
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<td>Expert</td>
<td>Damien Geradin</td>
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<tr>
<td>Expert</td>
<td>Arho Suominen</td>
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Annex 3: Interview guides

Large online platforms

Economic impact

- What have been the short-term impacts of the COVID-19 crisis on your business model?
- To what extent has the COVID-19 crisis affected the take-up of your services/products and your sales/turnover?
- To what extent has the COVID-19 crisis affected your business users?
- Did you provide support to your business users, and if so which type of support and to what extent? (financial assistance e.g. direct donations, waivers of fees, commission; strategic or technical assistance e.g. training, guidelines)
- To what extent has the COVID-19 crisis affected your end-users (consumers) and their behaviour?
- What medium to long-term impacts do you expect from the crisis?
- How do you prevent the spread of illegal goods/content, disinformation and harmful content on your platform? Have there been changes in this area during the COVID crisis, and do you expect future changes post-crisis?

Merger and acquisition activities

- Have you concluded new acquisition deals since the outburst of COVID-19, and if so, to what extent do they differ from the deals pre-COVID in terms of target company characteristics, type of investment, envisaged destiny of the acquired company?
- To what extent do you expect changes in your mergers and acquisition strategy in the post-COVID context?

Medium online platforms

Economic impact

- What have been the short-term impacts of the COVID-19 crisis on your business model?
- To what extent has the COVID-19 crisis affected the take-up of your services/products and your sales/turnover?
- To what extent has the COVID-19 crisis affected your business users?
- Did you provide support to your business users, and if so which type of support and to what extent? (financial assistance e.g. direct donations, waivers of fees, commission; strategic or technical assistance e.g. training, guidelines)
- To what extent has the COVID-19 crisis affected your end-users (consumers) and their behaviour?
- If the COVID-19 crisis increased your sales/turnover, what do you think affected this (e.g. consumers changing habits, increased interest in alternative platforms, the support offered to business users)
What medium to long-term impacts do you expect from the crisis?
If your sales/turnover increased during the COVID-19 crisis, do you believe that this was an immediate effect of the crisis of that this increased interest will continue in the future?
How do you prevent the spread of illegal goods/content, disinformation and harmful content on your platform? Have there been changes in this area during the COVID crisis, and do you expect future changes post-crisis?

Merger and acquisition activities

Could you present any recent acquisitions made in the last 5 years before the COVID crisis, in terms of target company characteristics (activity, turnover, user base, acquisition value), type of investment (purely financial investment or controlling-stake), destiny of the acquired company (remains autonomous, integrated within the platform ecosystem)?
Have these acquisitions been subject to merger scrutiny procedures at national or EU level?
Have you concluded new acquisition deals since the outburst of COVID-19, and if so, to what extent do they differ from the deals pre-COVID?
To what extent do you expect changes in your mergers and acquisition strategy in the post-COVID context?
To what extent do large online platforms have the ability to buy niche operators or competitors and thus foreclose competition? Do you believe that your business may be subject to such a trend?
Do you believe that some start-ups are principally developed with the objective of selling off their business later on for a significant deal, or that most start-ups enter the market with a true intention to compete? Can any trends be observed in relation to these two business strategies?
Do you believe that the trend of acquisitions of innovative start-ups by large online platforms may raise further barriers to entry or expansion?

Business associations and platform associations

Economic impact

What have been the short-term effects of the COVID-19 pandemic on the different sectors and business models of the online platform economy, such as social media, e-commerce, on-line conferencing and e-learning providers, apps, etc?
What have been the effects on businesses using online platforms to reach their customers (B2B and B2C), and especially on SMEs?
How has the uptake of digital services been affected by the crisis in terms of new users as well as earlier users?
Did the online platforms provide support to their business users, and if so which type of support and to what extent? (financial assistance e.g. direct donations, waivers of fees, commission; strategic or technical assistance e.g. training, guidelines)
Have you observed the emergence or increased interest in new or alternative platforms during the COVID-19 crisis? What are their main characteristics?
• If you have observed the emergence and growth of new or alternative platforms, do you believe that this was an immediate reaction to the COVID-19 crisis or that this increased interest will continue in the future?
• What medium to long-term impacts of the crisis are expected for business users of the platforms (e.g. sustained changes in e-commerce, issues such as the creation of new dependencies, lock-in situations, problems with multi-homing and switching, sustained user and consumer behavioural changes)?

