



Study to support the Commission's policy development on promoting repair of consumer goods and contracts in the data economy

Part B: Contracts in the data economy
Final report – Part B

Written by Kantar Public
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Abstract

This document is the final report for Part B of the 'Study to support the Commission's policy development on promoting repair of consumer goods and contracts in the data economy'. The study was contracted under the Framework contract n° JUST/2020/PR/03/0001 on Evaluation, Impact and Compliance Assessment, Policy Support and Legal Analysis Services. The objective of the study was to provide qualitative and quantitative data relating to the existence and size of the problems that arise when consumers within a contractual relationship with traders do not pay or not only pay a price, but provide or undertake to provide their personal data to the trader – data which are not necessary for the performance of contract but based on consent by the consumer. The study was conducted by Kantar Public in collaboration with Joasia Luzak (Exeter Law School).

The study is based on scoping interviews with experts and industry associations, desk research / literature review, a consumer and business survey, and mystery shopping with traders.

Executive summary

Introduction

This document is the final report for Part B of the 'Study to support the European Commission's policy development on promoting repair of consumer goods and contracts in the data economy'. The study was contracted under the Framework contract n° JUST/2020/PR/03/0001 on Evaluation, Impact and Compliance Assessment, Policy Support and Legal Analysis Services.

The aim of the study is to provide qualitative and quantitative data relating to the existence and size of problems in situations where consumers within the contractual relationship with traders do not or not only pay a price but provide or undertake to provide their personal data to the trader – data which are not necessary for the performance of the contract (later referred to as 'data contracts').

The study focuses on four digital content/services sectors (digital video and music, digital games, Software-as-a-Service and social media) and covers also, to a certain extent, tangible goods.

Methodology

The study used several data collection activities to answer the research study's questions:

- Scoping interviews with industry associations and experts
- Desk research / literature review on the market development in the five sectors
- Consumer survey with 1,000 respondents per Member State (MS) from 10 MS (France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Spain, and Sweden)
- Business survey in 13 countries with businesses from the five sectors, but not limited to these (232 complete responses)
- Mystery shopping in 5 MS (Germany, Netherlands, Romania, Spain, Sweden) with 100 observations across the five sectors

Provision of personal data in contracts

The study focuses on analysing data contracts where consumers provide or undertake to provide personal data to traders. The study mainly inquired about contracts for the supply of digital content or service, or contracts for the sale of goods for which consumers do not or not only pay a price but provide personal data to the trader which are not necessary for the performance of the contract and give consent for the processing of these data.

However, the scope of the study also includes the processing of personal data that were collected because they were necessary for the performance of the contract but are also used by the trader itself or third parties for other purposes, on the basis of consent (e.g., physiological data provided by consumers using a fitness tracker provided to third parties for market analysis purposes).

This study does not assess whether such practices are in line with the GDPR.

Overview of data contracts in the digital content/service sector

The study provides an assessment of the current market for data contracts in the sectors of digital content/services.

The provision of digital content/services to consumers is present in many sectors and market segments, and consumers will need to provide at least some personal data (those essential for the provision of the service) to gain access – whether they pay a price or not. Many providers will also rely on a broader range of personal data, such as access to browsing behaviour via tracking cookies, to generate the revenue needed to offer their content.

Data contracts for the supply of digital content and services are widespread but by no means a dominant business model in Europe, according to the survey carried out as part of the study. About half of European providers surveyed for this study do offer content for which consumers undertake to provide their personal data instead of, or in addition to, paying a price. 15% of the companies surveyed allow consumers to access their services by providing personal data without paying a price, while 31% allow access through the provision of personal data together with the payment of a price. 4% of the respondents use a mix of models. In contrast, 51% of the surveyed companies reported that they only allow consumers who pay a price to access their digital content or service.

The results of the mystery shopping study confirm that terms and conditions state that the collection of personal data is necessary for providing the digital content or service in the majority of the sample analysed (66 out of 96 observations). Only in a minority of cases did the terms and conditions state that personal data was collected for commercial/marketing purposes and was not strictly necessary for supplying the product.

Withdrawing consent and consequences

The results of the business survey show that consumers do not withdraw their consent for processing their personal data very often. However, there is a non-negligible minority of consumers (around a quarter) that have already withdrawn their consent for processing of data (often 12% and very often 3%). These results are in line with what consumers say on the same topic (24-31% consumers withdrew their consent in the last 12 months preceding the survey, according to consumer survey results).

As regards consequences of withdrawal, the results of the mystery shopping exercise are in line with the action(s) that businesses indicate that they take following the withdrawal of a consumer's consent. Many surveyed businesses stop supplying digital content/services (47%), while others only limit the access/use of digital content/services (25%) and 20% of surveyed companies continue supplying digital content/services. Many consumers do not seem to know what the consequences of withdrawal are (between 14% and 19% of consumers surveyed, depending on the sector). Furthermore, based only on consumer views, there doesn't seem to be any prevalent typology of the consequences of withdrawing consent, but results show that in many cases, consumers face negative consequences following the withdrawal of their consent (account deletion, limited access, reduced volume of data, reduced quality).

Restitution of contractual performance after the contract has been voided

The results of the business survey show that companies are almost never faced with situations where data contracts for the supply of digital content or services are voided with retroactive effect after the contract has been performed. However, there are contrasting results between the business survey and mystery shopping regarding the extent to which contracts concluded with customers include clauses on the consequences of the voidance of the contract after the latter has been performed. This may indicate that practices in this area are fragmented.

Situations where consumers do not provide data as agreed and traders do not comply with data protection rules

Results of the business survey show that traders are rarely faced with situations where consumers do not provide personal data as agreed.

No conclusions could be drawn on situations where the trader does not comply with data protection rules due to a lack of data.

Rules applicable to data contracts

The results show that most of the legal frameworks of EU MS do not foresee specific rules for data contracts. While no MS has adopted specific provisions qualifying as a contract situation where the consumer does not pay a price in exchange for digital content or service but provide personal data, these situations might be qualified as a contract under general contract law at national level. Businesses surveyed think that there is some unclarity regarding national rules on data contracts but overall have mixed feelings regarding the impacts of unclarity and fragmentation of national legal frameworks on developing cross-border activities, although the limited number of responses received could not allow for a generalisation of these results at EU level. Surveyed businesses seem more positive about the national level rules and their impact in developing business domestically, possibly due to higher awareness of the applicable contract law at national level.

Overview of data contracts for tangible goods with digital elements

The primary data collected is not sufficient to draw any robust conclusions.

As tangible goods with digital elements may involve the collection and processing of personal data, the market overview focused on wearable health and fitness trackers, smart TVs, e-book readers and gaming consoles as four examples of such goods. The market overview did not find cases where such products are transferred without any payment by the consumer. Whilst there is an example of business model that does rely on - and extract (ad) revenue from the personal data of the user in the product segments selected for the market overview (Amazon Kindle), none of the companies that participated in the study's business survey reported doing so. However, the collected data was limited and insufficient to draw general conclusions on goods with digital elements.

The data collected through the business survey is also limited. Out of the 108 survey respondents that sold tangible goods, only 11 businesses also collected personal data. None of them indicated that they encountered cases where the consumer withdrew their consent for processing their personal data.

Finally, only 10 products within the 4 product categories covered in the market overview were covered by the mystery shopping exercise (3 smart watches, 1 pair of earbuds, 4 e-books readers, 1 smart ring, 1 paper tablet). All of them were purchased in exchange of a price.

Synthèse

Introduction

Le présent document est le rapport final de la Partie B de l'étude destinée à soutenir la Commission européenne dans l'élaboration de politiques sur la promotion de la réparation des biens de consommation et les contrats dans l'économie des données. Cette étude a été commandée au titre du contrat-cadre n° JUST/2020/PR/03/0001 relatif aux services d'évaluation, d'analyse d'impact et de conformité, de soutien aux politiques et d'analyse juridique.

Cette étude a pour objectif de récolter des données quantitatives et qualitatives sur l'existence et l'ampleur de problèmes dans des situations où les consommateurs ne paient pas un prix, ou pas seulement, dans le cadre de leur relation contractuelle avec un commerçant, mais fournissent ou s'engagent à fournir leurs données personnelles à ce commerçant, alors que ces données ne sont pas nécessaires à l'exécution du contrat (ci-après les « contrats de données »).

L'étude se concentre sur quatre secteurs de contenus/services numériques (vidéos et musique numériques, jeux vidéo, logiciels en tant que services et médias sociaux) et couvre également, dans une certaine mesure, les biens corporels.

Méthodologie

L'étude a utilisé plusieurs techniques de collecte de données pour répondre aux questions posées :

- Entretiens de définition avec des associations sectorielles et des spécialistes
- Recherche documentaire et analyse de la littérature sur l'évolution du marché dans les cinq secteurs étudiés
- Enquête auprès de 1000 consommateurs par État membre dans 10 États membres (France, Allemagne, Espagne, Grèce, Hongrie, Italie, Pays-Bas, Pologne, Roumanie et Suède)
- Enquête auprès d'entreprises actives dans les cinq secteurs étudiés, sans s'y limiter, dans 13 pays (232 réponses complètes)
- 100 enquêtes « client mystère » dans les 5 secteurs étudiés dans 5 États membres (Allemagne, Espagne, Pays-Bas, Roumanie et Suède)

Fourniture de données personnelles dans le cadre de contrats

L'étude met l'accent sur l'analyse des contrats de données, dans lesquels les consommateurs fournissent ou s'engagent à fournir des données personnelles aux commerçants. Elle s'est principalement intéressée aux contrats de fourniture de contenus ou de services numériques et aux contrats de vente de biens pour lesquels les consommateurs ne paient pas un prix, ou pas seulement, mais fournissent aux commerçants des données personnelles qui ne sont pas nécessaires à l'exécution du contrat et donnent leur consentement au traitement de ces données.

Néanmoins, l'étude inclut également dans son champ d'observation le traitement de données personnelles qui ont été collectées parce qu'elles étaient nécessaires à l'exécution du contrat, mais qui sont aussi utilisées pour d'autres finalités, par le commerçant lui-même ou par un tiers, sur la base du consentement des consommateurs (p. ex. données physiologiques fournies à des tiers par les utilisateurs d'un dispositif de suivi de l'activité sportive à des fins d'analyse du marché).

Cette étude ne cherche en aucune manière à déterminer si ces pratiques sont conformes au RGPD.

Aperçu des contrats de données dans le secteur des contenus/services numériques

L'étude examine le marché actuel des contrats de données dans le secteur des contenus/services numériques.

Des contenus et services numériques sont fournis aux consommateurs dans de nombreux secteurs et segments du marché, et les consommateurs doivent fournir au moins certaines données personnelles (celles nécessaires à la fourniture du service) pour y accéder – qu'ils paient un prix ou non. De nombreux prestataires mettent également à profit des données personnelles plus étendues, telles que l'accès au comportement de navigation sur Internet par le biais de cookies de suivi, pour générer les revenus dont ils ont besoin pour proposer leurs contenus.

Les contrats de données pour la fourniture de contenu et de services numériques est une pratique courante, mais d'après l'enquête menée dans le cadre de l'étude, ce modèle économique n'est absolument pas prédominant en Europe. Environ la moitié des prestataires européens interrogés proposent des contenus pour lesquels les consommateurs s'engagent à fournir leurs données personnelles au lieu de payer un prix, ou en complément. Parmi les entreprises consultées, 15 % permettent en outre aux consommateurs d'accéder à leurs services sans payer s'ils fournissent leurs données personnelles, 31 % accordent cet accès contre la fourniture de données personnelles en conjonction avec le

paiement d'un prix, et 4 % appliquent un mélange de différents modèles. En revanche, 51 % des entreprises interrogées déclarent qu'elles permettent uniquement aux consommateurs qui paient un prix d'accéder à leurs contenus ou services numériques.

Les résultats de l'enquête mystère confirment que les termes et conditions stipulent que la collecte de données personnelles est obligatoire pour la fourniture des contenus ou des services numériques dans la majorité de l'échantillon étudié (66 cas sur 96). Les conditions générales mentionnaient seulement dans une minorité de cas que les données personnelles étaient collectées à des fins commerciales ou de marketing et n'étaient pas strictement nécessaires pour la fourniture des produits.

Retrait du consentement et conséquences

L'enquête auprès des entreprises montre que les consommateurs retirent rarement leur consentement au traitement de leurs données personnelles. Il existe toutefois une minorité non négligeable de consommateurs (environ un quart) qui ont déjà retiré leur consentement au traitement de leurs données (souvent pour 12 % et très souvent pour 3 % d'entre eux). Cette observation correspond aux déclarations des consommateurs sur le même sujet (d'après l'enquête auprès des consommateurs, 24 à 31 % d'entre eux avaient retiré leur consentement au cours des 12 mois précédents l'enquête).

S'agissant des conséquences d'un retrait du consentement, les conclusions de l'enquête « client mystère » correspondent aux mesures que les entreprises déclarent prendre après qu'un consommateur a retiré son consentement. Un grand nombre d'entreprises mettent un terme à la fourniture des contenus ou services numériques (47 %), d'autres se contentent de limiter l'accès aux contenus ou services numériques ou leur utilisation (25 %), et 20 % continuent de fournir leurs contenus ou services numériques. Une part considérable des consommateurs semblent ignorer les conséquences d'un retrait de leur consentement (entre 14 % et 19 % des consommateurs interrogés selon le secteur). Considérant uniquement les opinions des consommateurs, aucune typologie prépondérante ne semble en outre se dégager pour les conséquences d'un retrait du consentement, mais il apparaît que dans de nombreux cas, les consommateurs subissent des conséquences négatives après le retrait de leur consentement (suppression de leur compte, limitation de l'accès, diminution du volume de données ou baisse de la qualité).

Restitution de la prestation contractuelle après l'annulation du contrat

Il ressort de l'enquête auprès des entreprises qu'elles ne sont pratiquement jamais confrontées à des situations dans lesquelles des contrats de données pour la fourniture de contenus ou de services numériques sont annulés avec effet

rétroactif après leur exécution. Cette enquête et l'enquête « client mystère » livrent toutefois des résultats contrastés quant à la mesure dans laquelle les contrats conclus avec des consommateurs contiennent des clauses sur les conséquences de l'annulation du contrat après son exécution. Cela pourrait signifier que les pratiques à cet égard sont fragmentées.

Situations dans lesquelles les consommateurs ne fournissent pas de données comme convenu et les commerçants ne respectent pas les règles de la protection des données

L'enquête auprès des entreprises permet de conclure que les commerçants sont rarement confrontés à des situations dans lesquelles les consommateurs ne fournissent pas de données personnelles comme c'était convenu.

En raison du manque de données, aucune conclusion ne peut être formulée sur les situations dans lesquelles les commerçants ne respectent pas les règles en matière de protection des données.

Règles applicables aux contrats de données

Les résultats montrent que dans la plupart des États membres, le cadre juridique ne prévoit pas de conditions particulières pour les contrats de données. Bien qu'aucun État membre n'ait adopté de dispositions spécifiques qualifiant de contrat une situation dans laquelle un consommateur ne paie pas de prix, mais fournit des données personnelles, une telle situation pourrait être qualifiée de contrat au niveau national en application du droit général des contrats. Les entreprises interrogées estiment qu'un certain flou entoure les règles nationales sur les contrats de données, mais témoignent de sentiments partagés quant aux répercussions des cadres juridiques nationaux sur le développement d'activités transfrontalières, même si le faible nombre de réponses reçues ne permet pas de généraliser ces résultats à l'échelle européenne. Elles font preuve d'un état d'esprit plus positif à l'égard des règles applicables au niveau national et de leur influence sur le développement des affaires dans leur pays, peut-être parce qu'elles connaissent mieux le droit des contrats en vigueur au niveau national.

Aperçu des contrats de données dans le secteur des biens corporels comportant des éléments numériques

Les données primaires collectées ne sont pas suffisantes pour tirer des conclusions solides.

Étant donné que les biens matériels comportant des éléments numériques peuvent impliquer la collecte et le traitement de données à caractère personnel, l'étude de marché s'est concentrée sur les trackers de santé et de fitness

portables, les téléviseurs intelligents, les lecteurs de livres électroniques et les consoles de jeux, qui constituent quatre exemples de ce type de biens. L'étude de marché n'a pas trouvé de cas où ces produits sont transférés sans aucun paiement de la part du consommateur. Bien qu'il existe un exemple de modèle commercial qui repose sur les données personnelles de l'utilisateur et qui en tire des revenus (publicitaires) dans les segments de produits sélectionnés pour l'étude de marché (le Kindle d'Amazon), aucune des entreprises qui ont participé à l'étude n'a déclaré le faire. Toutefois, les données collectées étaient limitées et insuffisantes pour tirer des conclusions générales sur les biens comportant des éléments numériques.

Les données recueillies dans le cadre de l'enquête auprès des entreprises sont également limitées. Sur les 108 entreprises interrogées qui vendent des biens matériels, seules 11 collectent également des données à caractère personnel. Aucune d'entre elles n'a indiqué avoir rencontré des cas où le consommateur avait retiré son consentement au traitement de ses données personnelles.

Enfin, seuls 10 produits parmi les 4 catégories de produits couvertes dans l'aperçu du marché ont été couverts par l'exercice d'évaluation mystère (3 montres intelligentes, 1 paire d'écouteurs, 4 lecteurs de livres électroniques, 1 bague intelligente, 1 tablette graphique). Tous ces produits ont été achetés en échange d'un prix.

1. Introduction

This is the final report for Part B of the study to support the Commission's policy development on promoting repair of consumer goods and contracts in the data economy.

The aim of the study is to provide qualitative and quantitative data relating to the existence and size of problems in situations where consumers within the contractual relationship with traders do not or not only pay a price but provide or undertake to provide their personal data to the trader – data which are not necessary for the performance of the contract (later referred to as 'data contracts').

The Directive on certain aspects for the supply of digital content and digital services (DCD)¹ acknowledges the existence of data contracts. Article 3(1) second subparagraph of this directive provides that "this Directive shall also apply where the trader supplies or undertakes to supply digital content or a digital service to the consumer, and the consumer provides or undertakes to provide personal data to the trader, except where the personal data provided by the consumer are exclusively processed by the trader for the purpose of supplying the digital content or digital service in accordance with this Directive or for allowing the trader to comply with legal requirements to which the trader is subject, and the trader does not process those data for any other purpose".

In such contracts, personal data are used by the trader for other purposes than the performance of the contract, for instance for economic purposes, provided that there is a valid legal basis under the General Data Protection Regulation (GDPR)², such as consent pursuant to point (a) of Article 6(1) of this Regulation.

However, the DCD does not apply to all contracts which might be qualified as data contracts. According to Recital 25, "this Directive should also not apply to situations where the trader only collects metadata, such as information concerning the consumer's device or browsing history, except where this situation is considered to be a contract under national law. It should also not apply to situations where the consumer, without having concluded a contract with the trader, is exposed to advertisements exclusively in order to gain access to digital content or a digital service. However, Member States should remain free to

¹ Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services (Text with EEA relevance.)

² Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance).

extend the application of this Directive to such situations, or to otherwise regulate such situations, which are excluded from the scope of this Directive.”

In addition, DCD does not regulate a number of contract law related questions, such as potential contract law consequences if consumer withdraws consent for the processing of personal data.

The Sale of Goods Directive (SGD)³ concerns sales of goods (online or on-site) in business-to-consumer (B2C) relations. Goods with a digital element (e.g., smart fridge, intelligent watch) are covered by the SGD.⁴

In contrast to contracts for digital content and digital services regulated by the DCD, the EU legislation in place does not regulate data contracts for tangible goods. The scope of the Directive on certain aspects concerning contracts for the sale of goods (SGD)⁵ only includes sales contracts where the seller transfers ownership of a good to a consumer and the consumer pays a price. Contracts where the seller transfers ownership of a good to a consumer and the consumer does not pay a price but provides personal data to the trader are not covered by the SGD. However, in the sale of goods there can also be situations where the consumer pays a price and in addition to paying a price provides personal data to the trader. In this case, potential contract law considerations connected to the sale of digital content/services could evolve in a similar manner in contracts for the sale of goods.

These questions remain matters of national law and could potentially lead to legal uncertainty and fragmentation in the internal market.

This is the reason why the study provides an assessment of the current market for data contracts in the sectors of digital content/services and tangible goods. The following terms/definitions are being used throughout the study:

- **Data contracts:** contractual relationship between consumers and traders in which consumers do not or not only pay a price but provide or undertake

³ Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC (Text with EEA relevance) Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0771>.

⁴ Council and Parliament agree on new rules for contracts for the sales of goods and digital content, 29 January 2019. Available at: <https://www.consilium.europa.eu/en/press/press-releases/2019/01/29/council-and-parliament-agree-on-new-rules-for-contracts-for-the-sales-of-goods-and-digital-content/>

⁵ Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC (Text with EEA relevance.).

to provide their personal data to the trader – data which are not necessary for the performance of the contract.

- **Digital content:** data produced and supplied in digital form.
- **Digital service:** the DCD defines it as a service that allows the customer to create, process, store or access data in digital form or a service that allows the sharing of any other interaction with data in digital form uploaded or created by the consumer or other users of that service.
- **Goods with a digital element:** any tangible movable items that incorporate, or are inter-connected with, digital content or a digital service in such a way that the absence of that digital content or digital service would prevent the goods from performing their functions.
- **Cookies:** A cookie is a small text file that a website stores on the computer or mobile device when users visit the site. The purpose of a cookie is to enable the site to remember users' preferences (such as username, language, etc.) for a certain period of time. Cookies can also be used to establish anonymised statistics about the browsing experience on the sites.⁶
- **Metadata:** Data that describes other data, providing a structured reference that helps to sort and identify attributes of the information it describes.⁷ Metadata refers for instance to information concerning the consumer's device or browsing history.

⁶ Definition of cookies by the EU. Available at: https://european-union.europa.eu/cookies_en

⁷ Definition of Metabase by Garry Kranz. Available at: <https://www.techtarget.com/whatis/definition/metadata>

2. Method for data collection

This section shows the method and the sample composition of the sources of primary data used for this study.

2.1. Scoping exercise

In the scoping phase, desk research was conducted to identify and review key academic and grey literature (legal as well as economic/business-model-oriented research papers) on the subject, as well as existing market research on the product groups in question and available data from relevant federations (on number of companies, on revenues etc.). Relevant sources included: material received from the European Commission (exploratory questionnaire on applicable national law to the Expert Group on the digital contracts directives and responses from Member States of the European Union (MS)), the relevant legislation (the Digital Content and Digital Services Directive, the Sales of Goods Directive), studies published by the European Commission⁸, quantitative and qualitative sector analyses from the European Audiovisual Observatory (EAO), Interactive Software Federation of Europe (ISFE), European Games Developer Federation (EGDF), position papers from BEUC, Eurocommerce, FEDMA, EDiMA, and academic publications⁹.

During the scoping exercise, the four sub-sectors of digital content and services that the proposal initially suggested for further analysis (digital video and music, digital games, software-as-a-service, social media) were confirmed. The desk research confirmed that these are sufficiently large market segments where the provision and processing of personal data plays an important role for business models. For tangible goods, the devices E-book-readers and fitness trackers were also tested through mystery shopping (see below).

Complementary expert interviews were conducted with stakeholders from: Institut Mines-Télécom Business School/ University of Paris Sud, London Business School, FEDMA - Federation of European Data and Marketing and ISFE. The goals of these expert scoping interviews were:

⁸ Including a 2018 study on data sharing between companies in Europe (https://publications.europa.eu/resource/ellar/2d6d436e-4832-11e8-be1d-01aa75ed71a1.0002.01/DOC_1) and a 2022 behavioural study on unfair commercial practices in the digital environment (<https://op.europa.eu/en/publication-detail/-/publication/606365bc-d58b-11ec-a95f-01aa75ed71a1/language-en>)

⁹ All the used sources are listed in the bibliography and referenced in the text.

- to map and understand prominent business models linked to the use of personal data;
- to categorise the types of personal data collected by businesses;
- to discuss whether and how traders' terms and conditions address contractual aspects of the use of personal data outside of GDPR;
- and to talk through perceived uncertainties from the point of view of contract law.

Consequently, the outcomes of the scoping interviews informed our description of the main business models (the ad-financed model and freemium were identified as the most widespread in the sectors selected), the refinement of the description of legal issues, and the preparation of the fieldwork.

2.2. Country selection

The primary data collection activities were carried out only in a selection of MS: Sweden, Estonia, Germany, Ireland, France, Netherlands, Spain, Italy, Greece, Bulgaria, Hungary, Poland, and Romania.

The selection of countries was done to fit the needs of both Part A and Part B of the contract. For part B, the following criteria were considered when choosing the countries:

- **Acceptance to have online activities monitored in exchange for unrestricted access to a certain website** (Eurobarometer, 2016¹⁰). In order to have an indicator that captures the diversity of countries for part B of the study, we have opted for an indicator that could be a proxy for how amenable people would be to have their data used when a service is provided to them. That is why the sample includes MS where the acceptance of using data to provide services is low or very low (around a quarter of the population agreeing), such as Bulgaria, Greece, Sweden and the Netherlands. Three MS selected, Germany, Spain and Estonia, are around the EU average (a third of the population agreeing). Five MS sit well above the EU average: France, Poland, Romania, Italy and Hungary (the latter having the second highest acceptance rate in the EU).

¹⁰ Eurobarometer flash (2016) e-Privacy, question Q5.1. Available at: <https://europa.eu/eurobarometer/surveys/detail/2124>

- Related to the data protection issues, we have looked into a database on consumer complaints ¹¹ of the EU, and the privacy and contract related entries there (“Privacy and data protection”, “Contracts and sales”), to see if any MS had outstanding statistics. Of the MS from the sample, France, Estonia, Germany, Spain, Ireland, Italy, the Netherlands, Poland had a high number of complaints).

The data collection activities covered the following selected countries.

- Business survey (13 MS): Sweden, Estonia, Germany, Ireland, France, the Netherlands, Spain, Italy, Greece, Bulgaria, Hungary, Poland and Romania.
- Consumer survey (10 MS): France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Spain and Sweden.
- Mystery shopping (5 MS): Germany, the Netherlands, Romania, Spain and Sweden.

2.3. Consumer survey

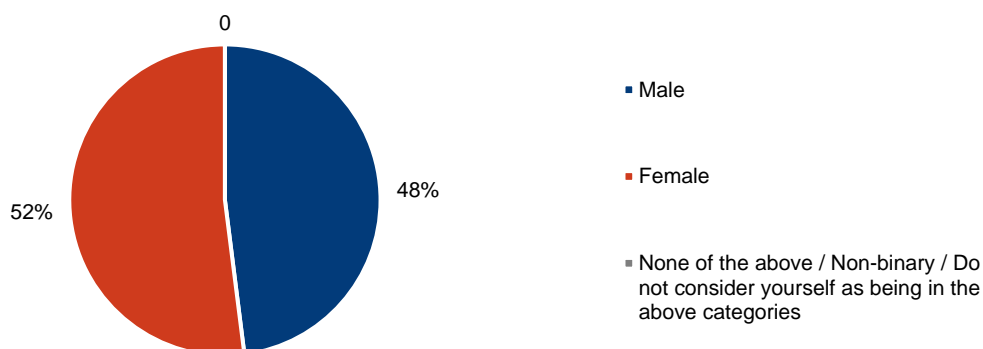
An online consumer survey was carried out in 10 MS and included a sample of at least 1,000 respondents per country. The countries covered were France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Spain, and Sweden. The selection of countries was driven by a multitude of criteria, including geographical coverage, population size and existing legal framework.

Participants were selected from an online survey panel. This selection was carried out with a quota-based sampling approach applying fixed quotas based on national population statistics for each country of the study (on age, gender, region, with additional monitoring of soft quotas on factors like education and income). The fieldwork was carried out between 6 and 28 April 2022. Overall, 10,144 participants took part in the survey. The achieved sample is representative for the general population of 18 years and older in each of the countries.

The achieved sample is representative of the population in the individual countries. The sample shows an even distribution in terms of gender, with 48% of respondents being male and 52% being female.

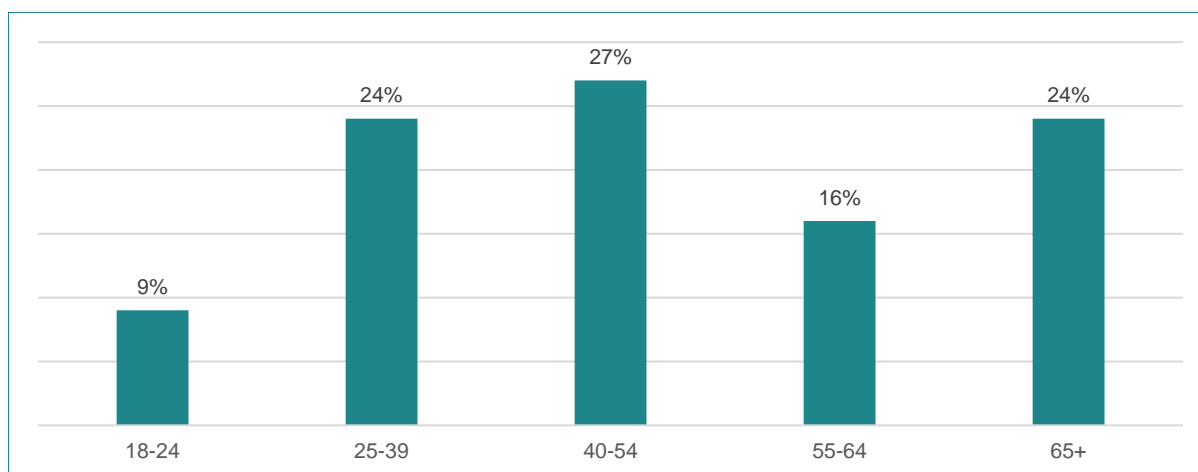
Figure 1 - Distribution of gender in the sample of the consumer survey

¹¹ Consumer complaints statistics from 2006 to 2018. Available at: https://ec.europa.eu/info/policies/consumers/consumer-protection-policy/evidence-based-consumer-policy/consumer-complaints-statistics_en.



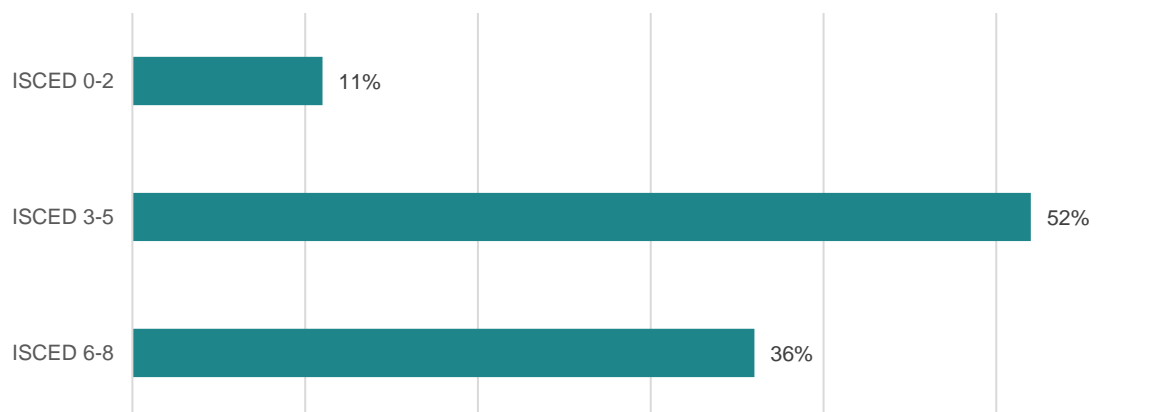
The age distribution of the achieved survey sample reflects the age of the population in the countries in which the survey was carried out. The highest share of respondents can be found in the age bracket of 40-54 years old (27%).

Figure 2 - Distribution of age in the sample of the consumer survey



When it comes to education, the achieved sample is also broadly representative of the population in the individual countries. The highest share of respondents is in the category of the ISCED 3-5 education level (52%), which corresponds to secondary, below university level education. A share of 36% of respondents in the sample has achieved a degree at university level.

Figure 3 - Distribution of education in the sample of the consumer survey



When we report on the consumer survey results, results may not always add up to 100%. This is an effect due to the rounding of weighted survey data. The calculated totals reported may deviate by +/- 1 percentage points from the sum of individual answer options.

2.4. Mystery shopping

Mystery Shopping observations were conducted to explore the consumer journey in the context of the data contracts and the consequences for consumers on the execution of their contract when they withdraw consent to the use of their personal data. The mystery shopping exercise was carried out in 5 MS (explained below). The target was to gather 100 observations and this target was reached.

2.4.1. Mystery shopping design and approach

The following MS were selected for the Mystery Shopping observations: Germany, the Netherlands, Romania, Spain and Sweden. The selection of MS was based on the following criteria:

- Geographical location of the MS in the EU (in order to ensure an equal distribution across the regions of the EU)
- Size of the MS (population of the country)

The data collection was focused on two main business models, which are the most relevant examples of data contracts:

Table 1 - Business models covered by the Mystery Shopping

Business model	Description
Ad-based model	Business models based on ad revenue, where access to the full service is generally free for all users. Revenue is generated through ads that the users of the service are exposed to. Paying tiers either do not exist or do not offer access to

substantial extra functionalities and typically do not generate significant revenue.

Examples: Google search engine, YouTube

Freemium model	Business model based on limited functionality for users of a free-tier offer, and full functionality being only available for subscribed users (paying tier). Revenues from subscription services are significant and, in some cases, the exclusive source of revenue. The free tier may or may not be supported by ads.
	Examples: Dropbox, Spotify

The above two business models are not exclusive to the industry. Other models include freeware (typically open source), as well as products with lengthy free trial periods. These were however not included in the mystery shopping exercise as they are less typical among the digital content and services selected for analysis.

The aim of the mystery shopping was to include national and multi-national enterprises¹² in the sample. We also monitored in which country the headquarter of the enterprise is based (in the EU or outside the EU). For multi-national enterprises we always tested the local version of the product that is offered in the market that is in the scope of the study. The data collection focused on the six sectors presented in the table below.

Table 2 - Sectors covered by the Mystery Shopping

Sector	Description	Examples of companies
Digital video and music	Provision of digital audio and video content	Spotify, YouTube
Digital gaming	Provision of digital games online or in apps	Minecraft, Chess24
Software-as-a-service (SaaS)	Provision of software services	Dropbox, AWS, Slack
Manufacturing of goods (with digital elements)	Sale of goods with a digital component	Philips, Fitbit
Social media	Provision of services related to social networks and communication	Twitter, Facebook

¹² In the context of this study, we define multi-national enterprises as those that sell their products/services to consumers in the market of at least one other country in addition to the domestic market where the company is based. This market can be the EU market or a third market.

Online media	Provision of information in the online world	Newspapers, Spiegel, le Monde
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In terms of tangible goods, the mystery shopping exercise focused on two specific types of products: health and fitness tracking devices and e-book readers (3 smart watches, 1 pair of earbuds, 4 e-books readers, 1 smart ring, 1 paper tablet). All products with digital elements that were tested during the mystery shopping belonged to one of these categories.

In a preparatory desk research, we collected information about enterprises and their products from these sectors. This provided the sample frame from which the enterprises that were included in the mystery shopping have been selected.

Companies were selected to obtain an even distribution of size, sector, business model and headquarter location in each country. Based on these targets, companies from the overall sample list were included in the final list of enterprises that were investigated by the mystery shoppers.

