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# The impact of the Digital Services Act on business users

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Policy report

Prepared for  
Allied for Startups

23 October 2020

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# Designing the Digital Services Act to empower startups and the wider EU economy

oxera

ALLIED  
FOR  
STARTUPS

The physical and digital economies are deeply **interconnected**:

**18%**

of total EU business turnover is enabled by online services

We asked 1,000 businesses from four member states (Bulgaria, Ireland, Germany and Spain) how changes to online platforms induced by the DSA could affect their business. **We found:**

## The DSA could...

### Help businesses reach customers



**55%** of businesses would find it easier to expand around the EU if rules were more consistent

### Enable platforms to protect users



**2/3** of business users feel they have good channels to flag illegal or harmful content

### Promote safety and trust



**44%** of businesses said customers would trust them more if users were verified by platforms

## while avoiding...

### Lost business opportunities



**3.7m** gig workers unable to take on last-minute shifts if posts are delayed

### Removal of platform features



**48%** of businesses said customers would be less likely to try their products or services without reviews

### Putting online revenues at risk



up to **€23bn** in revenue lost by small businesses alone under the most stringent DSA rules



## Summary

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From finding work to booking holidays, reading the news to running a business, the services people need can be found online—often via a platform intermediary. For example, e-commerce plays an increasingly important role, with an average of 60% of individuals across the EU having bought goods or services online in 2019. Importantly, the interconnectedness of platforms with the wider economy means that their incentives are closely aligned: platform startups grow by creating a vibrant online ecosystem for their business users.

In June 2020, the European Commission proposed a new Digital Services Act (DSA) to provide updated rules and regulations for digital services. In light of this, Allied for Startups asked Oxera to examine what different DSA policy options could mean for Europe's businesses and consumers. Through a series of interviews with platform operators, and a survey of 1,000 European business users, we found:

### The DSA could...

#### Help business reach customers

A key benefit of online platforms is the scale and scope efficiencies they offer. Vibrant platforms help businesses reach a wide customer base at home and around the world. A consistent regime around the EU could unlock an additional €2.3bn revenue per year for the travel and tourism sector in the four countries surveyed. Indeed, 71% of businesses said the number of users that platforms have is important to their business's success; while 39% said they would lose customers if platforms were to limit user numbers.

#### Enable platforms to protect users

Platforms have a strong incentive to invest in technologies and processes that protect users and increase the value of their online ecosystem. However, the current rules prevent operators from proactively moderating content, for fear of losing their liability protections. The DSA should correct this, aligning the regulatory environment with platforms' commercial incentives.

#### Promote safety and trust

Safety and trust are important for both online platform operators and their business users. For platforms, more trust means more users; while for businesses, this means more sales opportunities. Nevertheless, it is important to take a flexible approach that allows platforms to implement scalable solutions that avoid onerous requirements for businesses.

### While avoiding...

#### Lost business opportunities

The flexibility that platforms offer their business users enables economic activity that might otherwise not occur. Any regulations that inhibit this flexibility could eliminate these gains. For example, burdensome sign-up processes could discourage 28% of gig workers; while delays to job posts could prevent 40% of them from doing work at short notice.

#### Removal of platform features

Increased liabilities or reporting requirements could lead platforms to restrict or remove ancillary features in order to mitigate legal risks or avoid administrative costs. This would hinder businesses' online activities, given the benefits they receive from features such as written reviews, flexible working and AI-driven matching of businesses to potential new customers.

#### Putting online revenues at risk

Changes to the regulatory environment could force platforms to change the services they offer. This, in turn, will affect the demand that businesses face online, reducing their ability to generate revenue. For example, interventions that lead platforms to restrict their functionality, incorrectly take down content and raise fees could reduce revenues for 38% of businesses. That could mean €1.4bn per year in lost revenues for the travel and tourism sector in the four countries surveyed.

### How could the DSA achieve this?

**Continue to limit platforms' liability** for third-party content posted to their site and the transactions they facilitate. To lose this would create a *de facto* general monitoring requirement as platforms seek to control their liability risk.

**Enable proactive measures** by allowing platforms to take voluntary actions to screen for harmful or illegal content while preserving their limited liability.

**Design procedural obligations with known penalties** such as notice-and-act systems that could increase trust for business users and consumers, while providing legal certainty and measurable risk for platforms.

**Increase the consistency of rules applied across the EU** by extending the country-of-origin principle to the broadest possible range of legal requirements. This will help platforms to enter and expand across member states.

**Avoid information burdens** that discourage business users, such as burdensome sign-up processes or the detailed verification of each action taken on the platform (such as product listings, qualifications, or content copyright).

**Do not prescribe solutions** that specify how platforms should govern their ecosystem. For example, requiring human oversight of every issue, or defining zero-tolerance policies, would prevent platforms from innovating with scalable technical solutions (such as AI tools) or developing new business models (such as flexible, gig working).

**Avoid rules based on platform size** (such as user numbers, or the value of transactions facilitated), which disincentivise platform growth by creating a regulatory 'cliff edge' for scale-ups of increasing compliance costs when the threshold is reached.

## 1 Introduction

This report presents the key findings of our study, culminating in a scenario-based assessment of the DSA's potential impact on businesses in four sectors of the EU economy (see section 8).

Before that, we provide an overview of Europe's digital landscape (section 2), highlighting the interconnected role that digital services play through a range of economic sectors.

Then, we discuss the key policy dimensions of the DSA, assessing the implications for platform operators, before quantifying the impact on business users. This includes:

- **scope of the DSA:** (section 3) considering the sizes and types of service it could cover;
- **content moderation:** (section 4) examining options to balance platform responsibility with proportionate costs and legal risk;
- **know your customer:** (section 5) assessing the effects of increased user verification on both trust and participation on the platform;
- **algorithm oversight:** (section 6) considering the implications of increased transparency for both regulators and users;
- **regulatory consistency:** (section 7) exploring the impact on Europe's businesses of a unified legal system across the EU.

Further details of our approach, data collection, and supporting quantitative analysis can be found in the accompanying methodology report.<sup>1</sup>

### Box 1 About this study

This study presents our findings on the potential implications of the DSA for platform operators and the possible resulting knock-on impact for their business users.

It focuses on the Commission's inception impact assessment relating to the liability and responsibilities of platforms. It does not examine the potential impact of ex ante measures and rules related to gatekeeper power or the proposed New Competition Tool.

The objective of the study is to help inform the debate by highlighting the *mechanisms* through which the DSA may have unintended effects on European businesses. With this knowledge, policymakers can compile coherent combinations of policies to be assessed.

While the economic analysis presented in this study is intended to be balanced—exploring both the positive and negative aspects of changes the DSA could bring about—it is not an exhaustive analysis of all aspects of the DSA and is not intended to be a cost–benefit analysis of any specific policy option.

This study was produced with input from six different platform operators within Allied for Startups' member network. We also benefited from comments and funding from Allied for Startups' corporate board members.

## Research methodology

We began with a detailed review of the Commission's public consultation on the DSA and of the draft reports released by the European Parliament in April 2020.<sup>2</sup> From this, we identified a range of potential policy options for the DSA.

Next, we interviewed six small and medium-sized platforms operating throughout Europe, to assess the opportunities and challenges for them of the different DSA implementation options. For example, we asked how they would be likely to respond to legislative changes putting more liability on their business, or requiring increased knowledge of their business customers.

