
The impact of the Digital Services Act on business users

Methodology report

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1 Introduction

The European Commission is in the process of updating, clarifying and harmonising the e-Commerce Directive (ECD)—the 20-year-old legislation that governs the Internet.¹ The new legislation, known as the Digital Services Act (DSA), will set new rules for online services within the EU.

Allied for Startups commissioned Oxera to examine the possible implications of the DSA for Europe's platforms, and the potential impact of these on business users within the EU. Our study focuses on the Commission's Inception Impact Assessment related to the liability and responsibilities of platforms, which will replace the ECD. It does not examine the potential impact of ex ante measures and rules related to gatekeeper power or the proposed New Competition Tool.

This methodological report accompanies our policy report, which presents a summary of our key findings on the potential impact of the DSA on platforms and business users, and discusses the policy implications.²

1.1 Overview

In June 2020, the Commission opened a public consultation on the DSA package, which will replace the ECD.³ The range of issues that the consultation covers indicates that many aspects of digital services activity could be affected by potentially important changes. This will have wide-ranging implications for online platforms and their users, including both businesses and consumers.

If designed well, the DSA has the potential to provide a boost to Europe's online economy—harmonising the single market for digital services, protecting consumers, and providing small businesses with legal clarity and a level playing field. However, if it does not properly take into account the interconnectedness of platforms and the wider EU economy, the DSA could create imbalanced incentives or overextend the regulatory scope, resulting in unintended consequences that harm businesses, consumers, and wider society.

1.2 Structure of the report

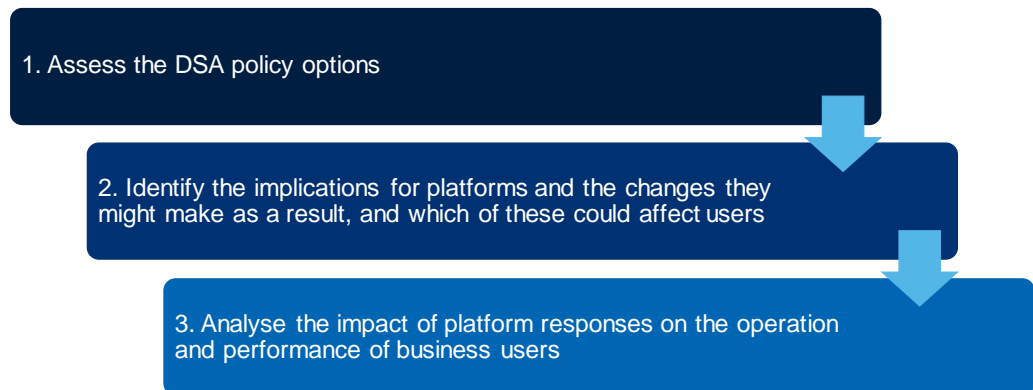
This study examines the implications for platforms and impacts for business users of changes resulting from the DSA. As the consultation is ongoing—and the range of options is still under debate—our report considers various possible features and requirements that may be included in the DSA. A summary of our research approach is depicted in Figure 1.1 below.

¹ Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce'). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32000L0031&from=EN>.

² Oxera (2020), 'The impact of the Digital Services Act on business users: Policy report'.

³ Our study focuses on the Commission's Inception Impact Assessment related to the liability and responsibilities of platforms that will replace the ECD. It does not examine the potential impact of ex ante measures and rules related to gatekeeper power that are also part of the DSA. See European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services'. Available at: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12417-Digital-Services-Act-deepening-the-Internal-Market-and-clarifying-responsibilities-for-digital-services>.

Figure 1.1 Research approach



Source: Oxera.

We began by assessing the policy options under consideration, drawing primarily on the various documents that have emerged from the Commission and the European Parliament, but also considering views from some other voices in the debate (see section 2).

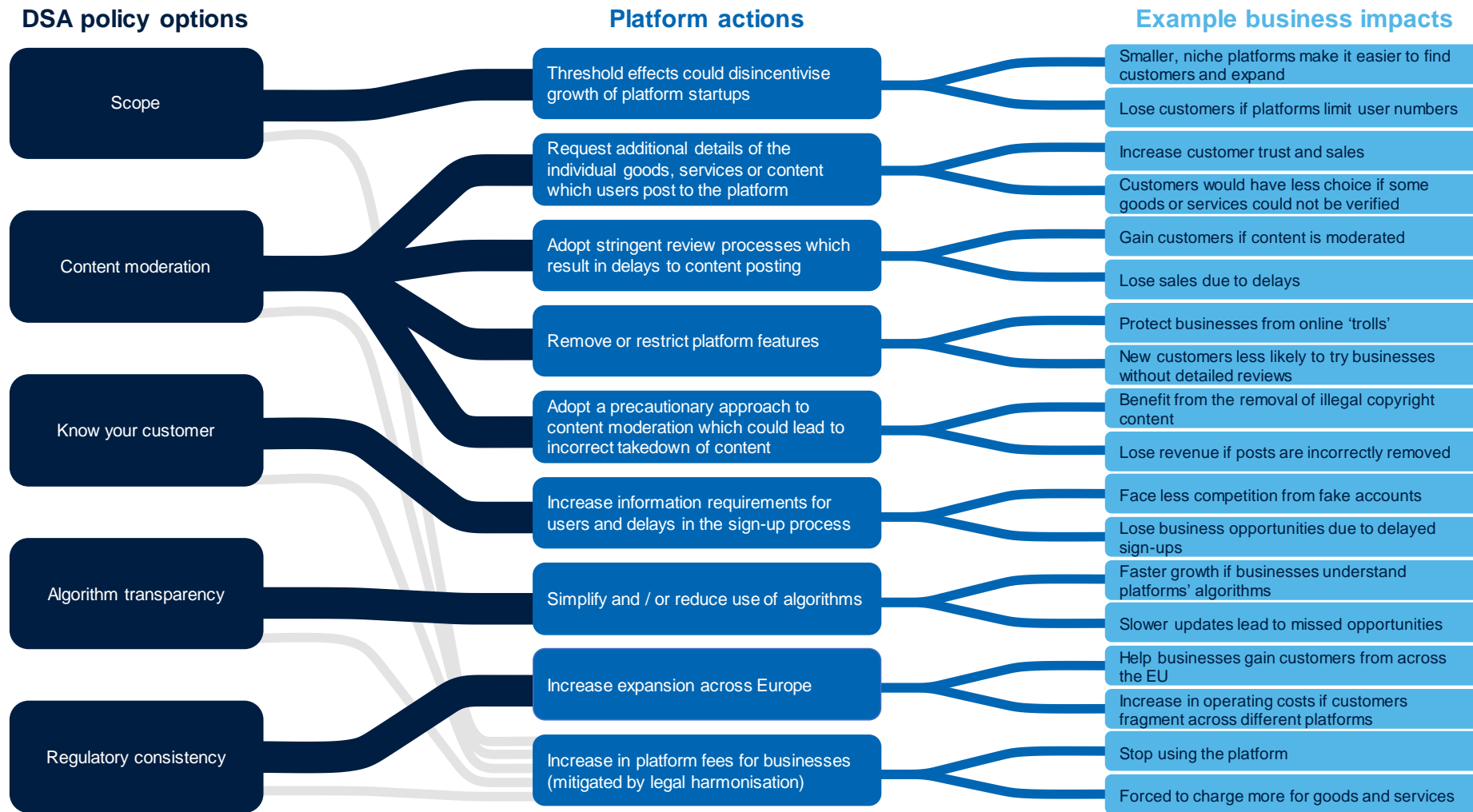
Next, we considered the implications for Europe's platform operators of the various policy options identified. This was based on insights gained primarily through a series of interviews with platform operators to understand the issues and opportunities that different DSA scenarios might present. Combining this with an examination of the economic incentives that different options create, we identified nine possible service changes that platforms may need to make as a result of the DSA (see section 3).

Then, we assessed the knock-on impact that the DSA could have on Europe's businesses as a result of these platform-service changes. This analysis is based on a survey of 1,000 business users from four economic sectors (content creators, small or local businesses, travel and tourism operators, and gig-economy workers) across four representative EU member states (Bulgaria, Germany, Ireland and Spain) (see section 4).

Finally, we analysed the wider economic effects of the DSA. For this, we used additional data and statistics from the public domain to scale up results from our survey (see in section 5).

Figure 1.2 provides a summary of the analysis developed in this report.

Figure 1.2 End-to-end impact of the DSA on EU SMEs



Source: Oxera.

2 The Digital Services Act

2.1 What is the DSA?

The current legal framework for digital services is composed of a number of directives at the EU level and additional laws at the member state level. The cornerstone is the ECD from the year 2000, which lays out the horizontal framework for all digital services. This is complemented by additional directives, non-binding instruments and voluntary measures.⁴

The DSA is intended to upgrade, clarify and enhance the horizontal legal framework for digital services of the ECD while complementing the pre-existing sector-specific regulation. This initiative is intended to address challenges in the digital space and the fragmentation of the legal landscape in the internal market by updating the horizontal rules that define the responsibilities and obligations of digital services to keep users safe online from illegal goods, content or services, and to protect their fundamental rights online.

2.2 Sources

The Commission's process to provide a DSA package is ongoing. For the purposes of this study, we conducted a literature review to identify the main potential options for how the DSA might look.

This broad literature review drew on the following sources.

- **The Commission's consultation:** on 2 June 2020, the Commission launched a public consultation on the DSA package to gather views and evidence on how to shape the future rules for digital services as announced in the Commission's February 2020 communication titled 'Shaping Europe's Digital Future'.⁵ As part of this consultation, a combined evaluation and inception impact assessment on the initiative, titled 'Digital Services Act package: deepening the Internal Market and clarifying responsibilities for digital services', was published in June 2020.⁶ This assessment outlined the context, main issues to tackle, objective, and three policy options to be considered. The three policy options are: (i) a limited legal instrument that would regulate online platforms' procedural obligations; (ii) a more comprehensive legal intervention updating and modernising the rules of the

⁴ The Commission's inception impact assessment mentions the following relevant measures: market surveillance regulation, the revised Audiovisual Media Services Directive; the directive on the enforcement of intellectual property rights; the directive on copyright in the digital single market; the regulation on market surveillance and compliance of products; the proposed regulation on preventing the dissemination of terrorist content online; the directive on combatting the sexual abuse and sexual exploitation of children and child pornography; the regulation on the marketing and use of explosives precursors; the Commission's general guidelines to online platforms and member states for tackling illegal content online through a Communication (2017) and the Recommendation (2018); the EU Internet Forum against terrorist propaganda online; the code of conduct on countering illegal hate speech online; the Alliance to better protect minors online under the European Strategy for a better internet for children and the WePROTECT global alliance to end child sexual exploitation online; the Joint Action of the consumer protection cooperation network authorities; the memorandum of understanding against counterfeit goods; the online advertising and IPR memorandum of understanding; the safety pledge to improve the safety of products sold online; the framework of the Consumer Protection Cooperation Regulation (CPC); and a package of measures adopted to secure free and fair elections.

⁵ European Commission (2020), 'Commission launches consultation to seek views on Digital Services Act package', press release, 2 June. Available at: <https://ec.europa.eu/digital-single-market/en/news/commission-launches-consultation-seek-views-digital-services-act-package>.

⁶ European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services'. Available at: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12417-Digital-Services-Act-deepening-the-Internal-Market-and-clarifying-responsibilities-for-digital-services>.

ECD; and (iii) options for creating an effective system of regulatory oversight, enforcement and cooperation across member states, supported at EU level.

- **The European Parliament Committee on the Internal Market and Consumer Protection (IMCO)** published an initiative draft report with recommendations for the DSA on 'Improving the functioning of the Single Market' by rapporteur Alexander Agius Saliba.⁷ This report provides a detailed view on key components of the DSA such as scope, notice-and-action mechanisms, transparency requirements, and enforcement. In addition, the IMCO committee requested a study on 'Online platforms' moderation of illegal content online', authored by Alexandre de Streel et al. (2020), which provides an overview of the current law and practices in the EU and other countries, concluding with a number of recommendations for the DSA reform.⁸
- **The European Parliament Legal Affairs Committee (JURI)** published an initiative draft report by rapporteur Tiemo Wölken, with recommendations to the Commission on adapting commercial and civil law rules for commercial entities operating online.⁹ This initiative draft report focuses mainly on changes to the regulatory oversight of digital services, targeted advertisement and binding procedural obligations for illegal content through notice-and-action systems.
- **The European Parliament Committee on Civil Liberties, Justice and Home Affairs (LIBE)** published an initiative draft report by rapporteur Kris Peeters on the Digital Services Act and fundamental rights issues posed.¹⁰ This initiative draft report focuses mainly on the fragmentation of rules across EU member states, transparency and procedural safeguards. The report calls for greater responsibility from online platforms that actively moderate or host content, increased cooperation, and the creation of an independent EU body.
- **Additional sources** include the feedback received by the Commission during the DSA consultation as well as public opinions on the DSA from across the digital sector.^{11,12}

⁷ Saliba, A.A. (2020), 'DRAFT REPORT with recommendations to the Commission on Digital Services Act: Improving the functioning of the Single Market, Committee on the Internal Market and Consumer Protection', 24 April. Available at: https://www.europarl.europa.eu/doceo/document/IMCO-PR-648474_EN.pdf.

Saliba, A.A. (2020), 'Compromise AMs on the draft report on Digital Services Act: Improving the functioning of the Single Market', 3 July. Available at: https://www.europarl.europa.eu/meetdocs/2014_2019/plmrep/COMMITTEES/IMCO/DV/2020/07-06/p.9_CAs_Saliba_DSA_EN.pdf.

⁸ De Streel, A. et al. (2020), 'Online Platforms' Moderation of Illegal Content Online', Study for the committee on Internal Market and Consumer Protection, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg, 2020, Available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/652718/IPOL_STU\(2020\)652718_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/652718/IPOL_STU(2020)652718_EN.pdf).

⁹ Wölken, T. (2020), 'Draft report with recommendations to the Commission on a Digital Services Act: adapting commercial and civil law rules for commercial entities operating online', 22 April. Available at: https://www.europarl.europa.eu/doceo/document/JURI-PR-650529_EN.pdf.

¹⁰ Peeters, K. (2020), 'DRAFT REPORT on the Digital Services Act and fundamental rights issues posed', Committee on Civil Liberties, Justice and Home Affairs, 27 April. Available at: https://www.europarl.europa.eu/doceo/document/LIBE-PR-650509_EN.pdf.