2.4.2. Data collection of the mystery shopping

The data collection was carried out between 12 December 2022 and 19 January 2023. Per country, a group of 3-5 mystery shoppers were allocated to carry out the observations. The mystery shoppers were selected based on their knowledge of the main business language of the country and their familiarity with the local market. A central training of shoppers was held on 16 November by the Kantar Public project team. In addition, each mystery shopper received a briefing presentation as well as a manual explaining how to carry out the data collection.

The findings from the observations were documented in an observation grid, which was designed in cooperation with DG JUST. The data collection was carried out by using technology (such as VPNs and software emulators) to simulate the shopper experience from the analysed country, to avoid geolocating by the product or service provider¹³, in cases where mystery shoppers were not directly present in the countries under analysis. Shoppers also had the option to make use of pre-defined personas which provided a fictitious or false identity of a typical person living in the country in question and could be used by mystery shoppers in cases when they needed to provide personal information during the purchase process.

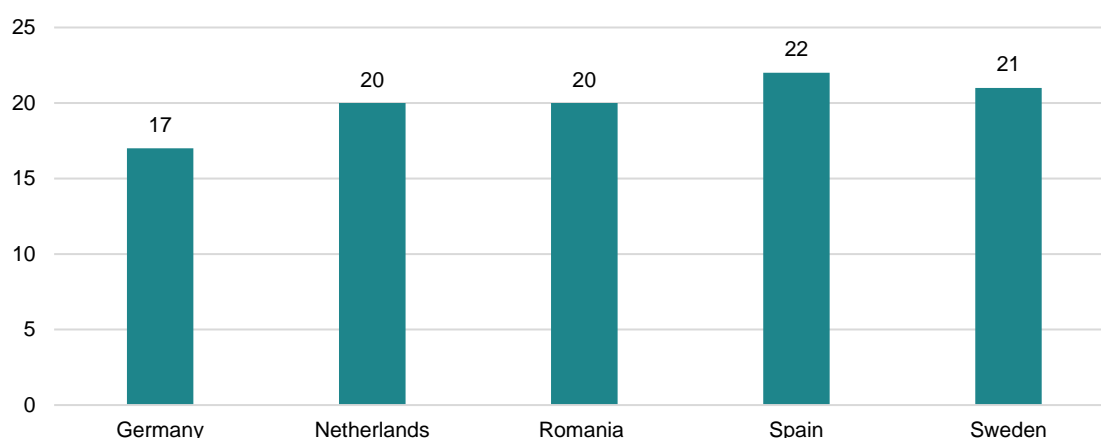
¹³ Geolocation is the process or technique of identifying the geographical location of a person or device by means of digital information. It is used by providers of products or services to verify the location of the customer on their websites and adapt their offer accordingly. To follow the consumer journey of a customer from a specific country, shoppers occasionally had to circumvent such geolocating by using VPN applications.

Prior to the main phase of data collection, we carried out pilot observations in Spain. This pilot phase took place between 29 November and 12 December. Overall, nine observations were carried out during this phase by four mystery shoppers. Following the pilot phase, a debriefing session was organised during which the shoppers reported their observations on the data collection process and materials. The insights from this pilot phase were used to improve the observation grid¹⁴ and the fieldwork process for the main phase of data collection.

2.4.3. Received data

The mystery shopping exercise resulted in 100 observations in total with about 20 observations per country. We covered five countries overall: Germany, the Netherlands, Romania, Spain and Sweden. The chart below shows the distribution of observations across the MS in the scope of the study.

Figure 4 - Distribution of mystery shopping observations by country



Source: Authors based on mystery shopping results (five countries)

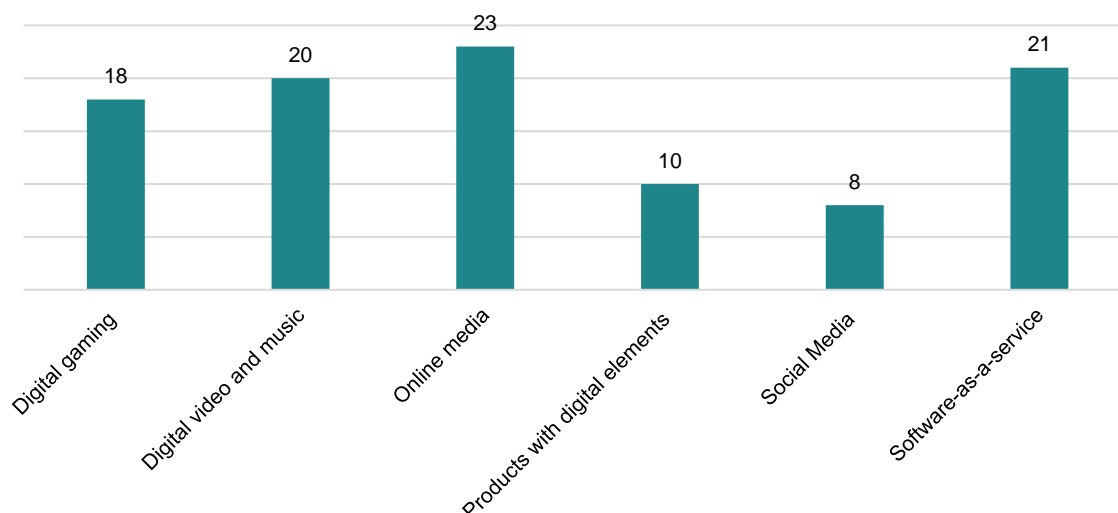
The observations were evenly distributed across the 6 covered sectors, with two exceptions. The study covered a smaller number of products or services from the sector 'products with digital elements' and from the sector 'social media' (with 10 and 8 observations, respectively). For products with digital elements, the number was lower for practical reasons: as these products are usually higher priced, only a few products could be purchased and included in the exercise¹⁵. With regard to 'social media' services, the market is dominated by a small number of

¹⁴ After the pilot phase, we added an additional field to the observation grid to also document how long it takes from the provider to answer to the mystery shopper, when they withdrew their consent to the use of their personal data via email.

¹⁵ Products purchased included: smart watches (Garmin Vivofit 4, Xiaomi smart band, and Samsung galaxy fit 2), a pair of earbuds (Quiet on sleep earbuds), e-books readers (Kindle e-reader, Kobo e-reader, Liseuse Diva and Tolino page reader), a smart ring (Oura Ring) and a paper tablet (Bookeen).

companies (these are mostly headquartered in the US although they have established European legal entities for their operations in the EU).

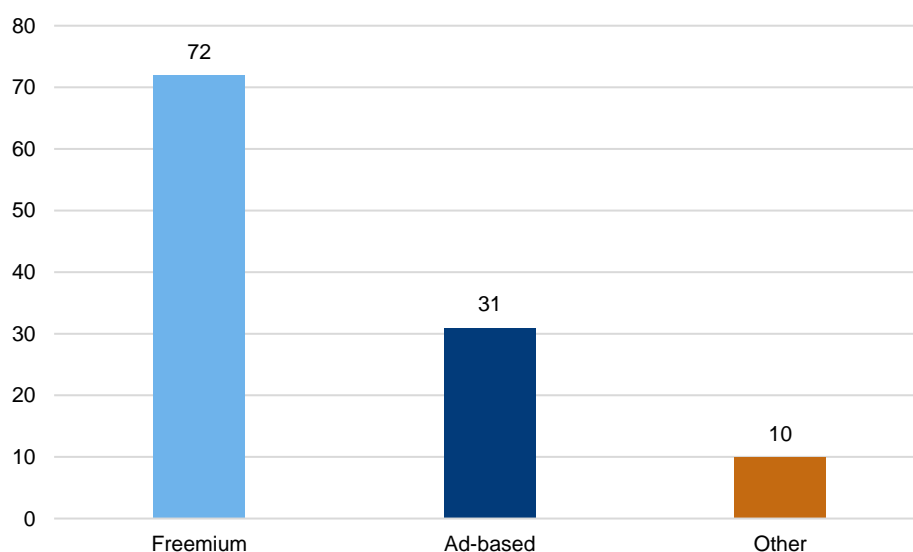
Figure 5 - Distribution of mystery shopping observations by sector



Source: Authors based on mystery shopping results (five countries)

The study considered two main business models. The largest share of tested products or services was based on the 'freemium' business model (72 observations). 31 observations were done on products or services with business model 'ad based'. Some products or services however combine more than one business model, a combination of ad-based revenue and subscription model. These observations were counted in both of the categories to which they related. The chart below shows the distribution.

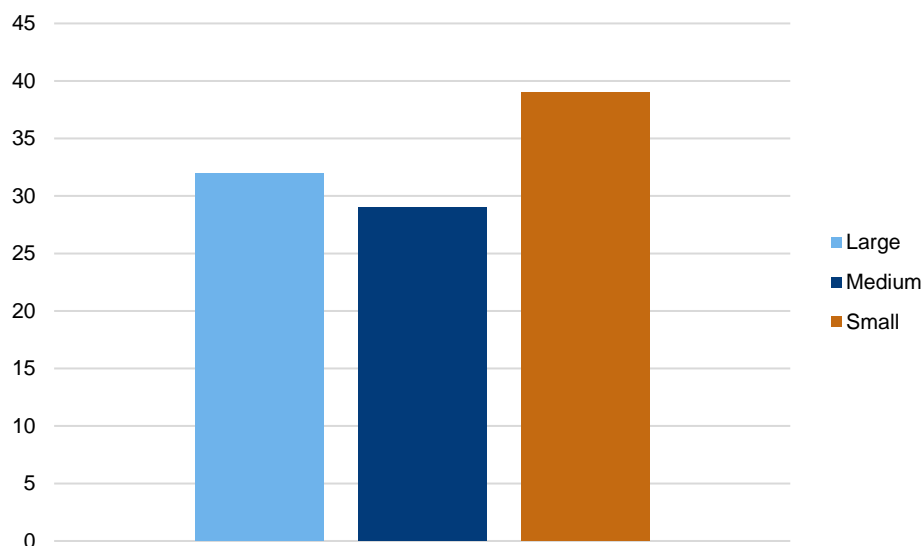
Figure 6 - Distribution of mystery shopping observations by business model



Source: Authors based on mystery shopping results (five countries)

The category 'Other' includes business models that belong neither to the categories 'Freemium' or 'Ad-based'. This could include for example subscription models that does not include a free trial period or a free-tier offer. Shoppers selected this category when such a third business model formed the basis of the tested product.

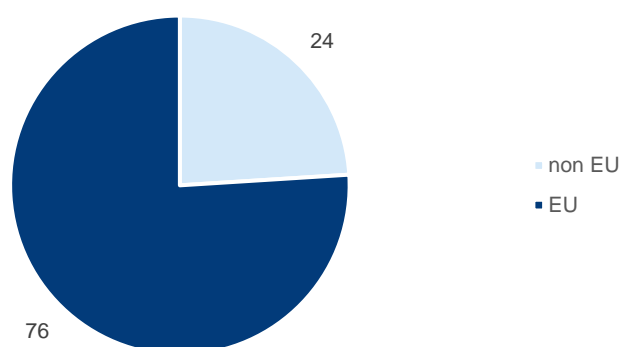
Figure 7 - Distribution of mystery shopping observations by size of company



Source: Authors based on mystery shopping results (five countries)

For around a quarter of the tested products or services, the provider was headquartered in a location outside of the EU (24 out of total 100 observations). These cases were evenly distributed across all countries and sectors.

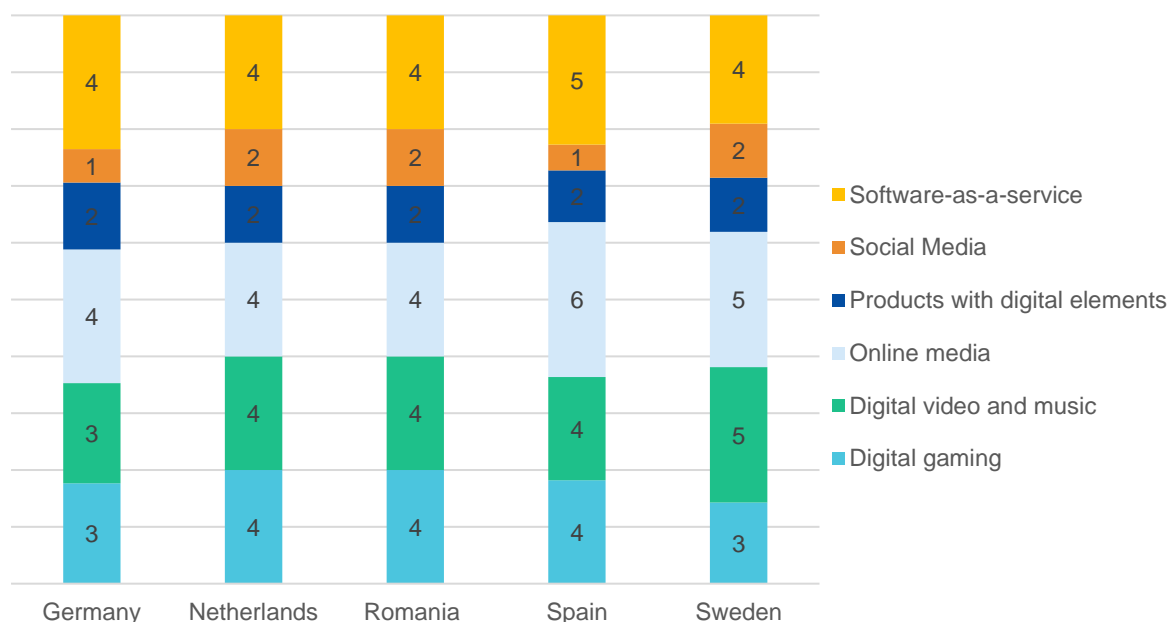
Figure 8 - Distribution of mystery shopping observations by headquarter region



Source: Authors based on mystery shopping results (five countries)

During the data collection emphasis was put on ensuring that the products and services tested were evenly distributed by sectors and across MS. The chart below shows the distribution of the observations by sector and country.

Figure 9 - Distribution of mystery shopping observations by country and sector



Source: Authors based on mystery shopping results (five countries)

2.5. Business survey

A survey with businesses from Sweden, Estonia, Germany, Ireland, France, Netherlands, Spain, Italy, Greece, Bulgaria, Hungary, Poland and Romania was carried out between 14 October 2022 and 31 December 2022. The target group for the survey were businesses active in digital video and music, digital games, SaaS, online media, social media and tangible goods. Companies from other sectors were also allowed to answer the survey.

The aim of the survey was to gather companies' views on B2C contractual arrangements for digital content and services as well as goods, for which consumers provide personal data (data contracts). In particular, the survey collected businesses' views on the structure of the market for data contracts, current practices regarding data contracts and views on possible uncertainties and fragmentation of the existing legal frameworks.

The businesses targeted were selected from a Kantar Public business registry. The businesses selected were among the sectors that were the focus of the study, namely online media, social media, SaaS, digital gaming, digital video and music and tangible goods. There are limitations to the use of an online business survey (i.e., limited sectors relevant to the study topic, limited control over the response rate, low response rate among businesses, complexity of the topic) and the responses received cannot be considered as representative to the whole business economy in those sectors (albeit some sectors, such as social media, digital video and music have few companies that are established in the EU). While

the results cannot be considered as representative, these provide insightful information about business practices around contracts in the data economy.

The survey gathered 264 responses from businesses selling to consumers only, or to both consumers and businesses. However, some digital content/services companies did not respond to the question on how consumers get access to their digital content/service which was fundamental in analysing the survey responses. These responses were removed from the analysis due to uncertainty of whether these businesses were the main target of the survey. By removing these answers, the analysis had a total number of 232 complete responses. Of these:

- 124 from the digital content/services sector exclusively and 108 from tangible goods sector
- Some businesses were both sellers and manufacturers or selling both digital content/services and tangible goods. Of the 108 businesses from the tangible goods that responded to the survey, 20 were also selling digital content/services.

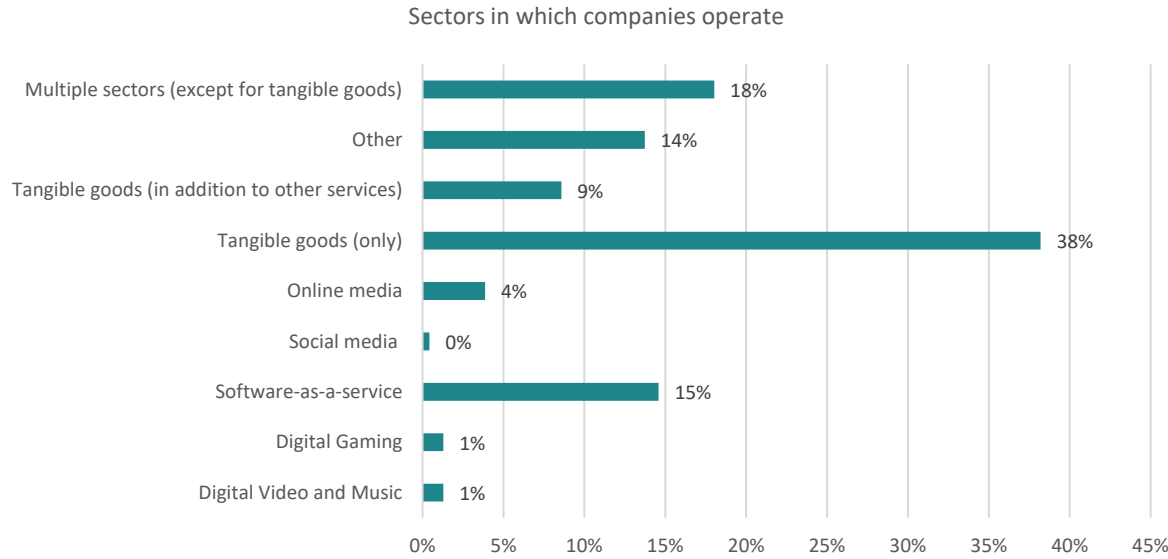
The figure below illustrates the distribution of responses by type of business.

It should be noted that the survey included several screening questions aimed at filtering out respondents that were not relevant for the study subject.

- If companies sold to businesses exclusively, these could not continue with the survey (the current EU legislation on data contracts is not applicable to them).
- If companies of digital content/service allowed consumers to access the service only by paying a price exclusively, their answers were excluded from the analysis as this situation does not constitute a data contract. Overall, 124 companies from the digital content/services sector responded to the survey, of which 63 provided access to consumers through payment exclusively. These answers were removed from the analysis in Chapter 4.
- Of the 108 companies from the tangible goods sector, only 10% (11 companies) claimed to have sold tangible goods to consumers in exchange of their personal data (which are provided either exclusively or in addition to a price). Of these 11 companies, 3 sell also digital content or services in addition to tangible goods.

The figure below breaks down the respondent companies by sector of activity. It should be noted that 18% of companies operated across several sectors and these were counted separately in the figure below. Similarly, companies selling tangible goods were counted separately.

Figure 10 - Sectors in which respondent companies operate



Base=232 respondents

Note: 63 of 232 respondents provided paid only services. As these companies were out of scope in our research, their results were not analysed in Chapter 4 of the study.

Full results of the business survey including socio-demographic information are available in Annex 3.

3. Provision of personal data in contracts

3.1. Data

As the study focuses on analysing data contracts where consumers provide or undertake to provide personal data to traders, it is important to outline first what the term 'personal data' covers in this regard.

The definition under the GDPR for personal data serves as the point of departure. Article 4(1) explains that: "personal data' means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person."¹⁶ ¹⁷

In practice, the GDPR's notion of 'personal data' can apply to many different types of data which are already linked to a natural person or allow them to be singled out from a database.

3.2. Use of the personal data by the trader

Taking a step further in the delineation exercise, the next and complicated question is to determine for which purpose personal data are used by the trader.

The study mainly inquired about contracts for the supply of digital content or service or contracts for the sale of goods for which consumers do not or not only pay a price, but provide personal data to the trader which are not necessary for the performance of the contract and give consent for the processing of these data (non-essential data). Consumers could technically refuse to provide such non-essential personal data to a trader or a service provider, even if in some cases they would have to accept the loss of access to certain functionalities or features of the product or service as a consequence, and to limit themselves to the core version.

However, the study also includes in its scope processing of personal data that were collected because they were **necessary for the performance of the**

¹⁶Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016.
Available at: <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

¹⁷Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995.
Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01995L0046-20031120>

contract (essential data) but are also used by a trader itself or third parties **for other purposes**, on the basis of consent (e.g. physiological data provided by consumers using a fitness tracker provided for market analysis purposes to third parties). Essential data such as login names, email addresses, technical identifiers, payment details which are not used for other purposes are excluded from this scope. This is in line with Recital 25 of the DCD which says that the Directive “should not apply to situations where the trader collects personal data exclusively to supply digital content or a digital service, or for the sole purpose of meeting legal requirements”.¹⁸

This study makes no assessment whether such practices are in line with the GDPR.

3.2.1. Use of personal data in contracts for the sale of goods with digital elements

When consumers purchase tangible goods with digital elements involving the collection and otherwise processing of personal data, when these elements are essential for the functioning of the goods (fitness trackers or other consumer wearables, for instance), the contract is governed by the SGD - but only if consumers paid a monetary price for the goods. As such it is the monetary payment that constitutes counter-performance in these contracts, and not data. Regardless of the lack of existing legal framework covering the data contracts in the context of goods with digital elements, the study considers also scenarios in which consumers consent to the processing of their personal data – and such goods are provided not against monetary payment but for ‘free’, or at least at a discounted price¹⁹.

3.2.2. Use of personal data in contracts for the supply of digital content or digital service

The study looks at situations where the digital content or service is provided without monetary compensation or at least at a discounted price against provision of personal data. By now many Europeans are used to the fact that ‘free’ content or services are not entirely free. On many occasions they are paid for by advertisers, or the wider enterprise group of the provider or a third party interested in establishing contact with a user for commercial benefit (this latter marketing-

¹⁸ Efroni (2020). Gaps and opportunities: The rudimentary protection for “data-paying consumers” under new EU consumer protection law. *Common Market Law Review*, vol. 57, 799-830.

¹⁹ The discount would reflect the fact that the trader also expects revenue streams or other tangible economic benefits (e.g. own marketing initiatives, improvement of own products) from the personal data obtained.

orientation is somewhat similar to the motivations of advertisers)²⁰. These economic operators are interested in consumers' characteristics and behaviour (i.e., their personal data) to target their ads and services accordingly.²¹

The study is tasked with looking into current business practices with regard to the use of personal data in data contracts. The provision of digital content or a digital service is (in practice, by design) generally conditional on the collection and processing of essential or functional cookies, for which the user's consent is not required. Service/content providers do not have to but may collect some personal data, e.g., essential data, without which the content or service would not be accessible.

It must be noted here, however, that users of digital content and services are normally not strictly obliged to provide their personal data if that is not necessary for the performance of the contract or for the trader to comply with applicable legal obligations. In practice, the legal basis for the processing of personal data is often the consent of the data subject and traders and service providers tend to allow users to refuse or withdraw their consent. It is noteworthy that the consequences on the future provision of the service will be very different if the personal data in question was essential for the provision of the service, or if it was not. The study takes account of this distinction.

3.2.3. Goods and digital content/services for which a full price is paid

The study also looks into business models where the full price is paid, but consumers also undertake to provide their personal data. In cases where the full price is paid, one may expect that access to the digital content or service would be maintained even if consent to process personal data were to be withdrawn, or the personal data are not provided (unless this is technically or legally impossible in the absence of 'essential' personal data). Paying the full price is typical in the domain of (connected) tangible goods, but it is also prevalent in web applications and platforms (subscription-based or single-payment purchases).

For goods with digital elements, we looked at products where the full price is paid, but personal data is also provided. The price may be the same for all users, regardless of whether they consent to the use of their personal non-essential data for various purposes other than performance of the contract (e.g., statistics, marketing), but the business model – and the relatively low price - behind it would

²⁰ Trabucchi, Buganza and Pellizzoni (2017). Give away your digital services. Leveraging Big Data to capture value. Research Technology Management, vol. March-April, 43-51.

²¹ In other cases, traders provide content or a service for free in the hope that they will convert free users into paying customers. Here, the valorisation of personal data would be of lower importance.

depend on the value generated by the processing of the personal data of the consumers, assuming that most or many customers would consent to the use of their personal data for these additional purposes. Furthermore, if consent for the processing of personal data is withdrawn or data is not provided, even if the product can remain in the customer's possession, certain functionalities may no longer work, or the trader might want to limit them - even if the price (one-off purchase, subscription fee, etc.) had been paid.

3.3. Opinions on data contracts

3.3.1. Position of the European Data Protection Supervisor

A 2017 position paper of the European Data Protection Supervisor (EDPS)²² warned about any provision introducing the idea that people can pay with their data in the same way as they do with money, as fundamental rights (i.e., right to protect personal data) cannot be reduced to simple consumer interest, and consumer data cannot be treated as a commodity. Hence, the EDPS recommended in 2017 that the EU should apply the GDPR as the means for regulating the use of personal data in the digital economy.

3.3.2. Doctrinal debates

The views of legal experts of such contracts are not unambiguous. While some academics claim that it is possible to conclude a contract where data is a 'counter-performance',²³ others warn about uncertainties surrounding this.²⁴ The most recent research argues for the need to use a permissive interpretation of the interplay between the GDPR and the DCD, which would prevent GDPR outlawing the broad scope of applications of data contracts where consumers provide or

²² EDPS (2017). Opinion 4/2017 on the Proposal for a Directive on certain aspects concerning contracts for the supply of digital content Available at: https://edps.europa.eu/sites/edp/files/publication/17-03-14_opinion_digital_content_en.pdf

²³ See e.g. C Langhanke and M Schmidt-Kessel, 'Consumer Data as Consideration' (2015) 6 EuCML 221.

²⁴ N Helberger, F Zuiderveen Borgesius & A Reyna, 'The Perfect Match? A Closer Look at the Relationship Between EU Consumer Law and Data Protection Law' (2017) 5 Common Market Law Review.

undertake to provide personal data to traders likely intended by the DCD.²⁵ Academics have however argued that online traders and digital service providers should stop claiming that they provide their products or services for 'free', if they indeed collect and process their customers' data, as this could be perceived as a misleading commercial practice.²⁶

A 2018 paper on the topic²⁷ concluded that business models based on the provision of personal data give rise to some concerns. As these models rely on the mass aggregation of personal data which leads to unequal bargaining power, the main risk is having personalised discrimination and no possibility to access goods and services without disclosing personal data.²⁸ Similarly, other academics think that where personal data is provided as 'counter-performance' for access to a digital content or service, payment awareness and decision-making power should be at the core of the issue. It is emphasised that the data contracts in question should be perceived to be the result of autonomous decisions of both parties (i.e., the party providing their personal data should be aware that by allowing the use of their data, a substantial economic value is being transferred to the economic operator²⁹).

According to Drechsler (2018), the commercialisation of data is a reality in today's economy, and one should not deny this by using only the fundamental right of data protection argument. The author argues that the "enjoyment of property is recognised as a fundamental right for the EU, and property is an economic asset. Fundamental rights protection and the status of personal data as an economic asset therefore seem to at least not exclude each other per se. Therefore, legally accepting personal data as an economic asset for the purposes of a consumer law instrument should not per se undermine its fundamental rights status." ³⁰

²⁵ Efroni (2020). Gaps and opportunities: The rudimentary protection for "data-paying consumers" under new EU consumer protection law. *Common Market Law Review*, vol. 57, 799-830.

²⁶ See e.g. M. Loos and J. Luzak, 'Update the Unfair Contract Terms directive for digital services' (Study for the European Parliament, PE 676.006, February 2021), pp. 28-29.

²⁷ Lohsse, S., Schulze, R. and Staudenmayer, D., 2020, July. Data as Counter-Performance—Contract Law 2.0? An Introduction. In *Data as Counter-Performance-Contract Law 2.0?* (pp. 9-22). Nomos Verlagsgesellschaft mbH & Co. KG.

²⁸ Versaci, Giuseppe (2018). Personal Data and Contract Law: Challenges and Concerns about the Economic Exploitation of the Right to Data Protection. Available at: <https://www.degruyter.com/document/doi/10.1515/ercl-2018-1022/html?lang=en>

²⁹ Note that economic operators argue that the economic value of the personal data of one single user (if only used, as is often the case, for customised ads, performance monitoring, development of new services) is usually negligibly small, especially in the case of very large online platforms.

³⁰ Drechsler, L., 2018. Data As Counter-Performance: A New Way Forward or a Step Back for the Fundamental Right of Data Protection?. Laura Drechsler, *Data as Counter-*

Including contracts that treat personal data as a payment in an EU instrument might legitimise the business models of free services that are currently problematic from a data protection standpoint.³¹

3.3.3. Stakeholder's views

ISFE drafted a separate response to this study, due to business survey questions not fully responding to the specificities of the digital gaming sector. ISFE emphasised the importance of the distinction between, on the one hand, personal data that is provided in exchange for digital content or a digital service, and, on the other hand, personal data needed for the supply of the digital content or service. According to ISFE, most of the data processing operations in a video game fall in the latter category, where data is mostly processed to purchase and provide video game content, enable a gameplay service.

As regards situations where consumers withdraw their consent for the processing of personal data (or stop using their data), ISFE mentioned that the supply of content or a service is not carried out on the basis of consent but because it is necessary for the performance of a contract. Lastly, ISFE considers that the provision of data in the context of these processing activities is essential for the supply of any digital content or digital service and should not be considered as a separate means of access next to the payment of a price (rather such processing operations should fall outside of the scope of a data contract).

The European association representing European and global online platforms and innovative technology companies operating in the EU (EDiMA) mentioned in its 2019 that generalising that one pays for free digital content or services with data is a “misleading simplification” which does not cover the multiple ways in which data is collected. Also, the extension of the scope of the DCD was considered problematic as some businesses are predicated on scaling up globally (often SMEs, start-ups and developers) and benefit easily creating digital content. The extension in scope was considered to have a negative impact on these businesses' competitiveness. Furthermore, EDiMA considers that regarding data as a means of payment for the provision of digital content is a “flawed premise”, as no particular value can be attributed to data.³²

performance: A New Way Forward or a Step Back for the Fundamental Right of Data Protection.

³¹ Ibid.

³² EDiMA. EDiMA feedback on proposed Directive on certain aspects concerning contracts for the supply of digital content. Available at: <https://www.europarl.europa.eu/cmsdata/102260/EDiMA%20-%20Position%20paper.pdf>

One issue raised by BEUC³³ relates to tangible goods with digital content (mentioned in the context of the Data Act). BEUC considers that *there must be a blacklist of prohibited contractual clauses for B2C contracts to curtail excessive collection and harmful uses of data processed through products and services*. For instance, such clauses could prohibit *processing of the personal data generated by the use of a product or service by any data subject other than the user (including use by data holders and third parties) where the data makes it possible to make inferences about private lives or would otherwise entail high risks for the rights and freedoms of the individuals concerned*.

Generally, BEUC considers that consumers must be protected by design and by default. The data processing should depend entirely on the consumer's preferences and not be used for profiling purposes unless specified by the consumer. They also feel that consumers should have control of the data that is generated. They should have the right to obtain a copy of their data and they should also have an enhanced data portability right among other rights.

³³ BEUC (2022). Available at: [https://www.beuc.eu/sites/default/files/publications/BEUC-X-2022-103%20BEUC Position paper on the Data Act proposal.pdf](https://www.beuc.eu/sites/default/files/publications/BEUC-X-2022-103%20BEUC%20Position%20paper%20on%20the%20Data%20Act%20proposal.pdf)

4. The market for data contracts: digital contents or digital services

This chapter provides an overview of the market for data contracts in the digital contents or digital services sector. The chapter starts with an overview of the market of selected digital contents or services on which the study has been focusing, and then looks at how the market is expected to develop. Furthermore, this chapter presents the main practices of consumers and businesses, as well as their frequency and consequences. Lastly, this chapter provides an assessment of the impact of the possible legal uncertainty and fragmentation.

This chapter responds to the following research questions:

- What is the current market for data contracts in the sector of digital contents or services and how do consumers access them (see Chapters -491668480 and -491668480)? How is the market expected to develop (see Chapter -491668480)?
- What are the market practices (both for consumers and businesses) and the frequency of certain specific contractual situations described below (Chapter -491668480)? How do businesses and consumers react to these (see Chapter -491668480)?
- What is the impact of the possible legal fragmentation and uncertainty of the rules applicable to data contracts and to the specific contractual situations (Chapter -491668480)?

4.1. Assessment of the current market

This section provides an assessment of the current market for data contracts in the sector of digital content or services, by focusing on a set of four key sub-sectors. These sub-sectors were selected on the basis of their overall significance in terms of user numbers, the importance of personal data for their business models, as well as offering a good coverage of different modes of engaging with their consumers. Based on the results from the business survey, the study also makes some assumptions on the future development of the market.

4.1.1. Key business models for the provision of digital content and services

The digital economy, as it is widely known, has several important business models that differ from the traditional model of offering consumers goods or services in exchange of a price that (in principle) fully covers the costs and profit

of the provider. Several widespread business models can be found that involve the provision of content or services without monetary compensation (i.e. payment received directly from the consumer), or business models where consumers do not have to pay the full price but undertake to provide personal data before access. The review of literature and sample providers, as well as the business survey suggest that such business models are very widespread in the digital domain.

The assumption in literature is often that companies can only 'afford' to offer content and services without asking for payment from the consumer because they either show advertisements to their users or because they can valorise their personal data or the user-generated content.

Indeed, different types of business revenue or other value (generating other kinds of economic benefit) can be generated from different types of user data. Based on literature and desk research, *external* data valorisation options can include (i) generating ad revenues, either targeted via user profiling or generic, (ii) selling anonymised data (e.g. location-based analytics, summary statistics), or (iii) selling or bartering personal data; while *internal* data valorisation options can encompass (iv) cross-selling of other content or services from the provider, (v) improvement of the service, leading e.g. to more page views and average time on page (leading to more ad revenue), higher conversion rates (to paying customers), cost reduction (vi) development of new content or services, or simply (vii) building a user base that can be valorised in the future, possibly by selling it to another business.

The key business models derived, distinguishing between models where the consumer does pay a price and models where no monetary compensation is requested, are listed in the table below. The categorisation is based partly on academic literature³⁴, market research studies, and the data collection conducted as part of this study. It contains some simplifications necessary to handle the complexities of software licencing, Creative Commons licences or the details of Intellectual Property rights.