Using the insights gained from these interviews, we commissioned a survey of 1,000 businesses, across four representative EU countries, to understand how the proposed changes to platform services would affect Europe's economy.<sup>3</sup>

Our survey covered four important economic sectors that rely heavily on platforms: (i) gig workers; (ii) travel and tourism providers; (iii) content creators; and (iv) small or local businesses.

## 2 Europe's digital landscape

Over the last two decades, digital services and online marketplaces have grown to play an ever-increasing role in the day-to-day lives of Europe's citizens. For consumers and businesses alike, online services can mean more choice, greater convenience, wider reach, and lower costs. However, along with these benefits, the rapid shift to an online environment has brought new challenges, such as ensuring safety standards and protecting consumer rights. While it is crucial that these challenges are properly addressed, it is also important to keep in mind the range of businesses and consumers that will be affected by any changes that the DSA brings about.

In this section, we briefly consider the reach of the digital economy within the EU, to better understand the breadth of impact that the DSA could have. This is not intended to be an exhaustive review, but rather a selection of examples that demonstrate the effects that digital services are having throughout the economy. We consider the role that digital services play in: (i) retail; (ii) travel and tourism; (iii) gig working; and (iv) the creative industries.

We find that the supply and demand for online goods and services is growing rapidly, with digital services playing an increasingly important role in both the retail and travel industries; creating new opportunities for flexible labour; and providing access to new markets for the creative industries.

### Retail

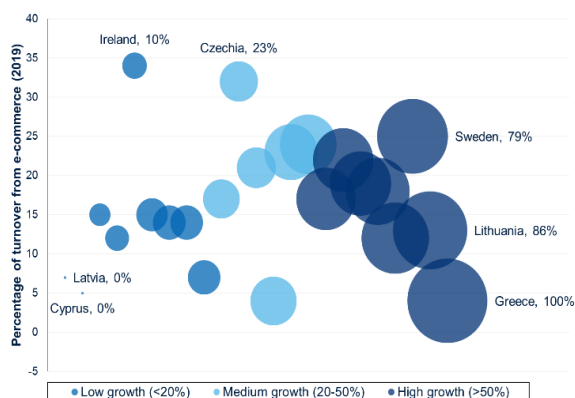
Consumers across Europe are ordering an increasing number of goods and services online. Data from Eurostat shows that, on average, 60% of individuals across the EU-27 made online purchases in 2019, up from 43% in 2013.<sup>4</sup> The COVID-19 pandemic has accentuated this. While

total retail trade across the EU declined by 0.3% between February and June 2020, online and mail order sales increased by 17.4%.<sup>5</sup>

More generally, e-commerce accounts for an increasing proportion of enterprise turnover, having grown from an average of 13% in 2013 to 18% by 2019, across the EU-27.<sup>6</sup>

However, the success and trajectory of online trade varies between EU member states. Figure 1 shows that businesses in Ireland and Czechia already receive a comparatively high proportion of their revenue from e-commerce, at 42% and 32% respectively. In contrast, those in Greece earn just 4% online, but are expanding much more rapidly. Indeed, businesses in Greece, Lithuania and Sweden enjoyed a rapid growth in e-commerce between 2013 and 2019 (at 100%, 86% and 79% respectively).

Figure 1 Growth of e-commerce in the EU-27



Note: Bubble size represents the growth rate between 2013 and 2019. Belgium, Denmark, Luxembourg and Malta are excluded as data is not available for both years.

Source: Oxera analysis of Eurostat data.<sup>7</sup>

### Travel and tourism

Online sales represent an increasing proportion of the travel and tourism sector. In 2017, an average of 40% of consumers across the EU-27 booked travel or accommodation through online services, up from 36% in 2013.<sup>8</sup> Between 2013 and 2019, the proportion of turnover that travel agency and tour operator services earned online increased from 28% to 36% across the EU-27.<sup>9</sup>

Collaborative platforms are also playing an increasing role in the EU's travel and tourism industry. This 'sharing economy' is often based on a peer-to-peer model, in which online platforms facilitate transactions, typically between private individuals.<sup>10</sup> In 2019, an average of 21% of individuals across the EU-27 used a website or app to arrange accommodation from another person, up from 15% in 2017.<sup>11</sup>

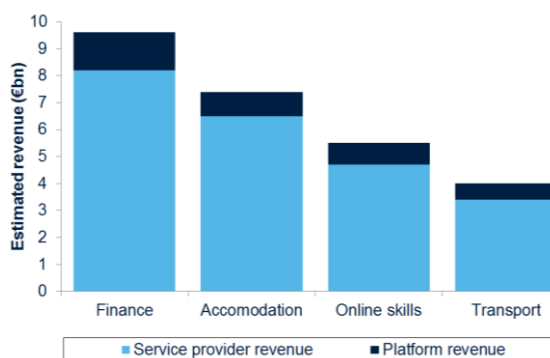
### Gig work

Collaborative platforms have also spurred the growth of a 'gig economy', in which individuals

can undertake a range of flexible, temporary or freelance work (often referred to as 'gigs'). Many platforms have emerged to efficiently match gig workers to appropriate job postings.

In 2016, the collaborative economy generated an estimated total market revenue of €26.5bn and an average of around 0.2% of EU-28 GDP.<sup>12</sup> As Figure 2 shows, the majority of this value goes to those individuals providing the service, with the platform share being around 14% on average.

Figure 2 Collaborative economy revenues



Source: Oxera analysis of European Commission data covering the collaborative economy in EU-28 in 2016.<sup>13</sup>

A recent study from the Commission's Joint Research Council (JRC) found that in 2018, around 8.6% of the working-age population undertook platform work at least monthly across 16 EU member states.<sup>14</sup> Focusing on regular gig workers, who earn at least 25% of their income or work at least 10 hours per week via platforms, we estimate there to be around 9.2m gig workers in the 15 member states for which data is available (covering 81% of EU-27 working-age adults).<sup>15</sup>

### Creative industry and content creation

The Internet is an increasingly important source of consumer access to video and audio content, allowing individuals to upload content they have created to be shared with other users. In 2019, an average of 29% of individuals across the EU-27 uploaded self-created content to sharing sites.<sup>16</sup>

In 2018, 51% of European consumers used the Internet to watch video content from sharing services.<sup>17</sup> Notably, European videos accounted for an estimated 25% of the total time spent watching YouTube globally.<sup>18</sup>

In 2019, 51% of consumers listened to music online.<sup>19</sup>

Revenues from digital music distribution in 2020 was estimated to be around €2bn across 12 EU member states for which data is available (representing 87% of EU-27 GDP).<sup>20</sup>

**€2bn**  
revenue from digital music in 2020

Podcasts are a rapidly growing form of online audio, typically featuring ad-supported content. In 2019, podcast ad-spend in Europe was estimated to be €38.6m, up from €22.7m in 2018.<sup>21</sup>

Related to this, social media plays an increasingly important role in business, with 50% of

enterprises across the EU-27 making use of social media in 2019, up from 34% in 2014.<sup>22</sup>

**Box 2 A digitally connected economy**

- Platforms play a crucial role in many sectors around Europe as they match users to facilitate trade.
- This means that the changes brought about by the DSA will have a knock-on effect on business users and their consumers, magnifying the overall social impact.
- The proportion of sales made online is generally increasing around the EU; but in some member states, the average remains comparatively low. The DSA must avoid hampering the growth of Europe’s digital economy as these states rise up the maturity curve.
- Platforms present new opportunities for businesses and workers through the collaborative economy. For example, peer-to-peer accommodation is increasingly prevalent, while a material number of individuals provide labour services via platforms and are able to find flexible work.

approach could exempt certain platforms from the DSA’s obligations.