¹¹ European Commission (2020), 'Feedback received on: Digital Services Act – deepening the internal market and clarifying responsibilities for digital services'. Available at: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12417-Digital-Services-Act-deepening-the-Internal-Market-and-clarifying-responsibilities-for-digital-services/feedback?p_id=7937428.

¹² For example, the opinions published include: EDiMA (2020), 'Responsibility Online' (available at <https://edima-eu.org/wp-content/uploads/2020/01/Responsibility-Online-1.pdf>), European Digital Rights

This literature review identified a spectrum of different policy options for the DSA, which we describe in the next section.

2.3 Policy options considered

Based on the sources listed above, we identified a spectrum of policy options for the DSA, ranging from maintenance of the status quo to the introduction of more stringent changes. In presenting these options in this report, we group them according to the following key elements of the DSA:

- scope of what digital services are included;
- content moderation obligations and responsibilities;
- know-your-customer (KYC) obligations and responsibilities;
- algorithm transparency obligations and responsibilities;
- regulatory consistency.

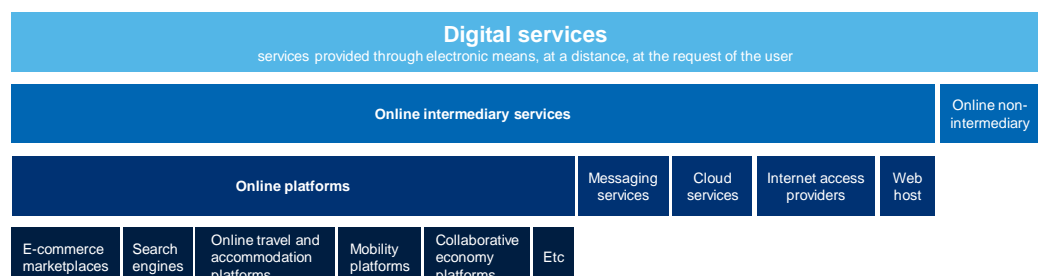
2.3.1 Scope: digital services

The Commission’s consultation indicates that the DSA will be a horizontal piece of legislation affecting the full range of digital services (see Figure 2.1), including online platforms (e.g. social platforms and marketplaces), search engines, Internet service providers, cloud services, content delivery networks, domain name services, collaborative economy platforms, online advertising services, and services built on electronic contracts and distributed ledger technologies.

Through our research, we identified that the scope of the new legislation might not equally apply to all digital services as there is ongoing debate over whether the new rules should be applied symmetrically or instead include a degree of proportionality for some digital services. The current proposals from the Commission and the European Parliament are for application of the new rules to be based on:

- the type of digital service;
- the size and public reach of a platform;
- the level of risk for the type of content carried by the digital service.

Figure 2.1 Digital services classification



(2020), 'Platform Regulation Done Right: EDRI Position Paper on the EU Digital Services Act', 9 April (available at https://edri.org/wp-content/uploads/2020/04/DSA_EDRIPositionPaper.pdf), Global Network Initiative (2020), 'Event Summary and Video Recording: "The Rights Foundation: Building Human Rights into the DSA"' (available at <https://globalnetworkinitiative.org/event-human-rights-dsa/>).

Source: Oxera.

2.3.2 Content moderation obligations and responsibilities

There are two broad approaches that are considered for updating digital services' obligations and responsibilities for content moderation—through the intermediary liability regime, or through procedural obligations. Each of these approaches has a spectrum of options that can be included in the DSA package, which we discuss below based on our research.

A distinction should be drawn between illegal content and harmful but not illegal content. Illegal content could be further categorised into criminal illegal and economic illegal content, and for the purposes of this study includes content such as: counterfeit, dangerous or unauthorised products; illegally traded goods; terrorist content; child sexual abuse content; illegal hate speech; and intellectual property violation. Harmful content includes, for example, online disinformation, online bullying and online threats. The distinction between these two categories of content is also reflected in the policy options for the DSA, identified through our research.

Intermediary liability

With respect to illegal content, the intermediary liability regime sets out the conditions under which online intermediaries would be exempt from liability for the content on their platforms. These laws are also referred to as 'safe harbours'.¹³

Currently, in the European Union, the ECD—through Articles 12, 13 and 14—exempts some intermediaries (mere conduits, caching and hosting services) from liability for the content that they manage if they fulfil certain conditions:

- *service providers hosting illegal [content] remove it or disable access to it as fast as possible once they are aware of the illegal nature;*
- *only services who play a neutral, merely technical and passive role towards the hosted content are covered by the liability exemption.*¹⁴

Both the Commission and the European Parliament proposals have suggested that the current EU liability regime needs to be clarified or changed to reflect how digital services' activities have evolved since the ECD came into force. Below, we present a spectrum of four options that can be considered for the liability regime, ranging from the status quo to an extreme scenario in which the digital services have full liability.

As a first option, the Commission is consulting on maintaining the status quo for the liability rules of the ECD with no further clarifications.¹⁵

¹³ Oxera (2015), 'The economic impact of safe harbours on Internet intermediary start-ups', February. Available at: <https://www.oxera.com/wp-content/uploads/2018/07/The-economic-impact-of-safe-harbours-on-Internet-intermediary-start-ups.pdf.pdf>.

¹⁴ Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce'). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32000L0031&from=EN>.

¹⁵ 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).

As a second option, the DSA could provide clarity and harmonisation across member states to the current liability rules by revisiting the definitions of terms such as 'mere conduit', and 'passive' and 'active host'.¹⁶ However, this option is still perceived as insufficient to address the disincentive of platforms' need to proactively search for illegal content.

A third option, considered by the Commission and in the proposals from the European Parliament, is to address the incentives that the digital services have for undertaking pro-active actions to search for illegal content. A suggestion, highlighted by the literature review, is to change the liability regime to a safe harbour type of regime in which platforms that have additional processes to screen content do not lose the liability exemption.¹⁷ A variant of this option could be the introduction of a safe harbour contingent on the existence of safety features (positive obligations).¹⁸ However, some do not agree with this approach as they consider that the conditioning will lead to digital services taking a much stronger approach to content moderation and will increase the rate of takedown in order to avoid liability risk. Another issue with this option, highlighted by the literature review, is the difficulty of defining what level of safety measures is sufficient to maintain the safe harbour status, which increases the uncertainty that digital service providers face.¹⁹

A fourth option, which extends the spectrum of liability to one extreme, would be to assign full liability to platforms. However, this would place disproportionate responsibility on the intermediaries rather than the offenders, and it is likely to trigger a strong response from digital service providers. As such, it would contradict the 'no general monitoring' principle and the higher-level aim of providing digital services with the incentives to innovate.

The liability regime sets the incentives for digital services according to the type and quantity of content moderation they do. Our research also identified that the current view of the Commission and the European Parliament is that there should be a separation between the liability regime for the digital services and the standalone procedural obligations that a digital service must comply with. These are discussed in the next section.

Procedural obligations for content moderation

The advocates of procedural obligations with specific sanctions believe that these could represent a more effective way of regulating digital services by removing uncertainty and providing specific sanctions. The Commission's DSA consultation and public discussions have considered a spectrum of possible procedural obligations, including measures to:

¹⁶ 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).

¹⁷ 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); and Werner Stengg (Cabinet member, Executive Vice President Margrethe Vestager) during CERRE Think Tank webinar (2020), 'Online platforms' content moderation: towards a new approach?', 16 July. Available at: <https://www.youtube.com/watch?v=IXgRJN4YxBU&t=1856s>.

¹⁸ A similar option as present in Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0790&from=EN>.

¹⁹ Werner Stengg (Cabinet member, Executive Vice President Margrethe Vestager) during CERRE Think Tank webinar (2020), 'Online platforms' content moderation: towards a new approach?', 16 July. Available at: <https://www.youtube.com/watch?v=IXgRJN4YxBU&t=1856s>.

- maintain harmonised notice-and-action (including takedown) systems;
- provide effective redress and protection against unjustified removal of content;
- adhere to transparency and reporting rules related to the content moderation processes;
- cooperate with and report to (where appropriate) relevant authorities and trusted flaggers;
- undertake risk assessments for harmful but not illegal content obligations. In a previous note from the Commission, it was acknowledged that the diverse and evolving nature of harmful content makes it unsuitable for strict notice-and-action obligations.²⁰

The notice-and-action procedures for illegal content were present in all sources reviewed for this report. While the ECD includes a notice and takedown requirement, this is not formalised or harmonised across providers. The details on how a notice-and-action process would be implemented are varied—however, the main components include requirements to:

- provide means for notification (for example for: online users, trusted flaggers, official databases, etc.);
- provide information to the parties involved;
- act in a specific timeframe;
- maintain counter-notice procedures;
- provide information on access to outside court dispute settlements.

In addition, the DSA could also include options for obligations on KYC and algorithm transparency. These are considered separately below.

2.3.3 KYC procedural obligations and responsibilities

The Commission and the European Parliament proposals for the DSA are considering the inclusion of KYC requirements. Digital service providers, and platforms in particular, have different types of customer groups. The options discussed for KYC obligations and responsibilities identified throughout our research range from targeted requirements for specific users such as business users in marketplaces or gig-work platforms, to *all* users of digital services.

There is a consensus that a requirement for platforms to verify all its users will conflict with the protection of online anonymity for users (other than business users). The proposals from the Commission and the European Parliament do not include KYC obligations for non-commercial users.

The policy option proposed by the Commission is to impose KYC obligations only on business users in marketplaces. Some detailed proposals suggest that this could be achieved through verification against recognised databases and

²⁰ 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>.

increased collection of identifying information before a user is accepted on a digital service.²¹

2.3.4 Algorithm transparency obligations and responsibilities

Algorithms are an important part of how digital services work. They are used to perform many functions for delivering and moderating content. The Commission's consultation for the DSA is considering the inclusion of obligations of transparency, reporting and independent audit of the algorithms used for content moderation, rankings and recommendations, and commercial communications.

These obligations can take the form of regulatory oversight, such that digital service providers share their algorithmic systems with a regulator or independent auditor who will assess if an algorithm is good enough to prevent illegal content or its principles are acceptable for filtering harmful content while preserving fundamental rights and tackling online disinformation.

In a previous note from the Commission, it was suggested that the introduction of regulator access to sandboxes (controlled environments that allow users to test changes to algorithms) could be used as an option to test digital providers' algorithms.²²

Algorithm transparency obligations and responsibilities to users are also being considered. This could require digital service providers to disclose how their algorithms use data to determine rankings and recommendations or explain how specific outcomes were generated.²³

2.3.5 Regulatory consistency—oversight, enforcement and cooperation

The last component considered for the DSA is related to regulatory consistency covering rules and procedures for oversight, enforcement and cooperation across the EU.

The ECD sought to simplify the rules for platforms operating across the EU with the introduction of a limited liability regime (as discussed in section 2.3.2) and 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 has been eroded by implementation at the member state level and the resulting different interpretations of the law.²⁴ The Commission has identified addressing these divergences as one of the main overarching aims of the DSA.

²¹ Saliba, A.A. (2020), 'Compromise AMs on the draft report on Digital Services Act: Improving the functioning of the Single Market', 3 July. Available at: https://www.europarl.europa.eu/meetdocs/2014_2019/plmrep/COMMITTEES/IMCO/DV/2020/07-06/p.9_CAs_Saliba_DSA_EN.pdf.

²² 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>.

²³ Saliba, A.A. (2020), 'DRAFT REPORT with recommendations to the Commission on Digital Services Act: Improving the functioning of the Single Market, Committee on the Internal Market and Consumer Protection', 24 April. Available at: https://www.europarl.europa.eu/doceo/document/IMCO-PR-648474_EN.pdf.

²⁴ De Streel, A. et al. (2020), 'Online Platforms' Moderation of Illegal Content Online', Study for the committee on Internal Market and Consumer Protection, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg. Available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/652718/IPOL_STU\(2020\)652718_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/652718/IPOL_STU(2020)652718_EN.pdf). Examples of member state laws include the German Network Enforcement Act ('NetzDG') or the French Aviva law that has been declared unconstitutional by the French Constitutional Council.

DSA policy options for regulatory oversight, enforcement and cooperation include:

- the introduction of an EU regulatory authority with the powers to directly enforce the DSA;²⁵
- a system of effective regulatory oversight, enforcement and cooperation between public authorities at the member state level. A sufficient level of harmonisation of rules and procedures would allow member states to use the country of origin principle to coordinate. However, an important challenge to achieving this is if the member states agree on the minimum level acceptable;²⁶
- an EU-supported system of effective regulatory oversight, enforcement and cooperation between public authorities at the member state level. Some consider that the country of origin principle is not sufficiently strong to provide one member state with incentives to oversee a digital service established in their country for all the EU;²⁷
- enforcement before state judicial courts. However, this can erode the country of origin principle if divergence in interpretation continues to emerge;
- the use of out of court dispute settlement systems to address issues before they reach state judicial courts;²⁸
- enforcement through private bodies (such as platforms themselves) through self- and co-regulation that is monitored by relevant authorities (for example, through codes of practice).

The DSA legislative process is ongoing, with the Commission undertaking a public consultation and the European Parliament putting forward reports on the content of the DSA. Our research has identified a number of options for how each 'key' component of the DSA could be changed. The next sections of this report will look at how these options could affect platforms and business users of platforms.

²⁵ Peeters, K. (2020), 'DRAFT REPORT on the Digital Services Act and fundamental rights issues posed', Committee on Civil Liberties, Justice and Home Affairs, 27 April. Available at: https://www.europarl.europa.eu/doceo/document/LIBE-PR-650509_EN.pdf.

²⁶ European Commission (2020), 'Inception impact assessment, Digital Services Act – deepening the internal market and clarifying responsibilities for digital services'. Available at: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12417-Digital-Services-Act-deepening-the-Internal-Market-and-clarifying-responsibilities-for-digital-services>.

²⁷ Alexandre De Streel (CERRE academic and professor of EU law at University of Namur) at CERRE Think Tank webinar (2020), 'Online platforms' content moderation: towards a new approach?', 16 July 2020. Available at: <https://www.youtube.com/watch?v=IXgRJN4YxBU&t=1856s>.

²⁸ Saliba, A.A. (2020), 'DRAFT REPORT with recommendations to the Commission on Digital Services Act: Improving the functioning of the Single Market, Committee on the Internal Market and Consumer Protection', 24 April. Available at: https://www.europarl.europa.eu/doceo/document/IMCO-PR-648474_EN.pdf.

3 Identify likely platform responses

3.1 Information-gathering approach

To understand the implications of different DSA options for Europe's platform operators, we conducted a series of six semi-structured video interviews with platforms of different sizes that offer their services in one or more EU member states.