Table 3 - Key business models in the data economy

Main business model	Explanation
Consumer paying the full price	
Upfront payment models	The most 'traditional' of the identified business models requires the (one-off) upfront payment of the full price by the consumer to allow access to the digital content or service. Access is granted without restrictions to the content or functionalities, and normally without time limitations (restrictions that aim at protecting the legitimate/proper use of the content or service and the intellectual

³⁴ See for instance P Hacker (2019). Daten als Gegenleistung. Rechtsgeschäfte im Spannungsfeld von DS-GVO und allgemeinem Vertragsrecht ZfPW, 148-197

Main business model	Explanation
	<p>property of the provider are natural exceptions). Consumer can expect terms and conditions not to change, or at least not to their detriment as long as the company/service is operational. This category can include lifetime subscriptions or the distribution of software which is licenced to the user for a very long, but still limited time.</p> <p>Examples: proprietary software with upfront payment or lifetime subscription options (e.g. Office 365)</p>
Subscription models	<p>In this model, consumers pay a subscription fee, usually on a monthly or annual basis. Access to the content or service is granted without restrictions for a predetermined period, but the price and other aspects of the terms and conditions may change for the next subscription period.</p> <p>Examples: subscription-based online games (e.g. World of Warcraft), news media, subscription-video-on-demand (SVoD, e.g. Netflix, Disney+)</p>
Consumer not paying the full price	
Ad-financed model	<p>The ad-financed model is ubiquitous in the digital content economy. The provider will generate all, or the overwhelming share of its business revenues from advertisers that want to target its user base. The types of ads evolve continuously and can include, inter alia: display ads (banner ads, embedded video), in-stream ads which can be targeted, if the user is profiled or generic; as well as targeted emails or SMS if the user has consented to receiving such communication.</p> <p>Examples: Search engines, Google Maps, many apps. Several news sites (many may ask for donations, complementing their revenue model - e.g. the Guardian), various specialised web content (collections of recipes, stock photo, fonts, maps...).</p>
Freemium	<p>Freemium refers to a duality of the service which includes a 'free' and a 'premium' tier: the user does not have to pay for the 'free' content or services but will not have access to all content or functionality (e.g. games with free starting levels only, free educational content but paying certificate), or only until a certain usage volume (e.g. Dropbox). The provision of personal data or user-generated content can be essential for the business model in some cases. For instance, users can assemble their family tree on genealogical sites without monetary payment, uploading data in the process that will be valuable for paying subscribers. In other cases, free-tier users will consent to receive advertisements that will cover a part of the provider's costs. In many cases, however, the personal data is not commercialised and generally not important – the free offer is only a way to attract large amounts of users who the provider hopes can be converted into paying customers (possibly upon selling the company and its user base to a larger business who would have better prospects for monetisation).</p>

Main business model	Explanation
	Examples: Dropbox, Spotify, Zoom, 2ememin ³⁵ .
'Freeware'	<p>This category includes in this categorisation digital content or services (proprietary or open-source) that is distributed at no monetary cost to the consumer, no ad revenues are sought, and the personal data of the consumer is not monetised in any other way. This category is hence used here in a somewhat broader meaning than the commonly used 'freeware' model for software. It is to be noted that DCD Article 3(5) (f) excludes from the scope of the Directive "software offered by the trader under a free and open-source licence, where the consumer does not pay a price and the personal data provided by the consumer are exclusively processed by the trader for the purpose of improving the security, compatibility or interoperability of that specific software".</p> <p>Examples: (Ad-free) freeware games and software, Linux operating systems, Open Office, Wikipedia</p>
Combined models	<p>Providers of digital content and services do often deploy various of the above 'pure' models in their operations at the same time, leading to combined models. This pattern is also confirmed by the responses to the business survey. For instance, the ad-financed model can be combined with a subscription formula or micro-transactions (e.g. partially paywalled content accessible only with a subscription or a micro-payment); in this case the free content would remain in the ad-financed model. The model of YouTube and other digital content providers is mainly ad-financed but also offering ad-free access for a subscription fee, which is not a substantial difference in accessible content or functionality to be considered 'freemium', but rather a specific combined model. Social media platforms are mostly financed through ads but they also have some subscription-based services. On the other hand, revenues in the 'freemium' model may be topped up by on-site or in-app advertisements.</p> <p>Examples: YouTube, social media</p>

Apart from the above, there are some additional – rarely used - business models using some hidden revenue generation model such as commission-free stock trading services, which mainly sell the order flow data of its customers to large traders.

The study, in its desk review of the market and the survey of business practices, has focused on the ad-financed and the freemium models. These are the two most widespread business models where consumers do not have to pay a price for access to the digital content or services but may be required to provide personal data in exchange.

³⁵ Digital games with a Pay-to-Win (P2W) logic may also be classified as 'freemium', with the status and satisfaction from being competitive in the game being the premium offering.

4.1.2. Overview of the market in selected digital content and services

There is a variety of sectors and market segments in today's economy that involve the provision of digital content or services to consumers – for which users may be obliged, for technical and/or commercial reasons, to provide certain personal data before being granted access. This obligation may not be spelled out clearly in the terms and conditions of the provider, but the website or app will simply not allow access without the user having ticked the GDPR-compliant consent box which will result in the collection and processing of at least some personal data. Many of the services rely on their users, or at least a sufficient share of their users, to share further personal data with them which will allow the provider to generate higher business revenues via – more profitable - targeted ads, or to analyse usage patterns and further improve their products or develop and market new products.

This study focused on four relatively large sub-sectors from the broader digital content and services sector, where data contracts are an important component of the business models:

- (1) Digital video and music
- (2) Digital games
- (3) Software-as-a-service
- (4) Social media

These sectors (more specifically: their B2C segments) have been estimated to achieve a combined business revenue of at least EUR 80 or 90 billion in the EU (see Table 4 below), even though robust figures are not available in the absence of specific and extensive market research. The majority of these revenues come from advertisement, although the relevance of one-off or monthly subscription fees, pay-per-view revenues or other micro-transactions is also significant in some segments.

In contrast, the economic added value and jobs generated by these digital content and service providers in the EU is only a small fraction of their revenues, as the sectors concerned are typically dominated by businesses from the US or East Asia, and to a more limited extent also from the UK (the share of European companies is somewhat more significant in the digital games sector).

Table 4 - Estimated market size of the four selected sub-sectors (ad and other revenues)

Sector	Market size	Third country dominance
(1) Digital video and music	<u>Digital video-on-demand services:</u> EUR 14.07 billion (subscription fees and transactions, not including ad revenues) (2023) ³⁶ / EUR 16.84 billion with ad revenues (i.e. ad revenues of EUR 2.77 billion) <u>Digital music services:</u> EUR 4.38 billion (subscription fees and transactions, not including ad revenues) (2023) / EUR 5.18 billion with ad revenues (i.e. ad revenues of EUR 0.8 billion). ³⁷	Dominated
(2) Digital games	EUR 23.3 billion (2022) ³⁸ / EUR 27.45 billion (2023) ³⁹	Partly dominated
(3) SaaS	<u>B2B market:</u> EUR 36.2 billion / (2022) EUR 40.5 billion (2023) ⁴⁰ <u>B2C market:</u> Unknown (but considerably smaller than B2B)	Dominated
(4) Social media	Ads: EUR 36.56 billion (2023) ⁴¹	Strongly dominated
Total (B2C)	EUR 86.03 (without B2C SaaS) ~EUR 90-100 billion (with B2C SaaS)	

The lion's share of the revenues above come from digital advertising. Digital advertisement expenditure has been growing rapidly in the past years, by one market estimate reaching an estimated EUR 86 billion in the wider European region by 2022.⁴² According to the European Audiovisual Observatory's figures, online advertising generated €45.3 billion in revenue in 2021 in the EU27 – this corresponds to €101 per inhabitant.⁴³ Statista, in its Digital Market Outlook also

³⁶ Statista (2023) Digital Market Outlook. See links below in sub-section (1).

³⁷ Statista (2023) Digital Market Outlook. See links below in sub-section (1).

³⁸ Europe's video games industry. Available at: <https://www.isfe.eu/game-industry/>

³⁹ Statista (2023) Digital Market Outlook: Video games – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/eu-27>

⁴⁰ Statista (2022) Software as a Service EU27. Available at: <https://www.statista.com/outlook/tmo/public-cloud/software-as-a-service/eu-27>

⁴¹ Statista (2023) Social Media Advertising Europe. Available at: <https://www.statista.com/outlook/dmo/digital-advertising/social-media-advertising/europe#ad-spending>

⁴² Statista (2023) Digital Market Outlook: Digital Advertising - EU-27. Available at: <https://www.statista.com/outlook/dmo/digital-advertising/eu-27?currency=EUR>

⁴³ EAO (2023) Yearbook 2022/2023 – Key trends. Available at: <https://rm.coe.int/yearbook-key-trends-2022-2023-en/1680aa9f02>

gives estimates for digital advertising spending in the EU27 (EUR 59.13 billion),⁴⁴ broken down to various segments:

- Search Advertising: EUR 26.61 bn (to grow to EUR 36.99 bn by 2027)
- In-App Advertising: EUR 19.85 bn (EUR 29,48 bn)
- Banner Advertising: EUR 14.42 bn (EUR 18.56 bn)
- Video Advertising: EUR 11.63 bn (EUR 14.72 bn)
- Social Media Advertising: EUR 16.13 bn (19.72 bn)

Note that the revenue figures for the four sub-sectors in the table above include all business models, including upfront purchases and subscription-based services, where consumers in fact pay the full price of the digital product they use.

The significance of ad revenues, or ad-financed business models in general is high in these sub-sectors – driven in particular by its significance in digital video and music and social media. Access to the browsing history of the user (via cookies) and other personal data can be important to generate higher business revenue through allowing for targeted ads using behavioural targeting, which sell for more than generic ads only. The latter can only draw on contextual information (the site or app currently used, and possibly factors such as the day of the week, the time of the day). For instance, a study from 2019 found that the average CPM (cost per thousand) of ads in their sample was USD 1.18 for ad placement through open auction transactions when tracking cookies were involved, vs. only USD 0.74 without (although note that part of the difference is explained by other factors).⁴⁵

Ads in Software-as-a-Service solutions and in digital gaming are present as well, but their share in overall revenues is more limited. Digital gaming typically involves upfront payment, and in some cases monthly subscriptions and/or in-game purchases. Ads will be usually only seen on mobile games and on game aggregator sites which offer access to gaming content for no payment. SaaS sites or apps targeting consumers may contain ads but their free-tier offerings are typically made in expectation of converting users into paying customers (possibly later by another company, upon selling the start-up that has successfully generated a large user base).

The second large business model in the sector is 'freemium', where users of a free-tier offer have access to restricted content or a limited service only; while the

⁴⁴ Statista (2023) Digital Market Outlook: Digital advertising. Available at: <https://www.statista.com/outlook/dmo/digital-advertising/search-advertising/eu-27?currency=EUR>

⁴⁵ Marotta et al (2019) Online Tracking and Publishers' Revenues: An Empirical Analysis . Available at: https://weis2019.econinfosec.org/wp-content/uploads/sites/6/2019/05/WEIS_2019_paper_38.pdf

full product is available against payment: this can be an upfront payment, a subscription fee or payment schemes linked to usage (e.g. pay-per-view). The commercial motivation of the provider to not ask for financial compensation is most often the expectation that a share of users will be converted to paying customers. This model is –especially prevalent in the SaaS sub-sector, but it is also present in the digital games sub-sector where initial levels can be accessed freely, as well as in certain social media sites where some features or functionalities are not available for users of the free tier. It is important to note that while users' personal data will be requested and processed under the freemium business model, business revenues depend on it only to a very small extent, unlike under the ad-financed model.

Table 5 - Significance of key business models in the selected sectors

Sector	Ad-financed model	Freemium	Explanation and comments
(1) Digital video and music	High	Medium	The weight of subscription-based streaming (e.g. Netflix) or transactional video-on-demand (e.g. YouTube Movies) is high in the video sector, but video sharing platforms which offer 'free-to-view' content (YouTube) primarily rely on ad revenues. Premium services – corresponding to a freemium model – can be also important sources of revenue for some providers. ⁴⁶⁴⁷ In digital music, the weight of ads revenue streams is about 15% (the rest is direct payment from users), but this links to an ad-free freemium model only to a small extent.
(2) Digital games	Low	Medium	For most digital games, the upfront payment or a monthly subscription fee are the main revenue sources. In-game purchases also gain in importance. Digital games that do not ask for an upfront or monthly payment ('Free to play') rely to a large extent on in-game purchases ⁴⁸ ,

⁴⁶ YouTube, the largest video sharing platform globally, reached ad revenues of \$28.8 billion in 2021 (and has remained stable since, see: <https://www.statista.com/statistics/289657/youtube-global-quarterly-advertising-revenues/>). Revenues from the ad-free Premium service might have reached \$7 billion. YouTube also receives a cut from user spending on Channel Memberships, Super Chats, Super Stickers and Super Thanks, See: <https://whatisthebusinessmodelof.com/business-models/youtube-business-model/>

⁴⁷ Video ad spending, according to the Statista Digital Market Outlook, reached €11.63 billion in the EU27 in 2023. See: <https://www.statista.com/outlook/dmo/digital-advertising/video-advertising/eu-27>

⁴⁸ This category, interpreted broadly, also includes the cut that the game operator gets from transactions on online marketplaces where virtual items are bought and sold between players.

Sector	Ad-financed model	Freemium	Explanation and comments
			while in-game ads play a smaller role. ⁴⁹ ⁵⁰ However, 'Free to play' games can also serve as teasers for a full (paying) version of the game, which leads to the freemium model.
(3) SaaS	Medium	High	Ads can be very important for instance for map ⁵¹ or email providers ⁵² , but they would be only moderately important to negligible for services like office software, cloud storage and file sharing, image and video editing, or automated translation. These services are predominantly running under the freemium model (certain companies may be focussing only on user accumulation or cross-selling and not have a sustainable business model for their service in isolation).
(4) Social media	High	Medium	The prime revenue of social media sites comes from personalised ads, but subscriptions under a freemium model are also present.

Using a different, supply-side based methodology, it can also be estimated that the above four digital content and services sub-sectors represent around 1% of the EU economy, based on the turnover data available on Eurostat for 2019⁵³. This estimate does not consider tangible goods with digital content, due to lack of comprehensive and reliable data on the sector. Furthermore, the total turnover generated by these sectors cannot be fully attributed to activities that involve the

⁴⁹ Alha K (2020) The Rise of Free-to-Play: How the revenue model changed games and playing (dissertation). Available at: <https://researchportal.tuni.fi/en/publications/the-rise-of-free-to-play-how-the-revenue-model-changed-games-and->

⁵⁰ Statista in its Digital Market Outlook has estimated revenues from in-game advertising at €1.59bn in 2023 (5.8% of the total revenues of the digital gaming sector). See: Statista (2023) Digital Market Outlook: In-game advertising – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/in-game-advertising/eu-27>

⁵¹ The business model of Google Maps, the largest business in digital mapping services by far, is based on local ads (one source - <https://www.kamilfranek.com/how-google-maps-makes-money/> - estimates annual revenues to be around €3.5 billion globally) and to a lesser extent on fees it receives from businesses who can embed the Google Maps API into their website or app, as well as from other partnerships (0.8 billion).

⁵² The main revenue sources for Gmail are contextual inbox ads (on a pay-per-click basis), as well as other revenues from advertisers with whom user data is shared. Additional sources include subscription fees from its Gsuite service and fees from sites that use Gmail accounts as a login and authentication tool (see: <https://moneymodels.org/business-models/how-does-gmail-make-money/>).

⁵³ Data based on NACE codes J63, J58.2, J59. A full list of NACE codes can be found here: https://ec.europa.eu/competition/mergers/cases/index/nace_all.html

collection and processing of personal data (revenues can also originate for instance from businesses using the digital services via B2B contracts). Given the rapid development of the digital economy, with growth rates reaching 5-8% per year, as indicated earlier, it is likely that the size of the sector will be markedly larger as of 2023.

The following sections provide more detail on the selected sub-sectors covered in the study. Notably, they give a brief description of the market, overall statistics of use and revenues, and list key players in the sector.

(1) Digital video and music

The digital video and music sector is understood as the provision of audio-visual content distributed over the internet directly to the end-user (so-called over-the-top – OTT – media services), hence not utilising cable or satellite television platforms. Pay-TV and other internet TV and radio with pre-scheduled programmes (also called 'linear' audiovisual services), which are traditional ad-supported services only using the internet as a technical distribution channel, and audio books accessible through specific devices (e.g., Kindle, which we may cover under the goods with digital elements category) are not included in the scope of this study.

The digital video content in scope covers many formats accessible through desktops and laptops, smartphones, tablets and smart TVs (the latter is discussed among goods with digital elements). This content can be classified as entertainment (shows or movies, music videos, etc.), informative material or advertisements, either pre-existing or produced specifically for digital platforms. The video-on-demand sector includes the following major paying segments:

- pay-per-view streaming (Transactional-Video-on-Demand or TvoD), which involves time-limited access to – rental of – premium video content through a single transaction;
- subscription-based streaming services (Subscription-Video-on-Demand or SvoD), where users pay a regular fee for unlimited access to various media in the content library of the provider; and
- video download (Electronic-Sell-Through or EST), where premium digital video can be downloaded, or permanently stored on cloud for a one-off fee.

A further type of service, free-on-demand (FoD) premium video services, offers similar content but for free. This covers publicly accessible internet media libraries of commercial or public TV channels (Broadcaster-Video-on-Demand or BvoD), and the service is financed via ads or, for public broadcasters, also through public funding. Another type of FoD service is specialised Advertising-financed-Video-on-Demand (AvoD) services, not TV traditional channels themselves, but

behaving like such channels by offering their content in exchange for also showing advertisements to users. It should be noted here that EU consumer law at the moment does not recognise a situation where consumers are paying for online services with the time or attention devoted by them to watching advertisements. As another type of free – but not ‘on-demand’ - services, free ad-supported streaming TV (FAST) is even more akin to traditional linear TV as it does not offer viewers a library from which they can choose the videos they would like to watch, but a range of channels that stream videos in a linear fashion in exchange for watching advertisements.

In addition, there are digital video platforms, such as YouTube, that offer – usually – third-party content for free (although not ‘premium’ content), supported by advertisements, or within the framework of a freemium model, where subscribing customers may have access to ad-free content or add-on features. These platforms may also offer in addition certain premium videos on a pay-per-view basis.

Outside the realm of professional/for-profit video content, media platforms also offer, or are specialised in, amateur “user-generated” videos and even include livestreaming video apps (Meerkat and Periscope were earlier independent apps, the market today is dominated by large social media apps). Social media platforms are also increasingly allowing the hosting of videos and are thus involved in the digital video sharing and livestreaming market.

With regard to digital music, the two main segments of distribution are:

- music streaming services, which allow users listen to the music in their content libraries with various devices and provide additional features such as generating and sharing playlists;
- music downloads, where user can access and download, for a one-time payment or for free, single tracks of albums for permanent use.

Some industry reports also mention mobile personalisation as a separate segment for the distribution of digital music, which refers to the now very small or almost non-existent market for the download of ringtones or ringback tones, and not to personalisation features of music streaming apps.⁵⁴

Size of the sector

The provision of digital video and music content, whether for payment or in exchange of personal data, is an important and fast-growing sector in Europe.

⁵⁴Persistence Digital Music Market: global industry Trend Analysis 2013 to 2017 and Forecast 2018 - 2028. Available at: <https://www.persistencemarketresearch.com/market-research/digital-music-market.asp>

However, Eurostat's traditional NACE categories do not adequately capture the boundaries of the market. A number of NACE codes can be associated with such economic activities, such as: J59.20 – Sound recording and music publishing activities, J62.01 – Computer programming activities, J62.02 – Computer consultancy activities, J63.12 – Web portals.

Data on the size of the market comes from alternative sources. For 2023, the Digital Market Outlook published by Statista estimates total business revenues for **paid digital video services** at about EUR 16.84 billion for the EU-27, while the market size of ad-financed 'Free to view' services is estimated at EUR 2.77 billion.

The Digital Market Outlook provides the following revenue estimates for the individual market segments – without digital video platforms - for 2023, which illustrate that streaming services are the most important ones in terms of turnover:

Table 6 - Revenue estimates for digital video services in the EU27, by market segment (2023)

Segment	Revenues 2023	Revenues 2027
Video Streaming (SVoD) ⁵⁵	€10.91 billion	€16.32 billion
Pay-per-View (TVoD) ⁵⁶	€2.12 billion	€2.73 billion
Video Downloads (EST) ⁵⁷	€1.03 billion	€1.09 billion
Total	€14.07 billion	€20.14 billion
Ad-financed video-on-demand (AVoD) ⁵⁸	€2.52 billion	€3.64 billion
Free ad-supported streaming TV (FAST) ⁵⁹	€0.25 billion	€0.41 billion
Grand total	€16.84 billion	€24.19 billion

Source: Statista Digital Market Outlook

⁵⁵ Statista (2023) Digital Market Outlook: Video streaming– EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-on-demand/video-streaming-svod/eu-27>

⁵⁶ Statista (2023) Digital Market Outlook: Pay-per-view– EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-on-demand/pay-per-view-tvod/eu-27>

⁵⁷ Statista (2023) Digital Market Outlook: Video-downloads – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-on-demand/video-downloads-est/eu-27>

⁵⁸ Statista (2023) Digital Market Outlook: Advertising AVoD) – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-on-demand/advertising-avod/eu-27>

⁵⁹ Statista (2023) Digital Market Outlook: Free-ad-supported streaming– EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-on-demand/free-ad-supported-streaming-tv-fast/eu-27>

The 2020 Yearbook of the European Audiovisual Observatory gives lower figures for 2019 for two digital video segments (EUR 5,190.3 million revenue for SVoD and EUR 1,216.4 million for TVoD), but considering the strong upward trend of revenues in previous years, the two estimates are more or less in line.

Other revenue numbers from the European Audiovisual Observatory indicate 2020 revenues for the E-28 - i.e. UK included - of EUR 9.7 billion and continuously increasing for SVoD, and EUR 1.9 billion but decreasing for TVoD.⁶⁰ This publication also indicates the revenues of the two remaining segments:

- Ad-financed/Broadcaster video on demand (AVoD/BVoD): EUR 700 million (data from 13 providers, includes the UK)
- Online video advertising revenues (video sharing platforms and social media): EUR 12.2 billion (with UK)

EAO also reports that in 2022 there were 3,195 video on-demand services and video sharing platforms in wider Europe – a group of countries that also includes, apart from the EU27, Albania, Armenia, Bosnia and Herzegovina, Georgia, Iceland, Liechtenstein, Montenegro, North Macedonia, the Republic of Moldova, Norway, Serbia, Switzerland, Türkiye, the United Kingdom and Ukraine.⁶¹ EAO's MAVISE database counts 2,350 services registered in the EU27 alone, of which 53 are online video sharing platforms and 2,297 are video-on-demand services as of June 2023.⁶²

On-demand pay revenues - i.e. subscription fees or revenues from pay-per-view transactions but not ad revenues - in the European region reached €16.2 billion in 2021. Since 2017, when revenues were at €5.3 billion, average annual growth was 34.2%.⁶³

For 'paid' **digital music services**, when not including the ad revenues linked to free video and music content (i.e. subscriptions and pay-per-view or per download), the size of the market in the EU is estimated to be about EUR 4.38 billion as of 2023. The corresponding figure with ad revenues counted in is EUR 5.18 billion. Market revenue breakdowns by segment are presented in the table below.

Table 7 - Revenue estimates for digital music services in the EU27, by market segment (2023)

Segment	Revenues 2023	Revenues 2027
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⁶⁰ Grece (2021) Trends in the VOD market in EU28, European Audiovisual Observatory. Available at: <https://rm.coe.int/trends-in-the-vod-market-in-eu28-final-version/1680a1511a>

⁶¹ EAO (2023) Yearbook 2022/2023 – Key trends. Available at: <https://rm.coe.int/yearbook-key-trends-2022-2023-en/1680aa9f02>

⁶² <http://mavise.obs.coe.int/>

⁶³ EAO (2023)

Music streaming⁶⁴	€4.18 billion	€4.96 billion
Music downloads⁶⁵	€0.20 billion	€0.19 billion
Total	€4.38 billion	€5.15 billion
Music streaming advertising⁶⁶	€0.55 billion	€0.72 billion
Podcast advertising⁶⁷	€0.25 billion	€0.34 billion
Grand total	€5.18 billion	€6.21 billion

Source: Statista Digital Market Outlook

Key players

Online video and music offerings are primarily controlled by American companies, even though most of them also have European headquarters. The tables below present a list of major video and music content providers; companies headquartered in the EU27 are listed separately. The lists are based on the best information available – companies listed in other studies as the largest players; companies analysed in market studies; companies listed in online directories; members of industry associations - but are not to be taken as authoritative and complete lists.

Table 8 - List of major digital video service providers – Third countries

Segment	Country	Name	EU legal entity
Transactional VoD	Japan	Rakuten TV (also ad-financed free offers)	yes
	United Kingdom	FilmDoo	yes
	United Kingdom	MUBI	unknown
	United States	Apple iTunes	yes
	United States	Google Play	yes
	United States	Amazon Prime Video	yes
	United States	YouTube Movies	yes
	United States	Microsoft Movies & TV	yes
	United States	PlayStation Store	yes
	United States	Liberty Global UPC/Virgin	unknown

⁶⁴ Statista (2023) Digital Market Outlook: Music streaming - EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/digital-music/music-streaming/eu-27>

⁶⁵ Statista (2023) Digital Market Outlook: Music downloads - EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/digital-music/music-downloads/eu-27>

⁶⁶ Statista (2023) Digital Market Outlook: Music streaming advertising - EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/digital-music/music-streaming-advertising/eu-27>

⁶⁷ Statista (2023) Digital Market Outlook: Podcast advertising - EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/digital-music/podcast-advertising/eu-27>

Segment	Country	Name	EU legal entity
Subscription VoD	Norway/United States	TIDAL	yes
	United Kingdom	NOW/Sky Ticket	yes
	United Kingdom	Britbox	yes
	United States	Netflix	yes
	United States	Amazon Prime Video	yes
	United States	Disney+	yes
	United States	HBO Max	yes
	United States	Paramount+	yes
	United States	Apple TV+	yes
	United States	Starz	yes
	United States	Showtime	yes
	United States	Discovery+	yes
	United States	DAZN	yes
	United States	DAZN	yes
Ad-financed VoD	Japan	Rakuten TV (also TVoD)	yes
	United States	Pluto TV	yes
	United States	Tubi	unknown
	United States	Plex TV	yes
	United States	Xumo	unknown
	United States	Vudu	yes
	United States	IMDb TV	yes
	United States	Roku Channel	yes
	United States	Roku Channel	yes
Video downloads	Canada	Utreon	no
	United States	Apple iTunes	yes
	United States	Google Play	yes
	United States	Amazon Prime Video	yes
Video sharing platforms	United States	YouTube	yes
	United States	Vimeo	unknown
	United States	Veoh	unknown
	United States	Ustream	unknown
	United States	Clash	unknown
	United States	Odysee / LBRY	unknown
	United States	Odysee / LBRY	unknown
Social media	Russia	Vk (VKontakte)	no
	United States	Facebook Watch	yes
	United States	Snapchat	yes
	United States	IGTV / Instagram	yes
	United States and Singapore (originally China)	TikTok	yes
	United States	Twitch	yes

Table 9 - List of major digital video service providers – EU27

Segment	Country	Name
Transactional VoD	Italy	Chili
	Germany	Pantaflix
	Sweden	Viaplay
	Sweden	SF Anytime
	French	Wakanim
Subscription VoD	Sweden	Viaplay
	Italy	Mediaset Infinity
	Italy	TIMVision
	Sweden	C More
	Netherlands	Videoland
	Finland	Ruutu+
	Czechia	Topfun
	Germany	Maxdome/Joyn/Pro7 (also ad-financed free offers)
	France	Salto
	Spain	Mitele Plus
	Poland	cda.pl
Ad-financed VoD / Broadcaster VoD	France	Molotov TV
	France	MyTF1 / TF1
	France	6play / M6
	Germany	Joyn/Pro7 (also SVoD)
	Germany	TVNOW/RTL
	Italy	Chili AVoD
	Spain	Antena 3
	Spain	ATRESplayer/Atresmedia
Video sharing platforms	Bulgaria	VBOX7
	France	Dailymotion

Table 10 - List of major digital music service providers – Third countries

Segment	Country	Name	EU legal entity
Streaming	China	NetEase Cloud Music	unknown
	Russia	Yandex	Finland
	United Kingdom	Last.fm	UK
	United States	Apple Music	unknown
	United States	Amazon Prime Music	Luxembourg
	United States	Band Camp	unknown
	United States	Apple Music	yes
	United States	YouTube Music	yes
	United States	Jango Radio	unknown
	United States	iHeart Radio	no
	United States	Pandora	unknown

Segment	Country	Name	EU legal entity
	United States	Music Ally	unknown
	United States / Norway	Tidal	yes
Downloads (premium)	United States	Apple iTunes	yes
	United States	Youtube Music	yes
	United States	Amazon MP3	yes
Downloads (user uploads)	United States	NoiseTrade	unknown
	United States	SoundOwl	unknown
	United States	Free Music Archive	unknown

Table 11 - List of major digital music service providers – EU27

Segment	Country	Name
Streaming	France	Deezer
	France	Qobuz
	Sweden	Spotify
	Sweden	SoundCloud
Downloads		
	Luxembourg	Jamendo
	Sweden	SoundCloud

(2) Digital games

Video games or digital games (formerly also known as interactive entertainment) are an economic sector engaged in the development, marketing and distribution of video and computer games. Video game industry representatives do not consider gamified educational content (edu-games) or advergames⁶⁸ as part of their sector. While it is not easy to draw the line between edu-games and games that also educate, as well as advergames and video games with in-game ads, our intention is to exclude the first-mentioned types of games from the scope of the study⁶⁹ as the boundaries may not be sharply defined.

Video games are published on different platforms: (i) PC/Mac; (ii) game consoles and handhelds; (iii) mobile devices (smartphones and tablets); (iv) internet

⁶⁸ Advergames are free video games specifically developed for the purpose of advertising a brand and often target children in order to start building brand recognition and loyalty among them. Video games outside of this category (most free-to-play mobile games for instance) can also source some or most of their revenue from in-game advertising. However, these do not build the game around a given brand. They only add advertisements typically through third-party mobile ad networks using various possible formats.

⁶⁹ Although educational game platforms could, for instance, be included.

browsers/cloud (i.e. directly playable from browser); or (v) virtual and augmented reality (VR/AR) devices.

These platforms have some bearing on how the games generate revenue and the underlying business models in general, but these revenue models are not fully linked to, or explained by, the platform.

Further segmentation is provided in the Statista Digital Market Outlook⁷⁰ which defines six sub-sectors within the video games industry:

- Download games: this group contains full-version video games, typically for PC/Mac (but also consoles) that are sold and downloaded online. They are typically fully paid for upfront, although they can also include in certain cases in-game purchases. The most important traders in this segment are Steam, PlayStation Store and Xbox Games Store. In this first category consumers pay the full price of the game (notwithstanding the possibility for further in-game purchases).
- Online games: these games can be either played directly in the internet browser or via clients installed on the user's computer. Games in this category do not have a purchase price that needs to be paid upfront; instead they are financed either via a subscription, or free-to-play games with an in-game payment system for additional content or functionalities (this can cover various freemium models, although Statista does not necessarily include these in their market size calculations). In-game ads may also be present. The group includes massive multiplayer online games (MMOGs), but also a broad range of casual and social games. This group (the subscription-based and free-to-play games alike) do fall under the scope of the study according to our understanding. For the former, the periodic subscription is a monetary counter-performance, but the processing of personal data plays an important part.
- Mobile/tablet games: this category covers gaming apps developed specifically for smart devices such as smartphones and tablets. These are either offered for an upfront payment in app stores (Google's Play Store and Apple's App Store) or are entirely free-to-play or freemium with in-app purchases for additional content or access time. Freeware games are usually either short test versions of games in development or follow an ad-financed model. This category is highly relevant for the purposes of the study.
- Gaming networks: this category refers to subscription services for access to premium online gaming services, mostly via consoles (Xbox Live Gold, PlayStation Plus, or Nintendo Switch Online). Specific features that online games do not have include the recording and sharing of sessions;

⁷⁰ Statista (2023) Gaming Networks worldwide. Available at:
<https://www.statista.com/outlook/dmo/digital-media/video-games/gaming-networks/>

furthermore, they may offer a monthly selection of free games, early access to new feature games, and other special offers.

- Cloud gaming: a subset of online gaming, in cloud gaming players can play on their devices without a dedicated gaming hardware or the local installation of games. The games are stored and run on remote servers, players can choose the game they wish to play from a large library. Cloud gaming services typically ask for a subscription fee from users.
- Games live streaming: the last segment in this sector, as categorised by Statista, involves the broadcasting of video gameplay (or eSports events) and commentary in real-time to an online audience. Platforms include Twitch, YouTube Gaming and Facebook Gaming.

Size of the sector

While the digital games sector has a significant and increasing role to play in the European economy, obtaining accurate data on its overall size and structure is not easy. The sector cannot be linked to specific NACE codes in a straightforward manner. In effect, its various sub-sectors are hidden as part of a range of NACE codes.

NACE code, J58.21 – Publishing of computer games - focuses on the publishing (and not the development) of digital games – whether the games were developed by third parties or in-house. Many companies from the more numerous groups of game developers (see the value chain of the industry) would not naturally use this code to classify themselves or their economic activities. In addition, as the statistical classification refers to 'computer games', companies that publish mobile game apps or browser games can interpret this as games published for a PC/Mac platform only. Therefore, some publishing activities where the target platform is a mobile or a console, or even the web (browser games), would not appear under this heading.

Game development activities are said to be currently split between: J62.01 – Computer programming activities, R90.03 – Artistic creation, C32.40 – Manufacture of games and toys, R93.19 – Other sports activities (for e-Sports), J62.02 – Computer consultancy activities, J63.12 – Web portals, M72.20 – Research and experimental development on social sciences and humanities, or P85.6 – Educational support activities.⁷¹ This means that we cannot source data from Eurostat to assess the size of the sector, as J58.21 would result in a very severe undercounting of company numbers, employment, turnover and gross value added (GVA). Furthermore, some gambling companies that would be

⁷¹ European Games Developer Federation (2021) Business statistics. Available at: <https://www.egdf.eu/documentation/5-fair-digital-markets/building-a-functional-digital-market-area-2/business-statistics-2021/>

correctly classified under R92 also use the J58.21 code, resulting in a slight overcount.

For 2019, Eurostat reports about 2,900 companies registered in the EU27 under the NACE code J58.21 – Publishing of computer games, generating a turnover of close to EUR 10 billion and GVA of over EUR 4 billion. This NACE sector employed about 24,000 people.

In contrast, the association European Games Developer Federation (EGDF), representing mostly SMEs, reports for the same year about 4,300 companies (about 230 publishers and 4,080 developers) active in the digital game sector for the 20 EU MS with data⁷², and employing about 72,000 people.⁷³ Industry data published by Interactive Software Federation of Europe (ISFE), representing both European SMEs and large publishers or gaming platforms, most of which are headquartered in third countries, suggests a turnover of EUR 23.3 billion in the European video game sector (UK included).⁷⁴

Statista's Digital Market Outlook also gives considerably higher projected figures for business revenues (for 2023) than those suggested by Eurostat's data. Their estimate for the EU27 amounts to EUR 27.45 billion, projected to grow to €38.80 billion by 2027 –this covers revenues directly obtained from customers in the form of upfront purchase, subscription fees, in-game transactions and in-game ads – however it does not include various revenues from advertisement that are not classified as in-game ads, such as banner ads on mobile gaming platforms.⁷⁵ Statista also separately estimates revenues from in-game advertising, which was projected to reach €1.59bn in 2023 (only 5.8% of the total revenues of the sector), and €2.07 billion by 2027.⁷⁶ Digital gaming businesses are also likely to be able to obtain a small slice of banner advertising (the total was estimated at €14.42 billion, as presented earlier) and social media advertising spending (a total of €16.13 billion).

Mobile games are by far the largest segment in terms of customer revenue. Statista's projections, customer revenues in the six above segments in 2023 and 2027 are given in the table below:

⁷² The seven MS not covered are: Austria, Croatia, Cyprus, Estonia, Hungary, Luxembourg and Malta.