An asymmetric approach based on size could have mixed effects on smaller, startup/scale-up platforms. A recent JRC study examining 200 key collaborative platforms found that 36% of the sample were ‘small’ platforms, with fewer than 10,000 customers and less than €1m in turnover.<sup>23</sup>

Taking a short-term view, size-based thresholds might reduce the regulatory burden for startups and scale-ups. However, in the long run, as these firms scale up, a size-based threshold creates a ‘cliff edge’ for regulatory compliance that discourages smaller platforms from expanding. This would reduce the growth of competitors to larger platforms; and have an impact on business users and consumers, as it limits positive network effects that platforms foster (see annex).

Indeed, 71% of survey respondents consider that the number of users on an online platform is important for their business’s success. If platforms restrict user numbers to remain under a size-based regulatory threshold, prospective customers could become fragmented across a larger number of platforms, increasing the admin burden for business users.

**39%**  
of business would lose customers if platforms limited user numbers

A regulatory threshold would also affect consumers, with 34% of business users saying that consumers could end up with less choice of goods and services; while 40% said that fragmentation of business users could force consumers to search across multiple platforms to find the goods or services they need.

**3 Scope of the DSA**

The scope of the DSA will be an important determinant of how it affects both the digital and non-digital economies. It intends to update, enhance and clarify the legal framework for digital services, as set out in the existing E-Commerce Directive (ECD), while complementing pre-existing sector-specific regulations.

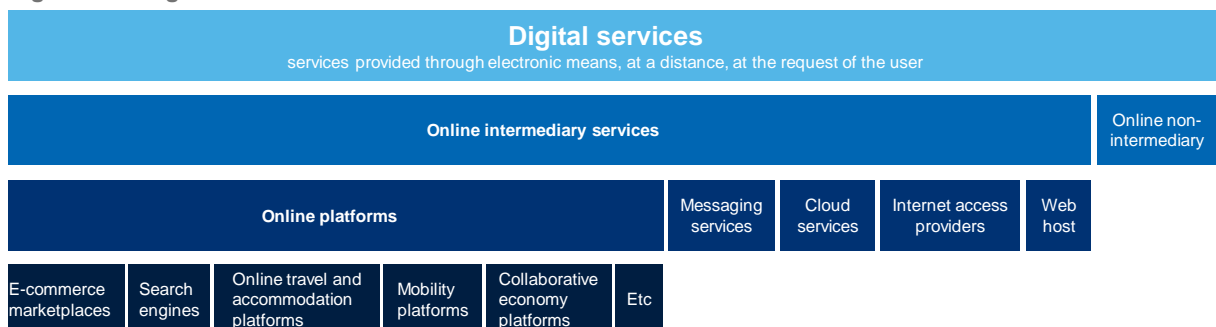
The Commission’s inception impact assessment suggests that the scope for the DSA will be wider than that of the existing ECD. The measures are likely to touch on how a range of different digital services treat online content, algorithms, data, and users (see Figure 3).

The consultation considers whether there should be an asymmetry in the application of the DSA, based on the type, size or risk of a digital service. Alternatively, the DSA could impose more or less stringent requirements depending on the level of risk associated with a particular activity. Either

**Box 3 Avoiding a regulatory ‘cliff edge’**

- Regulatory thresholds can disincentivise growth by platform startups as they create a compliance ‘cliff edge’ (such as additional employees or new systems requirements) that firms may seek to remain below in order to avoid additional costs.
- The DSA should avoid this by adopting progressive, risk-based measures.

**Figure 3 Digital services classification**



Source: Oxera.



## 4 Content moderation

There are two broad policy options that may be considered when updating digital services' obligations and responsibilities for content moderation:

- (1) an intermediary liability (IL) regime; and/or
- (2) procedural obligations.

Within each of these, there are a spectrum of options that could be included within the DSA package, which we discuss further below.

In either case, an important distinction should also be made between *illegal* content and *harmful* content. While both are undesirable for platforms, illegal content covers materials that are clearly defined in law; while harmful content includes less well-defined materials, such as online disinformation, online bullying, or violent content. This leaves a degree of subjectivity over what constitutes harmful content that would be hard for platforms to navigate.

### Intermediary liability

An IL regime—also referred to as a liability safe harbour—sets out conditions under which online intermediaries are exempt from liability for the content they carry.<sup>24</sup>

Currently, the ECD provides an exemption for intermediary services from liability for third-party content. As the Commission explains:<sup>25</sup>

**'The Directive exempts intermediaries from liability for the content they manage if they fulfil certain conditions:**

- **service providers hosting illegal [content] need to remove it or disable access to it as fast as possible once they are aware of the illegal nature [of] it;**
- **only services who play a neutral, merely technical and passive role towards the hosted content are covered by the liability exemption.'**

However, both the Commission and the European Parliament have suggested that the DSA should clarify or amend the current liability regime, to better reflect how digital activities have evolved. A spectrum of liability options could feature in the DSA as represented in Figure 4.

To be most effective, any IL regime must balance the incentives for online intermediaries to innovate and provide valued content services to their users, with the enforcement of laws and protection of consumers.

Assigning full liability to intermediaries would be likely to result in over-moderation, destroying value for users; while under-enforcement can lead to negative externalities and harm from the insufficient removal of illegal content.

### Box 4 Case study: open review platforms



Impartial reviews play an important role in building trust between consumers and businesses online. Open review platforms like Trustpilot allow any user to leave a review of any business, irrespective of whether the business invites feedback, without pre-posting moderation or screening. Users can typically leave and read reviews for free, while the platform generates revenue by offering premium services to businesses that wish to showcase their credentials, or access further analytical insight based on their customers' feedback.

This model means that consumers can proactively share their opinions, increasing transparency. It also means that these platforms receive a large number of posts on a daily basis. Trustpilot told us that it would be impractical to moderate content at this scale if it meant each context-dependent post had to be individually reviewed before posting. This would undermine the concept of an open platform, potentially infringe consumer rights to freedom of speech, and result in significant costs for platforms.

Faced with an increased liability risk, open platforms such as Trustpilot would need to reconsider the viability of their business model and may need to impose restrictions on the services offered to their users (such as prohibiting 'free-text' reviews and photos, or operating a closed business model, accessible to partner businesses and verified customers only).

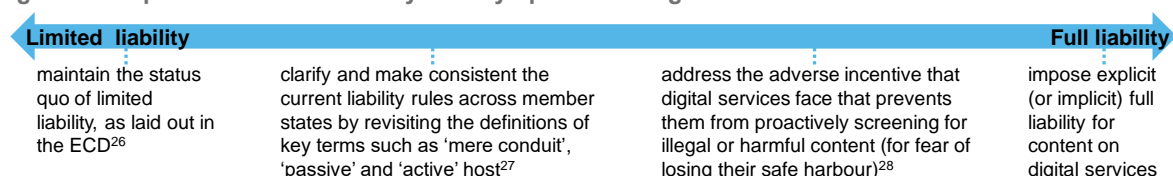
Source: Oxera interview with Trustpilot.