The platform operators we interviewed range from small startups and scale-ups with only a few employees operating in one or two locations, to well-known, publicly listed Internet brands with thousands of employees around the globe. The platforms we interviewed are based in Bulgaria, Denmark, Ireland, Israel, the Netherlands and Spain. The services they provide include:

- gig-economy work;
- physical delivery services;
- online marketplaces;
- online reviews;
- content hosting.

During the interviews, we presented the platform operators with a summary of the DSA scenarios described in section 2.3. We then discussed what the implications could be for their business and how they might respond. This interview process allowed us to qualitatively explore potential changes in the services offered by a range of different platforms as a result of the DSA. We used this as an input to our assessment of the potential impacts on EU business users. This is not intended to be a statistically robust sample and we do not use it to conclude what *will* occur, only what *could* occur.

The remainder of this section sets out our assessment of the potential implications of the DSA for platforms based on these interviews. We first discuss the themes and headline messages that emerged from the interviews, before discussing how these platform reactions could result in changes for their business users.

3.2 Themes from the interviewees

3.2.1 Open/closed platforms

We noted a distinction in responses from the interviewees depending on whether the platform was open or closed.²⁹ The closed platforms were generally less concerned over the imposition of certain requirements, such as KYC processes (some of which they already had) or content moderation. By contrast, one of the open platforms suggested that they might need to close their platform if they became liable for content posted by users.

3.2.2 Transactional/non-transactional

There is a natural difference between platforms in their existing KYC protocols. Platforms that facilitate a significant offline transaction may already have well-developed onboarding processes as part of the transactions themselves. For

²⁹ An open platform allows users greater or unrestricted access to content versus the closed platforms that have more control over both content and user access.

instance, the gig-economy platform we spoke with noted that it had an integrated payment system that required the user to submit information on their identity, which could be extended if required as part of the DSA.

3.2.3 Scaling and moving into new markets

Several platforms we spoke with noted that they were subject to a range of differing regulations in the different countries they operated in. This created barriers to them scaling up their businesses across member states. Similarly, some businesses relied on local assets to help fulfil the transactions they facilitated (such as a local courier network). This created a significant variation in how quickly and widely platforms could scale up their activities into new markets.

Some interviewees also noted that regulatory approaches across different countries and jurisdictions were affecting their decisions over which territories to expand into: several platforms we spoke with had expanded into third countries instead of other member states due to the complexity of regulatory requirements.

3.2.4 Automation

A number of the platforms we spoke with suggested that they would seek to automate as many new requirements as possible, such as any requirements leading to content moderation or filtering. However, they also noted that AI tools are not 100% efficient, especially when the content in question is context-dependent. Changes that could be dealt with using automation were not seen to create excessive regulatory burden. Indeed, for at least one of the platforms we spoke with, processing information using AI was integral to its business model, which relies on data science techniques to identify potentially fraudulent sellers, thereby providing assurance to potential buyers on their platform.

However, manual moderation or filtering would result in significant cost increases and still could not be relied on to identify content correctly all the time.

3.2.5 Removal of harmful content

The majority of platforms we spoke with mentioned taking active steps to remove content that was illegal or judged by the platform as harmful, although most noted that judging what is harmful can be challenging. Some among the platforms appeared to have differing philosophies over how much they should intervene outside removing illegal content. The larger platforms in particular appeared to have given careful consideration to what their policy should be, while smaller platforms in particular noted that they would value clarity from government.

3.2.6 Legislative certainty on content moderation

Some platforms we spoke with suggested that process-based rules on content moderation and filtering would provide the greatest certainty. Most agreed that filtering content could be challenging; identifying harmful or, in some cases, illegal content is not always straightforward.

3.3 Platform responses

The next stage in our work was to assess the implications for the platforms' commercial incentives and business-model sustainability based on the insights

from the interviews. From this, we determined a set of nine distinct actions that platforms active in Europe might take in response to the different DSA options we considered that could have knock-on effects for the platforms' business users.

1. **Scale: platform remains below a threshold.** If regulatory obligations apply only to platforms above a certain scale, some platforms could be incentivised to limit their growth to remain under the threshold and avoid a regulatory 'cliff edge'. From the perspective of the users, this could mean that they are not able to use their chosen platform, or that the platform is not able to reach as wide a range of customers.
2. **Verification: information required about activities on the platform.** Platforms could increase the amount of information that business users are required to provide in relation to their commercial activity on the platforms, for example verification of the goods or services posted on the platforms' websites.
3. **Delays: posts delayed due to review process.** Some of the DSA scenarios we have discussed might require or incentivise platforms to review content before being posted. This would be likely to lead to users experiencing delays in their content being posted on platforms while the review process is completed.
4. **Functionality: reduced/restricted functionality.** If platforms are liable for the content posted to their websites, and/or the transactions they facilitate, they might remove or restrict different functionalities offered in order to mitigate the associated liability risks.
5. **Implementation of notify and act: cautious application of moderation policies leading to unnecessary removals.** In order to mitigate the risks associated with content posted on their websites, platforms could introduce mechanisms allowing users to flag pieces of content as being illegal or harmful. Given the risks to them, platforms might adopt an overly cautious takedown policy that leads to the incorrect removal of legitimate content.
6. **Sign-up: increased information required and delays.** Platforms might need to adapt their sign-up processes in response to the DSA—either because of direct requirements such as enhanced KYC requirements, or indirectly (such as liability concerns incentivising open platforms switching to closed models). This could include increasing the information that platforms ask users to provide when signing up and requiring users to keep their profiles up to date. Moreover, this could lead to delays in the sign-up process, for example if platforms have difficulty verifying information.
7. **Transparency: explanations of AI/algorithms.** Platforms could be required to provide greater transparency over how they use algorithms, with oversight coming from an independent regulator or the platforms' users. This could lead to platforms using simpler algorithms that are more straightforward to explain but with fewer functionalities. Another potential outcome is that platforms seek to reduce the number of updates they make to their algorithms, delaying the release of new features or improvements.
8. **Access: greater reach of the platform across Europe.** Consistency of the regulatory regime could make it easier for platforms to operate across EU member states. From a user perspective, this would increase the number of

platforms a user has access to and potentially also increase access to non-domestic markets.

9. **Price: introduction or increased fees.** There are a number of potential changes that might be introduced by the DSA that could lead to increased costs for platforms. These include increased requirements for moderation, user onboarding or algorithm scrutiny. Platforms would then face a choice of passing on some or all of these costs to users in the form of higher platform fees or commission rates, or switching from a free to a paid-for service.

These potential responses provide concrete outcomes that link the DSA scenarios to the wider economy through the impacts on platform operators: their incentives, costs and operations. We now turn to our strategy for testing the effects of these outcomes in section 4.

4 Testing the impact on business users

In this section, we describe the methodology used to measure the impact of platform responses to the DSA on business users. For this, we drew primarily on a survey of business users of platforms across four representative EU countries. We also carried out desk research to gather public data and information to provide further evidence on the impacts on business users.

First, we provide an overview of the business survey (section 4.1). Next, we present our findings on the impact on businesses users of each of the platform actions uncovered through the interviews discussed in section 3 (section 4.2), before examining the overall impact of different combinations of platform responses (section 4.3).

4.1 Business survey

To gather quantitative evidence of the potential knock-on impact of the DSA on business users of online platforms, we commissioned the market research company Kantar Media to conduct a scenario-based survey questionnaire. The survey was conducted online during the period 10 July–30 July 2020, with a total of 1,000 responses.

Below, we present a summary of the survey sample and survey methodology. For a full description of the survey questions, see Annex A1.

4.1.1 Survey sample

To ensure that the research would be representative of the impacts on business users across the EU, the survey was run in four EU countries: Bulgaria, Germany, Ireland and Spain. In each country, we targeted four key digital sectors that rely on the use of platforms for commercial purposes, as identified in the ‘Europe’s digital landscape’ section of the accompanying policy report:³⁰

- content creators: individuals who create online content to generate income, for example by professionally writing/blogging, creating or producing video or audio content;
- gig-economy workers: individuals who use online platforms to find flexible, temporary or freelance work;
- travel and tourism operators: businesses operating in the travel and tourism industry, such as hotels, hostels, bed and breakfasts, tour operators, restaurants and attractions;
- small or local businesses: small or local businesses, such as local trades, retailers, service providers and other online/home-based businesses.

In total, we sampled 1,000 business users. Table 4.1 summarises the composition of the sample by country and sector.

³⁰ Oxera (2020), ‘The impact of the Digital Services Act on business users: Policy report’.

Table 4.1 Business survey sample size (number of respondents)

	Ireland	Spain	Germany	Bulgaria	Total
Content creators	76	89	76	68	309
Gig economy	51	51	52	50	204
Travel and tourism	64	63	60	57	244
Small or local businesses	126	116	117	125	484
Total	250	250	250	250	1,000

Note: The sum of respondents across the four sectors is larger than the total because some respondents identified as being in more than one sector.

Source: Oxera analysis of survey data.

4.1.2 Survey methodology

The purpose of the survey was to gather information on how business users would be affected by a range of possible changes that could be introduced by the platforms they rely on. To contextualise these potential changes, we adopted a scenario-based approach to framing the questions. The focus of this part of the research was the effect on business users and their customers (not on the business of the platforms), therefore the questions were tailored to reflect our assumptions about what activities business users undertake on the platform.

The research participants were presented with potential platform actions and a range of options to cover likely positive and negative outcomes for them. Then, the survey explored the magnitude of those impacts on their business by asking them to rate each impact on a Likert scale from 1 (no impact at all) to 5 (a significant impact).

Having established the nine potential platform responses following the platform interview process (see section 3.3), we worked with Kantar to design the questions and response structure to elicit insightful and robust responses on the impacts on business users. We aimed to strike a balance between a breadth and accuracy of answers from the respondents based on the following principles:

- the order of the platform actions was randomised among the participants to avoid biased answers between the beginning and the end questions.
- to avoid cognitive fatigue, not all respondents received all of the questions—we limited the survey length by showing only the most relevant scenarios to businesses in each sector.
- additional consideration was given to how the questionnaire was framed to ensure that the answers were did not simply reflect the circumstances of the global pandemic of the COVID-19 virus.
- the questionnaire development included a cognitive testing phase to ensure that the questions were could be understood and appropriate for the sample selected.

4.2 Impact of the DSA on business users

In this section we present the results of the survey—showing the impact of platform responses on business users, and also capturing the ‘knock-on effects’ of the DSA on the wider economy, given the intermediary role that platforms perform.

We discuss in turn the main findings for each of the nine platform responses described in section 3.3, before presenting the results on the overall impact on business users of three scenarios that combine different elements of the DSA and different platform responses.

For each scenario, we present the percentage of business users that selected each impact. In addition, we created an aggregated score of the overall impact of the platform’s response on respondents. This score was computed as a simple average of the magnitude of the impacts across all of the answers selected by respondents. The magnitude of the impact was coded as an integer from –4 (for a significant negative impact) to +4 (for a significant positive impact) with a score of 0 if there was no impact.

The aggregated score was also used to test for statistical differences across different groups of respondents while controlling for other known characteristics that could affect the score. We adopted a linear regression approach to significance testing, whereby we regressed the aggregated score for a certain platform response on dummy variables for country, business size and sector. When testing for differences across a group type (e.g. between countries), this approach allowed us to control for other differences (i.e. the sectors and business sizes). We then used a Wald test to investigate if the coefficients of different groups were different from each other. For each scenario we report the statistically significant differences with the associated p-value of the Wald test.

4.2.1 Platform remains below a threshold

Given the intermediary role played by platforms, the number of users on a platform is likely to be an important factor for businesses. Direct and indirect network effects can allow platforms to scale up rapidly, which could also benefit business users in the form of faster growth. Across all 1,000 respondents, two-thirds considered the number of platform users on an online platform to be important for their success.

We tested the impact of platforms restricting their scale with content creators, travel and tourism businesses, and small or local businesses. We did not present this scenario to gig workers because their activity is predominantly local and the size of a platform is less likely to be relevant. Table 4.2 presents the survey results for this scenario.

Table 4.2 Impact of platforms staying below a certain size

Impact	Ireland	Spain	Germany	Bulgaria	Total
Need multiple platforms to reach more customers, increasing costs	40%	56%	45%	48%	47%
Consumers will have to use multiple platforms to find the best content/products	34%	43%	43%	40%	40%
Reduces my customer base	37%	42%	33%	44%	39%
Feedback/reviews may be inconsistent across different platforms	38%	29%	39%	32%	35%
Customers will have less choice	36%	40%	30%	31%	34%
More competition between smaller platforms will mean consumers can select one that suits them	36%	37%	36%	27%	34%
More competition between smaller platforms would benefit my business	32%	29%	34%	28%	30%
Smaller, niche platforms would make it easier for me to find customers and expand	32%	35%	30%	23%	30%
No impact on me/my business	7%	3%	8%	7%	6%
No impact on my customers	8%	3%	9%	5%	6%

Note: N=896.

Source: Oxera analysis of survey data.

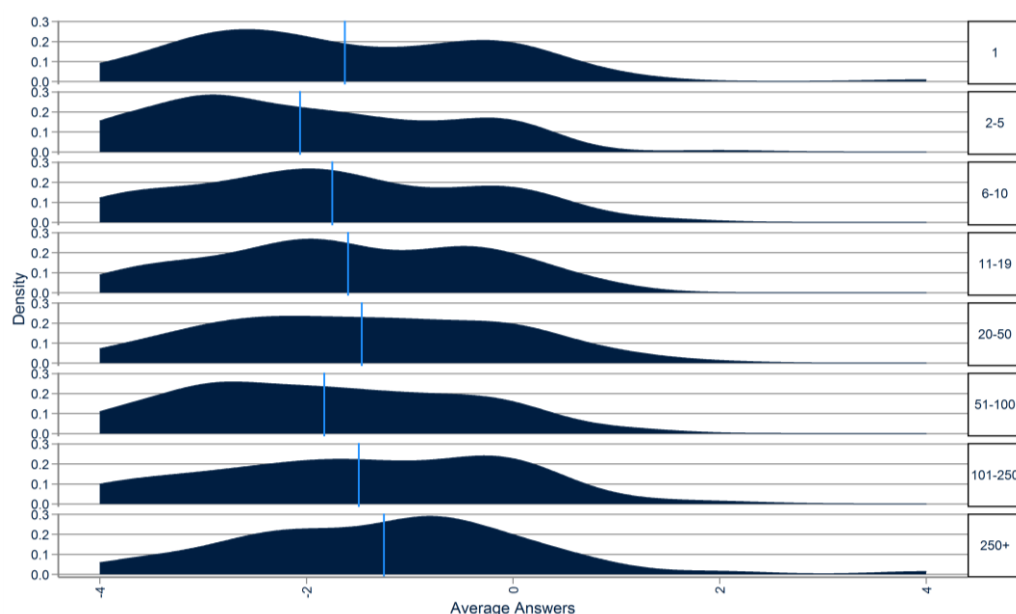
If presented with a potential change where the platform used would limit the number of users to remain under a threshold, 47% of the business users said that their costs would increase because they would need to use multiple platforms to reach more customers. 39% said that their customer base would be reduced, and 35% anticipated that the feedback and review they would receive would be inconsistent across different platforms. This could also have an effect on consumers, with 40% of business users anticipating that consumers would have to use multiple platforms to find the best content/products and 34% considering that consumers would have less choice.