⁷³ European Games Developer Federation (2021) Insights report of 2019. Available at: https://www.egdf.eu/wp-content/uploads/2021/08/EGDF_report2021.pdf

⁷⁴ Europe's video games industry. Available at: <https://www.isfe.eu/game-industry/>

⁷⁵ Statista (2023) Digital Market Outlook: Video games – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/eu-27>

⁷⁶ Statista (2023) Digital Market Outlook: In-game advertising – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/in-game-advertising/eu-27>

Table 12 - Revenue estimates for digital gaming in the EU27, by market segment (2023)

Segment	Revenues 2023	Revenues 2027
Mobile games⁷⁷	€16.63 billion	€22.18 billion
Download games⁷⁸	€3.35 billion	€4.35 billion
Online games⁷⁹	€2.31 billion	€2.88 billion
Gaming networks⁸⁰	€0.81 billion	€1.07 billion
Cloud gaming⁸¹	€0.72 billion	€3.18 billion
Games live streaming⁸²	€2.03 billion	€3.08 billion
Total	€25.86 billion	€36.73 billion
<i>In-game advertising</i>	<i>€1.59 billion</i>	<i>€2.07 billion</i>
Grand total	€27.45 billion	€38.80 billion

Source: Statista Digital Market Outlook

ISFE breaks down its reported EUR 23.3 billion of revenues as follows:⁸³

- 44% consoles
- 40% mobile (smartphone/tablet)
- 14% PC
- 2% on-demand/streaming (this refers to gaming networks)

In terms of breakdown by source of revenues, they give the following figures:

- 40% online revenue (full game downloads, in-game extras such as DLC⁸⁴, social games, browser games)

⁷⁷ Statista (2023) Digital Market Outlook: Mobile games – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/mobile-games/eu-27>

⁷⁸ Statista (2023) Digital Market Outlook: Download games – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/download-games/eu-27>

⁷⁹ Statista (2023) Digital Market Outlook: Online games – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/online-games/eu-27>

⁸⁰ Statista (2023) Digital Market Outlook: Gaming networks– EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/gaming-networks/eu-27>

⁸¹ Statista (2023) Digital Market Outlook: Cloud gaming– EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/cloud-gaming/eu-27>

⁸² Statista (2023) Digital Market Outlook: Games live streaming – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/games-live-streaming/eu-27>

⁸³ Europe's video games industry. 2021 key facts about the European video games sector. Available at: <https://www.isfe.eu/data-key-facts/key-facts-about-europe-s-video-games-sector/>

⁸⁴ Downloadable content

- 40% app revenue (paid apps, in-app purchases)
- 20% physical revenue (from physical copies of games – this refers mainly to console games)

The figures above suggest that this constitutes only a relatively small share of the total market sector, but it may still be worth considering it among the enquiry into tangible goods (it is recommended that the tangible goods category will look at the consoles market; the focus is not on the physical copies of games for the consoles but on the console connected to a gaming platform).

Key players

Video game publishing is globally dominated by Asian and American companies, all of which typically have a European presence for legal, business, and corporate policy/government relations reasons. While the GDPR applies also to smaller third-country publishers without a legal entity as they handle the personal data of European users (although some may not be fully compliant and the assessment of compliance would require an inquiry into the equivalency of data protection rules in the countries they have their headquarters in), European company law does not apply to them.

The tables below present the list of the most important digital retailers ('digital distributors') and gaming network platforms, and the largest game publishers; with companies headquartered in the EU27 listed separately. The lists are based on the best information available but are not to be taken as authoritative and complete lists.

Table 13 - List of major digital game distributors and gaming networks – Third countries

Platform	Country	Name	EU legal entity
Console	United States	Microsoft Store	yes
	Japan	Nintendo eShop	yes
	United States	PlayStation Store	yes
	United States	Xbox Games Store	yes
PC	Canada	Beamdog	no
	China	WeGame (Tencent)	unknown
	United Kingdom	Green Man Gaming	no
	United States	Amazon Digital Game Store	yes
	United States	Battle.net (Blizzard)	yes
	United States	Bethesda.net	yes
	United States	Discord Store	yes
	United States	EA Origin	yes
	United States	Epic Games Store	yes
	United States	Game Jolt	unknown
	United States	GameFly	no

Platform	Country	Name	EU legal entity
	United States	GameHouse	yes
	United States	Google Chrome Web Store	yes
	United States	Humble Store	no
	United States	Itch.io	unknown
	United States	Mac App Store	yes
	United States	Microsoft Store	yes
	United States	Pogo.com	unknown
	United States	Roblox	unknown
	United States	Steam	yes
	United States	WildTangent	unknown
Mobile – using own platforms	China	Huawei AppGallery	yes
	South Korea	Samsung Galaxy Store	yes
	United States	Amazon Appstore	yes
	United States	Apple App Store	yes
	United States	Google Play Store	yes
	United States	Microsoft Store	yes
	United States	OpenStore (Ubuntu)	unknown
	United States	Opera Mobile Store	unknown
	United States	PureOS Software Center	unknown
	United States	Snap Store	unknown
Mobile – using third-party platforms	United Kingdom	F-Droid	no
	United States	MiKandi	unknown

Table 14 - List of major digital game distributors and gaming networks – EU27

Platform	Country	Name
PC	France	dotEMU (Focus)
	France	Metaboli / GamesPlanet
	France	Ubisoft Connect
	Poland	GOG.com
	Spain	Robot Cache
	Sweden	GamersGate
Mobile – using third-party platforms	Lithuania	GetJar
	Portugal	Aptoide
	Sweden	Appland
	Sweden	GamersGate

Table 15 - List of major video game publishers – Third countries

Country	Name	EU legal entity
China	NetEase	yes
China	Tencent Games	yes
Japan	Nintendo	yes
Japan	Sega	yes
Japan	Bandai Namco	unknown
Japan	Capcom	unknown
Japan	GungHo Online Entertainment	unknown
Japan	Konami	unknown
Japan	Square Enix	yes
Japan, United States	Sony Interactive Entertainment	yes
South Korea	Netmarble	unknown
South Korea, Japan	Nexon	unknown
United States	Microsoft	yes
United States	Activision Blizzard	yes
United States	Electronic Arts	yes
United States	Epic Games	yes
United States	Microsoft	yes
United States	Take-Two Interactive	unknown
United States	Valve	unknown

Table 16 - List of major video game publishers – EU27

Country	Name
France	Ubisoft
Sweden	King Digital Entertainment
Sweden	Embracer Group
Italy	505 Games
France	Focus Entertainment
France	Nacon
Sweden	Paradox Interactive
Cyprus	Wargaming
Finland	Rovio Entertainment
France	Gameloft
Germany	Astragon
Germany	Daedalic Entertainment
Germany	Kalypso Media
Lithuania	Nordcurrent
Poland	All in! Games
Sweden	Raw Fury
Netherlands	Iceberg Interactive

There are a number of sites, hosted in both third countries and the EU27, that offer a selection of free-to-play games. Although this is a smaller sub-sector in

terms of revenues, they are relevant for the study. Examples are given in the table below.

Table 17 - Free online game sites - EU27

Country	Site
Finland	Pelikone
Finland	Alypaa
Netherlands	Poki
Netherlands	Hyves Games
Poland	GRY-OnLine

(3) Software-as-a-service

Software as a service (SaaS) is a 'software-on-demand' model, meaning that the software is not permanently purchased and installed on a computer or mobile device, but is licensed on a subscription basis and is hosted centrally by the service provider, accessible via the web. The service provider remains responsible for the infrastructure (hardware) on which the software runs, and for keeping the software up-to-date and secure.

SaaS is used extensively today by companies or other organisations in B2B relations, and this is clearly the user segment that is primarily meant when SaaS is mentioned. In this study, however, only B2C contracts are covered, but SaaS tools – although they would likely not be identified as SaaS tools, but rather as 'online tools' or 'apps' - are also ubiquitous among consumer (individual) software solutions. The range of SaaS tools is very broad, and there is no authoritative classification of these into segments. Examples for possible sub-categories that could be included in the study involve areas such as:

- Office software
- Cloud storage and file sharing
- Email
- Instant messaging
- Image editing
- Audio/video management and editing
- Translation tools
- Mapping software

As SaaS tools only install a relatively 'lean' client, and the actual computational work takes place centrally, the constant flow of personal data to the service provider, and the processing of these, is a necessity. In some cases, the client software pack can even be integrated into the web browser. For more developed SaaS tools, a larger software package will need to be installed on a computer or a mobile device.

A related term is Platform-as-a-service (PaaS), which refers to cloud platform services open to developers, providing them with a ready-to-use framework, software, and tools to build their own applications or software. Individual consumers may use such services for non-professional purposes, but this would be atypical. Professional use falls outside the scope of the study.

Size of the sector

Data on the size of the SaaS sector specifically for private users (consumers) is not available. Reports on the SaaS market focus exclusively or primarily on the B2B segment. According to figures from Statista, SaaS sales in only five EU MS⁸⁵ reached EUR 15.75 billion in 2020.⁸⁶ In another publication, they project a total market size of EUR 36.2 billion for the EU27 by 2022.⁸⁷

Figures are not available on the revenues of consumer SaaS products, and there are especially no estimates on revenues from advertisements for tools that are free to use (or freemium).

Key players

The table below provides examples for SaaS consumer solutions (but it is to be noted that many of them are also used by companies; business use may be dominant for some) for the categories tentatively proposed above. The tools identified are overwhelmingly offered by third-country companies, but an initial short list of EU-based SaaS tools is also provided. European companies have a very significant presence in B2B SaaS solutions, but they tend to be relatively smaller providers in the area of consumer online tools and various mobile apps.

⁸⁵ Germany, France, Italy, Netherlands and Belgium.

⁸⁶ Statista (2023) SaaS vs. other software market revenue in Europe 2020 & 2025, by country. Available at: <https://www.statista.com/statistics/1219237/saas-versus-other-software-market-revenue-europe-bycountry/>

⁸⁷ Statista (2022) Software as a Service EU27. Available at: <https://www.statista.com/outlook/tmo/public-cloud/software-as-a-service/eu-27>

Table 18 - List of consumer SaaS tools – Third countries

Country	Name
Office software	
China	WPS Office Free
India	Zoho Workplace
South Korea	Polaris Office
United States	Google Docs
United States	Microsoft 365 online
Cloud storage and file sharing	
Canada	Sync.com
New Zealand	MEGA
Switzerland	pCloud
United States	Google Drive
United States	iCloud
United States	Dropbox
United States	Box
United States	Microsoft OneDrive
United States	Imgur
United States	Onehub
United States	MediaFire
Email	
Switzerland	ProtonMail
United States	Gmail
United States	iCloud Mail
United States	GMX
United States	Yahoo ! Mail
Instant messaging	
China/Singapore	WeChat
United States	Facebook Messenger
United States	WhatsApp
United States	Slack
United States	Glip
United States	Flock
Image editing	
Australia	Canva
Canada/United States	Flickr
United States	Pixlr
United States	Fotor
United States	BeFunky
Audio management and editing	
Canada	TwistedWave
China (Hong Kong)	Apowersoft
United Arab Emirates	Audio Joiner (123 apps)
United States	media.io
United States	Bear Audio Tool
United States	Audacity Audio Editor Online

Country	Name
Video management and editing	
Armenia	Renderforest
Australia	ClipChamp
United Kingdom	Veed
United States	Adobe Spark / Adobe Creative Cloud Express
United States	Kapwing
United States	InVideo
United States	Animoto
United States	Wave.video
Translation tools	
Russia	Yandex Translate
United States	Google Translate
United States	Microsoft Text Translation
United States	IBM Watson Language Translator
Mapping software	
United Kingdom	OpenStreetMap
United States	Google Maps
United States	Apple Maps
United States	Bing Maps
United States	MapQuest
United States	HERE WeGo

Table 19 - List of consumer SaaS tools – EU27

Category	Tool
Office software	SoftMaker FreeOffice (DE), Libre Office (DE)
Cloud storage and file sharing	Nextcloud (DE), WeTransfer (NL)
Image editing	DxO PhotoLab (FR), designit (DK)
Audio management and editing	Audacity (CY)
Video management and editing	Kizoa (FR)
Translation tools	Translator.eu (CZ), DeepL (DE), Linguatools (DE), SYSTRAN.io (FR)
Mapping software	TomTom (NL)

(4) Social media

Social media is a summary term describing interactive online platforms and applications that allow users to create, modify and share online digital content themselves and participate in social networking. They are thus focused on user-generated content, and on deriving value from user profiles and from interlinking them with each other or with interested businesses.

User profiles and the analysis of their behaviour (the content they read, upload, share, the profiles they interact with, etc.) allow for efficient customised ad

targeting. Accordingly, personal data collected by the platforms can be very valuable in this context. In addition, through the networks on social media platforms where content is re-shared by individual users, social media can be the scene of viral marketing or information campaigns, with users themselves contributing to spreading the message. Social media platforms are also characterised by bots that can expand and nurture the established social networks, and upload and share content automatically, without any human labour expenditure by businesses.

A possible categorisation of social media is given in Aichner and Jacob (2015)⁸⁸, which offers the following 12 types:

- Social network sites: the core category of sites are general social networks that connect people who know each other and want to stay in touch or are in common groups or share common interests. Businesses and other organisations use these sites for their messaging and (interactive) stakeholder engagement. The sites can also work as a sort of flexible microblogs with short postings of user-generated content. The platforms also offer various tools and apps to support networking activities (event planning, calendar, polls, gaming, etc.). The business model is based on ad revenues and subscription fees.
- Business networks: used by both individuals and businesses (or other employers) to establish and maintain professional contacts. Revenue models are based on ads, subscription fees for additional features and access to database for marketing/matchmaking purposes.
- Enterprise social networks: these are established around an individual company or organisation for professional networking and business collaboration, and membership is limited to employees or other invited business partners. They are financed by the companies.
- Blogs: list of postings by individuals or organisations which can be read and commented upon by platform users. Revenues can come from ads, product sales, subscription fees, affiliate marketing.
- Microblogs: highly networked platforms for sharing user-generated content with strict restrictions on the length of postings. Ads are a primary revenue stream (e.g., banners or promoted postings), but subscriptions also exist.

⁸⁸ Aichner T, Jacob F (2015) Measuring the Degree of Corporate Social Media Use. In: International Journal of Market Research March 2015, 57(2):257-275
https://www.researchgate.net/publication/283073224_Measuring_the_Degree_of_Corporate_Social_Media_Use/link/5ab09155458515ecebeeb2223/download

- Forums: online platforms for discussion among users, or an organisation and their stakeholders. Revenues generally come from ads and business subscriptions.
- Social bookmarking: platforms where users' virtual bookmarks to online digital content can be saved, organised and shared with their personal contacts or the wider public.
- Products/services review: websites that sell and provide information about certain products. Users can write and read product reviews about them, and they may also participate in testing.
- Video sharing: individual users can share (royalty-free) videos on these platforms, either with the wider public or with selected other users (their personal contacts). Royalty holders can also opt to make their videos – music, films, training videos, commercials, etc. - accessible to the wider public. The platforms offer the possibility for comments and other forms of engagement around the videos. Revenues come from banners, in-feed video ads, subscription fees.
- Photo sharing: allowing the uploading, hosting, managing, and sharing of users' photos. Platforms usually offer online photo editing software (as SaaS) as well.
- Collaborative projects: building networks of internet users around a common interest, crowdsourcing knowledge and content, or developing projects (e.g. new software tools or applications). The results are usually open source. These collaborative projects may not be monetised by the platform and rely on donations; others might collect subscription fees, especially for the use of add-on features.
- Social gaming: online game sites that focus on social interactions between players who are virtually connected.
- Virtual worlds: a virtual space which users can explore and travel with their personal avatar, communicating and participating in various activities (primarily games). Companies can also use these virtual worlds to present themselves and their products and engage with their clients.

In recent years these categories have merged or converged to some extent, and a strict categorisation is not easily maintainable. General social media platforms have integrated gaming, photo sharing functions, while photo sharing platforms have expanded to have a more general social media character.

Size of the sector

The global social media market was expected to grow from USD 159.68 billion in 2021 to USD 223.11 billion in 2022. Marketing spending was strongly reduced in 2021 as a consequence of Covid-19, hence the figure is seen as unusually low. The market is expected to reach USD 833.50 billion in 2026 at a compound annual growth rate (CAGR) of 39%.⁸⁹ Ad spending on social media is projected to reach 37.47 billion USD in 2023 in the European region⁹⁰, and is expected to continue growing rapidly, with an annual growth rate of 8.58% between 2023 and 2027.⁹¹

The figures above relate to the revenues of social networking platforms generated by ads and sponsored posts, and do not include ads within online games on social networks (see 'Digital games') or revenues generated from membership subscriptions or premium fees. The latter also represent a significant amount.

For instance, LinkedIn premium membership subscriptions are estimated to have generated USD 4.45 billion revenues globally in 2021.⁹² Its ad revenues were only USD 3.8 billion in comparison.⁹³ However, the relative significance of advertisement versus subscriptions may vary strongly between social media companies.

In its most recent financial report, Meta, Facebook's parent company, reported that Facebook's ad revenues in 2022 reached USD 69.41 billion, and Instagram's reached USD 43.28 billion.⁹⁴ This represents over 97% of revenues. Facebook has recently introduced a cut on on-platform purchases, but this is being rolled out gradually and does not yet represent a significant share of revenues. In total

⁸⁹ The Business Research Company (2023) Social Media Global Report 2023. Available at: https://www.reportlinker.com/p06243803/Social-Media-Global-Market-Report.html?utm_source=GNW

⁹⁰ Data covers most EU27 members, Norway, Switzerland, the UK, Russia, Serbia and Turkey.

⁹¹ Statista (2023) Social Media Advertising Europe. Available at: <https://www.statista.com/outlook/dmo/digital-advertising/social-media-advertising/europe#ad-spending>

⁹² Statista (2022) LinkedIn premium accounts revenues worldwide from 2019 to 2021. Available at: <https://www.statista.com/statistics/1335941/linkedin-global-premium-accounts-revenue/>

⁹³ Statista (2023) LinkedIn premium accounts revenues worldwide from 2017 to 2026. Available at: <https://www.statista.com/statistics/275933/linkedins-advertising-revenue>

⁹⁴ Newberry (2023) 42 Facebook statistics marketers need to know in 2023, Hootsuite. Available at: <https://blog.hootsuite.com/facebook-statistics/>

USD 25.7 billion was generated in the European region.⁹⁵ The average revenue per user (ARPU) was USD 17.29 in the 4th quarter of 2022.⁹⁶

In terms of their share of total social media website visits, the largest platforms in the European region in 2022 were:

- Facebook: 78.07%
- Instagram: 8.47%
- Twitter: 5.64%
- Pinterest: 4.28%
- YouTube: 1.66%
- Reddit: 0.74%
- LinkedIn: 0.4%
- Tumblr: 0.39%⁹⁷

Key players

Most major social media platforms are established in, and operated from, the United States. However, many have legal entities in the EU. The following tables provide a list of key platforms from third countries (mostly the USA) and the EU27.

Table 20 - List of major social media platforms – Third countries

Type	Country	Name	EU legal entity
Social network sites	United States	Facebook, Messenger	yes
	United States	IGTV / Instagram	yes
	United States	Snapchat	yes
	China	QQ (Tencent)	no
	Russia	VK (VKontakte)	no

⁹⁵ Iqbal (2023) Facebook revenue and usage statistics, Business of Apps. Available at: <https://www.businessofapps.com/data/facebook-statistics/>

⁹⁶ Statista (2023) Facebook average revenue per user (ARPU) as of first quarter 2023, by region. Available at: <https://www.statista.com/statistics/251328/facebooks-average-revenue-per-user-by-region/>

⁹⁷ Statista (2023), Leading social media platforms by share of website visits in Europe as of December 2022. Available at: <https://www.statista.com/statistics/1333669/leading-social-networks-share-of-visits-europe/>

Type	Country	Name	EU legal entity
Business networks	United States	LinkedIn	yes
Enterprise social networks	United States	Slack	unknown
	United States	Yammer (Microsoft)	yes
	United States	Facebook Workplace	yes
	United States	VMWare Socialcast	no
	United States	Clarizen	no
Blogs	United States	Medium	no
	United States	Weebly	no
	Israel	Wix	unknown
	United States	Substack	no
	United States	Google Blogger	yes
	United States	Typepad	no
Microblogs	United States	Twitter	yes
	United States	Tumblr	yes
Forums	United States	Reddit	unknown
	United States	Quora	no
	United States	Tech Republic	no
	United States	4chan	no
Collaborative projects	United States	Wikipedia	yes
	United States	Mozilla	yes
	United States	GitHub	unknown
Social bookmarking	United States	Pinterest	unknown
	United States	StumbleUpon	no
	United States	Reddit	unknown
Products/services review	United States	Amazon	yes
	United Kingdom	Reviewcentre	no
	United States	Epinions	no
	United Kingdom	Reevoo	no
	United States	Capterra	no
Video sharing	United States	YouTube	yes
	United States	Vimeo	unknown
	United States	Twitch	yes
	United States and Singapore (originally China)	TikTok / Douyin	yes
	China	Kuaishou	no
Photo sharing	United States	Flickr	yes
	United States	Photobucket	no
	United States	Imgur	unknown
Social gaming	United States	Mafia Wars, FarmVille (Zynga)	no
Virtual worlds	United States	Second Life	no

Type	Country	Name	EU legal entity
	United States	Moodle	no
	United States	IMVU	no

Table 21 - List of major social media platforms – EU27

Segment	Country	Name
Social network sites	Germany	Lokalisten
	Germany	VZ Netzwerke
	France	Skyrock
Business networks	Germany	XING
	France	Viadeo
Blogs	Spain	Obolog
	Estonia	potach.io
Products/services review	Denmark	Trustpilot
	Spain	GetApp
Video sharing	France	Dailymotion
Social gaming	Netherlands	Hyves

4.1.3. Access to digital content or services in the market for data contracts

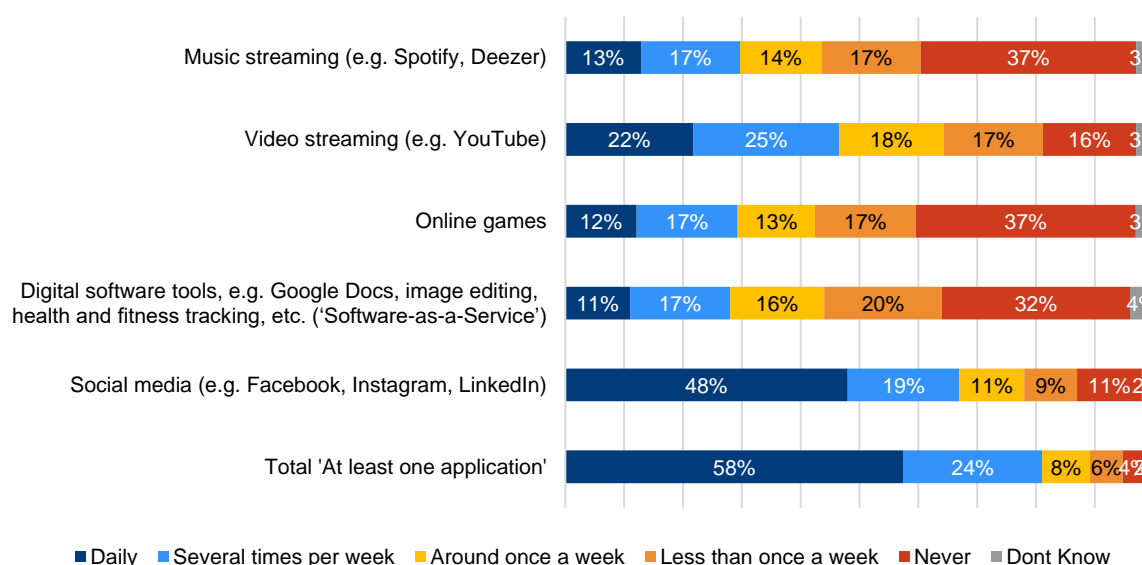
As shown above, the size of the market for data contracts in the digital contents or services sector is significant, and its size is illustrated through the revenues generated, as well as by the share of consumers that engage with services and contents from these sectors. Consumers also enjoy digital contents and services differently, depending on the service they use. Overall, access is still obtained through traditional payment methods, but a combination of both payment and data provision is not rare. These trends are explained in this chapter.

Consumer engagement with data contracts

The use of digital content and services has become a daily activity for most European consumers. The results of the consumer survey carried out in this study show that, out of all the sectors in the scope, social media is used, by far, the most frequently by consumers (with 48% using it on a daily basis). This is followed by video streaming services (with 22% using it on a daily basis). The figure below shows the breakdown of responses per sector.

Consumers do not use all these services at once, but results show that 58% of consumers use at least one of these services daily, while 24% use at least one service several times per week.

Figure 11 - Frequency with which consumers use digital content from the sectors in scope (2)



Source: Authors based on consumer survey results (ten countries)

Base: 10,144 respondents

To make commercial sense, primarily for profiling and then displaying corresponding ads, consumers are often linked to personal identifiers (e.g., the IP address or any device identifier via cookies). Roughly half of the consumers seem indifferent to this matter and systematically tend to accept cookies. Rejecting cookies requires users to further change set-ups on the website. Depending on the set-up of the specific cookie policy this may be more or less straightforward. On some websites - and notably on some of the commonly used third-party privacy tools - the user can easily reject all cookies that are not strictly necessary with the push of a button. On other websites visitors would need to work far more to restrict access to their personal data than simply accepting all cookies, and they can even be nudged to do so by deceptive design.⁹⁸ Around

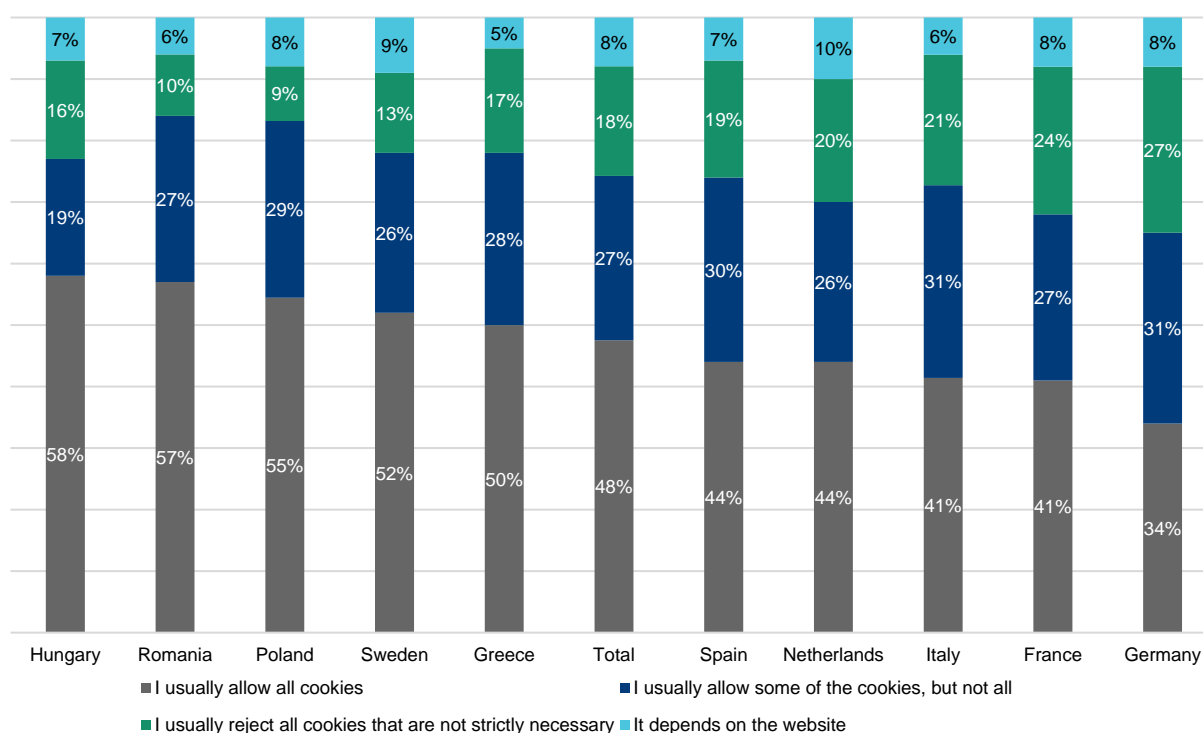
⁹⁸ The European privacy advocacy group *noyb* published a statistical summary of its complaints against violations of GDPR lodged in 2021 (<https://noyb.eu/en/noyb-aims-end-cookie-banner-terror-and-issues-more-500-gdpr-complaints>), although it records some improvement in its 2022 communication (<https://noyb.eu/en/226-complaints-lodged-against-deceptive-cookie-banners>). Simply accepting all cookies rather than selecting for what purposes or with what third parties they would be willing to share personal data is an easier task for users even if GDPR and national guidance is observed.

half of the consumers either choose the cookies that they accept or systematically reject all. The results of the consumer survey show that:

- 18% of consumers reject all cookies that are not strictly necessary;
- almost half of consumers (48%) allow all cookies;
- 27% allow some cookies but not all.

A small share (8%) of consumers claims that the extent to which the cookies are accepted depends on the website they access. There are only slight differences when breaking down the results by country. Consumers from Germany, France, Italy, and the Netherlands are more likely to reject all cookies that are not strictly necessary (between 20% and 27%), while consumers from Romania and Poland are less likely to reject them (only 9%-10% do so). These survey figures are aligned with results from a 2022 survey published by Statista, which found that between 49-59% of respondents from five EU countries investigated (Germany, France, Italy, Spain, the Netherlands) rejected the storage of cookies or adjusted the scope of the storage of cookies.⁹⁹

Figure 12 - Consumers preferences with regards to cookies



Source: Authors based on consumer survey results (ten countries)

Base: 10,144 respondents

⁹⁹ <https://www.statista.com/statistics/1367654/cookie-use-restrict-europe/>

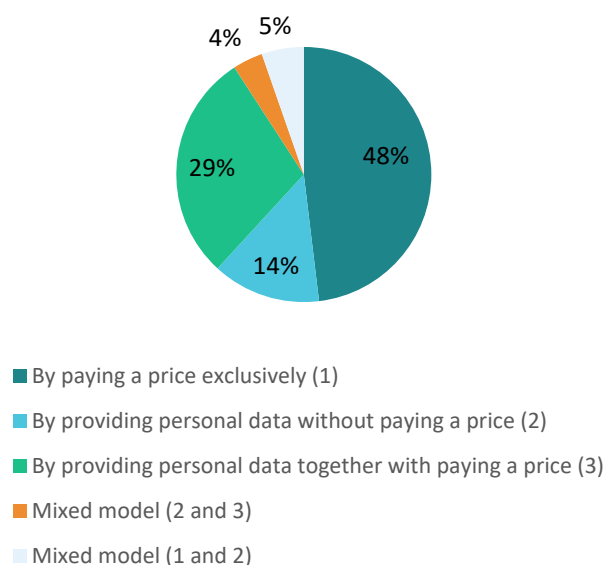
Provision of access to digital content or services by businesses

Traditionally, consumers obtain access to digital content or services by paying a price. However, in the data economy, consumers may also obtain access to digital content or services without paying a price, if they provide their personal data (with their consent).

Over half of surveyed companies in the sector of digital content/service allow consumers access their digital content/service only by paying a price (48%). Only 14% of companies surveyed allow consumers to access their services by providing personal data without paying a price and 29% allow access through the provision of personal data together with the payment of a price. For 4% (see 2 and 3) and 5% (see 1 and 2) of the respondent companies, a mix of models are used, probably due to companies offering different services/content.¹⁰⁰

Figure 13 - How consumers get access to companies' digital content/service

Share of means by which consumers get access to digital content or digital services



Source: Authors based on the business survey results

Note: Businesses covering also tangible goods were excluded from the sample. Responses from companies that responded "By paying a price exclusively" are not analysed further (screened out)

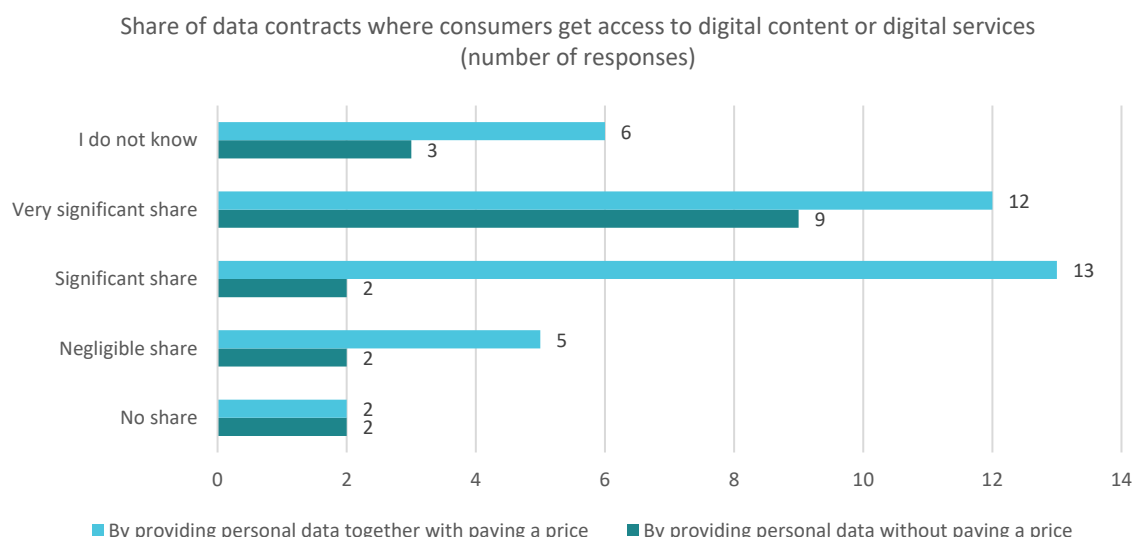
Base = 124 respondents from the digital content/services sector

Of those companies that responded to the survey and that provide access to consumers to their digital content/services by other means than paying a price exclusively, many claim that access by providing personal data together with

¹⁰⁰ None of the companies surveyed offer models 1 and 3 in combination.

paying a price represents a very significant-significant share of their contracts. Due to the low number of businesses responding to this question, no conclusions could be drawn at sectoral level.

Figure 14 - Share of data contracts where consumers get access to digital content/services



Source: Authors based on the business survey results

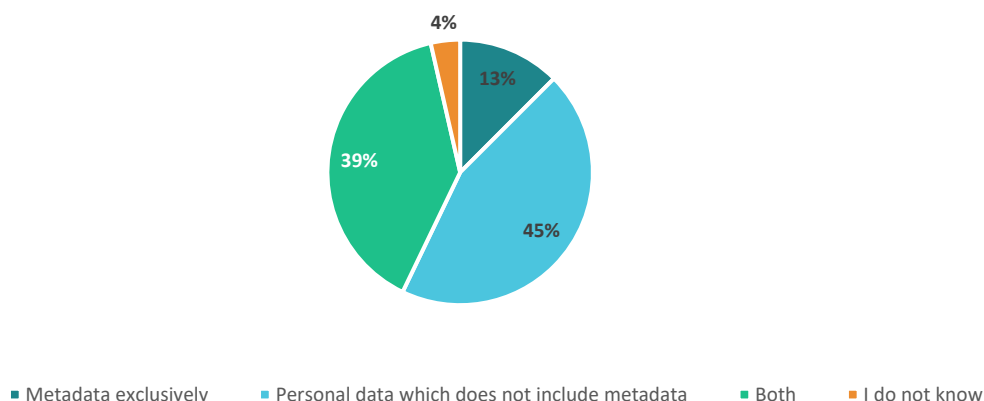
Base=56 respondents from the digital content/services sector (mixed models are not included)

Note: Only companies which provide access to services/content through provision of personal data together with paying a price and provision of personal data without paying a price

Businesses do not only find value in personal data that directly describe the characteristics of the user (such as their name, gender, age, address), but also in metadata describing the observed browsing and posting behaviour of the user (such as pages visited; the time spent on each page; items clicked; ads clicked), collected by tracking systems embedded in websites and apps. These data are used for the profiling of the user, with specific emphasis on their interests, for the purposes of personalised advertising. As regards **the kind of data that surveyed companies process**, in most cases, **only personal data which does not include metadata (45%) is being processed, while 39% of the companies process personal data both with and without metadata**. Only 13% of the companies surveyed process metadata exclusively.