### Procedural obligations

The Commission's consultation includes several suggestions for procedural obligations to regulate digital services, covering:

- notice-and-action (including takedown) provisions;
- preventive measures requirements;
- transparency and reporting obligations;
- cooperation with and reporting to relevant authorities and trusted flaggers;
- user redress to protect against unjustified removal of content;
- risk assessments for harmful content.<sup>29</sup>

Figure 4 Spectrum of intermediary liability options for digital services



## Implications for platform services

Procedural obligations could give platforms greater clarity over their obligations around content moderation, filtering and the protection of users. The legal certainty this provides would help platforms of all sizes manage their business, by turning an unknown risk with uncapped liability into specific expectations with defined sanctions.

In contrast, an IL regime that exposes platforms to greater liability for the transactions they facilitate is likely to result in platforms taking measures to mitigate their risk. These could include:

- limiting the type of products and services that can be sold;
- increasing verification requirements for sellers;
- reducing the availability of ancillary services.

Similarly, if platforms are liable for any illegal or harmful material posted on their sites, they may limit users' ability to upload content. For example:

- review sites may replace 'free-text' reviews and photo uploads with only 'star' ratings;
- platforms may switch from an 'open' model (allowing anyone to post) to 'closed' models, where only verified users can upload content.

In either case, businesses and consumers would miss out on valued features and opportunities as platforms seek to reduce their liability exposure.

Automated content filtering has been proposed as one scalable alternative to these restrictive approaches, although this too has its limitations.

First, it can require a significant up-front investment by the platform operator and is not 100% effective, as highlighted during our interviews with digital service providers.<sup>30</sup>

'Context is very important and automated solutions have difficulty distinguishing between problematic content and legitimate content especially with regards to photos.'

Startup platform (paraphrased)

Second, platforms require greater certainty that any harmful or illegal content that the automated filters miss—or any legitimate content that is erroneously taken down—will not result in uncapped liabilities. Without this assurance, platforms face a *de facto* general monitoring obligation as the only way to manage their risk.

Lastly, while some platforms already operate active filtering of certain types of content, a regime that expressly permitted this while maintaining the IL safe harbour would provide greater incentives for content moderation for all digital services.

In contrast, a harmonised procedural obligations regime, such as a notify-and-act mechanism, would provide all platforms with a clear set of rules and known sanctions. For startups in particular, this makes the unknown risks of content moderation more manageable, as they

## Box 5 Case study: classified ads platforms



Classified ads platforms facilitate consumer-to-consumer (as well as business-to-consumer) transactions by allowing users to post adverts for new or used products for sale. Different platforms have different business models. While some charge sellers for listing items, others list items for free and generate revenue from banner ads and providing additional services (such as 'premium listings') to sellers.

Providing content moderation is considered an important part of running an online classified ads platform. OLX Bulgaria explained that it actively invests in algorithms and brand partnerships to help identify counterfeit or illegal goods, and proactively removes fake posts and fraudulent sellers. The resulting increase in the integrity of its platform benefits both buyers and sellers—as well as the OLX itself. However, the responsibilities for platforms should be met with similar measures promoting responsibility and collaboration by other market stakeholders—such as those requesting the takedown of another party's listings—to help avoid abuse of the platform's takedown measures.

Any verification process has its limits. Many of the posts on classified ads platforms are from individuals making a one-off sale. These are not sophisticated business users and may not be able to verify the authenticity of their listing.

OLX told us it would be concerned if liability for those situations fell with it rather than the sellers. Importantly, even human verification cannot be presumed to be entirely foolproof. For example, recognising the difference between legal and illegal variations of a specialist product (such as animals) based on a photo or user-uploaded certificate cannot be done with certainty—either by automated or human processes.

Source: Oxera interview with OLX Bulgaria.

have greater legal certainty when making decisions about their business model.

However, further responsibilities—such as providing justifications for takedown decisions and/or dispute settlement—are likely to require human monitors, meaning additional staff and cost for the platforms. These would be likely to be passed on to business users in the form of increased fees or more limited services.

## Impact on business users

Our survey found that increased content moderation would have both positive and negative impacts on business users. For example, 50% of businesses would benefit from increased trust online, as platforms reduce the spread of illegal or harmful content. In addition, 39% of businesses considered that increased moderation would reduce the prevalence of fake



competition; and 31% said they would benefit from the removal of illegal copyrighted content.

*'I believe that if the content on the platforms is cleared of fake content, customers will have more confidence in the online platforms.'*

Content creator

However, the way in which the DSA implements this should avoid incentivising platforms to reduce the range of services they offer to business users, which would have harmful impacts (see Figure 5).

**Figure 5 Impact of content moderation**



Note: Impacts range from -4 (strong negative) to +4 (strong positive).

Source: Oxera analysis of survey data.

For example, stringent content moderation requirements could result in delays to content posting, or the loss of ancillary functionalities based on user-generated content (such as customer photo uploads or free-text reviews).

Our survey confirmed that this would have a negative impact on business users, with:

- 45% saying that delays to posts of up to one day would have a significant negative impact;
- 48% saying that new customers would be less likely to try their content, products or services without reviews from other users;
- 21% saying that they would stop using the platform altogether.

This is particularly critical given the growing importance of Internet channels, with 66% of consumers across the EU-27 using the Internet to find information about goods and services in 2019, up from 58% in 2013.<sup>31</sup>

Delays to postings could also hinder gig workers' ability to find work at short notice, with 40% of those we surveyed saying that it would prevent them from taking last-minute shifts. Across the 15 member states for which data is available, this represents around 3.7m regular gig workers.<sup>32</sup>

### Impact of unlimited liability

Faced with unlimited liability for the content, goods or services offered over their platform,

operators would be forced to take a precautionary approach to content moderation. This would be likely to lead to an increase in the rate of content takedown, to the detriment of both business and consumers.

Indeed, nearly half of the business users we surveyed said that they would lose revenues as a result of inaccurate content takedown. Many businesses have already been affected by content takedown, with 39% claiming to have had their posts incorrectly removed. This would be likely to rise if platforms imposed more stringent moderation measures.

**44%**  
of businesses would lose revenue if their posts were incorrectly removed

A further unintended consequence for consumers of precautionary takedown policies could be a reduced diversity of content posted online. 29% of the business users we spoke to anticipated this; while 43% foresaw less spontaneous or live content. Moreover, 46% considered that their customers might stop using platforms altogether if the content on offer were to become less varied.

### Box 6 A content moderation regime that works with platforms to instil safety and trust

- The DSA should maintain platforms' limited liability for the third-party content and transactions posted on their sites, as removing this would create a *de facto* general monitoring requirement.
- It should facilitate proactive screening of content by platforms with provisions for voluntary measures for the takedown of harmful or illegal content that preserve liability limitations.
- It should provide procedural obligations with known penalties (such as notify-and-act systems), which would increase online trust for businesses and consumers while providing legal certainty and measurable risk for platforms.

## 5 Know your customer

Both the Commission and the European Parliament are considering whether the DSA should include further 'know your customer' (KYC) obligations and responsibilities.

Options range from targeted requirements for specific users (such as business users in marketplaces, or gig-working platforms) to more widely defined users of digital services. For example, some proposals have suggested that online marketplaces could increase KYC through the identification and verification of business users against recognised databases before accepting them onto their platforms.<sup>33</sup>

### Implications for platform services

The impact of these proposals on platforms will vary depending on the extent of existing KYC

Box 7 Case study: gig workers



Gig-economy workers benefit from the ease and convenience with which they can find jobs using collaboration platforms. However, if the platforms were to become liable for every job and worker they connected, they would be forced to run more stringent checks on their users, thereby transforming them into something akin to a full-service employment agency.