On the other hand, 30% of business users considered that smaller, niche platforms would make it easier for them to find customers and expand, and 30% considered that more competition between smaller platforms would benefit their business. In addition, 34% of business users considered that more competition between smaller platforms would mean that consumers could select a platform that suits them best.

Overall, larger business users were more positive about the effect of a change where the platforms used would limit the number of users to remain under a threshold than smaller business users with up to 10 employees.³¹

³¹ The p-value is 0.00 for the Wald test on the coefficient of business size up to 10 employees and the coefficient of business size for more than 10 employees.

Figure 4.1 Impacts from platforms restricting their size by company size



Note: N=896. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The blue vertical line represents the mean impact for the group.

Source: Oxera analysis of survey data.

4.2.2 Information required about activities on platforms

We tested the impact of increased information requirements relating to users' activity on platforms used by gig workers, travel and tourism businesses, and small or local businesses. We did not present this scenario to content creators because their activity details are less relevant for their users. Table 4.3 presents the survey results for this scenario.

Table 4.3 Impact of information required about activities on platforms

Impact	Ireland	Spain	Germany	Bulgaria	Total
Increase my sales as customers' have more trust in my business	49%	54%	45%	51%	50%
Customers would have less choice if some goods/services cannot be verified	46%	39%	48%	37%	42%
Reduces unfair competition from fake or misrepresented goods/services	38%	42%	30%	45%	39%
Reduces the number of platforms I use	36%	27%	27%	31%	30%
Reduces the diversity of the products/content/services I post	31%	26%	32%	21%	28%
Hard to prove the authenticity/validity of my products/services	25%	28%	24%	29%	26%
Stop using the platform	14%	14%	19%	13%	15%
No impact on my customers	13%	12%	13%	16%	14%
No impact on me/my business	10%	15%	16%	12%	13%

Note: N=819.

Source: Oxera analysis of survey data.

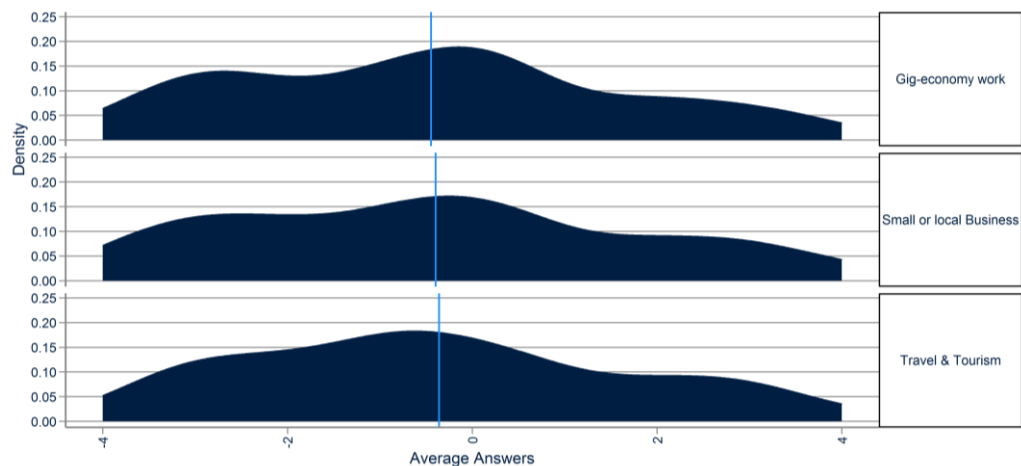
According to our survey results, increased information requirements about activities on platforms would have both positive and negative effects on business users.

Half of the respondents said that this type of change would lead to customers having more trust in their business and to increased sales, with 39% expecting to benefit from reduced unfair competition from fake or misrepresented goods or services that would no longer appear on the platform.

On the other hand, such a change could also lead to a reduced offering from online businesses, as 30% of businesses mentioned that they would reduce the number of platforms they use, 28% would reduce the diversity of their products, content or services posted, and 15% would stop using the platform altogether. Furthermore, 26% of business users considered that it would be hard to prove the authenticity or validity of their products and services and could also lead to consumers having less choice, as anticipated by 42% of respondents.

The impact of this potential platform response was similarly distributed across the three sectors tested, with approximately half of the respondents reporting a negative effect.³²

Figure 4.2 Impacts from platform activity information requirements



Note: N=819. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The blue vertical line represents the mean impact for the group.

Source: Oxera analysis of survey data.

4.2.3 Posts delayed due to review process

We tested the impact of delays in the posting of content with content creators and gig workers. We did not present this scenario to travel and tourism businesses or small or local businesses because their posting frequency is less likely to require a fast response from the platforms used. Table 4.4 presents the survey results for this scenario.

³² The p-value for the pairwise Wald tests was above 0.05.

Table 4.4 Impact of posts delayed due to review process

Impact	Ireland	Spain	Germany	Bulgaria	Total
Lose some sales due to delays	49%	46%	42%	48%	46%
Couldn't post spontaneous or live content	41%	43%	47%	40%	43%
Disrupt my posting schedule	42%	53%	39%	36%	43%
Customers would look elsewhere for goods/services	41%	42%	45%	36%	41%
Prevent me from doing last minute shifts	27%	35%	46%	52%	40%
Customers would stop using the platform if moderation led to reduced content	43%	41%	43%	31%	40%
More customers would use the platform if they knew the content had been monitored	34%	40%	40%	44%	39%
Stop using the platform	18%	23%	30%	17%	22%
No impact on my customers	13%	11%	5%	8%	9%
My/my customer's posts are already reviewed prior to posting	6%	6%	4%	7%	6%
No impact on me/my business	7%	3%	5%	8%	6%

Note: N=431 (with the exception of answer 'Couldn't post spontaneous or live content' where N=309 and answer 'Prevent me from doing last minute shifts' where N=204).

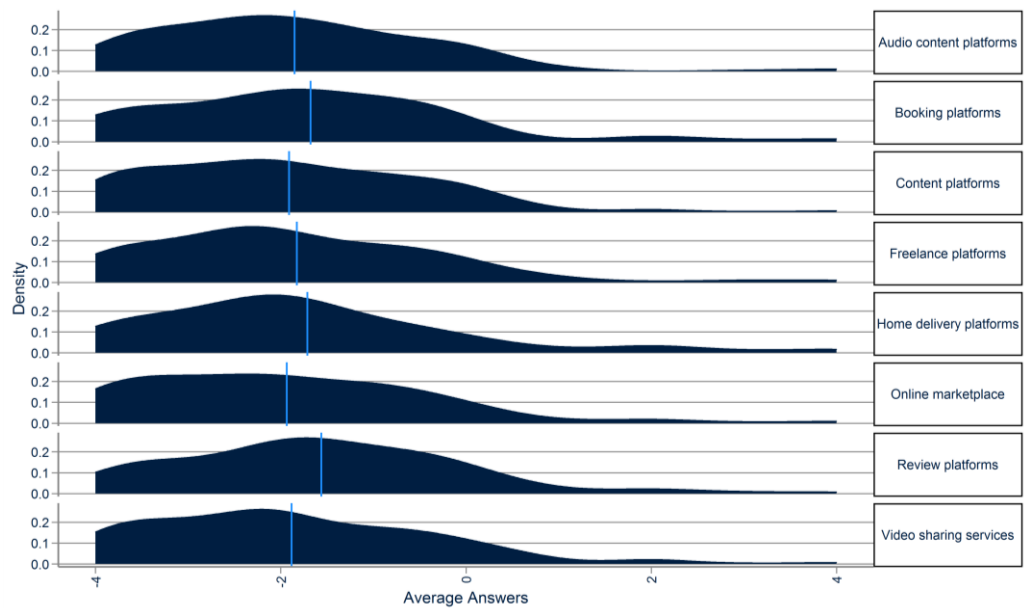
Source: Oxera analysis of survey data.

Our survey found that 46% of users would expect to lose some sales due to delays—this could lead to a significant impact on their activity considering that online revenue represents on average 64% of these businesses' total revenues according to our profiling questions. In addition, 43% of users would experience a disruption of their posting schedule and 22% said that they would stop using the platform. 41% of business users also anticipated that customers would look elsewhere for goods and services if they experienced delays, and 40% of business users considered that customers would stop using the platform if moderation led to reduced content. 40% of gig workers said that they would be prevented from doing last-minute shifts as a result of delayed posting.

However, not all of the reported impacts were negative: 39% of respondents said that they would expect more customers to use the platform if they knew that content was being reviewed.

Overall, the effect was perceived to be strongly negative regardless of the platform type used by the business users (see Figure 4.3).

Figure 4.3 Scale of the impacts from delays in posting to platforms

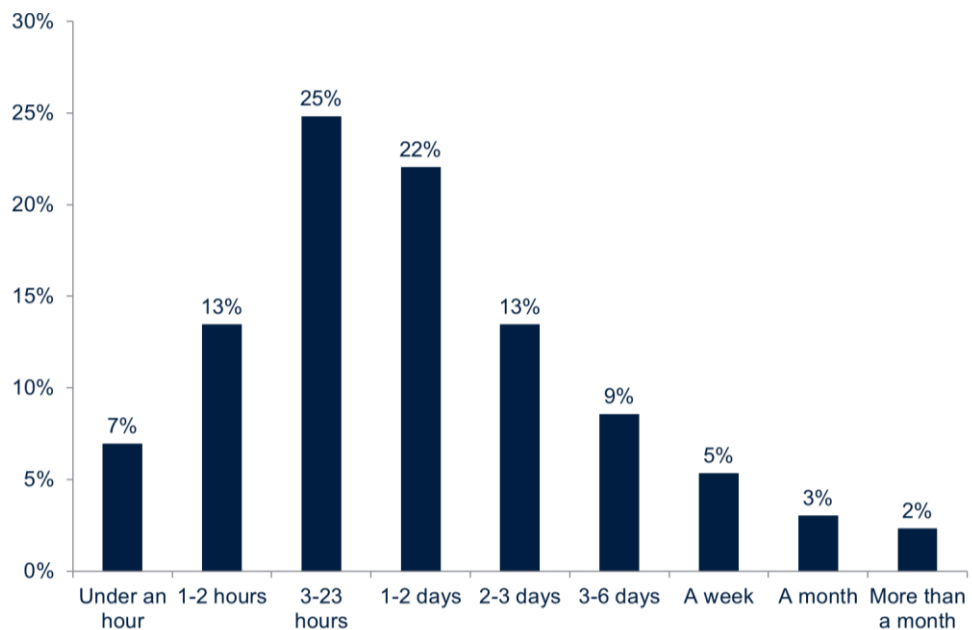


Note: N=431. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). Each respondent could select more than one type of platform, hence the groups represented in this figure are not mutually exclusive. The blue vertical line represents the mean impact for the group.

Source: Oxera analysis of survey data.

The survey asked respondents to report the length of delay for a post being uploaded to a platform that would have a significant impact on their business. The results indicated that 45% of businesses said delays of up to a day would have a significant effect on their business.

Figure 4.4 Length of delay that would cause a significant impact on survey respondents' business



Note: N=431.

Source: Oxera analysis of survey data.

4.2.4 Reduced or restricted platform functionalities

We tested the impact of reduced or restricted platform functionalities with all four sectors. Table 4.5 presents the survey results for this scenario.

Table 4.5 Impact of reduced or restricted platform functionalities

Impact	Ireland	Spain	Germany	Bulgaria	Total
New customers are less likely to try my content, products, services without reviews from other consumers	38%	48%	45%	59%	48%
Make it harder to attract new customers	49%	52%	35%	54%	47%
Make it harder for me to promote new products	42%	43%	45%	46%	44%
Harder to improve my products/ services without customer feedback	40%	44%	38%	40%	41%
Less information for customers could lead to miscommunication/increased returns	39%	36%	29%	45%	37%
Protects my business from online 'trolls'	36%	36%	33%	33%	35%
New customers would not be put off by inaccurate user reviews	36%	32%	26%	18%	28%
Stop using the platform	20%	23%	21%	18%	21%
No impact on my customers	8%	4%	12%	4%	7%
No impact on me/my business	6%	4%	10%	5%	6%

Note: N=1,000 (except answer to 'Less information for customers could lead to miscommunication/increased returns' where N=691).

Source: Oxera analysis of survey data.

Reduced or restricted platform functionalities would limit business users' options for how they use a platform. Our survey found that 48% of the respondents were concerned that fewer new customers would use their business without reviews from other consumers. 47% thought that it would be harder to attract new customers, and 44% considered that it would be harder to promote new products. At the same time, a loss of functionalities would restrict the ability to improve products for 41% of the business users. 37% of business users thought that less information for consumers could lead to miscommunication or an increase in returns. 21% of the respondents considered that this type of platform change could lead them to stop using the platform.

On the other hand, 35% of the respondents considered that a restriction of functionalities could lead to increased protection from online 'trolls' and 28% considered that less accurate reviews would not affect new customers.

In cases where there is less trust in the market, customers rely on reviews from previous customers. It seems that availability of this functionality is more important in Bulgaria than in the other three countries.

4.2.5 Cautious application of moderation policies

We tested the impact of platforms incorrectly removing content as a result of overly cautious takedown policies with content creators, travel and tourism businesses, and small or local businesses. We did not present this scenario to

gig workers as their activity information is already screened at the point of signing up and they are less likely to be affected by takedown policies. Table 4.6 presents the survey results for this scenario.