Figure 15 - Data that surveyed companies process in the context of the data contracts for the supply of digital content or services

Data that companies process in the context of the data contracts for the supply of digital content or service

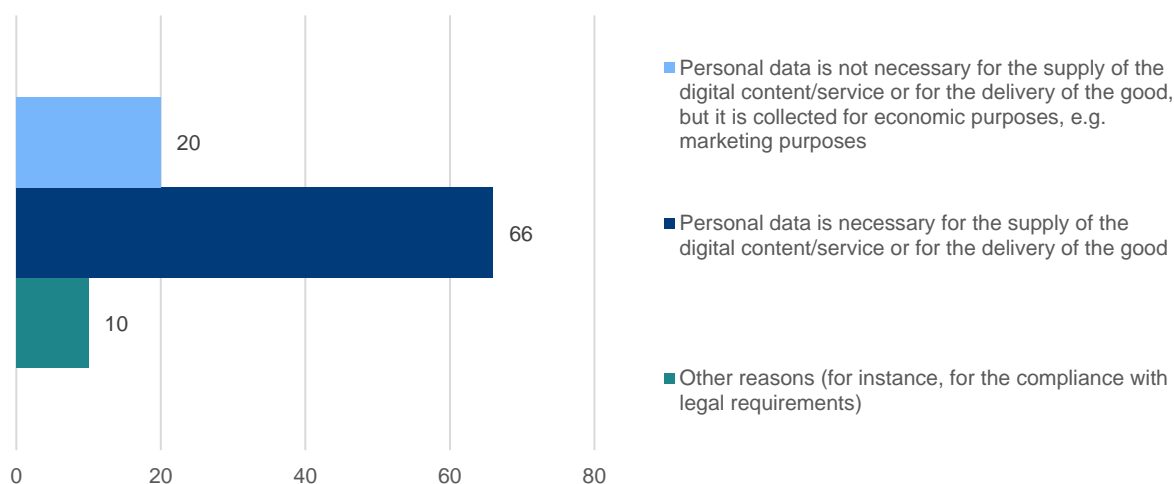


Source: Authors based on the business survey results

Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

The results of the mystery shopping study confirm that for traders in the market for data contracts, personal data is necessary in the majority of the cases for the supply of digital content/service or for the delivery of the good (66 out of 96 observations). Only for a minority of test services, the terms and conditions stated that was not necessary for the supply of a product or a service, but was collected for economic purposes. In the sectors of digital gaming (5 out of 16 observations) and of online media (6 out of 22 observations), collection of personal data that is not necessary for supply of the product or service but collected for secondary economic purposes occurred most often, but still only in a minority of cases.

Figure 16 - Reasons for collection of personal data



Source: Authors based on mystery shopping results (five countries). Base: 96 observations

The mystery shopping results show that, in general, the provisions of the terms and conditions adequately cover the use of personal data, and that these provisions are clearly expressed at the pre-contractual stage. In almost two-thirds of cases, the provision of personal data is necessary to gain access to services, especially in the case of online media and digital video and music sectors. In other cases, personal data is collected for economic purposes.

The mystery shopping results show that, in general, the provisions of the terms and conditions adequately cover the use of personal data, and that these provisions are clearly expressed at the pre-contractual stage. In almost two-thirds of cases, the provision of personal data is necessary to gain access to services, especially in the case of online media and digital video and music sectors. In other cases, personal data is collected for economic purposes.

However, the mystery shopping also showed that only in a few cases it is practically possible to purchase a service without giving consent to the use of personal data, especially in services that require registration. For 18 products or services (out of 97 tested), shoppers were able to purchase the product without giving consent for the processing of their personal data. Most commonly, this was possible for products or services from the online media sector.

4.1.4. Estimated development of the market for digital content or services

The market size in the selected sectors has been growing strongly in recent years and this trend is expected to continue, with average annual growth rates of 5-8% in the next four years, according to projections for different segments in the Digital Market Outlook published by Statista, see Table 22 below. The significance of business models where financial counter-performance is not demanded from users will remain high, although many service providers have made considerable efforts to channel as many users as possible into their new subscription-based services which offer, for instance, ad-free content or a full set of functionalities which are partially turned off in the 'free' version of the service. This campaign to shift business models is evident among digital video- and music-sharing platform (e.g., YouTube) as well as the B2C segment in SaaS.

In some cases, the direct financial revenue stream from users under these new subscription-based services do not fully cover the total costs or expected profits of the service, and revenues from the processing of personal data remains a source of value for businesses. On the other hand, the use of personal data for internal marketing or the improvement of content and services is expected to remain important.

Table 22 - Market growth in the selected digital content and services sectors (2023-2027)

Sector	Market growth (Expected CAGR)	Projected market size (2027)
Digital video and music	<i>Digital video-on-demand services:</i> 9.5%	EUR 24.19 billion ¹⁰¹
	<i>Digital music:</i> 4.6%	EUR 6.21 billion ¹⁰²
Digital games	9.0%	Non-ad revenues: EUR 38.80 billion ¹⁰³ Ad revenues: EUR 2.07 billion ¹⁰⁴
SaaS	B2B segment: 8.9%	B2B segment: EUR 57.02 billion ¹⁰⁵ B2C segment: unknown (significantly lower than B2B)
Social media	Ads revenues: 8.0	Ads revenues: EUR 49.74 billion ¹⁰⁶

Source: Statista Digital Market Outlook

In addition to the trends identified through the available data on the sectors within the focus of the study, businesses that responded to the online survey were also asked for their opinion on the development of the market.

The vast majority of companies operating in the digital content or services sector surveyed think that **the number of data contracts is likely to increase in the next ten years (80% think so)**, while only 2% of businesses think that the number will decrease over time.

¹⁰¹ Total of segments described in Sub-section 4.1.1 (a)

¹⁰² Total of segments described in Sub-section 4.1.1 (a)

¹⁰³ Total of segments described in Sub-section 4.1.1 (b)

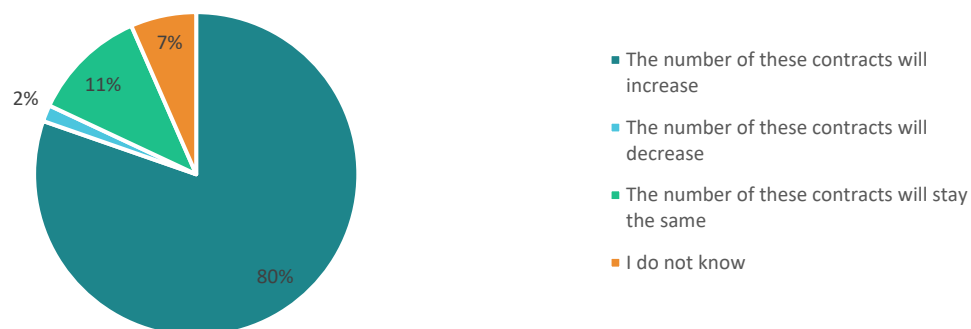
¹⁰⁴ Statista (2023) Digital Market Outlook: In-game advertising – EU27. Available at: <https://www.statista.com/outlook/dmo/digital-media/video-games/in-game-advertising/eu-27>

¹⁰⁵ Statista (2022) Digital Market Outlook - Software as a Service EU27. Available at: <https://www.statista.com/outlook/tmo/public-cloud/software-as-a-service/eu-27>

¹⁰⁶ Statista (2023) Digital Market Outlook - Social Media Advertising Europe. Available at: <https://www.statista.com/outlook/dmo/digital-advertising/social-media-advertising/europe#ad-spending>

Figure 17 - Estimated development of the market of data contracts for the supply of digital content or services within the next ten years

Estimated development of the market of data contracts for the supply of digital content or services within the next ten years (all companies from offering digital content or services)



Source: Authors based on the business survey results

Base = 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

While no conclusions could be drawn at sectoral level due to the limited number of responses received, there are several companies from other sectors than the ones in scope that see an increase in the future. The relatively high of companies from other sectors foreseeing an increase in the number of contracts might indicate that there are other sectors as well where this practice is likely to develop, in addition to those covered by the study (e.g., wellness, mobility, e-learning services and marketplaces).

4.1.5. Conclusions

The provision of digital content and services to consumers is present in many sectors and market segments, and consumers will need to provide at least some personal data (those essential for the provision of the service) to gain access – whether they pay a price or not. Many providers will also rely on a broader range of personal data, such as access to browsing behaviour via tracking cookies, to generate the revenue needed to offer their content.

The two major business models in the four sub-sectors reviewed in this study - digital video and music content, digital gaming, software-as-a-service (SaaS) and social media - are (i) the ad-financed model – mostly prevalent in digital video and music content provision and on social media, and (ii) the ‘freemium’ model, which is stronger in the SaaS and digital games segments. The ad-financed model benefits from access to users’ browsing behaviour as open auctions of ads yield higher prices for targeted ads (which can build on cookie information) than for generic ads that can at most rely on contextual information (the site or app

currently used, and possibly factors such as the day of the week, the time of the day) for targeting purposes.

Data contracts for the supply of digital content or service are widespread but by no means a dominant business model in Europe, according to the survey carried out as part of the study. About half of European providers surveyed for this study do offer content for which consumers undertake to provide their personal data instead of, or in addition to, paying a price. 15% of the companies surveyed allow consumers to access their services by providing personal data without paying a price, while 31% allow access through the provision of personal data together with the payment of a price. 4% of the respondents use a mix of models. In contrast, 51% of the surveyed companies reported that they only allow consumers who pay a price to access their digital content or service.

When data is collected, 45% of the businesses surveyed do not collect metadata (essentially: browsing history) which is normally used for user profiling and revenue generation through personalised ads. However, 52% of the respondents collect metadata (13% collect metadata exclusively and 39% collect both). It is to be noted again that while targeted ads sell for more than generic ads, the price difference seems to be less than 50% on a counterfactual basis.¹⁰⁷

The results of the mystery shopping study confirm that according to the terms and conditions, the collection of personal data is necessary for providing the digital content or service in the majority of the sample analysed (66 out of 96 observations). Only in a minority of cases did the terms and conditions state that personal data was collected for commercial/marketing purposes and was not strictly necessary for supplying the product.

Around half of European consumers seem to be allowing tracking, although this may be partly explained by the nuisance and additional work of rejecting it. Restricting the range of personal information that digital content or service providers can access is often more cumbersome than accepting all cookies – requiring extra clicks, scrolling and additional reading. Hence in the consumer survey carried out in this study, about half of respondents (48%) reported that they tend to generally allow all cookies when using websites. A further 27% allow some cookies but not all, and 18% reject all cookies that are not strictly necessary to access the site. For 8% of respondents, the extent to which they accept cookies depend on the website.

¹⁰⁷ Marotta et al (2019) has found that the average CPM (cost per thousand) of ads was USD 1.18 for ad placement through open auction transactions when tracking cookies (collecting metadata) were involved, vs. only USD 0.74 without. A part of the difference is however explained by other factors.

4.2. Assessment of market practices and their frequency

This chapter analyses not only the frequency with which consumers withdraw their consent for processing their personal data, but also how consumers and businesses react in these situations.

4.2.1. Consumers' withdrawal of consent

One of the main research questions of the study was to ascertain to what extent consumers withdraw their previously given consent to the processing of their personal data to a digital content/service provider, and the consequences of such consent withdrawal for consumers.

Results from the business survey show the frequency with which consumers withdraw their consent. **Results show that consumers do not withdraw their consent for processing their personal data very often.** Overall, 565% of surveyed companies offering digital content or services say that consumers rarely take such action and 215% say that consumers never do it.

However, according to the business survey, there is a non-negligible minority of consumers (around a quarter) that have already withdrawn their consent for processing of data (often 12% and very often 3%).

Figure 18 - Frequency with which consumers withdraw their consent for the processing of their personal data in the context of data contracts for the supply of digital content services (in a year)

Frequency of consumers withdrawing their consent for the processing of their personal data in the context of data contracts for the supply of digital content services (in a year)

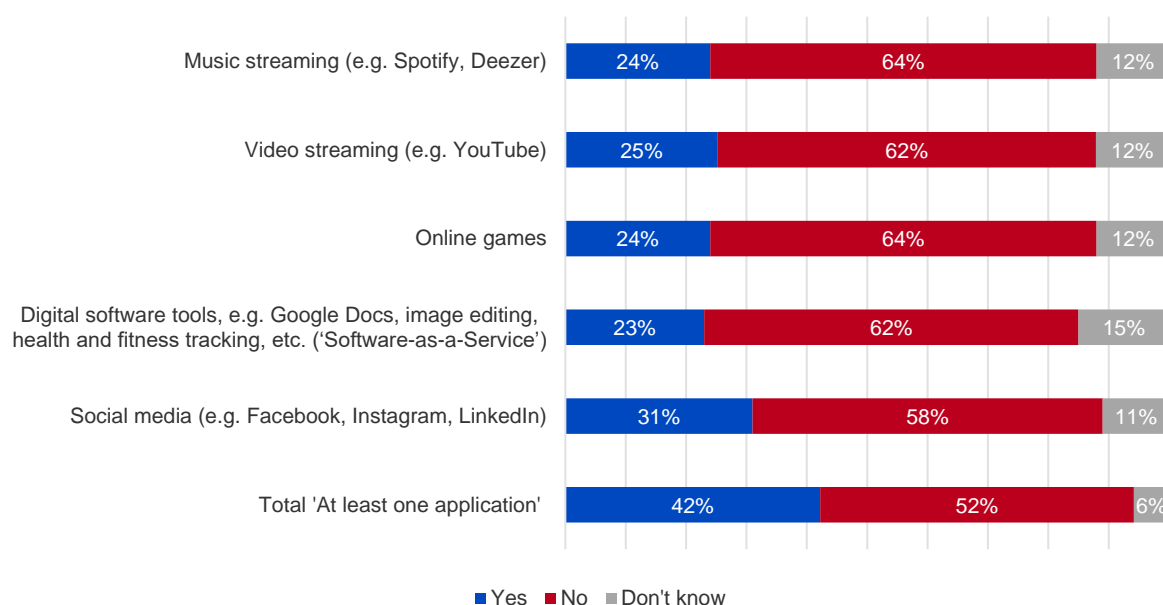


Source: Authors based on the business survey results

Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

These results are aligned with the consumer survey results which show that a minority of consumers have withdrawn their consent for processing of their personal data¹⁰⁸. The figure below provides an overview of the extent to which consumers have withdrawn consent in the past. There are no major differences across sectors. Depending on the type of digital content or service, 24 to 31% of the consumers of a specific type of digital content or service withdrew their consent in the past 12 months preceding the survey, according to consumer survey results. The results also show that 42% of consumers withdrew their consent in the past 12 months preceding the survey for at least one of the categories of services presented to them.

Figure 19 - In the past 12 months, have you withdrawn your previously given consent to a digital content/service provider from the categories below for processing your personal data?



Source: Authors based on consumer survey results (ten countries)

Base: 10,144 respondents

These results above show that consumers do not withdraw their consent regularly. The mystery shopping results show that, unless consumers actively seek to withdraw their consent, the information how to withdraw is not immediately provided to consumers. However, the mystery shopping has shown that in most cases, the terms and conditions cover at least to some extent the conditions for sharing of personal data (70 out of 97 observations) and for a large majority of the tested product, the provided information was “very clear” or “somewhat clear” (86 out of 97 observations). When testing the products, in 81 cases (out of 97), a specific procedure was available to the consumer to withdraw

¹⁰⁸ In the 12 months prior to responding to the survey.

their consent to the use of their personal data. In three quarters of cases, shoppers described the process of withdrawing consent as very easy or fairly easy for the products they tested.

Furthermore, the results of the mystery shopping exercise show that, for most services, there is a procedure in place to withdraw consent and that this procedure is fairly easy to use by consumers. The most frequent means for consumers to withdraw their consent is by making changes to their profile settings, or by contacting customer services via email. Means such as filling in online forms or contacting customer services through channels other than email are less frequent. In some cases, users were asked to delete their account in order for the data to be officially withdrawn. There are some differences at sectoral level. For instance, online media, digital music and video and digital gaming companies often ask consumers to change their profile settings. Contacting customer service via email was the most frequently reported in the online media, SaaS, and digital video and music companies sectors.

In relative terms, the highest proportion of services without such a procedure was reported in the digital gaming sector and the lowest was in the online media sector. Consent can most often be withdrawn by making a selection in the customer profile or contacting the customer service of the provider via email.

In three-quarters of cases, withdrawing consent was experienced as “very easy” or “fairly easy”. However, the results show that it is easier to provide consent than to withdraw it; thus, withdrawing consent trends are either more complex or require more engagement by consumers.

4.2.2. Consequences of withdrawal

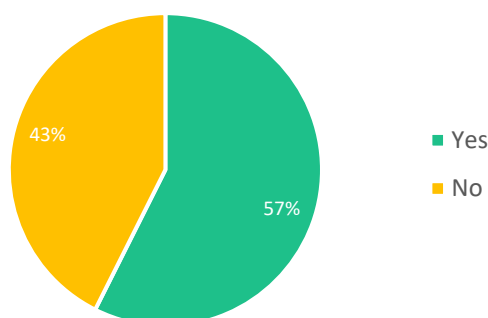
The consequences are presented from the perspective of consumers (based on results from the consumer survey and mystery shopping exercise) and of businesses (based on results from the business survey).

Consequences for consumers

Often, there are consequences that consumers must bear **after withdrawing consent**, whereby access to the service functionalities is terminated or limited.

According to business respondents, many business contracts do not have terms and conditions on the consequences of withdrawal of consent for the processing of personal data (43%). More than half (57%) of the businesses surveyed indicated that they have such terms and conditions in their contracts.

Figure 20 - Contracts for the supply of digital content/services include terms and conditions on the consequences of withdrawal of consent for the processing of personal data

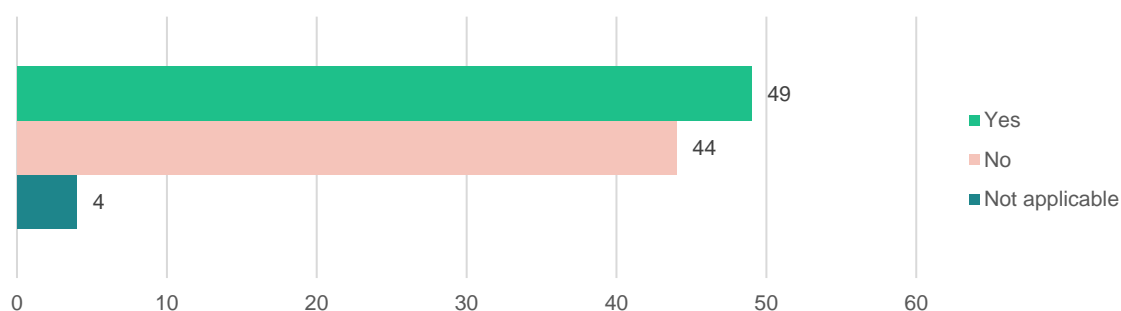


Source: Authors based on the business survey results

Base = 54 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

The mystery shopping exercise carried out for the study revealed that in over 50% of cases, privacy policies and terms and conditions mentioned the consequences for consumers of withdrawing their consent to share personal data. To assess the extent to which this information is provided, the shoppers checked if the privacy policy and the terms and conditions of the tested products or services mentioned what the consequences were to be if the consent to share personal data was withdrawn by consumers.

Figure 21 - Existence of clauses about consequences in case of consent withdrawal



Source: Authors based on mystery shopping results (five countries)

No noticeable differences were observed between countries. Similarly, the results across sectors were very balanced, which suggests that the average result is not skewed by any particular sector, but is rather representative across the board of all reviewed services.¹⁰⁹

¹⁰⁹ The full results of the mystery shopping can be found in Annex 1

The fragmentation of business practices is also obvious during the contract execution, especially as regards informing consumers about the consequences they must bear if such consent is withdrawn. Examples for consequences mentioned in sellers' terms and conditions are presented in the table overleaf.

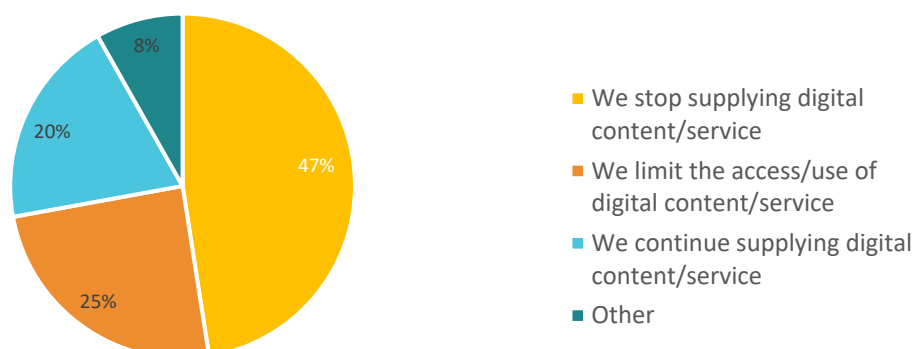
Table 23 - Main consequences following consumer withdrawal, as described in the companies' T&Cs

Sector	Main consequences laid down in the T&Cs
Digital Gaming	<ul style="list-style-type: none"> – Gaming experience to be less personalised – Promotional materials not sent to the user – Some user data to be retained for legal reasons – Game no longer accessible
Digital Videos and Music	<ul style="list-style-type: none"> – Quality of service impacted due to service not being personalised (e.g., Streaming service) – Service no longer offered to the consumer (e.g. Streaming service)
Online Media	<ul style="list-style-type: none"> – Data required to be able to provide the service – Some cookies are needed for functional purposes and cannot be deactivated – Some services no longer offered – The quality of service impacted by loss of personalised advertised content – Consumers must cancel subscription to withdraw all consent
Social Media	<ul style="list-style-type: none"> – Account to be deleted – Some functionalities no longer accessible
SaaS	<ul style="list-style-type: none"> – Not possible to provide service without necessary consent – Account to be deleted – Some functionalities no longer provided

Source: Authors based on the mystery shopping exercise

The results of the mystery shopping exercise are in line with the action(s) that businesses indicate that they take following the withdrawal of a consumer's consent. Many surveyed businesses stop supplying digital content/services (47%), while others only limit the access/use of digital content/services (25%) and 20% of surveyed companies continue supplying digital content/services.

Figure 22 - Actions taken when consumers stop providing the personal data or withdraw consent for the processing of personal data



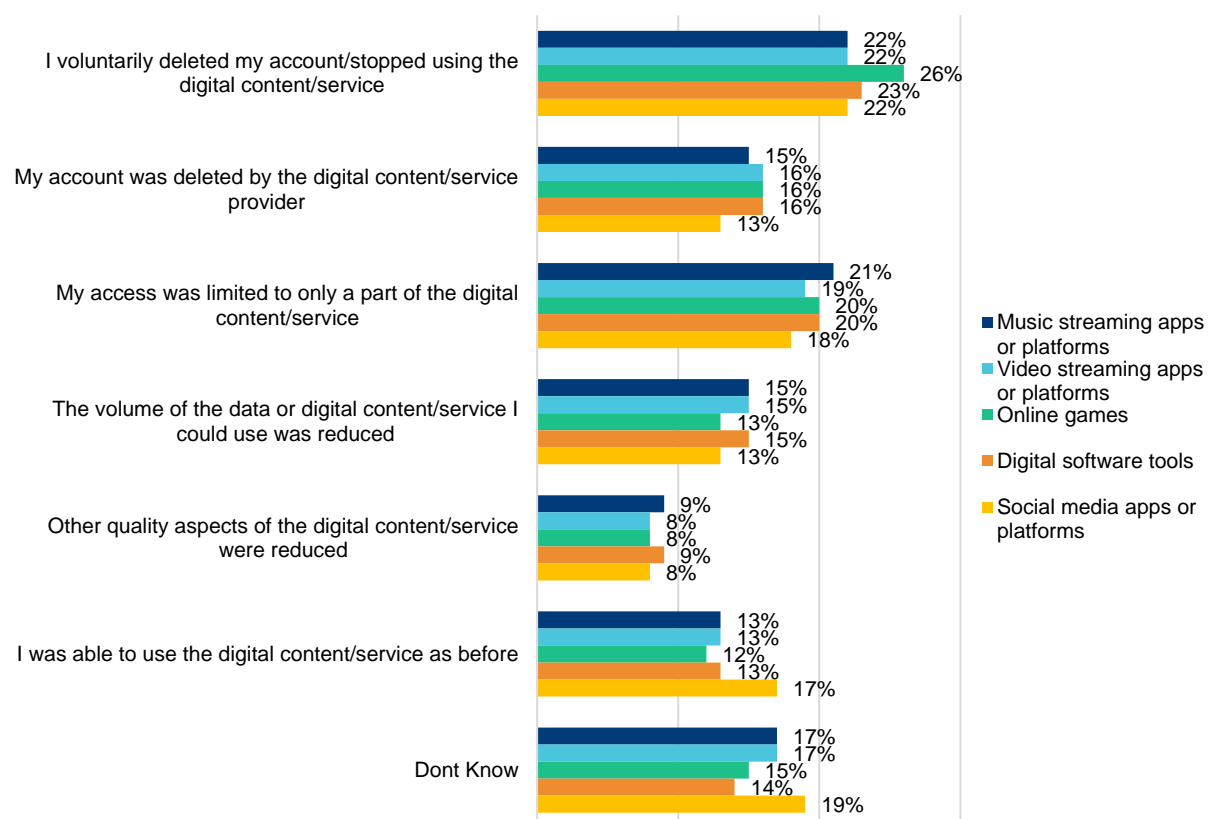
Source: Authors based on the business survey results

Base = 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

The figure below reflects **consumer views on the consequences they faced after withdrawing their consent for the processing of their personal data. Quite a significant share of consumers did not know what the consequences were** (between 14% and 19%, depending on the sector). Around a quarter of consumers had voluntarily deleted their account or stopped using the digital content/service following the withdrawal of consent (hence they could not see the consequences). Overall, based only on consumer views, there is no prevalent typology of the consequences of withdrawing consent but results show that in many cases, consumers face negative consequences of their consent withdrawal (account deletion, limited access, reduced volume of data, reduced quality). The variety of consequences that consumers face could also create uncertainty as to the consequences of withdrawal, perhaps deterring some consumers from withdrawing their consent.

The consequences of consent withdrawal differ between sectors, although not greatly. In the case of social media apps or platforms, more consumers were able to use the digital content/services as before also after withdrawing their consent. For music streaming apps or platforms, a slightly larger share of consumers saw their access limited to only a part of the digital content/service after withdrawing their consent. The figure below illustrates the differences between sectors.

Figure 23 - What happened after withdrawing your consent?

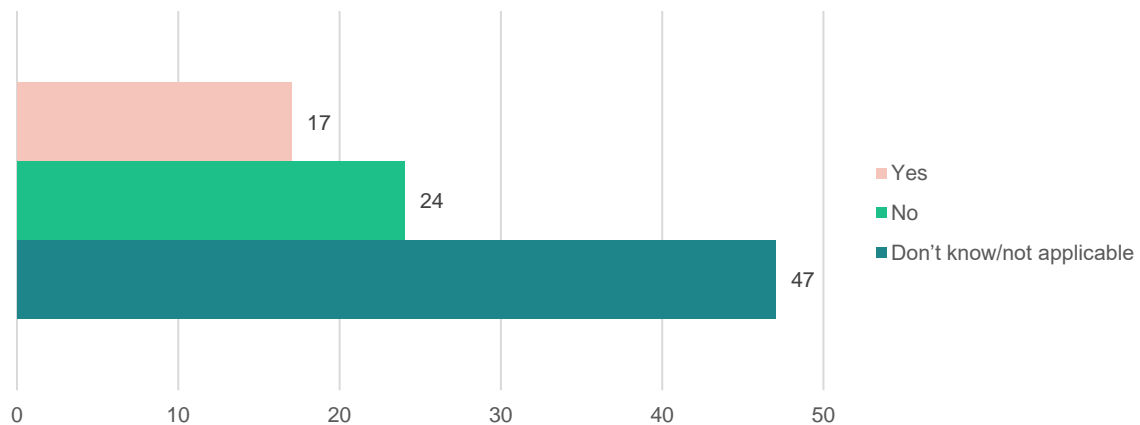


Source: Authors based on consumer survey results (ten countries)

Base = between 2,432 and 3,186

The results of the mystery shopping study are less conclusive in this regard, mainly because their request to withdraw consent could not be executed or was not processed by the trader within a reasonable time frame. Shoppers were asked to report whether the quality of the provided digital content, service or contact differed from the experience they had before. In 17 out of 88 cases, the mystery shoppers observed a change in the quality provided. On the other hand, in 24 out of 88 cases, shoppers reported that there was no change. Most immediate consequences were reported in the sector of digital video and music, while many shoppers reported that no change in the quality of the provided occurred in the online media sector.

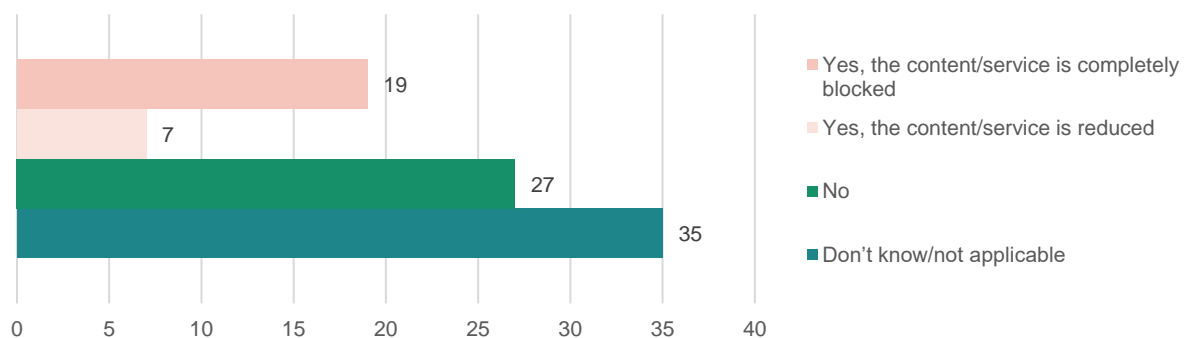
Figure 24 - Change in quality of digital content/service after consent withdrawal



Source: Authors based on mystery shopping results

Furthermore, the mystery shopping also gives an indication of the immediate consequences for the access to the content or service for consumers. In 26 cases, shoppers experienced a change in the scope of the provided content or service. They reported in 7 out of 88 observations that the scope of the provided content or service was reduced and in 19 out of 88 observations that it was completely blocked. Most often, restrictions were reported for tested products from the digital video and music sector, while among the tested product, those from the online media sector reported the least consequences when consent was withdrawn.

Figure 25 - Change in the content/service after consent has been withdrawn

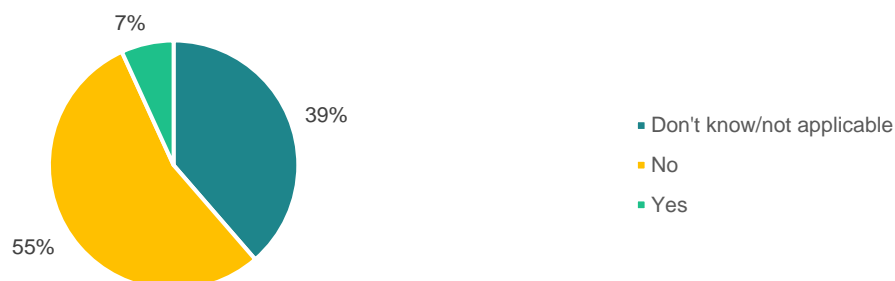


Source: Authors based on mystery shopping results

The mystery shopping study also explored whether consumers were confronted with any additional requirements when consent was withdrawn. In 6 cases (out of 88), such additional requirements were reported. In two cases these requirements included service providers asking consumers for a proof of identity to process their request to withdraw consent. In two other cases, service providers asked consumers for a potential fee for processing their request. In one

case, the shopper was asked to provide a valid telephone number to the service provider to notify their consent withdrawal.

Figure 26 - Additional requirements after withdrawing consent



Source: Authors based on mystery shopping results

It is at the end of the journey where consumers face the consequences of consent withdrawal. The results of the mystery shopping exercise show that, after the withdrawal of consent, the quality and scope for a small, but considerable share of tested services was reduced or completely blocked. Online media services rarely block or limit consumer access if consent is withdrawn, while in the case of digital video and music consumers are most likely to have the content or service either reduced or completely blocked.

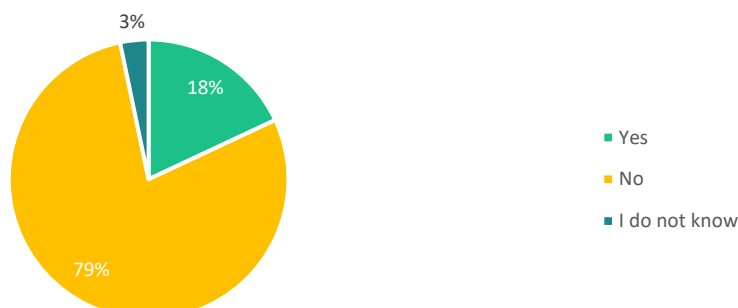
While many businesses have a clear response to the withdrawal of consent (limiting/blocking access or no change at all), mystery shopping results show that some businesses do not reply to consumer requests within a reasonable period of time.

Consequences for businesses

Results from the mystery shopping exercise presented above show that businesses do rely on the provision by consumers of their personal data to conduct their activity. However, only a non-negligible minority of surveyed companies (18%) indicated that, generally, they consider such consent withdrawal as a problem for their business model.

Figure 27 - The extent to which withdrawal of consent represents a problem for companies' business models

Situations where consumers withdraw their consent for the processing of their personal data represent a problem for the company's business model



Source: Authors based on the business survey results

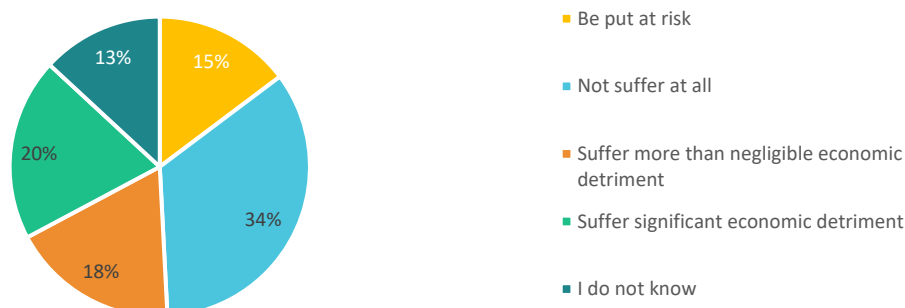
Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

If, hypothetically, companies could not stop/limit the supply of digital content or service when consumers withdraw their consent for the processing of the personal data, most companies surveyed consider that they would not be put at risk (34%). Only 15% of the surveyed companies consider that such a situation would put their business model at risk and 20% would suffer significant economic harm.