Gigable, one gig-working platform startup we spoke with, explained how it already adds value by using machine automation and AI to verify information gathered from its users as they sign up. For example, where machine-to-machine interfaces are possible, it can validate qualifications and licences. However, if it were necessary to manually check every gig worker using its service, it would bring the platform to a halt, forcing it to reconsider its operating model.

If legislation were to lead the cost of onboarding new gig workers to increase, the platform might allow only the most profitable workers (i.e. those that frequently pick up jobs) to join; or might pass on the costs to the gig workers themselves. This could disproportionately affect occasional gig workers who are seeking a quick way to supplement their ordinary income.

Source: Oxera interview with Gigable.

protocols, which differs significantly between different platform types.

For example, platforms that have limited direct interaction with their users—such as review sites or classified sites—might have minimal KYC processes in place; while platforms that process payments for their users—such as gig-working platforms or online marketplaces—already have some form of KYC protocol for compliance with financial regulations.

However, any additional KYC obligations that require increased verifications are likely to result in platforms demanding more information from users when they sign up for the first time; and may even require that they demand more details of the individual goods, services or content that users post to the platform. The impact could be particularly acute for 'open' platforms, for which users do not need to sign up in order to post.

Platforms implementing these types of verification procedures are likely to see a slowdown in the onboarding process for new users. While this may discourage some users from adopting platforms, it also has the potential to improve the overall integrity and trust in the platform.

Moreover, KYC could help platforms to support relevant authorities as they identify and tackle illegitimate business users who are abusing the service. However, as with content moderation,

platforms seeking to tackle fake accounts and inauthentic users at scale must be able to adopt AI-based solutions—supported by robust appeals processes for users removed in error—if they are to avoid significant cost increases that would have an impact on users.

### Impact on business users

On the one hand, many business users anticipate positive effects from increased KYC provisions, with 44% of respondents saying that their customers would have more faith in the integrity of their business; and 42% expecting to face less competition from fake accounts.

On the other hand, businesses fear it could increase admin costs (32%), reduce flexibility in accessing digital solutions (32%), and reduce their ability to multi-home across platforms (29%).

Overall, a proportionate KYC requirement would have mixed effects on businesses. However, we find a greater risk of negative impacts on gig workers, with 28% reporting that they would no longer be able to take on quick, part-time work if the sign-up process required more information and took longer. Across the 15 member states for which data is available, this translates to a negative impact on around 2.6m regular gig workers.<sup>34</sup>

**2.6m**  
gig workers  
affected by  
stricter sign-up  
processes

In the absence of access to online platforms, this could mean gig workers taking their activity offline, leading to reduced safeguards for both those gig workers and the businesses they serve.

In addition, 38% of the business users surveyed are concerned that fewer consumers would sign up to use platforms if they also faced increased requirements for information as they would be concerned with anonymity online.

### Box 8 Avoiding an information burden while increasing trust

- The DSA should seek to realise the benefits of increased integrity and authenticity while mitigating the negative effects of KYC provisions.
- Different platform business models should be taken into account, with KYC taking a sector-by-sector approach.
- The DSA should avoid information burdens that discourage business users, such as onerous sign-up processes or detailed verifications of individual actions (such as product listings, service qualifications, or content copyrights).
- This would have a distortive effect, with gig workers particularly badly affected by burdensome information requirements and delays to sign-up processes.

## 6 Algorithm oversight

Algorithms play an important role in the digital economy. They are key to many value-creating functions performed by platforms, such as user matching, content moderation, or fraud detection.

The Commission is considering whether the DSA should impose obligations for the reporting and auditing of algorithms—particularly those used for content moderation, rankings, recommendations, and commercial communications.

Such obligations would mean that digital service providers must share their algorithms with regulators or an independent auditor for assessment. The auditor would assess whether the algorithm is effective at moderating content, as well as considering whether its principles are acceptable for preserving fundamental user rights.

Other proposals (such as those from the European Parliament) are also considering transparency obligations that would require digital services to disclose to their users how algorithms determine rankings and make recommendations from data; and/or be able to explain how particular outcomes were arrived at. These would complement the existing transparency provisions of the Platform-to-Business Regulation, as well as the relevant consumer law obligations.

### Implications for platform services

While for some platforms the disclosure of an algorithm may be straightforward, for others providing an intelligible explanation of their complex algorithms is likely to be a significant undertaking. Ultimately, this could result in substantial compliance costs for platforms as they engage with regulators and/or business users.

If the regulatory burden is sufficiently large, some platforms may be forced to change their behaviour to reduce admin costs. The platforms we spoke with indicated that this could lead to:

- fewer or less sophisticated algorithms being used by platforms;
- reduced incentives to innovate;
- slower or fewer updates to algorithms, given the iterative nature of this process.

Transparency requirements may also hamper platforms' ability to provide the best possible service to users. Increased information may allow users to 'game' the system to gain favourable rankings; while platforms may be forced to shun better-performing algorithms in favour of simpler, more explainable ones.

This risks undermining the value generated by platforms through the use of sophisticated algorithms, such as the efficient matching of buyers and sellers; or personalised recommendations for consumers based on previous purchases.

On a practical level, exposing their algorithms to third-party audits, or providing transparency for users, would have additional implications for platform operators. Many algorithms are

### Box 9 Case study: online marketplaces



Online marketplaces facilitate trade in the wider economy by bringing together buyers and sellers. These platforms add value by using digital technologies to match users and detecting fraud better than individual buyers could. This enhances efficiency while boosting trust and safety for online traders.

For example TicketSwap, a platform intermediary we spoke with, helps users trade event tickets with each other in a secure and fair (limiting the mark-up from the original price to 20%) environment. TicketSwap builds trust in the ecosystem through the use of algorithms that moderate posts, highlighting suspicious content for review. These algorithms are therefore central to TicketSwap's value creation and security measures, making them highly commercially sensitive.

Transparency requirements that imposed costs and delays on the development of such algorithms, or required elements of it to be shared with regulators or third parties, could undermine this type of business model. In some cases, this could result in potential transactions never occurring, harming buyers, sellers and event organisers as well as the platform itself.

Source: Oxera interview with TicketSwap.

commercially sensitive, as they are integral to the platform's security and/or competitive advantage.

### Impact on business users

Increased algorithm transparency would be welcomed by many business users we surveyed, who currently feel that they lack an understanding of how these platform features work.

42% of the business users surveyed considered that they would grow faster if they had a greater understanding of their platform's algorithms. In addition, 30% said that slower platform updates would lead to missed opportunities.

However, an audit regime leading to the limitation or withdrawal of algorithm functionalities by platforms could be bad for businesses. 36% considered that it would be harder to find customers if matching algorithms were less sophisticated; while 27% considered that there is a risk of competitors gaining an unfair advantage if transparency obligations meant that they could 'game the system'.

Impeding platform innovation could be particularly damaging given that 58% of business users reported that they had noticed platform innovations that had benefited their business in the last year.