Table 4.6 Impact of cautious takedown policies

Impact	Ireland	Spain	Germany	Bulgaria	Total
Customers could stop using the platforms if the content is not varied enough	39%	52%	44%	48%	46%
Lost revenue if some of my content/products were wrongly taken down	42%	49%	38%	47%	44%
More customers because they have confidence the content posted on the platform is legitimate	36%	34%	39%	39%	37%
Content will have to be clearly labelled as sponsored/an advert	39%	37%	34%	35%	37%
Content would take longer to create to make sure it's compliant	37%	38%	28%	38%	35%
Customers would be more likely to report content and trust the platform, leading to more sales	35%	37%	37%	30%	35%
Benefit from the removal of illegal copyright content posted by my competitors	21%	44%	29%	28%	31%
Benefit from less competition from businesses that rely on posting false product	35%	27%	31%	26%	30%
Cause me to reduce the diversity and breadth of content	33%	34%	21%	29%	29%
Move more of my business online as I would trust the platform only contains legitimate content	26%	28%	35%	23%	28%
Would have no impact on my customers	12%	6%	10%	7%	9%
No impact on me/my business	8%	6%	10%	5%	7%

Note: N=896 (except answers 'Benefit from the removal of illegal copyright content posted by my competitors', 'Content will have to be clearly labelled as sponsored/an advert' and 'Cause me to reduce the diversity and breadth of content' where N=309).

Source: Oxera analysis of survey data.

Stricter takedown processes would affect the content available on a platform. 44% of the business users said that they would lose sales if content/products were wrongly taken down, 35% said that content would take longer to create to make sure it was compliant, and 29% said that this would cause them to reduce the diversity and breadth of content. Across the 44% of respondents who said that they would lose sales if content/products were wrongly taken down, the average revenue that comes from online channels is 56% according to the profiling questions, meaning that a significant proportion of those respondents' revenue would be affected. In addition, 46% of business users thought that customers could stop using the platforms if the content was not varied enough.

On the other hand, cautious takedown policies could lead to increased confidence in the content that remains on the platform (as selected by 35% respondents) and an increased likelihood that customers would report content and trust the platform, which business expected would lead to more sales. 31%

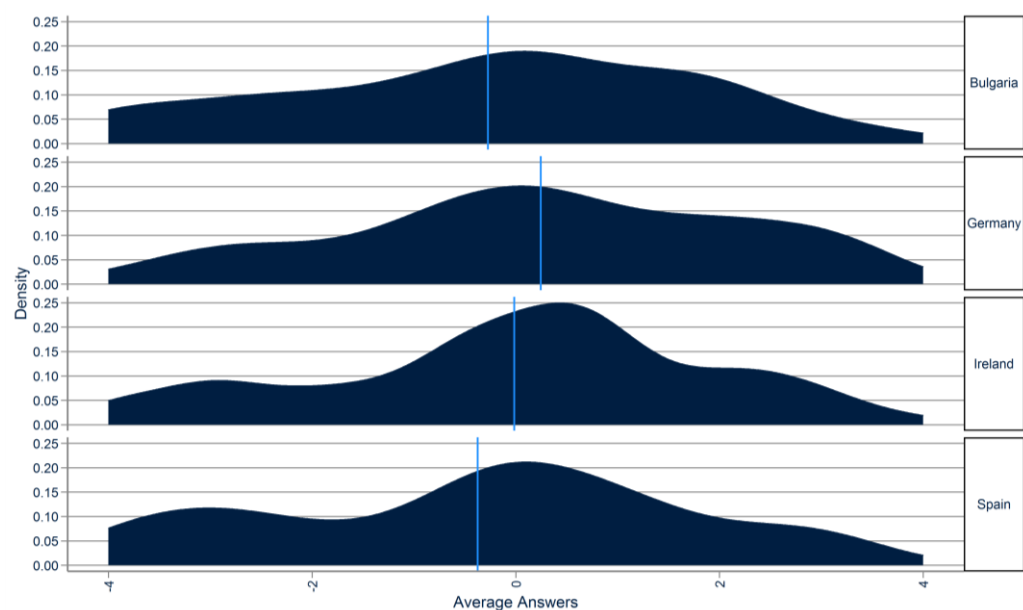
of business users said that they could benefit from the removal of illegal copyright content posted by their competitors, 30% would benefit from less competition from businesses that rely on posting false products and services, and 28% would consider moving more of their business online as they would trust that the platform contained only legitimate content.

The profiling questions asked respondents about their experience under the existing regime regarding the removal of content from platforms. The results show that 39% of users have had content incorrectly removed from a platform. Of these, 41% were satisfied with the response, while 46% were dissatisfied with the response. Only 11% said that they did not follow up. The remaining 2% said that no follow-up option was available.

In relation to the removal of illegal content posted online, such as illegal products or copyrighted material, 64% of business users said that they currently had a channel to flag illegal content. In addition, 67% of the respondents considered that they had a good channel to flag harmful but not illegal content.

Overall, the average score for this potential platform change indicates that Germany has a more positive perception than Spain and Bulgaria (which are more negative).³³

Figure 4.5 Scale of impact of incorrect takedowns of posts by country



Note: N=898. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The blue vertical line represents the mean impact for the group.

Source: Oxera analysis of survey data.

Figure 4.6 below shows the average magnitude of the impact of content moderation directly on business users if platforms take actions and delay posts due to the review process, require information about activities on the platform and adopt cautious takedown policies. While reducing fake competition and removing illegal content is likely to have noticeable positive impacts, business

³³ The p-value for the Wald test on the coefficients of Spain and Germany was 0.00 and the coefficients of Bulgaria and Germany was 0.03.

users were also concerned about the potential loss of revenue and sales that the changes could cause. Moreover, there could be negative impacts on content creators who could be prevented from posting spontaneous or live content.

Figure 4.6 Impact of content moderation



Note: The N varies by impact from 204 to 896. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). We took a conservative approach and reported the smaller impact if two platform actions lead to a similar impact on the business users.

Source: Oxera analysis of survey data.

4.2.6 Increased information and delays for sign-up

We tested the impact of increased information requirements and delays when signing up with all four sectors. Table 4.7 presents the survey results for this scenario.

Table 4.7 Impact of increased information and delays for sign-up

Impact	Ireland	Spain	Germany	Bulgaria	Total
Customers would have more faith in the integrity of my business	42%	48%	38%	46%	44%
Would face less competition from fake accounts	38%	36%	36%	56%	42%
Reduces fake reviews of my business	38%	39%	38%	51%	42%
Fewer customers would sign up to new platforms	41%	38%	38%	36%	38%
Prevents my business from seizing opportunities quickly	34%	26%	38%	29%	32%
Increases my administration costs	32%	36%	31%	27%	32%
Would need to introduce better promotional offers to entice new customers	32%	36%	27%	28%	31%
Focuses my operations on a single platform	30%	34%	30%	22%	29%
No longer be able to take on quick, part-time work	27%	33%	31%	20%	28%
Fewer reviews might give a biased perspective of my business	28%	30%	29%	18%	26%
No impact on my customers	7%	6%	6%	3%	6%
No impact on me/my business	7%	4%	6%	3%	5%

Note: N=1,000 (with the exception of the answer 'No longer be able to take on quick, part-time work' where N=204).

Source: Oxera analysis of survey data.

The business user respondents recognised the potential positive impacts that a stricter sign-up process could bring, as 42% of the respondents said that they would face less competition from fake accounts and 44% expected this to lead to an increase in customer faith in the integrity of their business.

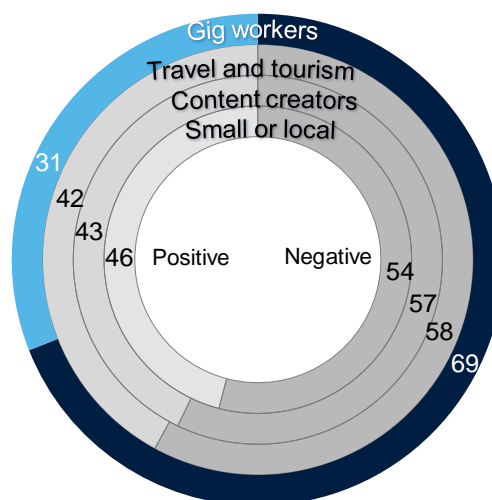
However, on the other hand they also recognised the potential increase in costs and loss of flexibility. Almost a third (32%) of the respondents considered that their administration costs would be likely to go up and 29% said that they would restrict their use to only one platform.

Increased information requirements and delays when signing up could also prevent businesses from seizing opportunities quickly (this was reported by 32% respondents) and prevent 28% of gig workers from being able to take on quick, part-time work.

We have assessed whether the impact of stricter sign-up processes affects different business users differently. As Figure 4.7 shows, we find that gig workers would be more negatively affected by sign-up requirements than content creators.³⁴ In particular, gig workers rely on online platforms to find freelance work on a flexible basis. Burdensome information requirements, lengthy sign-up processes and the risk of delay could risk undermining the nature of gig work, and may deter workers who use these platforms to find flexible work quickly.

³⁴ Wald test p-value 0.01.

Figure 4.7 Scale of impact from stricter sign-up processes by sector (%)



Note: N=1,000. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The positive group includes respondents with an impact score above zero.

Source: Oxera analysis of survey data.

4.2.7 Explanation of AI and algorithms

We tested the impact of platforms providing explanations of their use of AI and algorithms, which could entail simpler algorithms or update delays, with all four sectors. Table 4.8 presents the survey results for this scenario.

Table 4.8 Impact of explanation of AI and algorithms

Impact	Ireland	Spain	Germany	Bulgaria	Total
More customers will use the platform if they have an increased understanding of algorithms	40%	52%	39%	50%	45%
More understanding of the platform makes it easier to scale my business	38%	47%	43%	42%	42%
Increases my trust in the platform, meaning I use the platform more	35%	45%	35%	43%	40%
Fewer customers would find my business/content if the platform used less sophisticated algorithms	39%	34%	42%	30%	36%
Miss out on opportunities if the platform is slower to update features	31%	29%	26%	34%	30%
My competitors could gain an unfair advantage by 'gaming the system'	28%	28%	30%	22%	27%
Customers will stop using the platform if they know how algorithms are used to target them	28%	22%	30%	18%	25%
Easier to do business if there are slower updates to the algorithms	27%	26%	24%	20%	24%
Stop using the platform	13%	10%	15%	12%	12%
No impact on my customers	12%	11%	11%	15%	12%
No impact on me/my business	10%	6%	7%	4%	7%

Note: N=1,000.

Source: Oxera analysis of survey data.

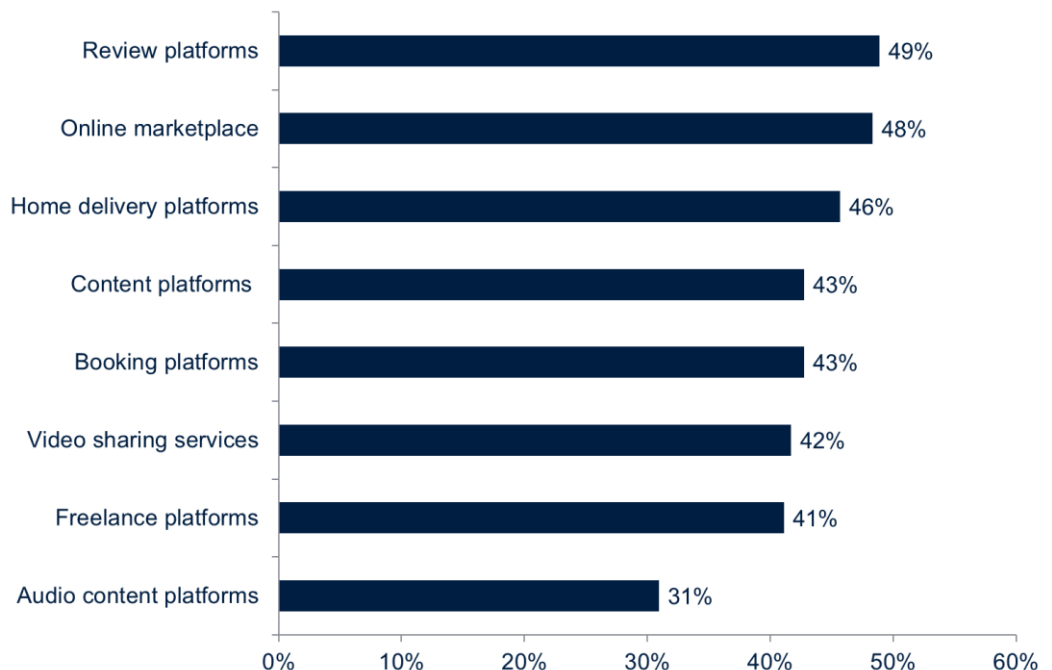
Our survey found that increased explanation of AI and algorithms can lead to more efficient outcomes for business users, but there are also disbenefits.

45% of business users considered that more customers would use the platform if they had an increased understanding of the algorithms, while 40% of business users said that they would use platforms more due to an increased trust in the platform from increased transparency. In addition, 42% considered that more understanding of the platform’s algorithms would make it easier to scale their business.

On the other hand, if increased transparency is also associated with delayed updates or less sophisticated algorithms, 36% said that they would expect fewer customers to find their business and 30% said that they would miss out on opportunities. 25% of business users considered that customers would stop using the platform if they knew how algorithms were used to target them. Overall, the negative impacts of algorithm transparency requirements for platforms could lead to 12% of business users leaving the platform.

Platforms continually update and improve their algorithms. This can benefit business users by allowing them to reach prospective customers more easily and by recommending their goods and services to relevant customers based on their purchase history. 58% of the 1,000 businesses we surveyed said that they had noticed innovations that had benefited their business in the last year across at least one of the online platforms used. Figure 4.8 shows the breakdown of respondents that had noticed beneficial changes in the last year by type of platform used.

Figure 4.8 Proportion of business users that noticed a beneficial platform change, by platform type



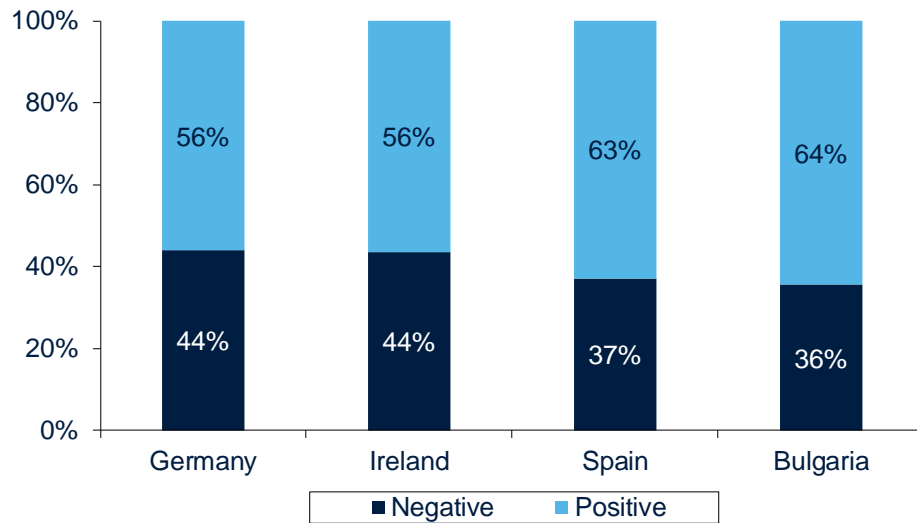
Note: N=1,000.