However, these results should be interpreted in the context of current consumer behaviour where withdrawal of consent is not a common practice. Hence, businesses have not yet experienced the full effects of such a practice. Should there be a legal framework in place which harmonises withdrawal practices and associated consequences, these impacts might be more significant.

Figure 28 - If companies could not stop/limit the supply of digital content or service when the consumers withdraw their consent on the processing of their personal data, their business model would ...

If you could not stop/limit the supply of digital content or service when the consumers withdraw their consent for the processing of their personal data, your business model would



Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

4.2.3. Restitution of contractual performance after the contract has been voided

The study also investigated situations where the contract has been voided after the contract has been performed (in whole or in parts). This chapter assesses such situations based on the results of the business survey and the mystery shopping.

The businesses surveyed overwhelmingly reported that they are **generally not faced with situations where data contracts for the supply of digital content or service are voided with retroactive effect** after the contract has been performed. Only 3% of companies surveyed face such situations often, and 1% very often (see figure below).

Figure 29 - Frequency of withdrawals from contracts for the supply of digital content with retroactive effect, per year

Frequency of withdrawals from contracts for the supply of digital content with retroactive effect, per year



Source: Authors based on the business survey results

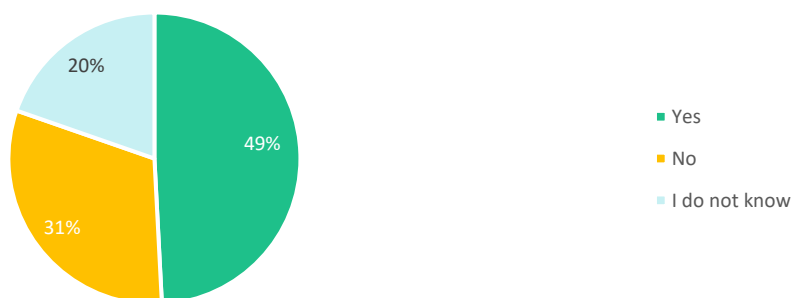
Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Moreover, 79% of businesses surveyed mentioned that situations where consumers withdraw their consent for the processing of their personal data, do not represent a problem for the business. The findings suggest that businesses are barely affected by the withdrawal of consent.

Also, 49% of surveyed digital content/services businesses say that data contracts for the supply of digital content or service concluded with consumers contain terms or conditions on the consequences of the voidance of a contract after it has been performed. Over one-third (31%) of surveyed companies do not have such conditions and 20% did not know whether they had them or not. This might expose both businesses and consumers to risks related to a lack of certainty as to the options for and consequences of voiding the contract.

Figure 30 - Extent to which contracts concluded with customers include clauses on the consequences of the voidance of the contract after the latter has been performed

Contracts concluded with costumers include clauses on the consequences of the annulation of the contract after the latter has been performed

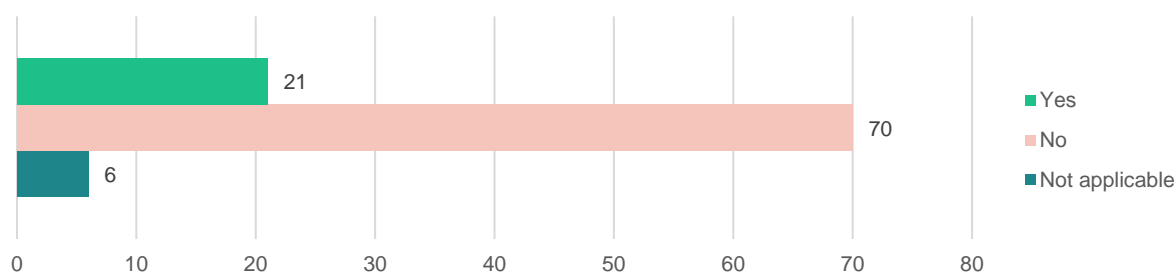


Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

This finding contrasts with the results of the mystery shopping conducted in this study. The mystery shopping showed that, for the specific case that the data contract is voided after it has been performed, only a few terms and conditions of the tested products contain any clauses that describe the consequences. In the majority of cases, such clauses were not present (70 out of 97 observations). Most commonly, businesses who had such clauses specified that they keep this data for a certain period of time before deleting it (e.g., for marketing or financial purposes). However, there are sectoral differences: most digital gaming companies included such specifications in their terms and conditions, while most SaaS and online media companies did not have them.

Figure 31 - Existence of clauses describing consequences in case data contract is voided after it has been performed



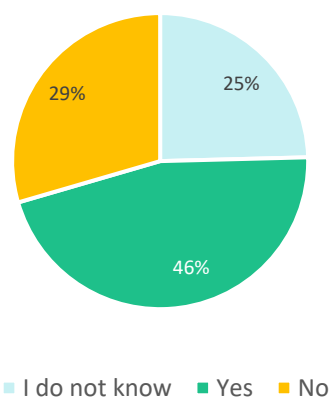
Source: Authors based on mystery shopping results (five countries)

The results also show that, when a data contract for the supply of digital content or service is terminated with retroactive effect after it has been performed, 70% of surveyed companies do not request or pay monetary compensation¹¹⁰ as restitution and only 5% ask for monetary compensation for the digital content provided after the termination of the contract. None of the surveyed companies pay monetary compensation for the processing of the personal data of consumers that occurred after the voidance of the contract (2%), while 11% use other actions. Many surveyed companies (13%) did not know how to respond to the question.

However, the biggest share of respondents considers it fair (46%) that there should be a monetary compensation for the digital content or service supplied and/or the personal data processed up to the contract being voided. There are also companies that do not consider this to be fair (29%), while 25% did not have an opinion.

Figure 32 - Perceived fairness to envisage a monetary compensation for the digital content or service supplied and/or the personal data processed until the contract has been voided

Perceived fairness to envisage a monetary compensation for the digital content or service supplied and/or the personal data processed until the contract has been voided



Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

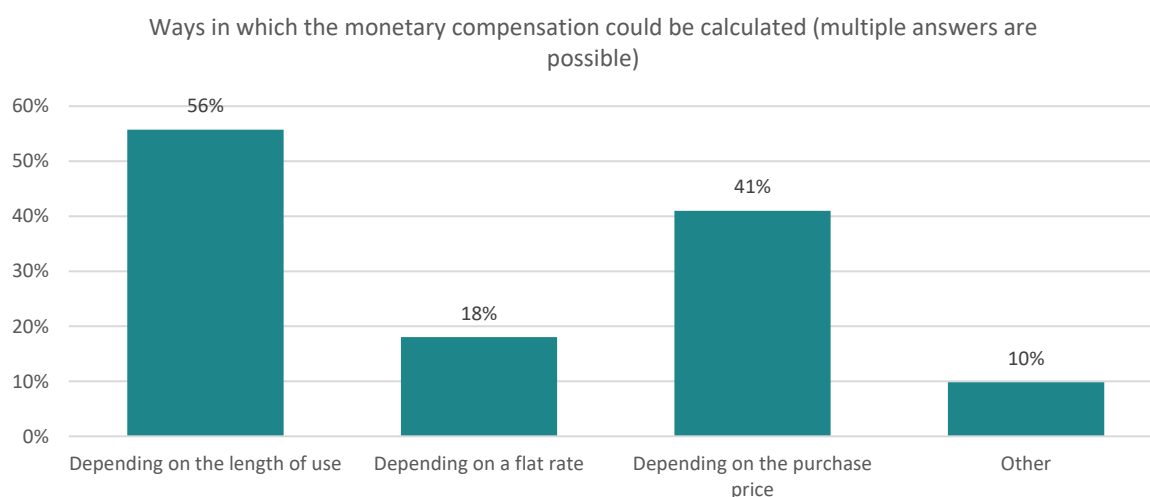
The **monetary compensation** could be **calculated** depending on the length of use (for 56% of surveyed companies) and on the purchase price (for 41% of surveyed companies). Only 18% of surveyed companies think that this should be calculated depending on a flat rate and 10% the calculation should follow other

¹¹⁰ Sample size: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

methods for calculation. The businesses surveyed highlighted other aspects that should be factored into the monetary compensation model:

- The calculation of monetary compensation should depend on the business model and the costs to which the cancellation gives rise
- While others think this should not exist
- Others recommend compensating for data per use and the length of use (multiplier per reuse)
- Data value and the processing performed should also be factored in when calculating monetary compensation.

Figure 33 - Ways in which the monetary compensation could be calculated (multiple answers could be selected)



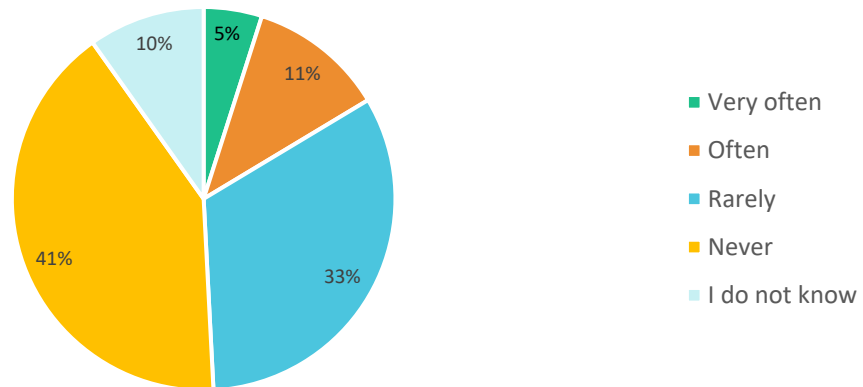
Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

4.2.4. Consumers do not provide personal data as agreed

This section provides information on the extent to which consumers do not provide personal data as agreed. The results of the business survey show that **cases of impossibility for businesses to supply the digital content or service** because the consumer has undertaken to provide personal data but has then not done so, **are not so frequent** (only 5% have these cases very often and 11% often).

Figure 34 - Frequency of cases in which the consumer refrains from providing personal data after having undertaken to do so, making the supply of digital content/services impossible

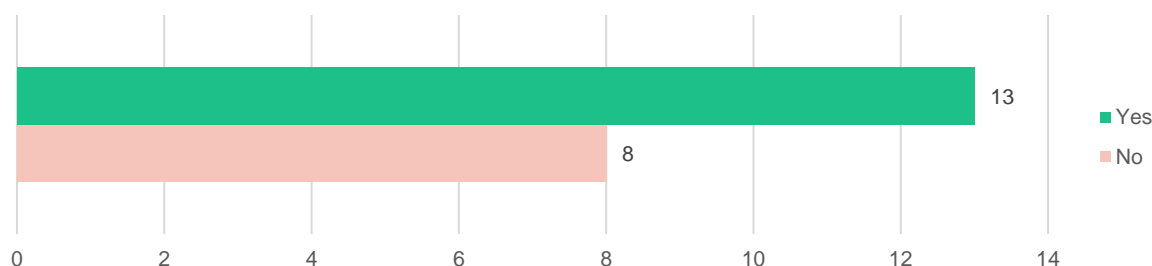


Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Of those surveyed companies that claimed these situations to be happening very often or often, five did not try to enforce consumers' undertaking to provide such data, while four did (one company did not know).

Figure 35 - Specifications about use of personal data after the contract was voided



Source: Authors based on mystery shopping results (five countries)

Base: products with terms and conditions that describe consequences if data contract is voided

Businesses surveyed in this study are rarely faced with situations where consumers do not provide personal data as agreed. There is no evidence from the mystery shopping which shows that traders try to enforce the consumer's undertaking to provide personal data.

4.2.5. Consequences if during the execution of the contract the trader does not comply with data protection rules

The DCD does not provide rules for what happens with the contract in situations where the trader does not comply with data protection rules when processing the personal data provided by the consumer. The contract law consequences are determined in the national law. Non-compliance with personal data rules in this case would mean that the trader would, for example, continue using consumers' personal data even after consent was withdrawn.

The situations where during the contract execution it becomes apparent that the trader does not comply with data protection rules could not be tested through the main data collection activities carried out under this study for the following reasons:

- Consumers cannot objectively assess whether a trader complies with the data protection rules;
- In absence of consumer data, the study could not draw conclusions only based on businesses views. Also, the extent to which businesses would answer objectively to this question remains uncertain;

- Mystery shoppers are not equipped to make judgements, during the contract execution, on whether a trader complies or not with data protection rules. Furthermore, there is no access to information after the withdrawal of consent, that would allow such assessment.

In some cases, after withdrawing consent, the mystery shoppers reported that some traders had confirmed by email that no personal data was collected or that the data will be completely removed 7 days after. However, the mystery shoppers could not collect enough evidence that would show a lack of traders' compliance with data protection rules.

The results of the consumer survey show that between 22% and 26% of consumers have voluntarily deleted their account or stopped using the digital service/content after withdrawing consent. However, it is unknown to which extent this was done due to traders not complying with data protection rules.

4.2.6. Conclusions

The results of the mystery shopping exercise show that information on the withdrawal of consent is available in the terms and conditions in most cases. However, consumers are not always informed about the consequences that they have to bear when doing so, which might negatively impact their decision-making process when deciding to withdraw consent.

The results of the business survey show that consumers do not withdraw their consent for processing their personal data very often. However, there is a non-negligible minority of consumers (around a quarter) that have already withdrawn their consent for processing of data (often 12% and very often 3%). These results are in line with what consumers say on the same topic (24-31% consumers withdrew their consent in the last 12 months preceding the survey, according to consumer survey results).

The reasons for which consumers do not withdraw consent are not known, but one can assume that consumers lack awareness (or lack interest) of the possibility to withdraw consent. This is reinforced by the mystery shopping results which show that for most services tested, there is a procedure in place to withdraw consent and that this procedure is fairly easy to use by consumers.

Furthermore, the results of the mystery shopping exercise are in line with the action(s) that businesses indicate that they take following the withdrawal of a consumer's consent. Many surveyed businesses stop supplying digital content/services (47%), while others only limit the access/use of digital content/services (25%) and 20% of surveyed companies continue supplying digital content/services. Many consumers do not seem to know what the consequences of withdrawal are (between 14% and 19% of consumers surveyed, depending on the sector). Furthermore, based only on consumer views, there

seems to be no prevalent typology of the consequences of withdrawing consent, but results show that in many cases, consumers face negative consequences of their consent withdrawal (account deletion, limited access, reduced volume of data, reduced quality).

As regards the restitution of contractual performance after the contract has been voided, the results of the business survey show that companies are almost never faced with situations where data contracts for the supply of digital content or service are terminated with retroactive effect after the contract has been performed. However, contrasting results of the business survey and mystery shopping on the extent to which contracts concluded with customers include clauses on the consequences of the voidance of the contract after the latter has been performed, may indicate that practices in this area are fragmented.

Results of the business survey show that traders are rarely faced with situations where consumers do not provide personal data as agreed.

Lastly, for the reasons stated in section 4.2.5, the study could not test situations where the trader does not comply with data protection rules, hence no conclusions were made in this regard.

4.3. Impact of possible legal uncertainty and fragmentation of the rules applicable to data contracts

This chapter assesses the impact of the possible legal uncertainty and fragmentation of the rules applicable to data contracts on businesses (and consumers subsequently).

4.3.1. Approach to data contracts in national legal frameworks¹¹¹

Most of the legal frameworks of EU MS do not foresee specific conditions for situations where personal data is provided within the meaning of Article 3(1), sub-paragraph 2 of the DCD in contracts.¹¹² No MS has adopted specific provisions

¹¹¹ This is based on the self-reported data that MS submitted to DG JUST

¹¹² Article 3(1), sub-paragraph 2 of the DCD: "This Directive shall also apply where the trader supplies or undertakes to supply digital content or a digital service to the consumer, and the consumer provides or undertake to provide personal data to the trader, except where the personal data provided by the consumer are exclusively processed by the trader for the purpose of supplying the digital content or digital service in accordance with this Directive

qualifying as a contract situation where the consumer does not pay a price but provide personal data in exchange of a digital content or service. However, none of the MS excludes that such situations might be qualified as a contract under general contract law. The state of play is different for cases where metadata are collected in exchange of the digital content or service. The majority of MS does not exclude the contractual qualification under general contract law but several MS exclude it or are doubtful.

To provide slightly more information on the situation across the EU, the MS reported that they either transposed Article 3(1) sub-paragraph 2 of the DCD in a wording similar to that of the Directive¹¹³ or have left it to their general rules on contract formation to determine whether a contract was concluded where personal data was provided at the occasion of the contract.¹¹⁴

As the rules on contract formation have not been subject to harmonisation at European level, this means that how similar situations are qualified under national law is likely to differ between the MS. In some MS the rules on contract formation are general,¹¹⁵ which means that they could be applied, but this would be subject to the interpretation that national courts choose to apply, if there is no legislative or further regulatory guidance provided.

The legal uncertainty across the EU is further exposed when we examine e.g. possible consequences of the withdrawal of consent for the processing of personal data. The responses provided by various MS show that national laws often do not specify what should occur when a consumer withdraws consent,¹¹⁶ with general contract law rules applying. That may reveal uncertainty as to whether withdrawal of consent amounts to termination of a whole contract or provides traders and service providers with grounds for claiming a breach of contract. Alternatively, in a few cases, national law addresses this question and

or for allowing the trader to comply with legal requirements to which the trader is subject, and the trader does not process those data for any other purpose.”

¹¹³ E.g., Bulgaria, Italy and Malta.

¹¹⁴ E.g., Latvia, Austria and the Netherlands.

¹¹⁵ E.g., Sweden and Germany.

¹¹⁶ E.g., Croatia, Cyprus and Poland.

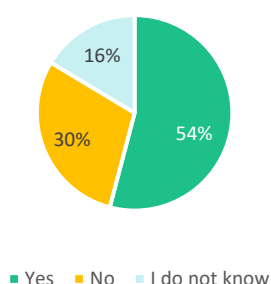
provides more certainty.¹¹⁷ Some MS consider that such consequences will be expressly regulated by contractual provisions.¹¹⁸

4.3.2. Impacts of national legal frameworks applicable to data contracts

The views of digital content/services businesses on the **extent to which national rules concerning data contracts are unclear in the country/countries where they sell digital contents or goods are mixed**, although the majority of businesses surveyed think the situation is unclear. Aggregated data shows that 54% of companies think the rules are unclear, 30% think they are not and 16% could not tell for sure. The limited number of responses does not allow to draw conclusions that would be representative to the whole relevant business sector in the EU.

Figure 36 - Digital content/services companies' views on whether national rules concerning data contracts are unclear

The extent to which national rules concerning data contracts are unclear in the country or countries where businesses sell your digital content/service



Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

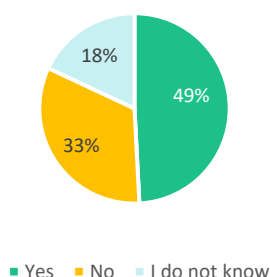
¹¹⁷ E.g., Estonia and Germany. In Estonia, the law stipulates that since the withdrawal of consent must be free according to the GDPR, the withdrawal of consent cannot constitute a breach of a contract and the trader cannot consequently exercise legal remedies against the consumer. In Germany, the law stipulates that the trader cannot claim compensation against the consumer due to the restriction of data processing effected. This includes, in particular, contractually agreed remuneration obligations as well as statutory claims for use and damages.

¹¹⁸ E.g., Czechia.

Views of surveyed companies are mixed on whether differing rules on data contracts have a negative impact on the businesses' interest in conducting their activities on a cross-border basis. For 49% of surveyed companies, this has a negative impact, while for 33% it doesn't.

Figure 37 - Digital content/services companies' views on whether national rules on data contracts have negative impacts on the interest of businesses in developing cross-border activities

Do national rules on data contracts have negative impacts on the interest of businesses in developing cross-border activities?



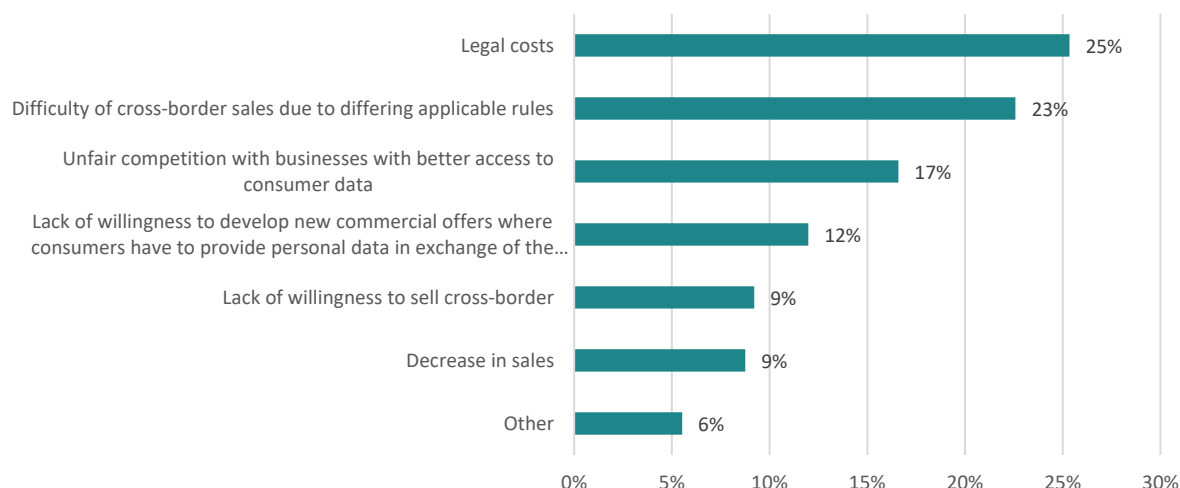
Source: Authors based on the business survey results

Base: 61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

At national level, there seems to be more understanding for the surveyed businesses as regards rules and therefore the impact on the development of the business domestically is slightly less negative (48% of companies think there is no negative impact, 38% think there is and 15% did not know). This might be due to businesses' being more aware of the application of general contract laws at national level in these situations.

Surveyed businesses see some negative impacts stemming from the current legislative framework. When traders and service providers stated that current legal rules were unclear or had a negative impact, they were asked a follow-up question to identify any issues noted with the legal framework. The results show what they consider as most problematic: legal costs (25%), some difficulties with cross-border sales due to varying applicable rules (23%), and unfair competition with businesses with better access to consumer data (17%).

Figure 38 - The main negative impacts stemming from the uncertainty and fragmentation of the legal framework on businesses for businesses that replied “yes” to at least one of the questions on existing legal framework having a negative impact



Source: Authors based on the business survey results (question displayed only to businesses when they stated that rules are unclear and/or have a negative impact)

Base = 42 respondents from the digital content/services sector

4.3.3. Conclusions

The results show that most of the legal frameworks of EU MS do not foresee specific conditions for situations where personal data is provided within the meaning of the DCD in contracts. While no MS has adopted specific provisions qualifying as a contract situation where the consumer does not pay a price but provide personal data in exchange of a digital content or service, these situations might be qualified as a contract under the general contract law at national level.

Businesses surveyed think that there is some unclarity regarding national rules on data contracts but have mixed feelings regarding the impacts of national legal frameworks on developing cross-border activities, although the limited number of responses received could not allow for a generalisation of these results at EU level. Surveyed businesses seem more positive about the national level rules and their impact in developing business domestically, possibly due to higher awareness on the applicable contract law at national level.

5. The market for data contracts: tangible goods (with digital elements)

This chapter provides an overview of the market for data contracts for selected tangible goods sector with digital elements. These products are analysed separately, as evidence shows that the market practices on contractual agreements between businesses and consumers differ from those of digital content/services. It should be noted that these findings cannot be extrapolated to the whole tangible goods with digital elements sector as they focus on specific segments. These segments were selected based on desk research and evidence of products that are most used by consumers.

The chapter starts with an overview of the market in selected tangible goods with digital elements on which the study focused, and then looks at the projected development of the market. Furthermore, this chapter presents the main practices of consumers and businesses, as well as their frequency and consequences. Lastly, this chapter provides an assessment of the impact of the possible legal uncertainty and fragmentation.

This chapter responds to the following research questions:

- What is the current market for data contracts for the sale of goods and how consumers access these contracts? How is the market expected to develop (see Chapter 5.1)?
- What are the market practices (for both consumers and businesses) and the frequency of certain specific contractual situations described below? How do businesses and consumers react to these situations (see Chapter 5.2)?
- What is the impact of the possible legal fragmentation and uncertainty of the rules applicable to data contracts for the sale of goods and to these specific contractual situations (Chapter 5.3)?

5.1. Assessment of the current market and estimated development

The study investigates contracts for tangible goods, where the consumer does not or does not only pay a price, but also undertakes to provide personal data which are used by the trader for other purposes than the performance of the contract, for instance for economic purposes. Below are some examples of goods whose functioning relies on consumers' provision of data: connected cars, smart home appliances, e-book readers and gaming consoles. These are not provided for 'free', i.e. without monetary compensation (whether an upfront payment or

some form of rental or leasing). Indeed, the products are paid for in full – but personal data is also provided to enable consumers to enjoy the full range of functionalities. The study does not focus on connected cars and smart home appliances for the following reasons.

Connected cars

Connected cars collect and process a wealth of data, mainly about the status of parts and equipment, location and driving behaviour. They can also collect biometric data (i.e., sensitive personal data) for driver identification. This data may be used e.g., for preventive maintenance purposes, for problem detection during repair, and in some cases also for further development by the producer. When the data is linked to an identified individual (not pseudonymised or aggregated), it is personal data. But aggregate data may also be used by the manufacturer or third parties and this would be less likely to constitute personal data as singling out a named individual from the dataset would require significant steps to be taken.

In addition, the personal data is not further commercialised via profiling for marketing and advertisement purposes.

Smart home appliances

This category can include 'smart' refrigerators, ovens, thermostats, lighting, locks and various other household products. Similarly to connected cars, the personal data is typically not monetised by the traders. The data may be used for the main functionalities offered by 'smart' products, such as for smart lighting or locks. The product would not function as intended without the collection and processing of personal data. This means that most of the situations – withdrawing consent for data use, or for the transfer of personal data – explored in this study are not relevant for this segment.

E-book readers

This sector, and notably Amazon Kindle, has been identified as the only example thus far where the price paid indirectly depends on the customer's choice to consent to the processing of their personal data in exchange. In March 2022, the price of an ad-free version of Kindle was EUR 89.99 (on amazon.de), while the version with ads was only EUR 79.99. For the latter, if the user consents, the advertisements placed are customised on the basis of the consumer's interests, hence they are informed by profiling data, using mostly actual reading behaviour. It is to be noted that all devices, the ad-free version as well, collect a broad range of personal data, but the advertisement-supported version will also create profiles

to customise ads. As on websites, the ads will still be displayed but not be as relevant (and will generate less revenue for the trader) if the consumer opts out.

Gaming consoles

Gaming consoles are highly relevant for the study because they collect a wealth of personal data including user-generated content, chats (underlying privacy regulations), and because they are heavily used by minors.

The following goods were explored further in the study: smart TVs, gaming consoles (through desk research only), wearable fitness trackers and e-book readers (through desk research and mystery shopping). The size of the market and key players in the four selected segments are described in the following paragraphs:

- The global wearable fitness tracker market size was estimated at USD 45 billion in 2021, and projected to grow by an average annual rate of 17.5% to USD 192 billion by 2030.¹¹⁹ The European market, including Russia, Switzerland and Turkey has been valued at USD 14.6 billion in 2022.¹²⁰ Most of the market is composed of wristwear (smart watches), but legwear and earplugs also exist. Key producers are Apple, Fossil Group, Garmin Ltd., Google (Fitbit), NIKE, Sensoria (United States), Samsung Electronics (South Korea), Huawei, Xiaomi (China) and TomTom N.V. (Netherlands). In 2022, the sector had 234 million users worldwide.¹²¹
- The size of the worldwide market for smart TVs was valued at USD 197.82 billion in 2022. The market is projected to grow at a compound annual growth rate of 11.4% between 2023 and 2030.¹²² Major players in the sector include: LG, Samsung (South Korea), Sony, Toshiba, Panasonic (Japan), Vizio

¹¹⁹ Straits Research (2021) Wearable fitness trackers market. Available at: <https://straitsresearch.com/report/wearable-fitness-trackers-market>

¹²⁰ Market Data Forecast (2023) Europe Fitness Trackers Market Research Report – Segmented By Product Type, Wearing Type, Application, End-users, Sales Channel, Country, Industry Size, Share, Trends, Growth and Global Forecast from 2022 to 2027. Available at: <https://www.marketdataforecast.com/market-reports/europe-fitness-trackers-market>

¹²¹ Statista (2023) Number of users of fitness activity tracking wristwear worldwide from 2018 to 2027. Available at: <https://www.statista.com/forecasts/1314613/worldwide-fitness-or-activity-tracking-wrist-wear-users>

¹²² Grand View Research, Smart TV Market Size, Share & Trends Analysis Report By Resolution, By Screen Size, By Screen Shape, By Operating System, By Distribution Channel, By Technology, By Region, And Segment Forecasts, 2023 - 2030. Available at: <https://www.grandviewresearch.com/industry-analysis/smart-tv-industry>

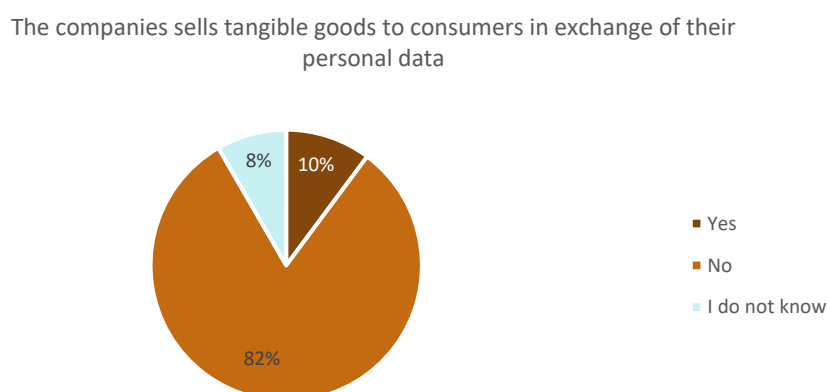
(United States), TCL, Haier (China), Videocon (India) and Philips (Netherlands).

- E-book readers represent a relatively small market: worldwide sales of USD 396.5 million in 2021.¹²³ Revenues from the digital content read or listened to on these readers considerably exceed this figure – they are estimated to be several billion US dollars. Key companies in the segment are Amazon Kindle (United States), Barnes & Noble Nook (United Kingdom), Kobo (Canada), Onyx Boox (China), PocketBook (Switzerland) and Denver (Denmark).
- Consumers spent an estimated USD 60 billion on games console hardware, games, and games services in 2021 worldwide. Of this amount about 30% (USD 18 billion) was expenditure on hardware.¹²⁴ The market is composed of three main companies: Microsoft Xbox (United States), Nintendo and Sony PlayStation (Japan).

Access to tangible goods with digital elements

Only 10% of the surveyed businesses that manufacture/sell tangible goods also sell tangible goods to consumers and collect their personal data (mostly in addition to paying a price).

Figure 39 - The extent to which companies sell tangible goods to consumers in exchange for their personal data



Source: Authors based on the business survey results

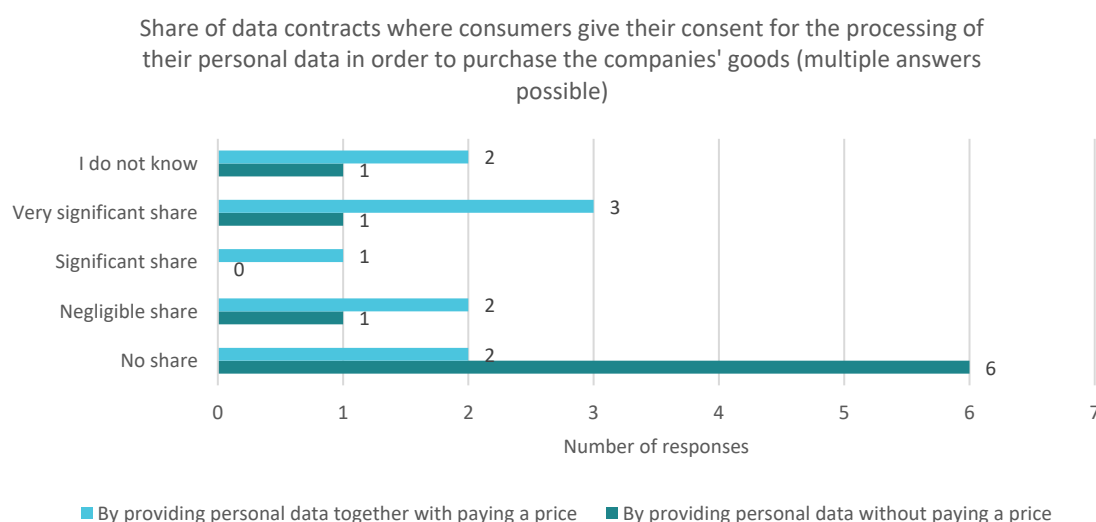
¹²³ Imarc, E-Book Reader Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028. Available at: <https://www.imarcgroup.com/e-book-reader-market>

¹²⁴ Harding-Rolls (2022) Console markets reaches new heights with growth to \$60 billion, Ampere. Available at: <https://www.ampereanalysis.com/insight/console-market-reaches-new-heights-with-growth-to-60-billion>

Base: 108 responses from the tangible goods sector

Of the companies that sell tangible goods and collect personal data, the share of contracts where consumers provide their personal data together with paying a price is more common in relation to instances where only personal data is provided. Although the sample size is limited, of the 11 companies that sell tangible goods to consumers in exchange of their personal data only one claims that the provision of personal data without paying a price represents a very significant share of their contracts. In most cases, data is provided in addition to the price of the product.

Figure 40 - Share of data contracts where consumers give their consent for the processing of their personal data in order to purchase the companies' goods (number of responses)



Source: Authors based on the business survey results

Base: 11 respondents from the tangible goods sector that sell tangible goods to consumers in exchange of their personal data

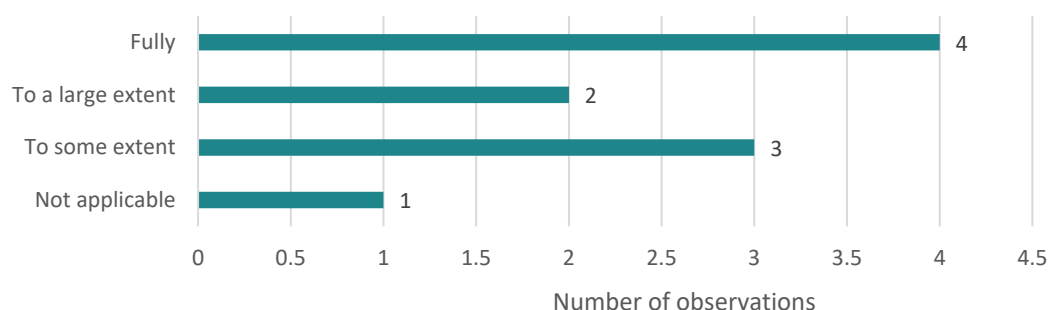
Compared with other digital content/services, tangible goods with digital elements (e.g., smart watches and e-book readers) differ in some aspects. The mystery shopping exercise carried out in this study revealed some of these differences. In the mystery shopping exercise, three main types of tangible products with digital elements tested were: health devices (mostly health tracking devices, such as specialised watches and other wearables) and e-book readers. However, it should be noted that only a limited number of tangible goods (overall 10 products) were tested in the mystery shopping study. A list of the products that were tested in the study is provided in the annex of this report.¹²⁵

¹²⁵ Shoppers tested ten products in total (with two products per country).