**58%**

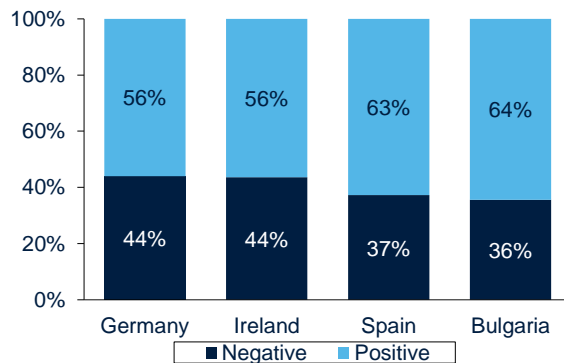
of businesses benefited from innovations by platforms over the last year

The anticipated impact of algorithm oversight also varies by country, with 44% of German business users anticipating an



overall negative effect, compared with 36% of Bulgarian users (see Figure 6).

Figure 6 Aggregated scores of impact



Source: Oxera analysis of survey data.<sup>35</sup>

Box 10 Avoiding reduced platform features and disincentives for innovation

- The DSA should ensure that increased algorithm oversight does not create an undue regulatory burden for platforms, leading to less sophisticated algorithms and reduced incentives to innovate.
- Delays to new platform features would have long-term negative impacts for business users and consumers alike.
- More efficient outcomes can be achieved by business users when there is more transparency on the platform’s algorithms, but this may come at a cost for business users if it disincentivises technical innovation or enables ‘gaming’ by users.

## 7 Regulatory consistency

The ECD sought to simplify the rules for platforms operating across the EU with a ‘country-of-origin’ principle, stipulating that—for certain areas of law—platforms are to be governed by the rules and regulations of the country they are based in, rather than the country in which the service is offered (the country of destination).

However, this principle is being eroded by new or proposed laws at the member-state level, such as the German Network Enforcement Act (‘NetzDG’); as well as by different interpretations of the ECD provisions by member state courts. Addressing this divergence has been identified by the Commission as an overarching aim of the DSA. There are a range of policy options that could address enforcement and cooperation as part of the new DSA rules. Suggestions include:

- the introduction of an EU regulatory authority with the powers to directly enforce the DSA;<sup>36</sup>
- a system of regulatory oversight, enforcement and cooperation across member states, supported at the EU level;<sup>37</sup>
- the use of out-of-court dispute settlement to address issues before they reach court.<sup>38</sup>

## Implications for platform services

While a fragmented regulatory environment hampers business expansion around the EU, the extent to which this affects platforms depends on the specifics of their business models. For example, platforms that operate purely as an online intermediary could expand around the EU more easily (subject to any applicable local laws or regulation); while others, such as those providing delivery services, require local infrastructure to provide their service, making expansion more difficult.

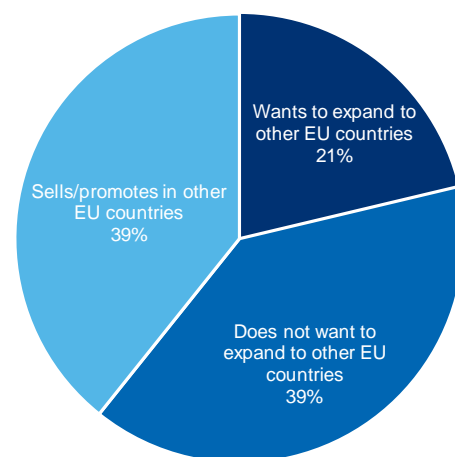
For those online-only platforms that do not need a local presence, regulatory consistency could enable a rapid expansion to additional member states, unlocking economies of scale and scope that provide cost reductions and increasing their ability to compete with large, global competitors.

## Impact on business users

Our survey found that Europe’s business users would benefit from more pan-EU platforms. While 39% of small business users already promote or sell their goods or services around the EU—accounting for an average 31% of their online revenue—the network effects enabled by pan-EU platforms and regulatory consistency would also support the ambitions of the 21% that wish to expand into other EU countries (see Figure 7).

Overall, our survey found that 55% of all business users consider that greater reach by platforms would help them gain customers from across the EU; while 36% said that it would make it easier and cheaper for them to operate across Europe. The potential value of these benefits is significant, given that monthly intra-EU exports were €256.3bn in January 2020 alone.<sup>39</sup>

Figure 7 EU expansion by small businesses



Source: Oxera analysis of survey data.<sup>40</sup>

Moreover, 35% of business users would also expect to gain from improved features or services by platforms as competition by foreign platforms increased. However, 23% did expect the increased availability of foreign platforms in their home territory to increase operating costs if they need to operate across multiple platforms—which could be the case if customers fragment across different platforms.

**Box 11 Increasing the consistency of rules applied across the EU**

- The DSA should seek to maximise regulatory consistency for platforms across the EU, by extending the country-of-origin principle to the broadest possible range of laws and regulatory requirements they face.
- Where clear rules enforced by courts are impractical (such as with harmful, but not illegal, content), a system of self- or co-regulation built on codes of practice and coherent incentives (such as procedural obligations and liability rules) could help prevent regulatory fragmentation.

**8 Business user impacts**

Different policy options can either benefit or harm business users (see Box 12 and Box 13), and the balance of these effects must be considered when formulating the overall DSA package.

**Box 12 Benefits to business users**

- **Increased customer trust** in their business from a content moderation regime that tackles illegal content.
- **More faith in online business integrity** from KYC measures that help tackle competition from fake accounts on platforms.
- **Regulatory consistency** that helps platforms expand across the EU, giving businesses access to new customers.

**Box 13 Harms to business users**

- **Reduced platform functionality** making it harder for them to reach prospective customers online.
- **Information burdens**, such as sign-up requirements or content verification, that discourage them (or their customers) from using platforms.
- **Reduced innovation** by platform operators as a result of regulatory burdens such as intrusive algorithm oversight.

Notably, measures that lead to substantial compliance costs for platforms (such as inefficient monitoring processes) could lead to an increase in platform fees for businesses—at least some of

**42%**  
of businesses would raise prices if their platform fees increased

which will be passed on to consumers. Indeed, 42% of businesses said that they would have to charge more for their goods and services.

Higher fees could also disincentivise platform use; while 43% of businesses said that they would reduce the number of

online platforms they operate on, 23% said that they would stop using the platform altogether.

**Policy scenario tests**

To help assess the overall impact that the DSA could have on the wider EU economy, we asked business users what revenue effect they would expect from three different policy scenarios, outlined in Figure 8.

**Figure 8 Policy scenarios**



For each, we described a combination of different platform responses, based on the findings of our research.<sup>41</sup> For example, when describing the increased liability scenario we explain that platforms would:

- restrict the types of content that can be posted (e.g. no photos or videos);
- limit online reviews (e.g. to ‘star’ ratings only);
- limit posts to verified users only (i.e. become more ‘closed’ in design);
- increase platform fees to business users;
- monitor content more closely, leading to delays in content posting and more posts being incorrectly taken down.

Our survey found that this would have a significant negative effect on business users, with 38% saying that they expected these platform actions would lead to a reduction in their revenue.

**38%**  
of businesses expected the increased liability scenario to reduce their revenue

In contrast, regulations that empowered platforms by providing clear rules on content as well as appeals processes, as in the clear procedural obligations and automatic filtering scenarios, were seen much more favourably. For example, when describing the automatic filtering scenario, we explained that platforms would:

- automatically filter content uploaded to the platform using databases from ‘trusted flaggers’ and take down illegal or harmful content;
- notify businesses if their content is taken down, with a clear reason;
- provide an appeals process to reinstate content that is incorrectly taken down;
- publish transparency reporting on the amount of content taken down.