Source: Oxera analysis of survey data.

As represented in Figure 4.9, businesses in Germany and Ireland reported statistically more negative responses than Spain and Bulgaria. The latter seem

to anticipate more positive effects if the platform takes actions to implement more transparency measures for its algorithms.³⁵

Figure 4.9 Impacts from explanation of algorithms, by country



Note: N=1,000. The magnitude of the impact across all of the questions related to algorithms ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The positive group includes respondents with an impact score above zero.

Source: Oxera analysis of survey data.

4.2.8 Greater reach of platforms across the EU

We tested the impact of an increase in platforms' reach across the EU with travel and tourism businesses and small or local businesses. We did not present this scenario to content creators, because their activity is already taking place across the EU, or to gig workers, because their activity does not usually involve cross-border access. Table 4.9 presents the survey results for this scenario.

Greater reach of platforms across the EU has the potential to increase the customer base that a business can access through it. For half of the travel and tourism businesses and the small or local businesses, pan-EU platform reach is important or extremely important.

³⁵ The p-value for the Wald test on the coefficients of pairs of countries was below 0.05.

Table 4.9 Impact of greater reach of platforms across the EU

Impact	Ireland	Spain	Germany	Bulgaria	Total
Customers from other EU countries can buy/access my products/services	55%	57%	47%	60%	55%
Makes it easier to expand my business in other EU countries	42%	42%	32%	55%	43%
Make it easier and cheaper for my current business to operate across Europe	37%	38%	35%	33%	36%
More competition between platforms, meaning lower fees and better service for me	34%	40%	33%	34%	35%
Customers would stick to their own country's products/services, so I might not get more customers	32%	29%	42%	32%	33%
More platform choice across Europe increases competition for me	33%	36%	28%	32%	32%
Harder for customers to find my products/services, which could lead to them going somewhere else	25%	26%	23%	20%	24%
Increased costs to operate across multiple platforms in my home country	28%	21%	23%	18%	23%
No impact on my customers	11%	13%	14%	10%	12%
No impact on me/my business—I offer my services locally	8%	12%	10%	13%	11%
No impact on me/ my business—I have no interest in using more platforms	5%	2%	4%	2%	3%

Note: N=676.

Source: Oxera analysis of survey data.

55% of business users considered that greater platform reach would allow customers from other EU countries to buy and access more products and services, and 43% considered that this would make it easier to expand their business. Additional platforms that offer access across the EU could also lead to smaller operating costs, as reported by 36% of respondents, or lower fees and better services, as reported by 35% of respondents.

Conversely, more choice among platforms was considered by 32% of businesses to also increase competition for themselves, and 24% said that it would be harder for customers to find their products/services, which could lead to those customers going elsewhere. 23% of business users said that this could lead to an increase in operating costs in their home country if it became necessary to be active on more platforms to reach the same number of customers.

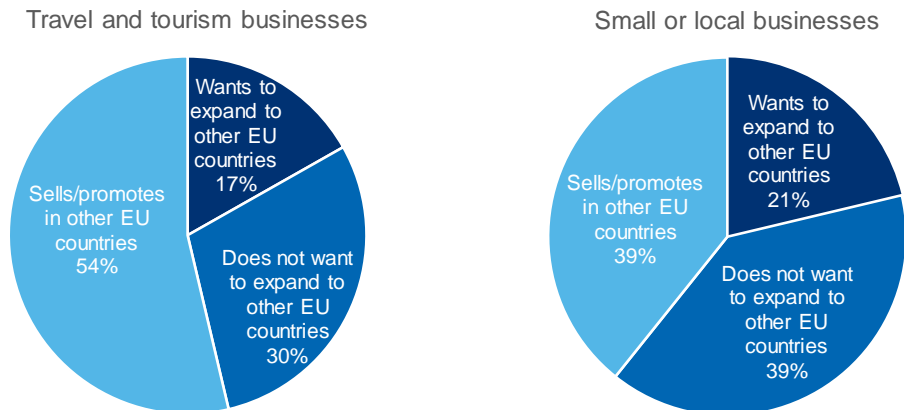
The profiling questions revealed that across all of the sample, 49% of business users sell or promote their products and/or services in other EU countries, and their online revenue from other EU countries accounts for an average of 34% of their online business.

The profiling questions revealed that 54% of travel and tourism business users sell or promote their products and/or services in other EU countries and their online revenue from other EU countries accounts for an average of 35% of their online business. In addition, 17% of travel and tourism business

respondents said that they do not currently sell or promote in other EU countries but they would like to expand their business to do so.

In the case of small or local businesses, 39% sell or promote their products and/or services in other EU countries, and their online revenue from other EU countries accounts for an average of 31% of their online business. Additionally, 21% of small or local businesses said that they do not currently sell or promote in other EU countries but that they would like to expand their business to other EU countries. Figure 4.10 shows the results for each type of activity separately.

Figure 4.10 Perceived opportunities for expansion

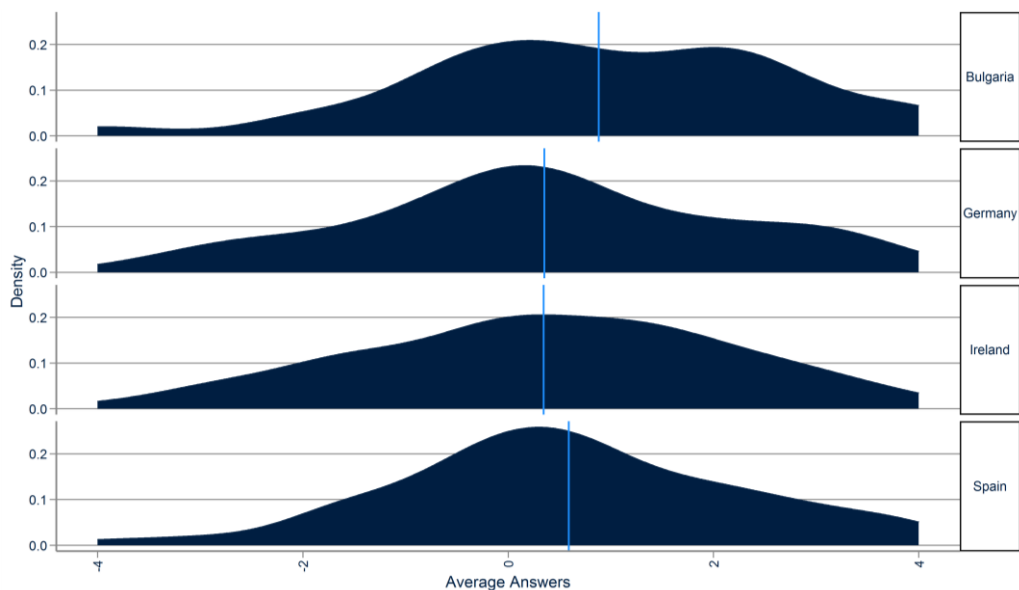


Note: Travel and tourism businesses N=244; small or local businesses N=484.

Source: Oxera analysis of survey data.

Overall, respondents from Bulgaria had a more positive outlook on the effect of more EU access than the respondents from Germany and Ireland (this result is statistically significant).³⁶

Figure 4.11 Scale of impacts from increased access across Europe, by country



³⁶ The p-value for the Wald test on the coefficients of Bulgaria and Ireland was 0.01 and the coefficients of Bulgaria and Germany was 0.01.

Note: N=676. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The blue vertical line represents the mean impact for the group.

Source: Oxera analysis of survey data.

4.2.9 Introduction or increase in platform fees

We tested the impact of the introduction or increase in platform fees with businesses in all four sectors.

Costs to use a platform are important for business users of all types. Overall, the profiling questions indicated that 100% of the survey respondents pay for some or all the platforms they use. Table 4.10, shows the likely impacts of a change in the fees or an introduction of fees to access a platform.

Table 4.10 Impact of an increase in or introduction of platform fees

Impact	Ireland	Spain	Germany	Bulgaria	Total
Customers would use fewer platforms	45%	49%	48%	50%	48%
Reduces profits as we cannot charge more	40%	42%	42%	53%	44%
Reduces the number of online platforms we operate on	36%	45%	43%	47%	43%
Have to charge more for our goods/ services	46%	43%	41%	37%	42%
Restricts our ability to grow the business	36%	32%	30%	34%	33%
More customers would use platforms if they were regulated	28%	32%	32%	25%	29%
Benefit from the platform being more regulated	28%	24%	30%	16%	25%
Stop using the platform	23%	22%	21%	25%	23%
No impact on my customers	6%	4%	6%	6%	6%
No impact on me/my business	6%	4%	5%	3%	4%

Note: N=1,000.

Source: Oxera analysis of survey data.

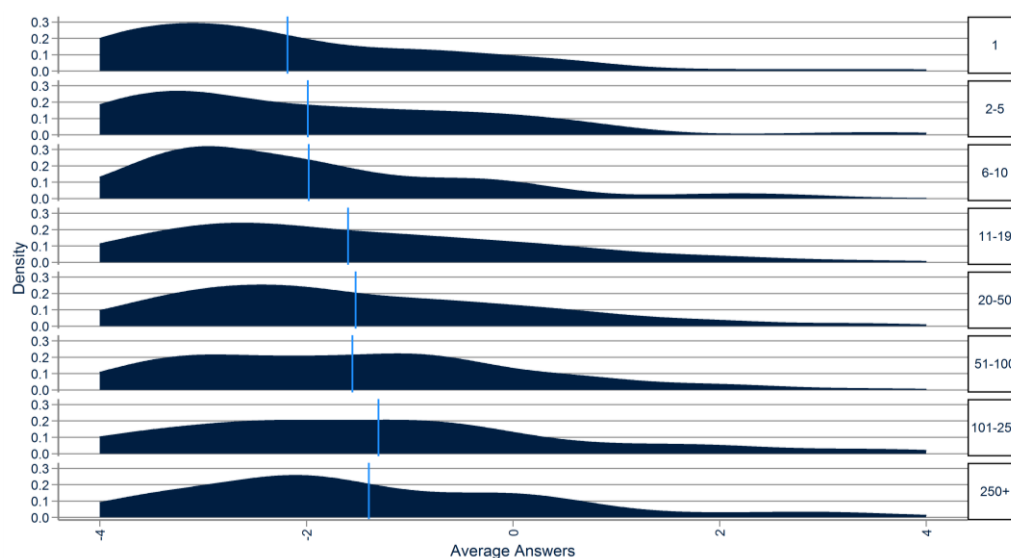
Our survey found that an increase in or the introduction of fees by the platform would directly affect business users (44% of whom said that they would face reduced profits) or indirectly affect consumers if businesses could pass on the increase in price (as reported by 42% of respondents). One third of businesses reported that this would restrict their growth, while 23% said that they would stop using the platform. 48% of business users expected that consumers would use fewer platforms if they also were to see an increase in or the introduction of fees. Increases in the business's costs to access a platform would also lead to a decrease in multihoming for 43% of respondents.

The respondents did, however, note some gains associated with increased fees. 29% of the respondents considered that the introduction of fees would lead to more customers owing to their confidence about the platforms being regulated and 25% of businesses considered that if platforms were more regulated their business would benefit.

On balance, platform fees appeared to have a strong negative impact. We observed that smaller companies (with up to ten employees) would be affected

more negatively than the larger companies, which tended to see some positive effects.³⁷

Figure 4.12 Impacts from an increase in platform fees



Note: N=1,000. The magnitude of the impact on the x-axis ranges from -4 (for a significant negative impact) to +4 (for a significant positive impact). The blue vertical line represents the mean impact for the group.

Source: Oxera analysis of survey data.

4.3 Impact of combined platform responses

The combined set of rules and precise formulation of the DSA will determine the combination of platform responses that are likely to materialise. Moreover, as described in section 4.2, each of the nine individual platform responses we identified has the potential to have both positive and negative impacts on business users. Therefore, to explore the potential overall impact of the DSA on business users, we tested three scenarios that combine different platform responses. These scenarios represent three possible formulations of the DSA based on our review of the Commission’s DSA impact assessment and potential changes to the intermediary liability regime.

4.3.1 Combined platform response scenarios

Scenario 1 represents a situation in which the DSA rules mean that platforms have more legal responsibility for the content posted (hereafter referred to as the ‘increased liability’ scenario). In this scenario, this leads platforms to: restrict posts (e.g. prohibiting photo or video uploads); limit review content (e.g. allowing star ratings but not written reviews or photos); limit posts to verified users only; and increase the fees to use the platform. Moreover, the platform would also monitor content more closely, leading to delays in content posting and more posts being incorrectly taken down.

Scenario 2 represents a situation in which the DSA rules mean that platforms have increased procedural obligations for illegal content, goods or services in relation to their operations across the EU (hereafter referred to as the ‘clear procedural obligations’ scenario). In this scenario, this leads platforms to:

³⁷ The p-value is 0.00 for the Wald test on the coefficient of business size up to 10 employees and the coefficient of business size for more than 10 employees.

rapidly remove content flagged by users as illegal (pending review); notify businesses if their content is taken down, with a clear reason; and provide an appeals process to reinstate content that is incorrectly taken down. Moreover, the same rules and procedures would apply across all EU member states.

Scenario 3 represents a situation in which the DSA rules help platforms increase the level of monitoring they can do in respect of content posted, and the transactions of goods or services that they facilitate across the EU (hereafter referred to as the 'automatic filtering' scenario). In this scenario, this leads platforms to: 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; and provide an appeals process to reinstate content that is incorrectly taken down. Moreover, platforms would publicly report on the amount of content taken down.

4.3.2 Results from the combined platform response scenarios

We asked respondents to report the expected impact that these combinations of platform responses would have on their revenue. The range of potential impacts was between a 'more than 50%' decrease in revenue and 'a more than 50%' increase in revenue, with 'no change' as the central point.³⁸ Each respondent was presented with one of the three scenarios at random.³⁹

Below, we present an overview of our key findings from the combined scenarios. Figure 4.13 presents the reported direction of the revenue impacts for each of the three scenarios, across all respondents.

The most common response under the increased liability scenario was that the platform responses were expected to have a negative impact on business revenues, accounting for 38% of responses. A similar proportion (35% of responses) said they expected that there would be no impact on their revenue, while 27% expected an increase in revenue.