The results of the mystery shopping exercise show that, unless information is sought by consumers in the terms and conditions before the purchase, they are not otherwise informed by the trader about the need to provide consent after the product is purchased and that the product would not be fully functional without providing such consent.

The shoppers were asked to check to what extent the terms and conditions covered the sharing of personal data. For nearly all tested products, the terms and conditions covered at least to some extent the sharing of personal data of the user with the provider.

Figure 41 - Extent to which terms and conditions covered the sharing of personal data



Source: Authors based on the mystery shopping results

Estimated development of the market

Given that the size of the European market for such goods is difficult to assess due to the lack or scarcity of data, predictions on its development could not be made.

Overall, the market is expected to develop unevenly in the coming years, with some sub-sectors recording significant growth (e.g., connected cars, Smart TVs), while others will report more modest growth (e.g., e-book readers). For example:

- **Wearable fitness trackers:** the market is expected to grow by an average annual rate of 17.5% by 2030.¹²⁶
- Revenues from sales of **e-book readers** are expected to grow at an annual rate of only 1.26%.¹²⁷

¹²⁶ Straits Research (2021)

¹²⁷ Statista (2023)

- Sales are forecast to remain high in 2023 for the most popular **gaming consoles** (e.g. Nintendo Switch, the most popular gaming console sold in Europe) owing to a number of popular games due to be release in the same year.¹²⁸

The businesses that responded to the survey and that sell tangible goods in exchange for data (provided exclusively or in addition to paying a price), think that the number of such contracts will increase (6/11), while others did not know (4/11) and only one company thinks these will decrease.

5.2. Withdrawal of consent and consequences

As the data collected for tangible goods are very limited, this chapter does not provide a complete assessment of the market practices related to data contracts but presents the results of the business survey and the mystery shopping.

Of 11 surveyed companies that sell tangible goods in exchange for data (provided exclusively or in addition to a price)¹²⁹, 9/11 claim to have never (6/11) or rarely (3/11) encountered situations where consumers have withdrawn their consent for the processing of personal data. Only one company stated that withdrawal occurs often. Some business respondents to the survey think that the withdrawal of consumer consent does not have an impact on their business model (7/11) and some think it does (4/11).

The main consequences of withdrawal of consent usually mentioned in the terms and conditions were:

- Cancellation of account (e.g., for health devices)
- Some functionalities no longer accessible and a less personalised experience (e-readers and a smart watch)

Of the 11 businesses that responded to the survey and that sell tangible goods in exchange for personal data (exclusively or in addition to paying a price), 5/11 say that their terms and conditions include information about consequences, 5/11 say they do not, and one did not know.

In comparison with self-standing digital content or services, the mystery shopping exercise did not highlight any significant differences for consumers during the contract execution or after withdrawing consent compared with the consumer experience with digital content or services.

¹²⁸ Statista (2022)

¹²⁹ 11 responses from the business survey

For the vast majority of tested tangible goods with digital elements (i.e., e-book readers, wearable fitness trackers), shoppers assessed that withdrawing consent for the use of their personal data was very easy or fairly easy. The provider either had a procedure in place to withdraw consent or enabled consumers to contact their customer service for this purpose. This ease with which consent can be withdrawn mirrors the findings in the mystery shopping for digital content or services.

The mystery shopping study revealed that after withdrawing consent for the tested products, the service was often reduced, and some features were no longer accessible or even blocked completely. These results do not differ substantially from what was identified for the digital services/content products that were tested in the mystery shopping.

Lastly, if a consumer does not provide personal data or withdraws consent for the processing of personal data, most companies continue delivering the good that functions properly (5/11) and only a few terminate the sale contract (3/11). One seller mentioned another action, which is refusing to enter into a contractual agreement if the data is not provided. Given the limited number of responses, these findings cannot be considered as representative.

5.3. Impact of possible legal uncertainty and fragmentation of the rules applicable to data contracts

Because of the limited number of responses received, it is not possible to draw conclusions on the legal uncertainty and fragmentation of rules for an underdeveloped market. The few companies that responded from the tangible goods sector think that:

- Views on whether differing national rules on data contracts have a negative impact on the interest of businesses in developing cross-border activities are mixed. Of the 11 surveyed companies that sell goods in exchange of personal data, 6/11 think that it doesn't have a negative impact and 4/11 think it has (1/11 did not know).
- Of the 11 companies, 7/11 think that national rules concerning data contracts are unclear in the markets where the goods are sold (2/11 think these are not unclear and 2/11 did not know).
- Of the 11 companies, 5/11 think that the unclarity of national rules have a negative impact on the development of the businesses domestically, 4/11 think they do not and 2/11 did not know.

5.3.1. Conclusions

Of the 108 companies that sell tangible goods and responded to the survey, 11 claim to sell goods in exchange of consumers' personal data (most of which do it in addition to the price). The study did not identify business models based purely on data contracts, but only business models where goods' functioning relies on consumers' provision of personal data and metadata. However, the collected data is limited and considered to be insufficient to draw general conclusions.

6. Conclusions

The aim of the study was to provide qualitative and quantitative data relating to the existence and size of problems in situations where consumers within the contractual relationship with traders do not or not only pay a price but provide or undertake to provide their personal data to the trader – data which are not necessary for the performance of the contract (later referred to as 'data contracts').

Offering digital content and services in exchange for personal data is widespread but by no means a dominant business model in Europe, according to the business survey carried out as part of the study. About half of European providers surveyed for this study do offer content for which consumers undertake to provide their personal data instead of, or in addition to, paying a price. 15% of the companies surveyed allow consumers to access their services by providing personal data without paying a price, while 31% allow access through the provision of personal data together with the payment of a price. In contrast, 51% of the surveyed companies reported that they only allow consumers who pay a price to access their digital content or service.

Furthermore, 45% of the businesses surveyed do not collect metadata (essentially: browsing history) which is normally used for user profiling and revenue generation through personalised ads. However, 52% collect metadata (13% collect metadata exclusively and 39% collect both). As regards personal data, the results of the mystery shopping study indicate that the collection of personal data is necessary for providing the digital content or service in the majority of the sample analysed. Only in a minority of cases did the terms and conditions state that personal data was collected for commercial/marketing purposes and was not strictly necessary for supplying the product.

The results of the business survey show that consumers do not withdraw their consent for processing their personal data very often. Results show that there is a non-negligible minority of consumers using the services of the businesses surveyed (around a quarter) that have already withdrawn their consent for processing of data (often 12% and very often 3% of consumers using the services of the businesses surveyed). These results are in line with what consumers say on the same topic (24-31% consumers withdrew their consent in the last 12 months preceding the survey, according to consumer survey results).

Consequences of consumer withdrawal are various, according to the results of the business survey and the mystery shopping. In most cases, businesses stop supplying the content/services or limit access. According to consumers surveyed, there are several negative consequences that they face (account deletion, limited access, reduced volume of data, reduced quality), but there is no distinctive typology of consequences.

As regards the restitution of contractual performance after the contract has been voided, the results of the business survey show that companies are almost never faced with situations where data contracts for the supply of digital content or service are terminated with retroactive effect after the contract has been performed. Furthermore, based on the business survey results, it is evident that traders are rarely faced with situations where consumers do not provide personal data as agreed.

It should be noted that the study could not draw any conclusions on whether situations where traders do not comply with data protection rules exist. This is largely due to lack of data in this regard. The data collection activities could not collect unbiased information on such practices.

While most legal frameworks of EU MS do not foresee specific conditions for situations where personal data is provided within the meaning of the DCD in contracts, these situations are in most cases covered by the MS general contract law. Businesses surveyed think that there is some unclarity regarding national rules on data contracts but have mixed feelings regarding the impacts of unclarity and fragmentation of national legal frameworks on developing cross-border activities. The limited number of responses received could not allow for a generalisation of these results at EU level. Surveyed businesses seem more positive about the national level rules and their impact in developing business domestically, possibly due to higher awareness on the applicable contract law at national level.

Lastly, the study looked into the market for data contracts in the **tangible goods sector. The study did not identify business models based purely on data contracts, but only business models where goods' functioning relies on consumers' provision of personal data and metadata.**

7. Annexes

7.1. Annex 1: Results from the mystery shopping

As part of the study, we carried out a mystery shopping exercise that systematically collected data on businesses' reactions when consumers withdraw their consent for the use and processing of their personal data in the context of digital products or services. The mystery shoppers had to go through certain stages to withdraw their consent and then report on their experience during those stages. The steps were the following:

- Pre-contractual stage.
- Contract execution stage.
- Experience after withdrawing consent.

The mystery shoppers reported also general information on the mystery shopping experience. This related to whether they were able to find all the information easily or were there a need to contact the customer service and how quick the customer service responded to their queries.

The findings show that:

- **Pre-contractual stage**
 - The provisions of the terms and conditions generally cover well the use of personal data and these provisions are clearly expressed.
 - In almost two thirds of the cases, the terms and conditions state that personal data is necessary to provide access to the products and services and it is especially relevant for Online media and Digital video and music sectors. In other cases, personal data is collected for economic purposes.
 - Online media, SaaS and digital video and music providers usually provide sufficient information in their terms and conditions about the right to withdraw consent.
 - Consequences of consumer's withdrawal of consent for the use and processing of their personal data are described in the terms and conditions in around half of the cases but there is no sector and country trend in the results.

- Only in a few cases it is possible to purchase a product with digital element or a service without giving consent to the use of personal data, especially in products and services that require registration or an account to use them.
- The majority of the companies that describe in their terms and conditions the consequences in case the data contract is voided after being performed, say that they will store the data for a certain amount of time before deleting it.
- **During contract execution**
 - Most tested products or services provide a specific procedure to withdraw consent and this procedure is fairly easy to use for consumers.
 - In relative terms, the highest proportion of products or services without such procedure was reported in the digital gaming sector (5 out of 17 without procedure) and the smallest in the online media sector (1 out of 22 without procedure).
 - Consent can most often be withdrawn by making a selection in the customer profile or contacting the customer service of the provider via email.
 - In three quarters of cases, withdrawing consent was experienced by the Mystery Shoppers as “very easy” or “fairly easy”.
 - In some cases (6 out of 88), additional requirements were put on consumer to process their request to withdraw their consent, such as providing identification or paying a fee.
- **Experience after withdrawing consent**
 - After withdrawing the consent, quality and scope for a small, but considerable share of tested products or services was reduced or access was completely blocked
 - While the access to the service may not be reduced or blocked, in some cases, when the consent was withdrawn, there were no more ads and the content was no longer personalised.

7.1.1 Pre-contractual stage

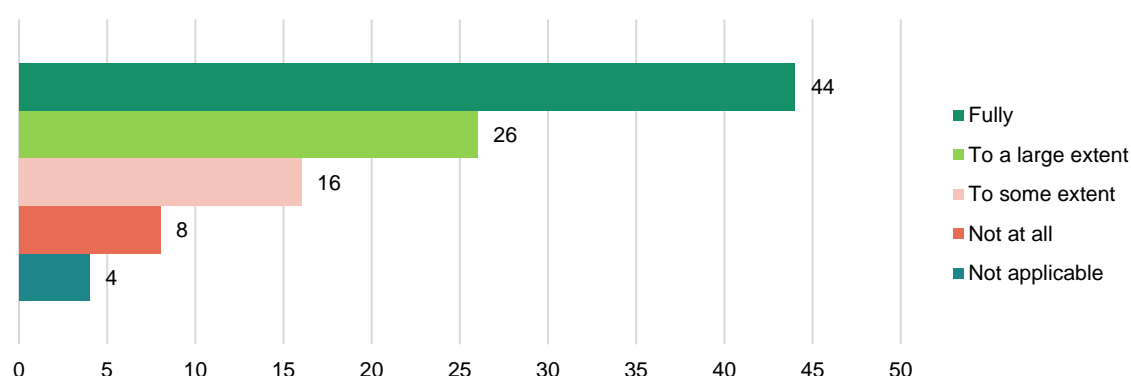
This was the first step for the mystery shoppers. This basically consisted of the shoppers reviewing the terms and conditions, and the privacy policy of the websites, applications and the products included in the exercise. They had to

assess if sharing of personal data was covered and, if yes, how extensively it was covered. For example, they had to check if the terms and conditions or privacy policies mentioned how the collected data was shared, what it was used for, and whether the terms were clear about the consequences that could be incurred in case the data contract was voided. Lastly, they had to check what is supposed to happen to the data once the contract has been voided.

The mystery shoppers reviewed **to what extent provision of the consumer's personal data to the provider was covered in the contract or the terms and conditions**. They were asked to indicate whether it was covered "fully", to "to a large extent", "to some extent" or "not at all". For a large majority of the products or services tested, this aspect was covered "to a large extent" (26 observations) or "fully" (44 observations). It means that the required information was found easily in the terms and conditions and the privacy policy pages of the website or within the application. A lot of these websites provided this required information section by section, point by point.

In a further 16 observations, shoppers reported that provision of personal data was covered "to some extent". In this case, there was a short paragraph that detailed the information available to the consumers. For 8 observations, shoppers reported that the sharing of personal data was "not covered at all" in the terms and conditions. In 4 cases, the shoppers selected "not applicable".

Figure 42 - Extent to which provision of personal data is covered in the contract or terms and conditions (actual numbers)

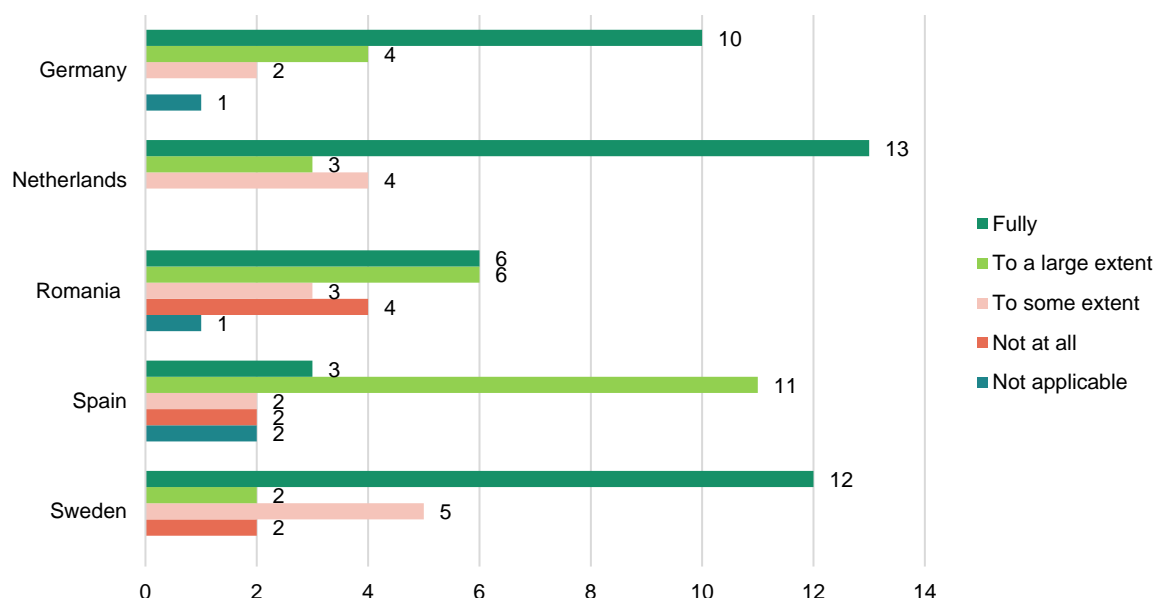


Source: Authors based on mystery shopping results (five countries)

In most of the cases in Germany (10 out of 17 observations), Netherlands (13 out of 20 observations) and Sweden (12 out of 21 observations), the terms of provision of personal data were "fully" provided to the customers as part of their data contract. In Spain, the terms of the tested products or services covered data provision most often "to a large extent" (11 out of 20 observations). Shoppers in Romania, on the other hand, reported the least number of observations that covered the provision of personal data in the terms and conditions well (3 out of 20 observations "to some extent" and 4 out of 20 observations "not at all").

Shoppers documented that this was because either the clauses for the provision of data were not covered in the terms and conditions and the privacy policy or the information was not as exhaustive as they would have expected it to be.

Figure 43 - Extent to which provision of personal data is covered in the contract or terms and conditions, results by country (actual numbers)



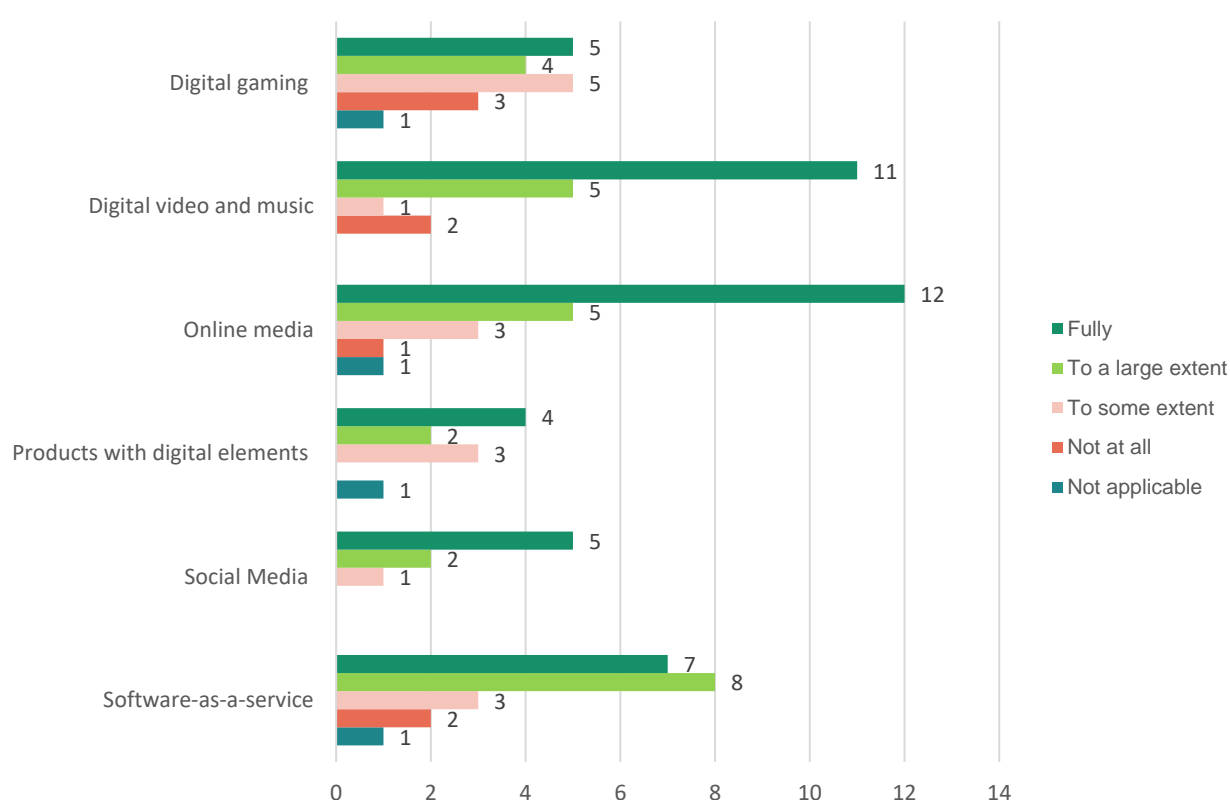
Source: Authors based on mystery shopping results (five countries)

A few differences by sectors can be observed. Shoppers most often reported for products or services that data provision is “fully” covered in the terms and conditions from the sectors of online media (12 out of 22 observations) and digital video and music (11 out of 19 observations), although in both sectors this means that only in barely more than 50% of examined cases such observations were made. Relative to the number of observations, “fully” was also the most reported category for products or services from the sector of social media (5 out of 8 observations). For products or services from the sector of software-as-a-service, shoppers judged the coverage most often as “to a large extent” (8 out of 21 observations), followed by “fully” (7 out of 21 observations). The least positive assessment of shoppers relates to products from the sector of digital gaming. For nearly half of the tested products or services, they assessed the coverage in the terms and conditions as rather lacking, either as “to some extent” (5 out of 18 observations) or “not at all” (3 out of 18 observations).

For the majority of tested products or services, companies in the sector of online media had covered provision of personal data in their terms and conditions fully or to a large extent. In most of the cases, when these websites were opened, there were pop ups that referred to the terms and conditions that needed to be agreed on before accessing the content. When signing up to these services, there was a link to the privacy policy and the terms and conditions that included

information on the provision of personal data. **The consumers needed to agree on these before they could access the service. It was not possible to sign up or access the service otherwise.** Products from the sector of software-as-a-service also worked the same way in the majority of the examined cases. However, shoppers noted in some cases from this sector that, while it was clear who the data is provided to and for what purposes, it was not clear what kind of personal data is collected and would be provided to the provider by using the product.

Figure 44 - Extent to which provision of personal data is covered in the contract or terms and conditions, results by sector (absolute numbers)

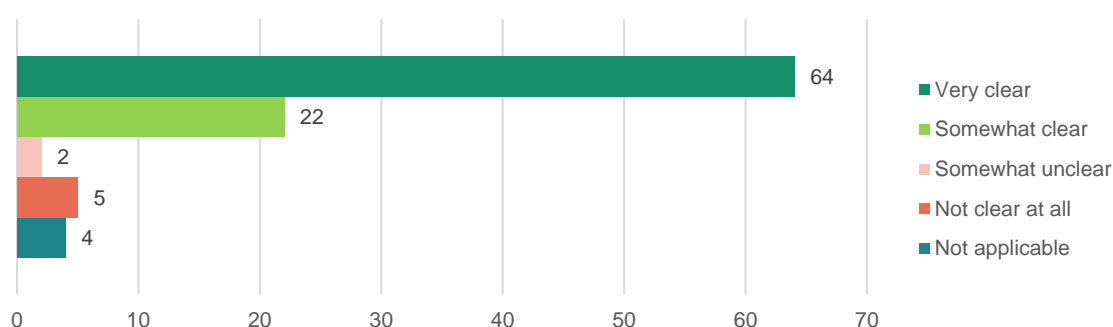


Source: Authors based on mystery shopping results (five countries)

Mystery shoppers were asked to assess, based on the review of terms and condition and privacy policy, **how clearly the use of the personal data was described in the contract.** In the majority of cases, shoppers perceived the description of the use of personal data as "very clear" (64 out of 97 observations) or "somewhat clear" (22 out of 97 observations). Only in a few cases, the use of personal data was "somewhat unclear" (2 out of 97 observations) or "not clear at all" (5 out of 97 observations). In the vast majority of the tested products or services, the related websites of the providers had a separate section dedicated to the terms and conditions that explained in detail what kind of data is collected and how it is used.

For observations that were judged as “somewhat clear”, all information needed was still provided, but it was either not very extensive and some parts remained unclear, or the information required more effort by the shoppers to be accessed and retrieved. For the observations that were considered as “somewhat unclear” or “not clear at all”, the information was either available only in a separate part of the website that required the shoppers to look around thoroughly before being found or it required to contact the provider.

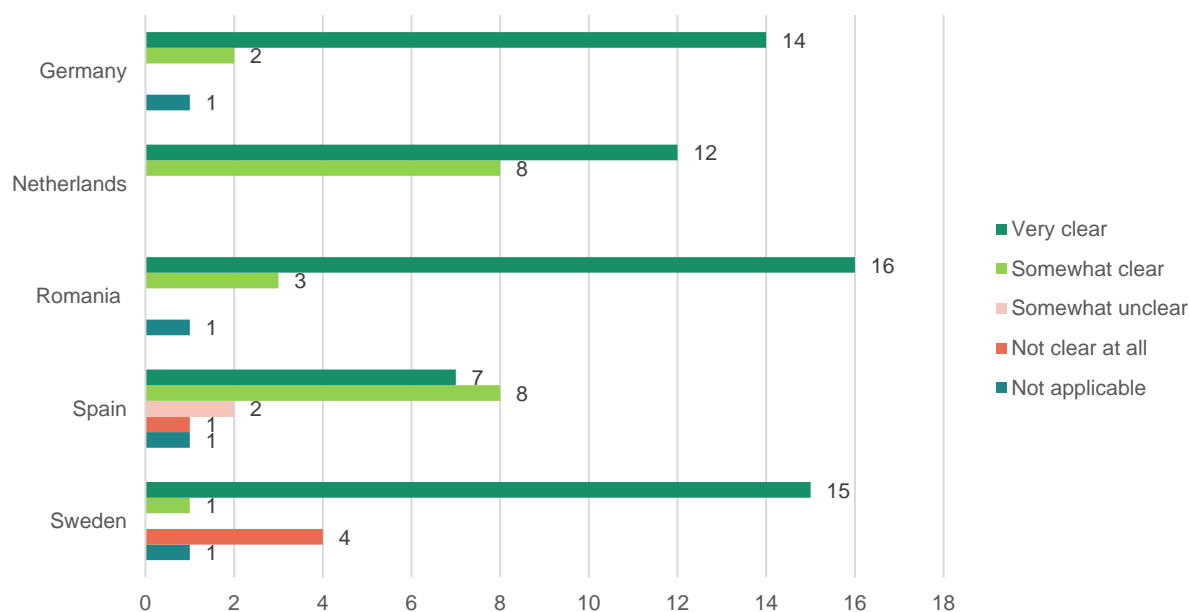
Figure 45 - Information about the use of the personal data



Source: Authors based on mystery shopping results (five countries)

The results show some interesting trends per country. For a large majority of products or services tested in Germany (14 out of 17 observations), Romania (16 out of 20 observations) and Sweden (15 out of 21 observations), shoppers considered that the information provided was “very clear”. In Spain (8 out of 19 observations) and the Netherlands (8 out of 20 observations), the information on data use associated with the tested products or services were more often deemed “somewhat clear”. Shoppers noted that, in the case of Spain, they had to search and identify separately each term in the terms and conditions and the privacy policy which led them to assess it as “somewhat clear” rather than “very clear”. Furthermore, in Sweden, for 4 out of 21 observations, the descriptions were perceived as “not clear at all”, which suggests that traders tend to provide the required information either transparently or not at all, with little middle ground.

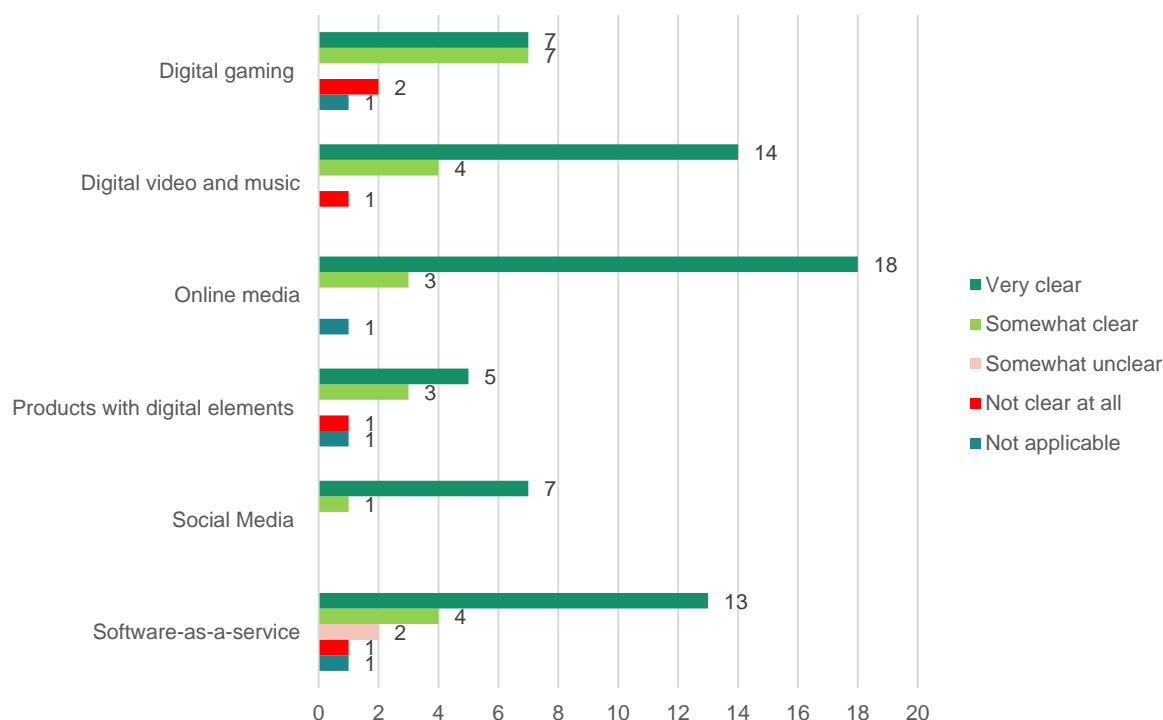
Figure 46 - Information about the use of personal data, by country (absolute numbers)



Source: Authors based on mystery shopping results (five countries)

Analysing the results by sector, no particular trends stand out. The highest number of observations where shoppers considered that description of the use of personal data was explained “very clear” was among products or services from the online media sector (18 out of 21 observations).

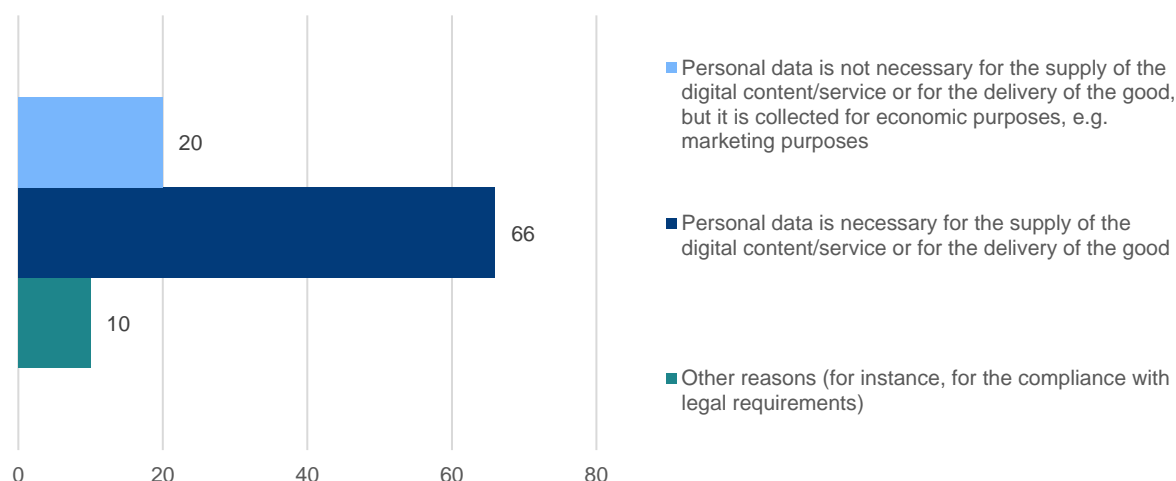
Figure 47 - Information about the use of personal data, by sector (absolute numbers)



Source: Authors based on mystery shopping results (five countries)

The results indicate that traders declared that the personal data was necessary in the majority of the cases for the supply of digital content/service or for the delivery of the good (66 out of 96 observations). Only in a minority of cases, the terms and conditions stated that personal data was not necessary for the supply of a product or a service, but was collected for economic purposes (20 out of 96 observations). In a lot of cases, data was stated to be used for multiple reasons and the reasons that were listed could apply to the collection of data when consumers were acquiring one product/service. In some cases (10 out of 96 observations), shoppers mentioned that companies provided “other reasons” for collecting personal data. This could include compliance with legal requirements.

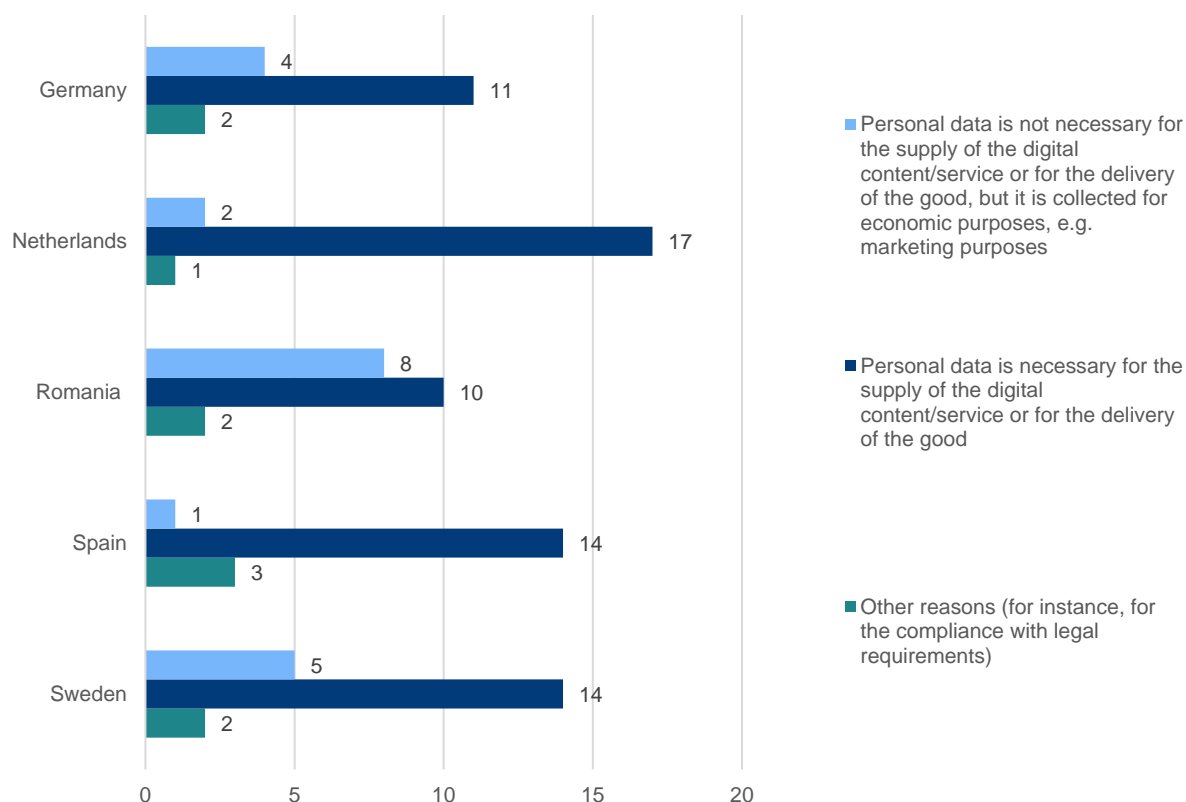
Figure 48 - Reasons for collection of personal data



Source: Authors based on mystery shopping results (five countries)

Considering differences by country, shoppers in Romania reported more often than others that in the products or services they tested, the personal data that was collected was, according to the terms and conditions, not necessary for the supply of the product or service but collected for economic purposes (8 out of 20 observations).