Overall, only 15% of business users anticipated a negative impact from the automatic filtering scenario; while 41% thought that they would see revenues *increase*.

Regarding the scale of the impact, business users said that their revenue could *decrease* by an average of 3.2% under the increased liability scenario, but could *increase* by an average of 1.7% under the clear procedural obligations scenario, and 1.3% under the automatic filtering scenario.<sup>42</sup>

This highlights both the risk to the wider economy from imposing inappropriate rules that force platforms to change the way they operate, and the opportunity for benefit that the DSA presents.

**Box 14 Avoid prescriptive solutions and encourage growth**

- The DSA should not prescribe solutions that specify how platforms should govern their ecosystem.
- For example, requiring human oversight of every issue, or defining zero-tolerance policies, would prevent platforms from innovating with scalable technical solutions (such as automated AI tools) or new business models (such as gig working).

**Wider economic effects**

Finally, we consider the overall impact of our three policy scenarios on business users in the four economic sectors we surveyed: the gig economy; travel and tourism; content creators; and small or local business.

For the travel and tourism sector, and small or local business, we scale up the survey results to provide an estimate of the overall magnitude of the effects. We measure the impact across the four countries we surveyed, which accounted for 26% of all enterprises across the EU-27 in 2017,<sup>43</sup> and 37% of GDP in 2019.<sup>44</sup>

**Gig economy**

Within the gig economy, the clear procedural obligations and automatic filtering scenarios were viewed positively by the business users surveyed, with an average anticipated increase in revenue of 4.3% and 4.5% respectively. Again, the stringent rules in the increased liability scenario were expected to have a negative impact, with an average of 1% decrease in revenue.<sup>45</sup>

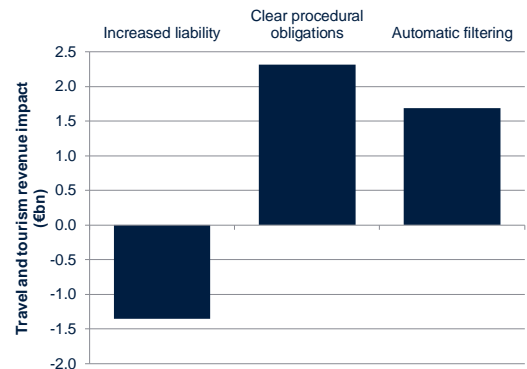
**Travel and tourism**

In the travel and tourism sector, business users expected the clear procedural obligations scenario—which standardises regulatory principles across Europe—to have the largest impact on business revenues with an anticipated increase of 4.4%.<sup>46</sup> This represents €2.3bn per year across the four countries we surveyed.<sup>47</sup>

**€2.3bn**  
increase in annual online revenue in the travel and tourism sector

Conversely, we estimate that the stringent rules in the increased liability scenario could cost those businesses €1.4bn per year in lost revenues (see Figure 9).

**Figure 9 Impact on annual online revenue for travel and tourism operators**



Source: Oxera analysis of survey data and Eurostat data.

**Content creators**

The impact on content creators is smaller across all three scenarios: under the increased liability scenario, we find a weighted average revenue impact of -0.9%; while the clear procedural obligations and automatic filtering scenarios are expected to have a small positive impact of 1.3% and 0.4% respectively.<sup>48</sup>

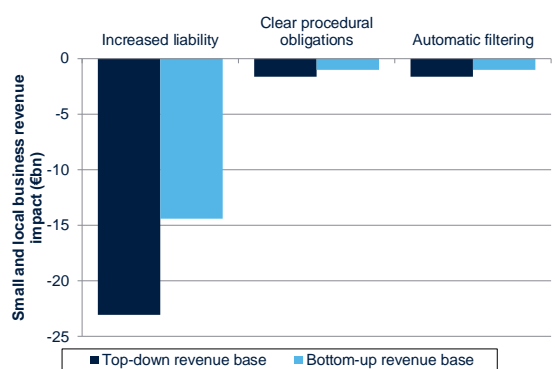
**Small or local business**

Small or local businesses could be particularly hard hit by the stringent rules in the increased liability scenario. We find an average anticipated revenue loss of 6.5%,<sup>49</sup> representing €14bn–€23bn across the four countries surveyed (see Figure 10).<sup>50</sup>

up to  
**€23bn**  
annual online revenue lost by small or local businesses

The anticipated impact of the other two scenarios is also negative, but more modest, at €1bn–€1.7bn.

**Figure 10 Impact on annual online revenue for small or local businesses**



Source: Oxera analysis of survey data and Eurostat data.



## Conclusions

- Digital services are an important enabler of activity in the wider economy. The impact of the DSA will therefore be felt much more widely than just among digital service providers.
- The digital economy is a diverse ecosystem with many different business models—such as online intermediaries facilitating transactions, open review platforms, and content hosting sites—and therefore a range of different economic sensitivities. It is important that policymakers understand all the impacts of any intervention, applying sector- or activity-specific regulation where appropriate.
- The DSA offers a valuable opportunity to provide regulatory consistency, which would support the growth and expansion of platforms across the EU that could lead to widespread benefits for platform users—such as access to new customers, more choice of platforms and greater competition.
- Our interviews with startup platforms, together with the evidence from our survey of 1,000 business users, show that a well-designed DSA has the potential to protect consumers and provide a boost to European businesses, while providing platforms with legal clarity and coherent incentives.
- However, without properly taking into account the interconnectedness of platforms and the wide EU economy, the DSA could create imbalanced incentives or overextend the regulatory scope, resulting in unintended consequences that harm businesses, consumers, and wider society.

## Annex: economics of online platforms

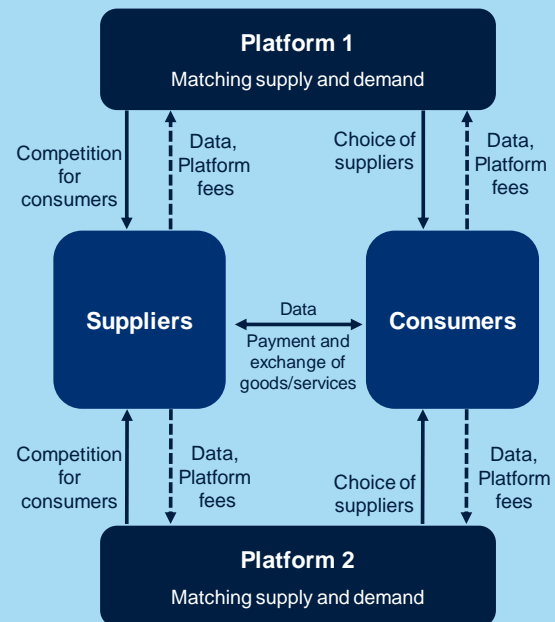
Online platforms create value by bringing together two or more sides of a market to facilitate an exchange. This could be buyers and sellers in the case of an online marketplace; viewers, creators and advertisers in the case of a content-sharing service; or traders, customers and reviewers in the case of a product comparison site. They typically do this by using **data and algorithms to reduce search and transaction costs** by better matching users from each side of the market.