Policy impact

• Are some sectors under stricter scrutiny than others, or should some sectors be subject to more scrutiny and how (e.g. e-commerce (including the spread of illegal goods, services and content as well as harmful content), online conferencing and e-learning, social media (including control of misinformation, hate speech, illegal goods, services and content), public administration and voting, cybersecurity risks) ?
• What potential political responses can be observed or expected (e.g. enhanced responsibility of online platforms for illegal or harmful content)?
• Could the economic recovery from the COVID-19 crisis represent an opportunity for policy makers to set more ambitious goals for the digital agenda?
• What potential long-term drawbacks of the COVID crisis should be taken into account in future policies (e.g. accessibility of online facilities, data policies, sustained dependencies, increasing monopolies and conglomerates)?

Merger and acquisition activities

• To what extent do you expect changes in the merger and acquisition strategies of large online platforms following the COVID crisis?
• Do you believe that the trend of acquisitions of innovative start-ups by large online platforms may raise further barriers to entry or expansion?

Consumer associations

Economic impact

• What have been the short-term effects of the COVID-19 pandemic on the different sectors of the online platform economy, such as social media, e-commerce, on-line conferencing and e-learning providers, apps, etc?
• How has the uptake of digital services been affected by the crisis in terms of new users as well as earlier users?
• How were platform end-users (consumers) affected by the COVID crisis (e.g. changing user behaviour, dependencies, data collection policies, mobile location data, health data, tracing apps etc)?
• What medium to long-term impacts of the crisis are expected for end-users of the platforms (e.g. sustained changes in e-commerce, issues such as the creation of new dependencies, lock-in situations, problems with multi-homing and switching, sustained user and consumer behavioural changes)?

Policy impact
• Are some sectors under stricter scrutiny than others, or should some sectors be subject to more scrutiny and how (e.g. e-commerce (including the spread of illegal goods, services and content as well as harmful content), online conferencing and e-learning, social media (including control of misinformation, hate speech, illegal goods, services and content), public administration and voting, cybersecurity risks)?
• What potential political responses can be observed or expected (e.g. enhanced responsibility of online platforms for illegal or harmful content)?
• Could the economic recovery from the COVID-19 crisis represent an opportunity for policy makers to set more ambitious goals for the digital agenda?
• What potential long-term drawbacks of the COVID crisis should be taken into account in future policies (e.g. accessibility of online facilities, data policies, sustained dependencies, increasing monopolies and conglomerates)?

Experts

Economic impact

• What have been the short-term effects of the COVID-19 pandemic on the different sectors and business models of the online platform economy, such as social media, e-commerce, on-line conferencing and e-learning providers, apps, etc?
• What have been the effects on businesses using online platforms to reach their customers (B2B and B2C), and especially on SMEs?
• How has the uptake of digital services been affected by the crisis in terms of new users as well as earlier users?
• How were platform end-users (consumers) affected by the COVID crisis (e.g. changing user behaviour, dependencies, data collection policies, mobile location data, health data, tracing apps etc)?
• Have you observed the emergence or increased interest in new or alternative platforms during the COVID-19 crisis? What are their main characteristics?
• If you have observed the emergence and growth of new or alternative platforms, do you believe that this was an immediate reaction to the COVID-19 crisis or that this increased interest will continue in the future?
• What medium to long-term impacts of the crisis are expected for business users and end-users of the platforms (e.g. sustained changes in e-commerce, issues such as the creation of new dependencies, lock-in situations, problems with multi-homing and switching, sustained user and consumer behavioural changes)?

Policy impact

• Are some sectors under stricter scrutiny than others, or should some sectors be subject to more scrutiny and how (e.g. e-commerce (including the spread of illegal goods, services and content as well as harmful content), online conferencing and e-learning, social media (including control of misinformation, hate speech, illegal goods, services and content), public administration and voting, cybersecurity risks)?
• What potential political responses can be observed or expected (e.g. enhanced responsibility of online platforms for illegal or harmful content)?
• Could the economic recovery from the COVID-19 crisis represent an opportunity for policy makers to set more ambitious goals for the digital agenda?
• What potential long-term drawbacks of the COVID crisis should be taken into account in future policies (e.g. accessibility of online facilities, data policies, sustained dependencies, increasing monopolies and conglomerates)?