In the clear procedural obligations scenario, the proportion that expected a negative impact was lower than in the increased liability scenario, at only 20% of responses, while the most common response was that there would be no impact (43% of responses). Over a third of respondents (37%) said they expected an increase in revenue. The results from the automatic filtering scenario are similar to those under the clear procedural obligations scenario; however, a smaller proportion said that they expected a decrease in revenue (15% of responses) and a larger proportion reported an expected increase in revenue (41% of responses).

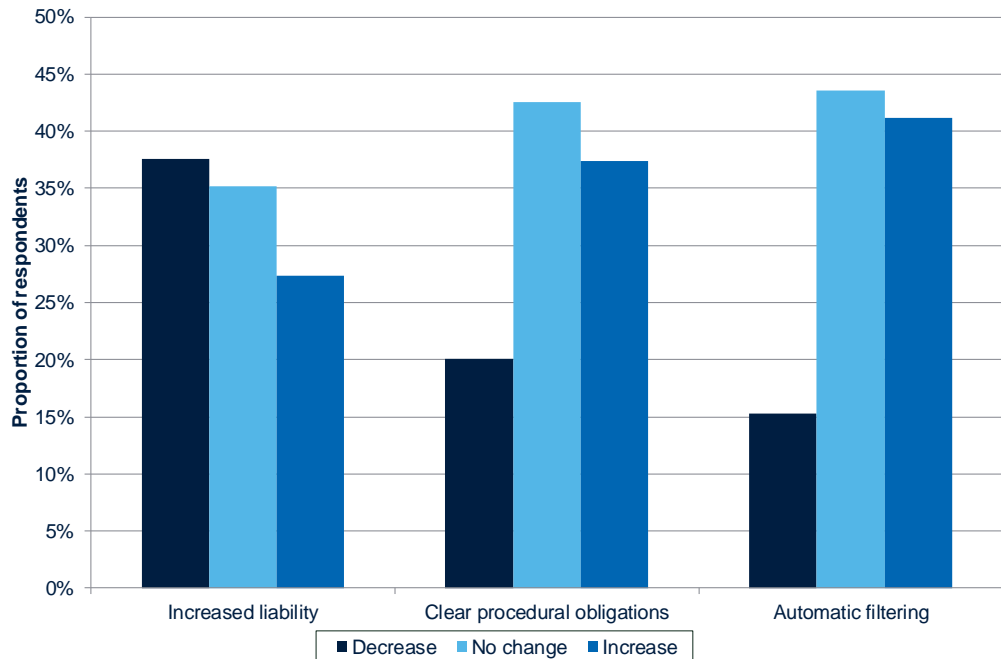
Overall, the results suggest that for some businesses, the platform responses do not have direct implications for their revenue. However, for those businesses that are affected, a greater proportion reported that they would experience a decrease in revenue under the increased liability scenario, while the proportion of businesses reporting an increase in revenue was greater

³⁸ The full range of impacts for increases/decreases in revenue included: 'less than 1%', 'between 1% and 5%', 'between 6% and 10%', 'between 11% and 20%', 'between 21% and 50%', 'more than 50%'.

³⁹ This was done in order to reduce the amount of time and cognitive effort required to complete the survey. In the survey, 333 respondents were presented with the increased liability scenario, 334 respondents were presented with the clear procedural obligations scenario, and 333 respondents were presented with the automatic filtering scenario.

under the clear procedural obligations scenario and automatic filtering scenario.

Figure 4.13 Direction of revenue impact by scenario



Note: Increased liability scenario (N=333), clear procedural obligations scenario (N=334), automatic filtering scenario (N=333).

Source: Oxera analysis of survey data.

In order to test for statistical differences in the revenue impact results between scenarios, we adopted a regression-based approach. We regressed revenue impact⁴⁰ against dummy variables for the scenarios, and a set of control dummy variables for the country, sector and business size. This allowed us to control for firm heterogeneity—i.e. the country, sector and size of the business. We found that the increased liability scenario is statistically different from the clear procedural obligations scenario and from the automatic filtering scenario at the 5% level, with business users viewing the clear procedural obligations and automatic filtering scenarios more positively in terms of revenue impact.⁴¹ This evidence suggests that the changes in the increased liability scenario would, on average, lead to a worse outcome for businesses—in terms of lower revenues—compared with the other two scenarios. However, we did not find a statistical difference between the clear procedural obligations scenario and the automatic filtering scenario at the 5% level.⁴²

⁴⁰ The independent variable 'revenue impact' is ordinal data on a scale of -6 to 6, representing the range of revenue impact categories from 'more than 50% decrease' to 'more than 50% increase'. Given that our independent variable is ordinal, we use ordered probit and ordered logit regressions.

⁴¹ The p-values for the Wald tests on the coefficient of the clear procedural obligations scenario against the increased liability scenario are $p < 0.000$ (ordered probit and ordered logit regressions); the p-values for the Wald tests on the coefficient of the automatic filtering scenario against the increased liability scenario are $p < 0.000$ (ordered probit and ordered logit regressions).

⁴² The p-values for the Wald tests on the coefficients of the clear procedural obligations scenario against the automatic filtering scenario are: $p = 0.919$ (ordered probit) and $p = 0.774$ (ordered logit).

4.3.3 Weighted average impacts

In order to understand the potential scale of the revenue impact under each scenario, we calculated a weighted average revenue impact under each scenario. We assumed that the mid-point of the range was the average scale of the impact for respondents selecting that range.⁴³ The average scale of the impact was then weighted by the proportion of respondents selecting each revenue impact under that scenario to give the weighted average revenue impact.

We found that, across the four sectors, the weighted average revenue impact for each scenario was:

- increased liability scenario: 3.2% *decrease* in revenue;
- clear procedural obligations scenario: 1.7% *increase* in revenue;
- automatic filtering scenario: 1.3% *increase* in revenue.

We examined the statistical significance of the weighted average revenue impacts using bootstrapping to estimate 95% and 90% confidence intervals for the result under each scenario.⁴⁴ We found that the weighted average impacts under the increased liability and clear procedural obligations scenarios are statistically different from zero at the 5% level. However, the result under the automatic filtering scenario is statistically different from zero only at the 10% level. Comparing between scenarios, we found that the weighted average impact under the increased liability scenario is significantly smaller than under each of the other two scenarios. However, we did not find that the weighted average impact is statistically different between the clear procedural obligations scenario and the automatic filtering scenario.

We also calculated the sector-level weighted average revenue impact for each scenario. To calculate the weighted average, we followed the same approach described above, focusing on the responses from each sector.⁴⁵ We also used bootstrapping to determine the statistical significance of our sector-level results. Table 4.11 presents these results.

⁴³ The range of impacts for increases/decreases in revenue was: 'less than 1%', 'between 1% and 5%', 'between 6% and 10%', 'between 11% and 20%', 'between 21% and 50%', 'more than 50%'. We assumed the maximum possible increase or decrease in revenue to be 100%. For those who said 'No change', the impact was zero.

⁴⁴ We used a bootstrap approach to generate a distribution of the weighted average impact. To do so, we took each scenario sample and resampled with replacements to obtain a new bootstrap sample of the same size. On the basis of the bootstrap scenario sample, we calculated the proportions in the respective scenario and the resulting bootstrap replicate of the weighted average revenue impact. We repeated this 1,000 times to give a distribution of bootstrap replicates of the average impacts. We then used the empirical variance of the bootstrap replicates to calculate the scenario variance and construct a confidence interval around the original average effect estimate.

⁴⁵ For each sector we included all respondents who reported that they belonged to the sector, including those who reported that they also belonged to other sectors.

Table 4.11 Weighted average revenue impact by sector

	Increased liability scenario	Clear procedural obligations scenario	Automatic filtering scenario
Content creators	-0.9% (n=111)	1.3% (n=100)	0.4% (n=98)
Gig economy	-1.0% (n=61)	4.3%** (n=67)	4.5%** (n=76)
Travel and tourism	-2.6%* (n=85)	4.4%** (n=83)	3.2%** (n=76)
Small or local businesses	-4.1%** (n=161)	1.4% (n=164)	1.1% (n=159)

Note: ** statistically different from zero at the 5% level; * statistically different from zero at the 10% level.

Source: Oxera analysis of survey data.

5 Assessing the wider economic effects

In this section we provide indicative estimates of the wider economic effects implied by the survey results discussed in section 4. This is *not* intended to represent a precise estimate of the impact of the DSA in each sector, but illustrates the order of magnitude of some of these effects.

For the travel and tourism sector and the small or local business sector, it is possible to estimate the impact across the four countries we surveyed. These countries accounted for 37% of EU-27 GDP in 2019, and 26% of the number of enterprises across the EU-27 in 2017. Our analysis of these sectors therefore represents a significant share of the EU economy, but by no means the majority. For the gig economy, in addition to estimating the impact in the four countries we surveyed, we also extrapolated the results to 15 EU countries for which data is available—these countries represent 81% of the EU-27 working-age population.

5.1 Gig economy

This section describes the data sources and methodology used to estimate the economic effects on the gig economy. In particular, we considered two potential effects of the DSA. First, we considered the number of gig workers who could stop using platforms to find gig work if there were stricter sign-up processes and delays in the sign-up process. Second, we considered the number of gig workers who could be prevented from doing last-minute shifts if stricter content review processes caused posts to be delayed.

The first step was to identify the number of gig workers in the EU that could potentially be affected by the changes. We used data from a Joint Research Centre (JRC) study that investigates the number of platform workers in Europe.⁴⁶ The study is based on a survey, conducted in 2018, of 38,878 Internet users aged between 16 and 74 years in 16 EU member states.⁴⁷

The authors of the JRC study caution the use of their results to represent the overall population because of the over-representation of high-frequency Internet users in their sample.⁴⁸ In the absence of alternative data sources, we consider that this study provides the best available source for estimating the potential number of gig workers, but note that, as a result, the results of our analysis should be treated with caution.

We used the data on the proportion of the working-age population who are platform workers in 15 of the 16 countries covered by the JRC study.^{49,50} The JRC study defines different categories of gig workers based on the number of hours and proportion of their income earned from gig work. The results from our business survey indicate that 96% of the gig workers we sampled earn at

⁴⁶ Urzi Brancati, M.C., Pesole, A., Fernández-Macías, E. (2020), 'New evidence on platform workers in Europe: Results from the second COLLEEM survey—JRC Science for Policy report'.

⁴⁷ The 16 member states were: Croatia, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, the Netherlands, Portugal, Romania, Slovakia, Spain, Sweden, and the United Kingdom.

⁴⁸ Urzi Brancati, M.C., Pesole, A., Fernández-Macías, E. (2020), 'New evidence on platform workers in Europe: Results from the second COLLEEM survey—JRC Science for Policy report', p. 6.

⁴⁹ Urzi Brancati, M.C., Pesole, A., Fernández-Macías, E. (2020), 'New evidence on platform workers in Europe: Results from the second COLLEEM survey—JRC Science for Policy report', p. 16.

⁵⁰ We excluded the UK from our calculations. The other 15 member states included in the study account for 81% of the EU-27 working population.

least 25% of their revenue online.⁵¹ This corresponds most closely to the 'secondary' and 'main' platforms worker categories in the JRC study.⁵² Therefore, we decided to focus on these two categories of gig workers.

Next, we combined the data above with Eurostat data on the working-age population in each of the 15 member states in 2019.⁵³ More specifically, we multiplied the proportion of 'secondary' and 'main' platform workers in each country by the working-age population in each country. Summing across the 15 member states for which we had data on the rate of gig work gives an estimated total of approximately 9.2m gig workers.

We also considered the impact of focusing on the four countries we surveyed. The JRC study includes Germany, Ireland and Spain—across these three countries, the estimated number of gig workers is around 4.7m. However, since the JRC study does not include Bulgaria (which is included in our survey), we used the average proportion of secondary and main platform workers across the Eastern European countries covered.⁵⁴ Combining this with Bulgaria's working-age population gives the estimated number of gig workers as 0.1m. Across the four surveyed countries, the estimated number of gig workers is therefore 4.8m.

In order to estimate the wider economic effects on the gig economy, we combined the estimated number of gig workers with our survey data.

Our survey revealed that 28% of gig workers said that they would 'no longer be able to take on quick, part-time work' in response to stricter sign-up processes and delays in the sign-up process.⁵⁵ Combining this result with the estimated total number of gig workers indicates that, across the 15 member states, around 2.6m gig workers would no longer take on gig work as a result of stricter sign-up processes and delays. Considering only the countries we surveyed, an estimated 1.3m gig workers could be affected.

In response to the scenario where posts are delayed, our survey revealed that 40% of gig workers said that this could prevent them from going last-minute shifts.⁵⁶ Combining this result with the estimated number of gig workers indicates that, across the 15 member states, around 3.7m gig workers could be prevented from doing last-minute shifts as a result of posting delays. Focusing on the countries surveyed, an estimated 1.9m gig workers could be affected.

As noted above, this is intended to give an indicative order of magnitude of the impact of these possible outcomes from the DSA. Notably, we have focused on those who are regular platform workers earning a material proportion of their income from this work, and have only captured gig workers in 15 of the 27 EU member states.

⁵¹ We found that 100 respondents who identified as gig workers reported that they were also part of other sectors. This means the reported proportion of revenue does not necessarily solely reflect their gig-working activity. We took the conservative approach of assuming that this revenue was from gig work, meaning that we only focused on platform workers who earn a material proportion of their income from gig work.

⁵² Secondary and main platform workers are defined as those who have provided labour services via platforms at least monthly and earn at least 25% of their income via platforms and/or spend at least ten hours per week on platform work. For a full definition of each category, see Urzi Brancati, M.C., Pesole, A., Fernández-Macías, E. (2020), 'New evidence on platform workers in Europe: Results from the second COLLEEM survey—JRC Science for Policy report', p. 15.

⁵³ Eurostat, Active population, aged 15-64 - annual averages [TIPSLM15], extracted 23 July 2020.

⁵⁴ Namely, the Czech Republic, Hungary, Romania and Slovakia.

⁵⁵ This was from a sample of 204 gig-economy workers.

⁵⁶ This was from a sample of 204 gig-economy workers.

5.2 Travel and tourism

This section describes the data sources and methodology used to estimate the wider economic effects on the travel and tourism sector. We measured the effect on the travel and tourism sector by grossing up the revenue impacts from the combined scenarios across the four countries included in the survey.