As the range of different online platforms has increased, various different business models have emerged, each taking a different approach to sharing in the value they create. Some platforms, such as many social media services, are free to consumers but charge advertisers for access. Others, such as many online marketplaces, charge a listing fee or transaction fee to the seller. Yet others, such as open review sites, are free to all 'basic' users but charge a fee to 'premium' users for additional services or support. This variety means that different platform operators engage with their users in different ways, with varying degrees of control and influence over the content provided over their platform.

Ultimately, as operators of a multi-sided market, the platform operator's first priority is to manage the ecosystem so as to maximise the total value created. This means coordinating between users on both sides of the market to generate **positive network effects**, whereby the use of the platform by one user increases the value of the platform for others, and to avoid **negative externality effects**, whereby the actions of one user diminish the value for others.

Network effects can be **direct or indirect**. Direct network effects refer to an increasing value for users as more users join the **same side** of the platform (e.g. more people to connect with on social media). Indirect network effects refer to an increasing value for users on one side of the platform when more users join on the **other side** (e.g. more creators on a content-sharing site means more value for viewers; while more viewers means more value for creators). For platform operators, the virtuous circle created by network effects means that it is critical to engage users on all sides of the market. This helps the platform unlock greater efficiencies through **economies of scale and scope**. Economies of scale are realised by the platform offering its (largely fixed-cost) service to the widest possible base of users; while economies of scope result from the platform incrementally expanding the range of services it offers.

Negative externalities can result if the actions of one (group of) user(s) are allowed to unduly hinder the experience of another.



For example, viewers may be put off using a content-sharing service that includes an excessive amount of inappropriate material; while buyers may shun an online marketplace if it includes a high proportion of inferior or counterfeit goods. Given the importance of network effects to a platform ecosystem, any loss of users could spark a vicious circle of decline. This creates a strong, natural incentive for operators to govern their platform so as to maintain a safe, **high-quality service** for all users.

For platforms' business users, these value-generating mechanisms can be very significant. However, the growth of platforms also introduces risks. For example, listing on popular platforms can lead to issues of congestion for some business users, who struggle to gain the attention of customers. To combat this, as well as other potential issues, many business users **multi-home** across several platforms. For example, they may list their products on one large platform to access a wide audience, while also showcasing their offerings to a niche set of consumers on a smaller platform.

Having the ability to multi-home also helps redress the balance of power between platform operators and business users by ensuring that businesses continue to have a range of options to reach their customers. However, the decision of whether to multi-home depends on a number of factors, such as platform usage or membership fees, sign-up requirements, exclusivity deals, or platform-specific investments (such as system integrations, file encoding formats, or verifications/certifications).

## End notes

- <sup>1</sup> Oxera (2020), 'The impact of the Digital Services Act on business users: Methodology report'.
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- <sup>10</sup> The European Commission has described the collaborative economy as referring to 'business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals'. Source: European Commission (2016), 'COM(2016) 356 final: A European agenda for the collaborative economy', 2 June, p. 3.
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- <sup>13</sup> Director-General for Internal Market, Industry, Entrepreneurship and SMEs (EU Commission), Technopolis, Trinomics and VVA Consulting (2018), 'Study to Monitor the Economic Development of the Collaborative Economy at sector level in the 28 EU Member States: Final report', 23 February, p. 33.
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- <sup>24</sup> Oxera (2015), 'The economic impact of safe harbours on Internet intermediary start-ups'. Available at: <https://www.oxera.com/wp-content/uploads/2018/07/The-economic-impact-of-safe-harbours-on-Internet-intermediary-start-ups.pdf.pdf>, accessed 21 September 2020.
- <sup>25</sup> European Commission, e-Commerce Directive webpage, subsection "Liability of Intermediaries". Available at: <https://ec.europa.eu/digital-single-market/en/e-commerce-directive>, accessed 21 September 2020.
- <sup>26</sup> As described by policy option 1, comprising a limited legal instrument that would regulate online platforms' procedural obligations option, in the inception impact assessment (see European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services', p. 5).
- <sup>27</sup> As described by policy option 2, comprising a more comprehensive legal intervention, in the inception impact assessment (see European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services', p. 5).
- <sup>28</sup> As described by policy option 2, comprising a more comprehensive legal intervention, in the inception impact assessment (see European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services', p. 5).
- <sup>29</sup> Leaked Commission note for the DSM Steering Group, June 2019. Available at: <https://cdn.netzpolitik.org/wp-upload/2019/07/Digital-Services-Act-note-DG-Connect-June-2019.pdf>, accessed 21 September 2020.
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- <sup>36</sup> Peeters, K. (2020), 'Draft report on the Digital Services Act and fundamental rights issues posed', European Parliament Committee on Civil Liberties, Justice and Home Affairs, 27 May. Available at: [https://www.europarl.europa.eu/doceo/document/LIBE-PR-650509\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/LIBE-PR-650509_EN.pdf), accessed 21 September 2020.
- <sup>37</sup> As described by policy option 3, in the inception impact assessment (see European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services', p. 6).
- <sup>38</sup> Saliba, A.A. (2020), 'Draft report with recommendations to the Commission on Digital Services Act: Improving the functioning of the Single Market', European Parliament Committee on the Internal Market and Consumer Protection, 24 May, p. 8. Available at: [https://www.europarl.europa.eu/doceo/document/IMCO-PR-648474\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/IMCO-PR-648474_EN.pdf), accessed 21 September 2020.
- <sup>39</sup> European Commission (2020), 'Intra-EU trade in goods – main features', April. Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Intra-EU\\_trade\\_in\\_goods\\_-\\_main\\_features&oldid=452727#Evolution\\_of\\_intra-EU\\_trade\\_in\\_goods:\\_2003-2019](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Intra-EU_trade_in_goods_-_main_features&oldid=452727#Evolution_of_intra-EU_trade_in_goods:_2003-2019), accessed 25 August 2020.
- <sup>40</sup> See section 4.2.9 of the methodology report for details of these calculations.
- <sup>41</sup> See section 3 of the methodology report for more detail.
- <sup>42</sup> The results under the increased liability and clear procedural obligations scenarios are statistically significant at the 5% level and at the 10% level under the automatic filtering scenario. See section 4.3.14 of the methodology report for more detail.
- <sup>43</sup> Eurostat, Number of enterprises in the non-financial business economy by size class of employment [TIN00145], extracted 4 August 2020.
- <sup>44</sup> Eurostat, Gross domestic product at market prices [TEC00001], extracted 4 August 2020.
- <sup>45</sup> The results under the clear procedural obligations and automatic filtering scenarios are statistically significant at the 5% level; the results under the increased liability scenario are not statistically significant at the 10% level. See section 4.3.14 of the methodology report for more detail.
- <sup>46</sup> The results under the clear procedural obligations and automatic filtering scenarios are statistically significant at the 5% level and at the 10% level under the increased liability scenario. See section 4.3.14 of the methodology report for more detail.
- <sup>47</sup> See section 5.2 of the methodology report for the data and methodology used in this calculation.
- <sup>48</sup> The results under each scenario are not statistically significant at the 10% level. See section 4.3.14 of the methodology report for more detail.
- <sup>49</sup> The results under the increased liability scenario are statistically significant at the 5% level; the results under the clear procedural obligations and automatic filtering scenarios are not statistically significant at the 10% level. See section 4.3.14 of the methodology report for more detail.
- <sup>50</sup> See section 5.3 of the methodology report for the data and methodology used in this calculation.

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