Merger and acquisition activities

• Could you characterise the mergers and acquisitions from large online platforms made in the last 5 years before the COVID crisis, in terms of target company characteristics (activity, turnover, user base, acquisition value), type of investment (purely financial investment or controlling-stake), destiny of the acquired company (remains autonomous, integrated within the platform ecosystem)?
• To what extent do you expect changes in the merger and acquisition strategies of large online platforms following the COVID crisis?
• To what extent do large online platforms have the ability to buy niche operators or competitors and thus foreclose competition?
• Do you believe that some start-ups are principally developed with the objective of selling off their business later on for a significant deal, or that most start-ups enter the market with a true intention to compete? Can any trends be observed in relation to these two business strategies?
• Do you believe that the trend of acquisitions of innovative start-ups by large online platforms may raise further barriers to entry or expansion?
• Do you consider that the current rules and thresholds for merger reviews are adequate for M&As in the digital sector and by online platforms?

This Annex presents the split of respondents to the survey by country and by sector, as well as the section from the questionnaire that was used for this analytical paper.

FIGURE 28: COUNTRY SPLIT OF BUSINESS SURVEY RESPONDENTS

[Pie chart showing the country split of business survey respondents with the following percentages: France 14.02%, Spain 12.21%, Germany 12.46%, Czech Republic 13.42%, Sweden 12.46%, Lithuania 10.95%, Ireland 8.39%, Netherlands 8.69%, Belgium 7.39%, and other countries as indicated.]

This section will investigate the impact of the COVID-19 crisis and measures (e.g. lockdown, closure of physical shops) on your business and your use of online platforms.

36) Did you experience a change in end-user (consumer) demand and consumption of your products or services compared to the pre-COVID period?*

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<th>Moderate decrease</th>
<th>No change</th>
<th>Moderate increase</th>
<th>Strong increase</th>
<th>Don't know/ Not applicable</th>
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37) Did the COVID-19 crisis and lockdown measures affect the operation of your supply chain?

( ) Yes
( ) No
38) Did the COVID-19 crisis and lockdown measures affect the production of products or services by your business?

( ) Yes, we reduced the production of our products or services
( ) Yes, we stopped the production of our products or services
( ) Yes, we increased the production of our products or services
( ) No, it did not affect the production of our products or services
( ) Don’t know

39) Did you notice a change in your overall revenues compared to the same periods one year ago?

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<th>Decrease by 10-49%</th>
<th>Decrease by less than 10%</th>
<th>No change</th>
<th>Increase by up to 10%</th>
<th>Increase by 11-50%</th>
<th>Increase by more than 50%</th>
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40) Did you experience a change in the share of your turnover stemming from the provision of your products or services through online platforms, compared to the pre-COVID period?

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<th>Decrease</th>
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41) Have you switched platforms or started using multiple platforms for the provision of your products and services during the COVID-19 crisis?*
Please select all that apply.
( ) Switched to another platform
( ) Started using additional platform(s) (multi-homing)
( ) Kept using the same platform(s)
( ) Don’t know

42) What other platforms did you start to use?
Please provide up to 3 names
Platform 1: ______________________________________
Platform 2: ______________________________________
Platform 3: ______________________________________

43) Did the [question('value'), id='23'] provide you with any of the following during the COVID-19 crisis?*
Please select all that apply.
( ) Direct donation
( ) Waiver of fees or charges
( ) Reduction in fees or charges
( ) Postponement of fees or charges
( ) Other form of financial support (please specify)
( ) None of the above
( ) Don’t know

44) Did [question('value'), id='23'] provide you with any of the following during the COVID-19 crisis?*
( ) Written guidelines
( ) Personal assistance
( ) Training
( ) Other form of financial support (please specify): _____________________________________________________
( ) None of the above
( ) Don’t know

[question('value'), id='23'] = “Please identify the main online platform that your business makes the greatest use of”