First, we calculated the relevant revenue base for the travel and tourism sector, using data from Eurostat on the annual revenue generated in the travel and tourism sector in each of the four countries we surveyed. Given the description of 'travel and tourism' in our survey, we focused on the following NACE codes defined by Eurostat:⁵⁷

- 'Accommodation and food service activities';
- 'Travel agency, tour operator and other reservation service and related activities'.

The total turnover across the four countries we surveyed for these activities was €247.8bn (in 2019 prices).⁵⁸

Next, we adjusted this revenue to exclude revenue generated offline.⁵⁹ We used data from Eurostat on the proportion of turnover generated from e-commerce in 2019 for the relevant NACE codes in each of the countries we surveyed.⁶⁰ To exclude offline revenue, we multiplied the percentage of turnover from e-commerce by the travel and tourism revenue bases in each of the four countries. This gave an estimated €52.7bn in annual online revenue for the travel and tourism industry (in 2019 prices).

To estimate the overall effects on the travel and tourism sector, we multiplied the travel and tourism online revenue base by the weighted average revenue impact under each scenario. These impacts are presented in Table 4.11. Figure 5.1 presents the estimated wider economic effects. As noted above, this is intended to give an indicative order of magnitude as opposed to precise estimates.

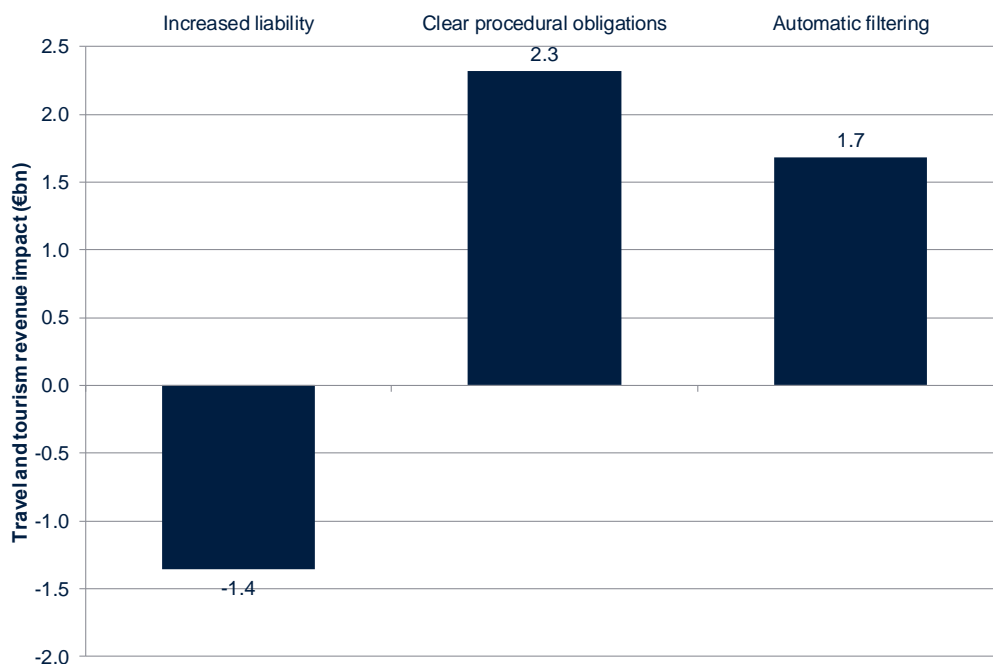
⁵⁷ Eurostat, Annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2) [sbs_sc_sca_r2], INDIC_SB: Turnover or gross premiums written - million euro, NACE_R2: 'Accommodation and food service activities'; 'Travel agency, tour operator and other reservation service and related activities', extracted 28 July 2020.

⁵⁸ The total revenue for these activities was €240.7bn in 2017. We used data from Eurostat on the Harmonised Indices of Consumer Prices (HCIPs) to convert this into 2019 prices. We made this adjustment for each of the four surveyed countries separately, using the country-specific inflation rate from 2017–19.

⁵⁹ We consider this to be a conservative approach because online platforms can still help generate revenue, even if the transactions themselves do not occur online.

⁶⁰ Eurostat, Value of e-commerce sales [isoc_ec_evaln2], INDIC_IS: Enterprises' total turnover from e-commerce sales, UNIT: Percentage of turnover, SIZEN_R2: 'Accommodation and food and beverage service activities'; 'Travel agency; tour operator reservation service and related activities', extracted 22 July 2020.

Figure 5.1 Impact of the combined scenarios on travel and tourism annual online revenue in the four countries surveyed



Source: Oxera analysis of survey data and Eurostat data.

5.3 Small or local businesses

This section describes the data sources and methodology used to estimate the economic effects on the small or local business sector. We measured the effect on the small or local business sector as the impact on online revenue from each of the three combined platform response scenarios across the four countries we surveyed. We focused on small or local businesses that reported they have 50 or fewer employees, since this is in line with the threshold for a 'small' business.⁶¹

The first step was calculating the weighted average revenue impact for each of the three combined scenarios reported by respondents in the small or local business sector, focusing on those that reported they have fewer than 50 employees. Following the same approach described in section 4.3.3, this gave:⁶²

- increased liability scenario: -6.5%;
- clear procedural obligations scenario: -0.5%;
- automatic filtering scenario: -0.5%.

Next, we calculated the relevant revenue base for the small or local business sector. We used data from Eurostat on the annual revenue generated by non-financial enterprises for different size classes of employment in each of the

⁶¹ The threshold for 'small' businesses is 49 employees according to the Eurostat definition.

⁶² The sample sizes used to calculate the weighted average impact in the travel and tourism sector for scenarios 1, 2 and 3 were 105, 107 and 97, respectively. This excluded the 174 respondents who reported that they were a small or local business and that they worked for a company that had more than 50 employees. These estimates have the same statistical significance as the full sample of small or local businesses.

countries we surveyed.^{63,64} We note that this definition also includes those businesses in the travel and tourism industry, meaning that there will be some overlap between this analysis and the figure described in section 5.2. We took the conservative approach of excluding revenue generated offline, even though this could be indirectly affected by platform use. We used data on the percentage of enterprises' turnover from e-commerce by employment class size in each of the countries we surveyed to estimate online revenue.⁶⁵ We used both a 'top down' and a 'bottom-up' approach to calculate the revenue base for small or local businesses. The top-down approach involved four steps:

- **step 1:** multiply the turnover for all businesses by the proportion of turnover from e-commerce across all enterprises, in each country;
- **step 2:** multiply the turnover across enterprises with 250 or more employees by the proportion of turnover from e-commerce across enterprises with 250 or more employees, in each country;
- **step 3:** repeat step 2 for enterprises with 50–249 employees;
- **step 4:** subtract the total estimated online revenue in steps 2 and 3 from the total estimated online revenue in step 1.

This gives an estimated total of €355.3bn in online revenue for the small or local business sector across the four countries (in 2019 prices).

We also conducted an analogous bottom-up version of the top-down approach described above as a sensitivity. In this case, we multiplied the revenue for enterprises in each employee size band (up to 49 employees) by the proportion of turnover from e-commerce for the relevant employee size band, by country.⁶⁶ This gives an estimated total of €221.9bn in online revenue for the small or local business sector across the four countries (in 2019 prices).

To estimate the economic effects on small or local businesses, we multiplied the estimated small or local business sector online revenue bases by the weighted average revenue impact under each survey scenario. Figure 5.2 presents the estimated economic effects. As noted above, this is intended to give an indicative order of magnitude as opposed to precise estimates.

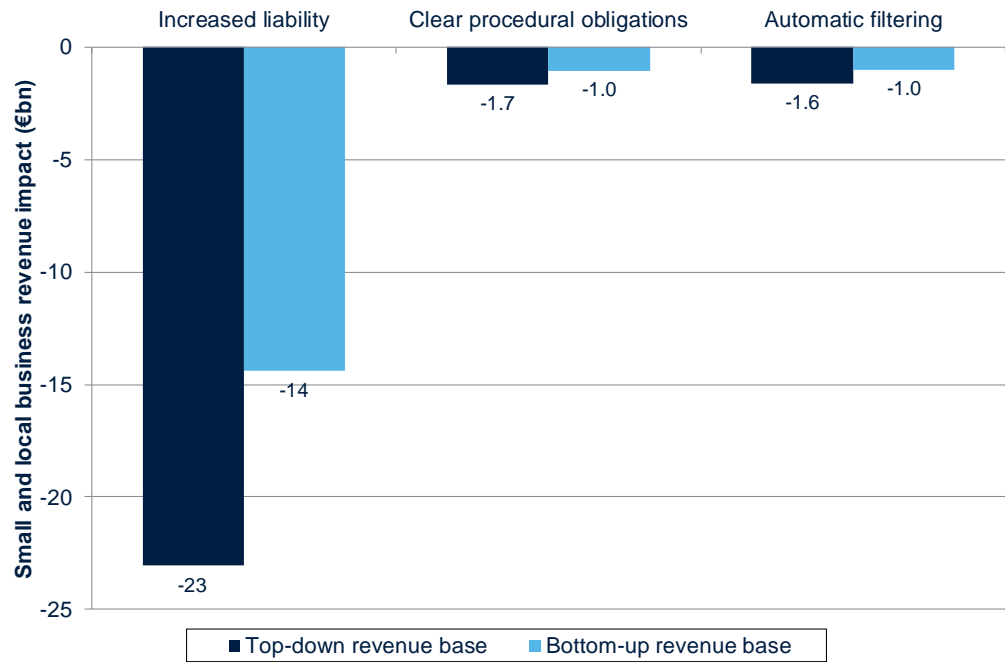
⁶³ Eurostat, Turnover of the non-financial business economy by size class of employment [TIN00146], Indicator: Turnover or gross premiums written - million euro, Classification of economic activities: Total business economy, extracted 29 July 2020.

⁶⁴ The latest available turnover data is from 2017. Therefore, we adjusted the revenue for inflation so that it is in 2019 prices using the same approach and data described in section 5.2.

⁶⁵ Eurostat, Value of e-commerce sales [isoc_ec_evaln2], INDIC_IS: Enterprises' total turnover from e-commerce sales, UNIT: Percentage of turnover, extracted 29 July 2020.

⁶⁶ However, the percentage of e-commerce is grouped for businesses with 10–49 employees. Therefore, we applied this percentage to the revenue for businesses with 10–19 and 20–49 employees. Moreover, the proportion of turnover is missing for businesses with 0–9 employees in Bulgaria and Ireland—we assumed it to be equivalent to the proportion for the 10–49 category.

Figure 5.2 Impact of the combined scenarios on small or local business annual online revenue in the four countries surveyed



Source: Oxera analysis of survey data and Eurostat data.

A1 Survey scenarios

The sections below present the survey scenarios presented to respondents based on potential platform actions.

A1.1 Increase in information required and delays for sign-up

A regulation could be brought in across the EU that requires all users (business users like yourself and your customers) to follow stricter processes when signing up to online platforms. This could involve users providing more information, requiring them to keep their profile updated and could lead to increased delays when signing up.

A1.2 The price increase or introduction of fees to use a platform

New regulations brought in could increase costs for the online platforms you use. This could mean they increase the fees they charge for joining or transacting on the platform, or introduce new fees for businesses currently using free tiers.

A1.3 Business users requested to provide more information regarding their activity on platforms

If the online platforms you use began asking for additional information regarding your business activities on their platforms (e.g. verifying the details of goods sold or qualifications regarding the services you offer)...

A1.4 Delays in posting goods/services due to platform reviewing process

It's possible that new rules could result in delays in posting content/goods/services online as online platforms would be required to review your and/or your customers' posts.

A1.5 Platform restriction of functionalities

Regulations could be introduced across the EU that restrict some of the functions online platforms can offer your business or your customers (e.g. sharing content, leaving written comments, uploading user-generated content, etc.).

A1.6 Explanation of algorithms

Online platforms use algorithms to undertake automated tasks, such as verifying information input by users, recommending products/services to customers based on their purchase history, or ranking search options based on the best product match.

New regulations could mean platforms are required to provide more explanation of how they use algorithms. This will give you more transparency of how the platform operates, but could also mean that platforms use simpler ranking algorithms when listing new content/products/services; give less accurate recommendations to consumers; and/or delay updates to platform features.

A1.7 Increased access across Europe for platforms

A change in regulations could make it easier for online platforms based in the EU to operate across the EU regardless of where they are based. This could lead to new types of platforms entering the country you are in; or might mean the platform you currently use starts operating in more countries around Europe giving you access to additional markets.

A1.8 New regulation causes platforms to stay small/limited

It is possible that new rules could be brought in which will cause platforms to limit the number of users (both business users like yourself and your customers) they accept. This could mean that less active accounts are closed or that the platform does not accept new users anymore.

A1.9 Posts removed due to cautious policies

Regulations could be introduced across the EU that increase the legal responsibility platforms have for the content or services posted on their website. The platform could introduce additional mechanisms to allow users to flag content. This could result in posts (for example, content posts such as video profiles and jobs, listings and reviews or product/service listings) being incorrectly removed due to more over-cautious takedown policies.

A1.10 Combined scenarios questions

The three combined scenarios have been randomised and each one of them has been shown to one third of respondents.

A1.10.1 Combined scenario 1 – Increased liability

Imagine that there are new legislative rules such that the online platforms you use have more legal responsibility for things that are posted on their website.

This leads your platforms to:

- restrict posts (e.g. no photos or videos);
- limit review content (e.g. star ratings, but no written reviews or photos);
- limit posting to verified users only;
- increase fees to use the platform.

The platform will also monitor content more closely, leading to:

- delays in posting;
- more posts being incorrectly taken down.

A1.10.2 Combined scenario 2 – Clear procedural obligations

Imagine there are new legislative rules such that online platforms have increased procedural obligations for illegal content, goods or services on their websites across the EU.

This leads your platform to:

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- rapidly take down content flagged by users as potentially illegal (e.g. within 48 hours), pending review;
 - notify businesses if their content has been taken down, with a clear reason;
 - provide an appeal process to reinstate content that is wrongly taken down;
 - apply the same rules and procedures for this everywhere in the EU.

A1.10.3 Combined scenario 3 – Automatic filtering

Imagine that there are new legislative rules that help platforms increase the level of monitoring they can do of content, goods or services on their websites across the EU.

This leads your platform to:

- automatically filter content uploaded to the platform using databases from ‘trusted flaggers’ (e.g. national authorities or approved review organisations) and take down anything considered illegal or harmful (e.g. counterfeit goods, hate speech or misinformation);
 - notify businesses if their content has been taken down, with a clear reason;
 - provide an appeal process to reinstate content that is wrongly taken down;
 - publish transparency reporting on the amount of content taken down by the platform.
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