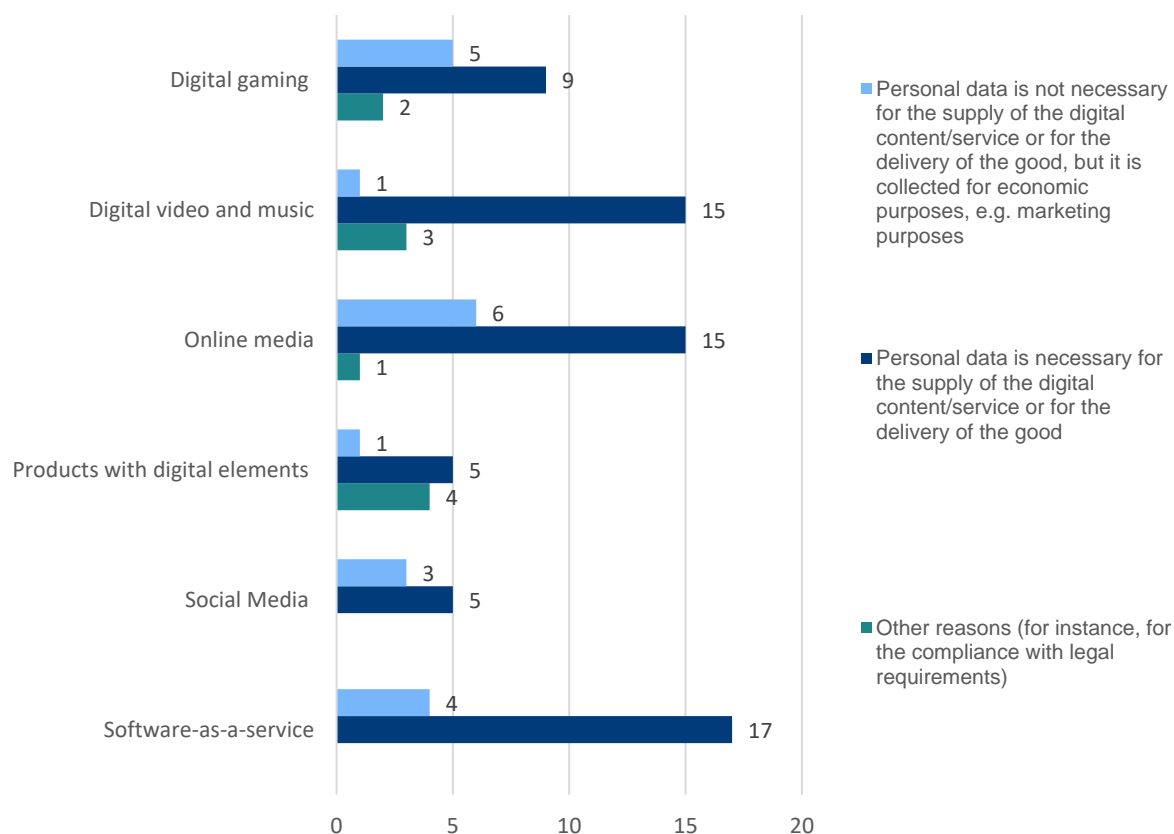
Figure 49 - Reasons for collection of personal data, by country



Source: Authors based on mystery shopping results (five countries)

Regarding differences by sector, in the sectors of digital gaming (5 out of 16 observations) and of online media (6 out of 22 observations), collection of personal data that is not necessary for supply of the product or service but collected for secondary economic purposes occurs most often, however this would still be declared in fewer than one third of examined cases.

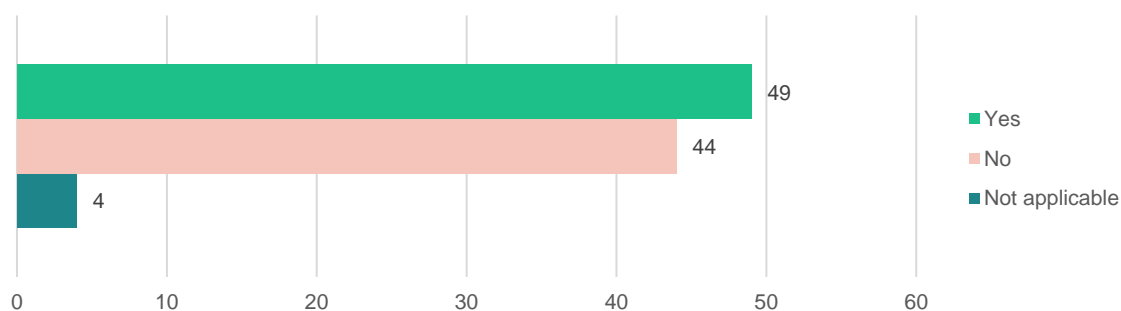
Figure 50 - Reasons for collection of personal data, sorted by sector



Source: Authors based on mystery shopping results (five countries)

The mystery shoppers had to **check if the privacy policy and the terms and conditions mentioned what the consequences were to be if the consent to provide personal data was withdrawn by consumers**. In around half of the cases, the terms and conditions contained a clause about the consequences when consent is withdrawn (49 out of 97 observations). For the other half of tested products or services, such clauses were not present (48 out of 97 observations).

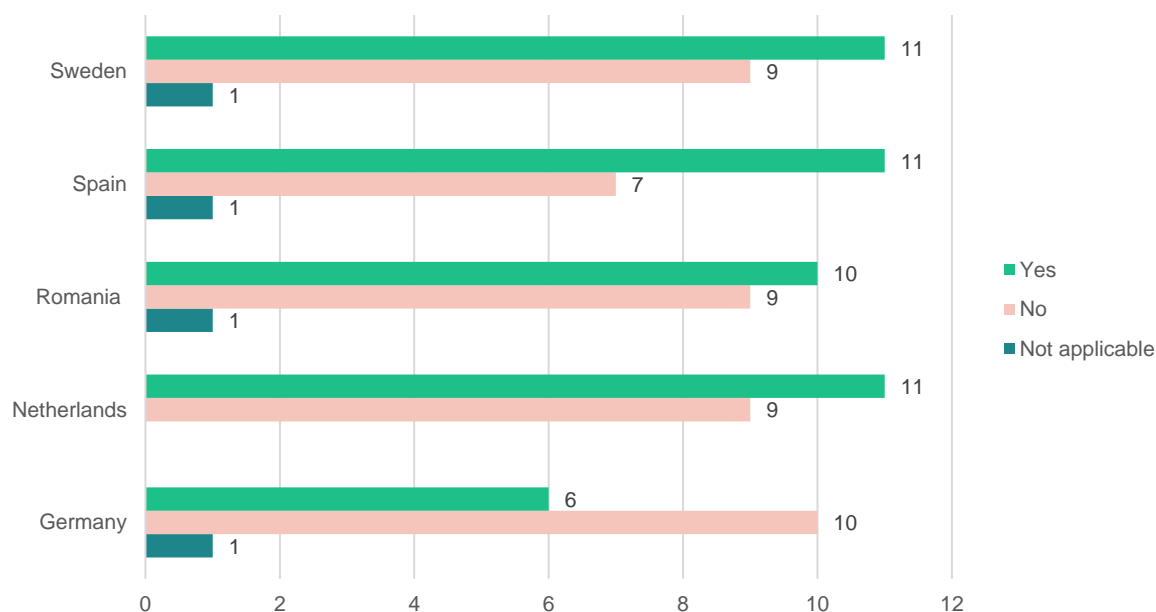
Figure 51 - Existence of clauses about consequences in case of consent withdrawal



Source: Authors based on mystery shopping results (five countries)

Analysing the results by country, Germany had the highest portion of observations where shoppers reported that the terms and conditions did not contain clauses about the consequences in case the data was no longer provided (10 out of 17 observations). However, the results are fairly balanced across all countries in the study.

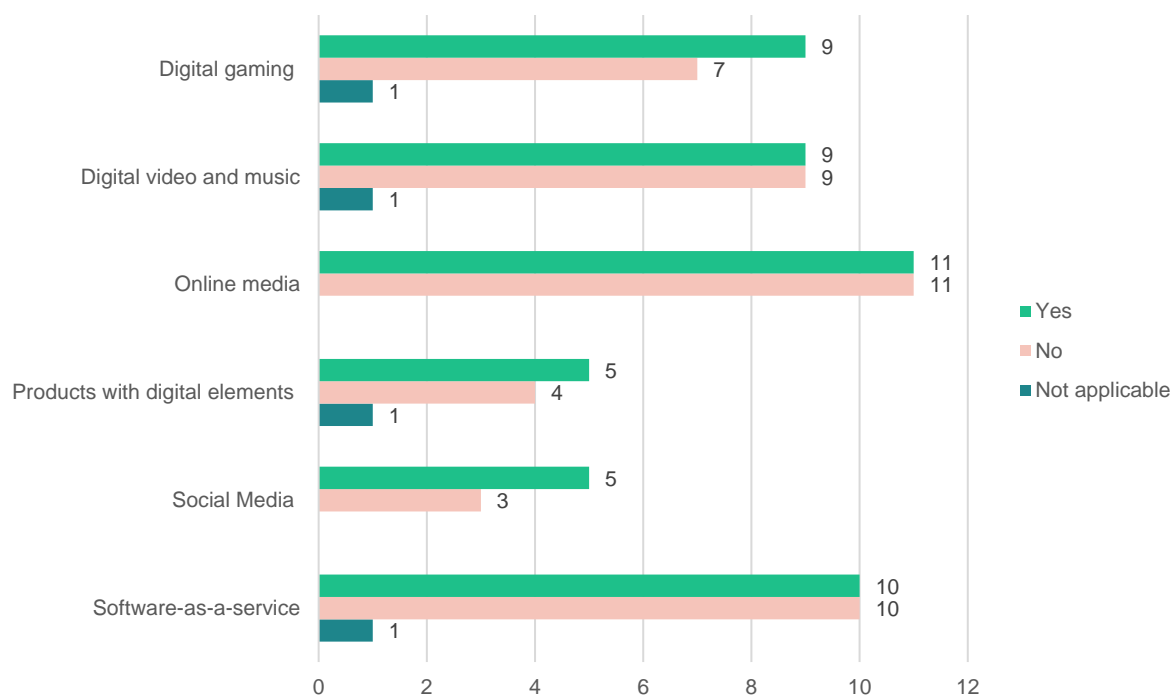
Figure 52 - Existence of clauses about consequences in case of consent withdrawal, by country



Source: Authors based on mystery shopping results (five countries)

Similarly, the results by sector were very balanced and in a lot of cases, the number of “yes” and “no” answers that shoppers documented were similar or the same. This suggests that the average result is not skewed by any particular sector, but rather representative across the board of all examined products and services.

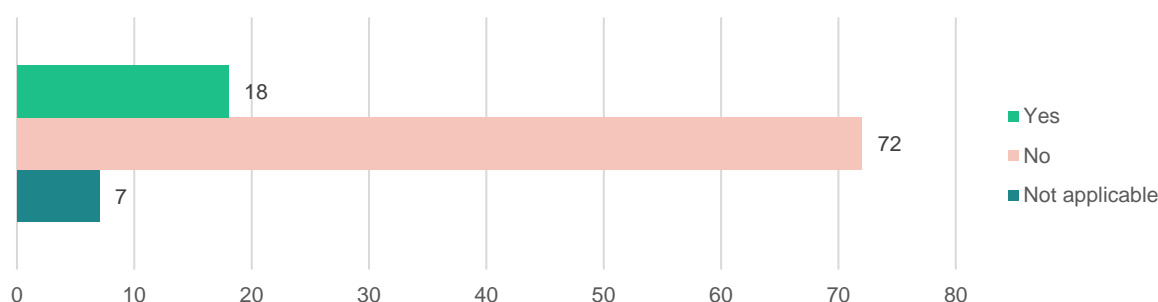
Figure 53 - Existence of clauses about consequences in case of consent withdrawal, sorted by sector



Source: Authors based on mystery shopping results (five countries)

When checking if it was possible in practice to **access the digital service or content without giving consent for the processing of the data**, in a large majority of cases the mystery shoppers reported that it was not possible (72 out of 97 observations). In some cases, it was possible to purchase the product or service without consenting to the use of personal data (18 out of 97 observations). However, in most cases, the mystery shoppers had to register and make an account, and when registering for the service, they had to agree to the terms and the conditions of the data contract. Even when not having to create an account to access the service, in a lot of cases, they had to agree to the terms and conditions and the privacy policy of the website before accessing the content.

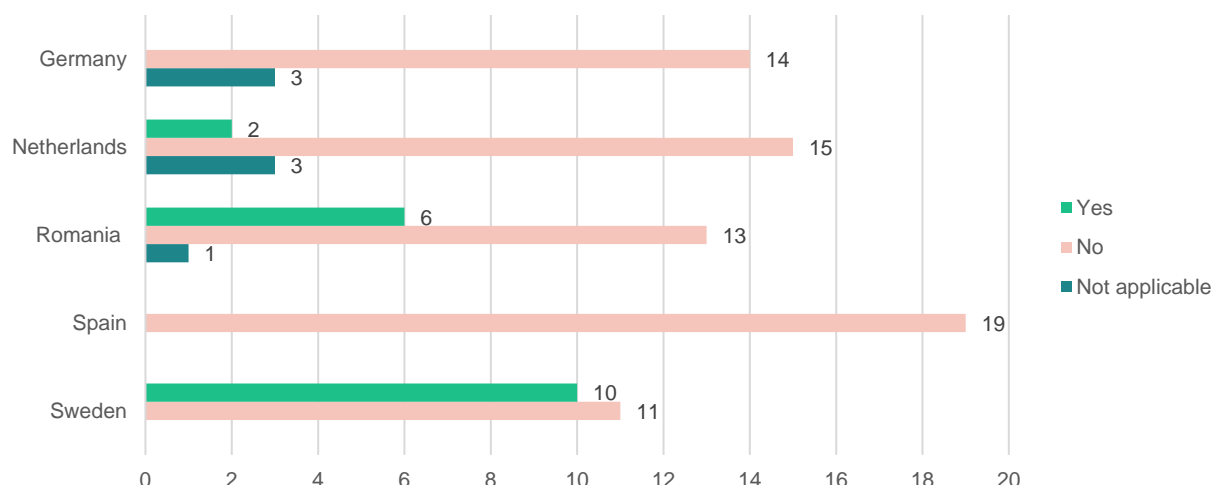
Figure 54 - Possibility of purchasing digital services/product without consent for processing of personal data



Source: Authors based on mystery shopping results (five countries)

When looking at the results by country, it stands out that shoppers in Sweden reported an almost equal distribution of “yes” and “no” answers to this question (10 and 11 out of 21 observations). On the other hand, for no product or service tested in Spain was it possible for shoppers to purchase the product or service without agreeing to the processing of their personal data.

Figure 55 - Possibility of purchasing digital services/product without consent for processing of personal data, by country

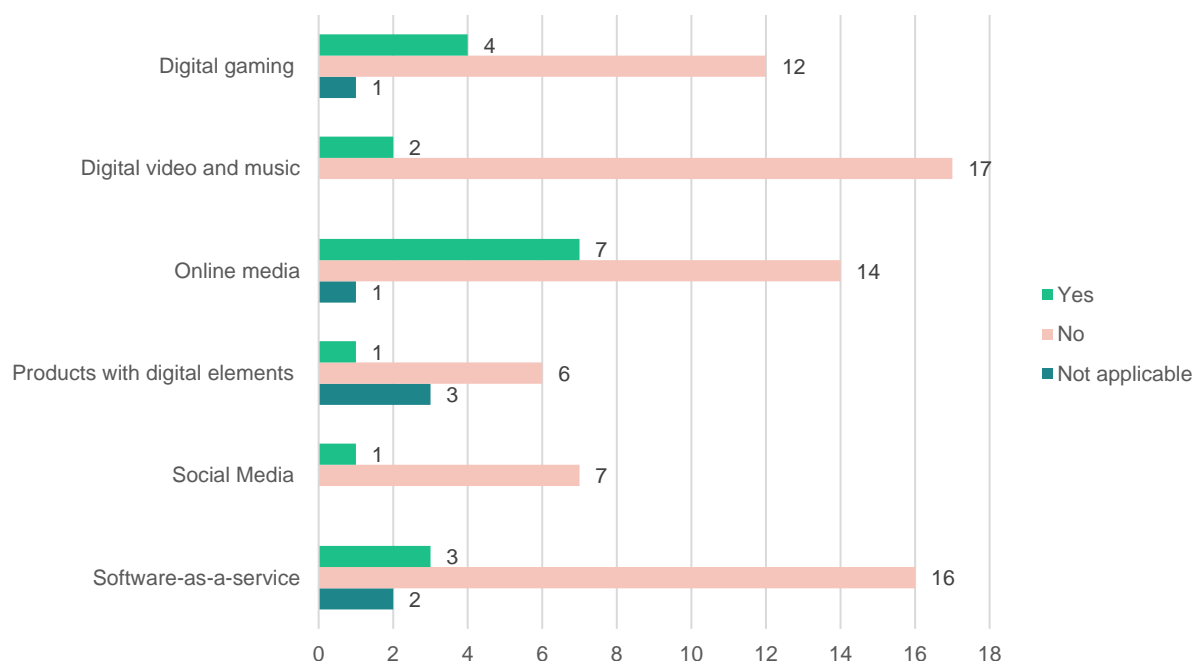


Source: Authors based on mystery shopping results (five countries)

When considering differences by sector, most “yes” answers can be observed among tested products or services from the online media sector (7 out of 22 observations). According to the documented answers of the shoppers, this is because there were more online media websites that did not require signing up to access the content. A lot of these were online newspapers that could be accessed and if shoppers refused the processing of personal data, the content was reduced only in some cases.

On the other hand, products or services from the sector of digital music and video had the highest portion of “no” answers (17 out of 19 observations). Generally, they required making an account which practically was always connected with providing consent to the processing of personal data. Products or services from the sector of software-as-a-service also had a very significant number of cases that did not allow for access to the service without providing consent to the processing of personal data (16 observations). This was because in this sector, service providers declared that for most services tested data collection was required to provide (access to) the service.

Figure 56 - Possibility of purchasing digital services/product without consent for processing of personal data, by sector

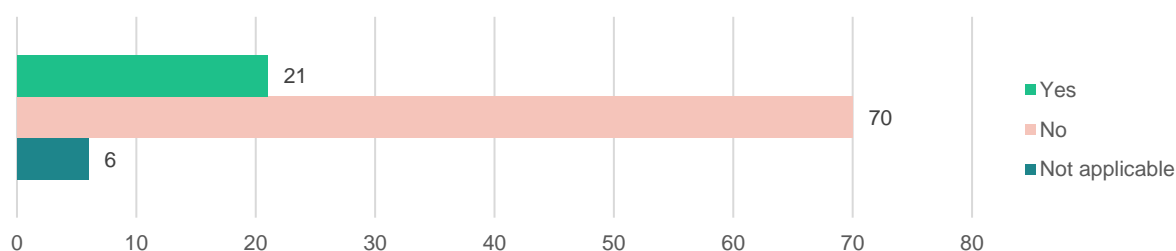


Source: Authors based on mystery shopping results (five countries)

Shoppers also checked whether **the terms and conditions contain any clauses that describe the consequences in case the data contract is voided after it has been performed**. In the majority of cases, such clauses were not present (70 out of 97 observations). However, for a considerable minority of tested products and services, shoppers reported that the terms and conditions contain such clauses (21 out of 97 observations).

For the companies that did give out the information on consequences of voiding the contract, these consequences related to the fee not being refunded, stopping the processing of data, services not being offered anymore and discontinuing of these services. In some cases, companies mentioned that the data is kept and processed for a few years before being deleted.

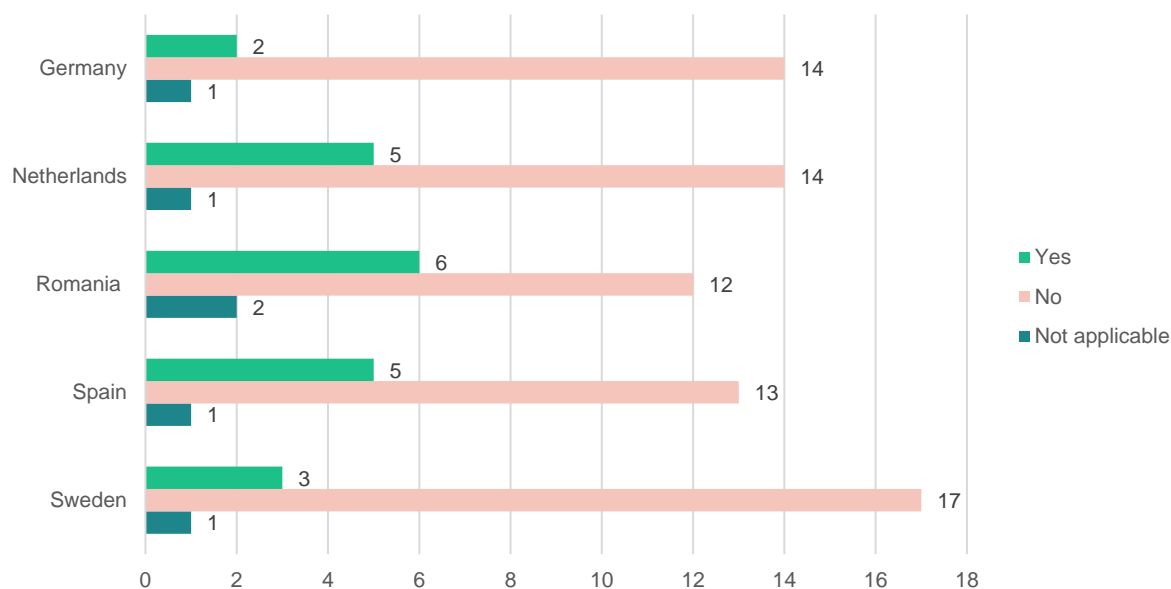
Figure 57 - Existence of clauses describing consequences in case data contract is voided after it has been performed



Source: Authors based on mystery shopping results (five countries)

In the country breakdown, no significant differences between the tested products in the different MS can be observed on this question.

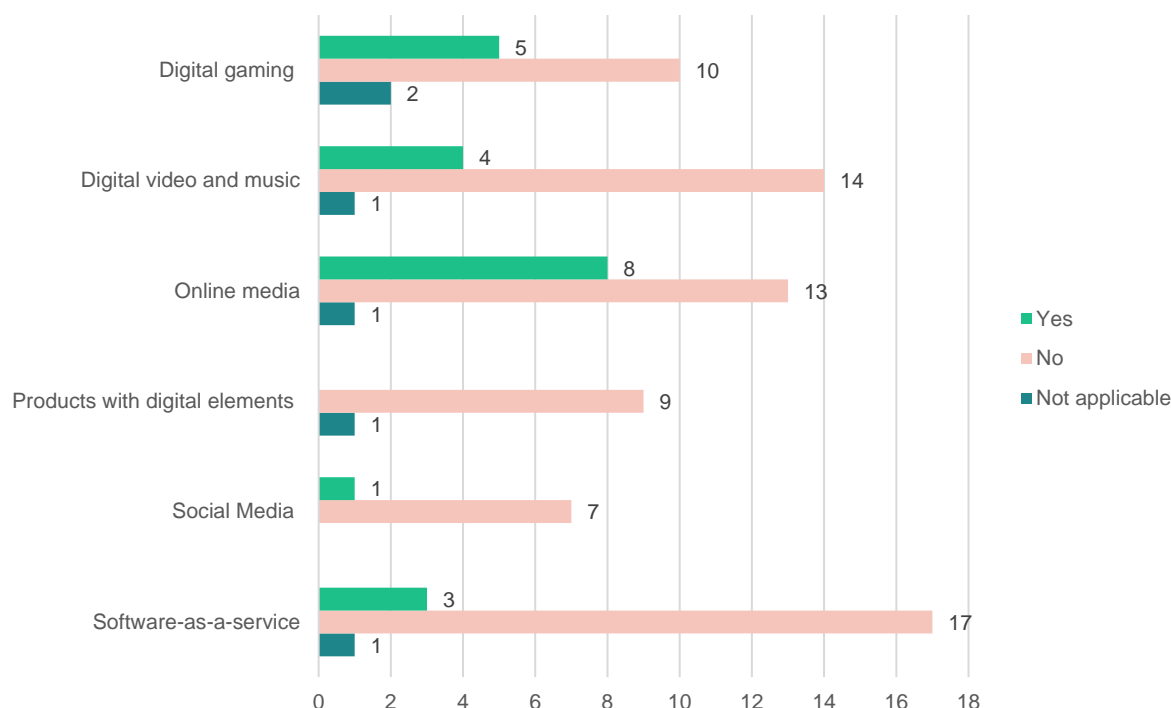
Figure 58 - Existence of clauses describing consequences in case data contract is voided after it has been performed, by country



Source: Authors based on mystery shopping results (five countries)

The sector breakdown showed that in the sector of software-as-a-service, there was the highest number of companies that did not explain the consequences of voiding the contract (17 out of 21 observations). On the other hand, product or services from the sector of online media had the highest number cases where the terms and conditions did mention the consequences of voiding the contract (8 out of 22 observations).

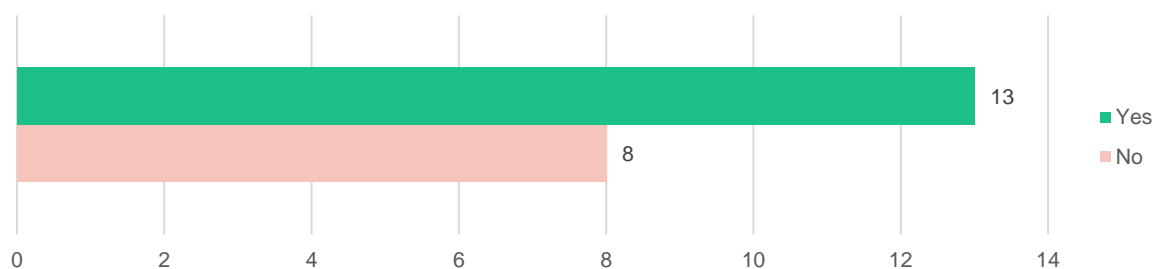
Figure 59 - Existence of clauses describing consequences in case data contract is voided after it has been performed, by sector



Source: Authors based on mystery shopping results (five countries)

Subsequently, the mystery shoppers were asked to document **whether in cases where clauses on the consequences are present in the event that the data contract is voided, these clauses specify also what happens with the personal data that the consumer provided and that was processed by the trader after the contract was voided.** In the majority of cases, there were specifications about this (13 out of 21 observations). For those products and services where the terms and conditions had specific clauses, shoppers often reported that these clauses mention that the data is kept for a certain amount of time before it is deleted. This time period can range from data being deleted immediately after the deletion of the account to 5 years for some digital content and services. Among the reasons companies gave for this were legal obligations, their own records keeping, marketing purposes and financial purposes. It should be noted that shoppers did not evaluate the legitimacy of these reasons.

Figure 60 - Data outcomes specified in the clauses



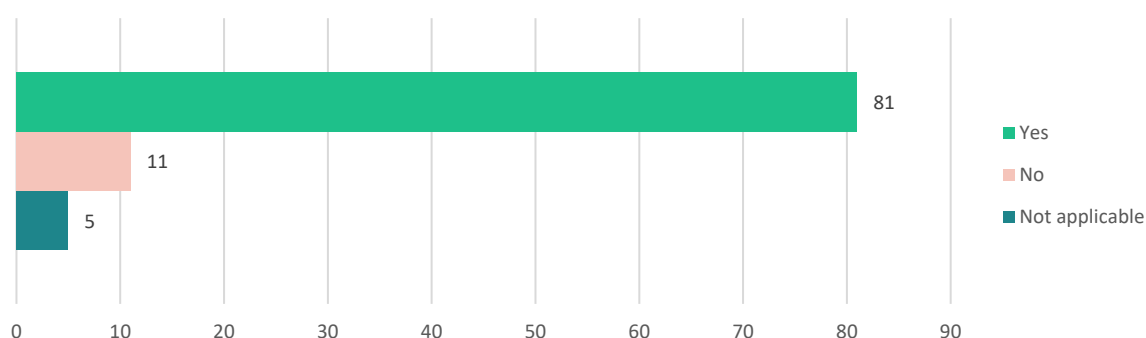
Source: Authors based on mystery shopping results (five countries)

7.1.2. During Contract Execution

After the analysis of the terms and conditions, the mystery shoppers purchased the product or service. In the following, they reported their experience as consumers during the contract execution. In particular, they explored **the possibility to withdraw their consent for the use of their personal data by the provider or affiliated third parties**. They reported in detail the options that consumers have to withdraw their consent, either within the application or product or by contacting the provider directly.

The mystery shoppers checked, **when using the product or service as a customer, whether the provider offered a specific procedure for consumer to revoke their consent to the use of their data**. In the majority of cases, a specific procedure was available to shoppers to withdraw consent to the use of personal data (81 out of 97 observations). Only a few products or services did not offer a specific procedure to withdraw consent (11 out of 97 observations). In 5 cases, shoppers reported that it was not applicable to this specific product or service.

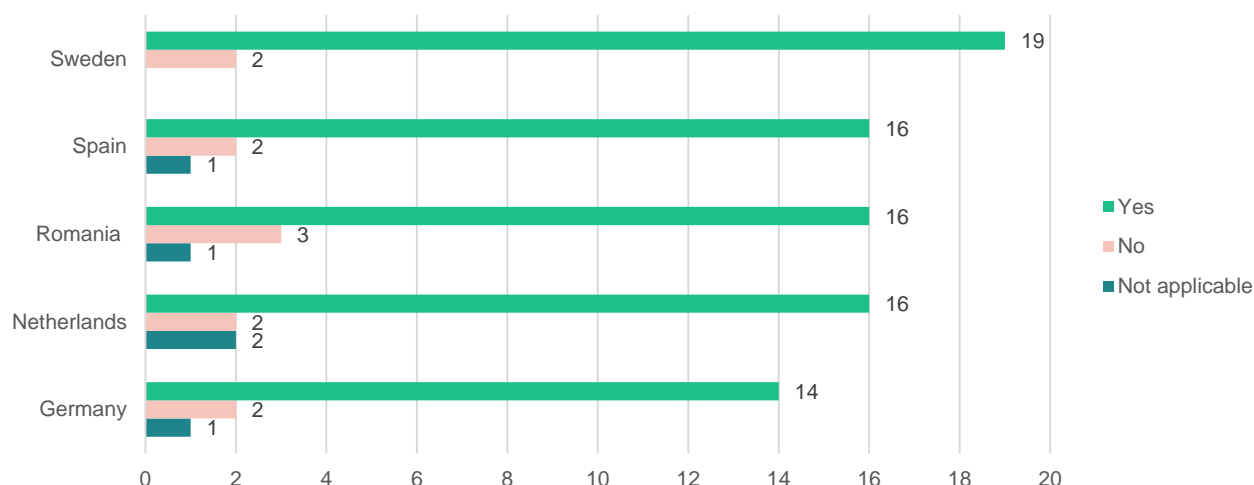
Figure 61 - Availability of specific procedure to withdraw consent



Source: Authors based on mystery shopping results (five countries)

Considering the differences in observations by country, no country stands out with a higher share of products in which a procedure or no procedure was offered to consumers to withdraw consent. The number of tested products or service without such procedure ranges from 3 in Romania to 2 in all other countries. This is consistent with the overall finding that such a procedure is provided to consumers in most cases.

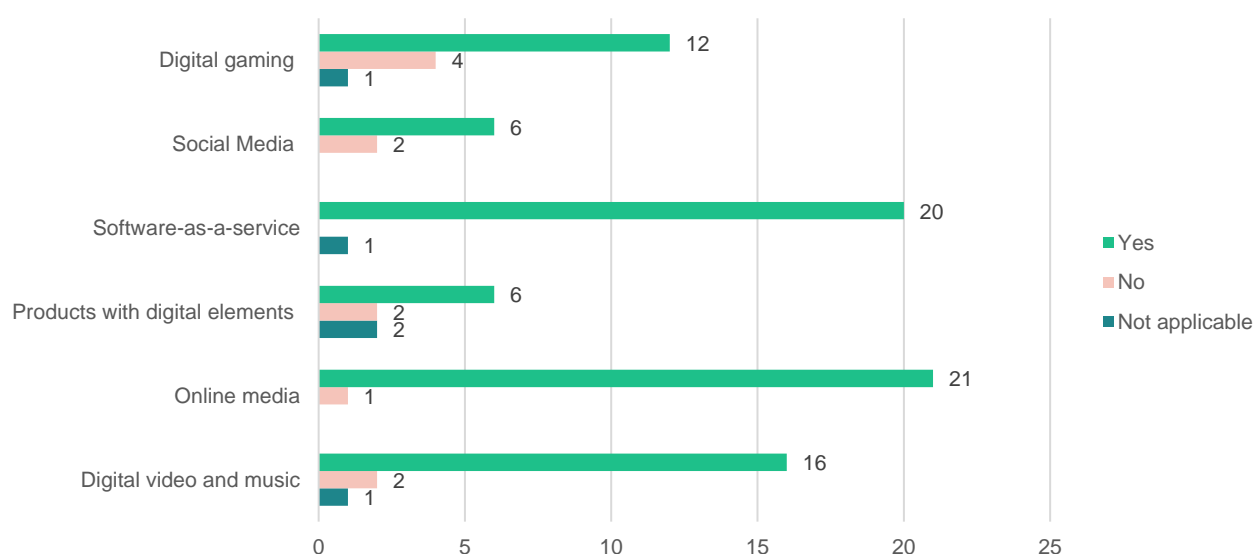
Figure 62 - Availability of specific procedure to withdraw consent, sorted by country



Source: Authors based on mystery shopping results (five countries)

The mystery shopping revealed some differences by sector. In relative terms, the highest proportions of products or services without such procedure were reported in the social media sector (6 products/services with procedure vs. 2 products/services without procedure) and in the digital gaming sector (12 products/services with vs. 4 products/services without procedure). At the other end of the scale, none of the tested products in the software-as-a-service sector was reported as not having such a procedure. Similarly, only 1 tested product in the online media sector had no such procedure (versus 21 products/services in this sector with procedure).

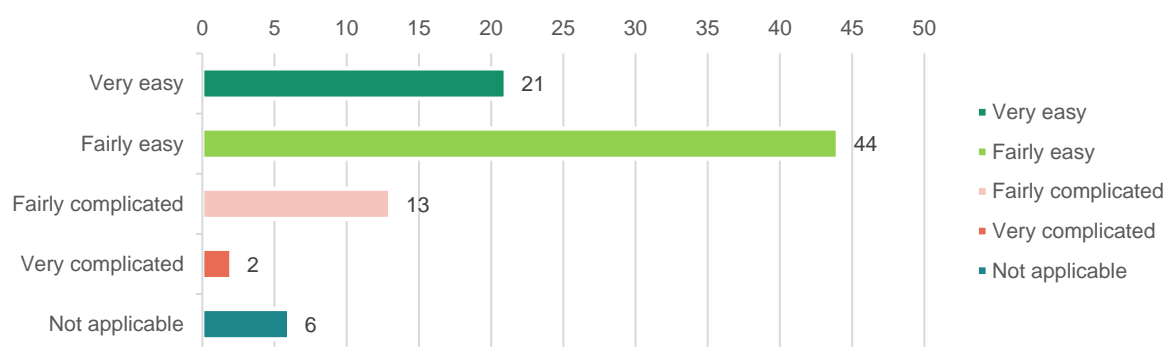
Figure 63 - Availability of specific procedure to withdraw consent, sorted by sector



Source: Authors based on mystery shopping results (five countries)

Mystery shoppers who had reported that a procedure to withdraw the consent is available for the tested product or service were subsequently asked to **evaluate how easy or complicated it is to do so**. Their evaluation is based on the experience when they withdraw consent as customers on this specific product. In most cases, shoppers reported that it was “very easy” (21 out of 86 observations) or “fairly easy” (44 out of 86 observations). Only in some cases, shoppers experienced the process as “fairly complicated” (13 out of 86 observations) or “very complicated” (2 out of 86 observations).

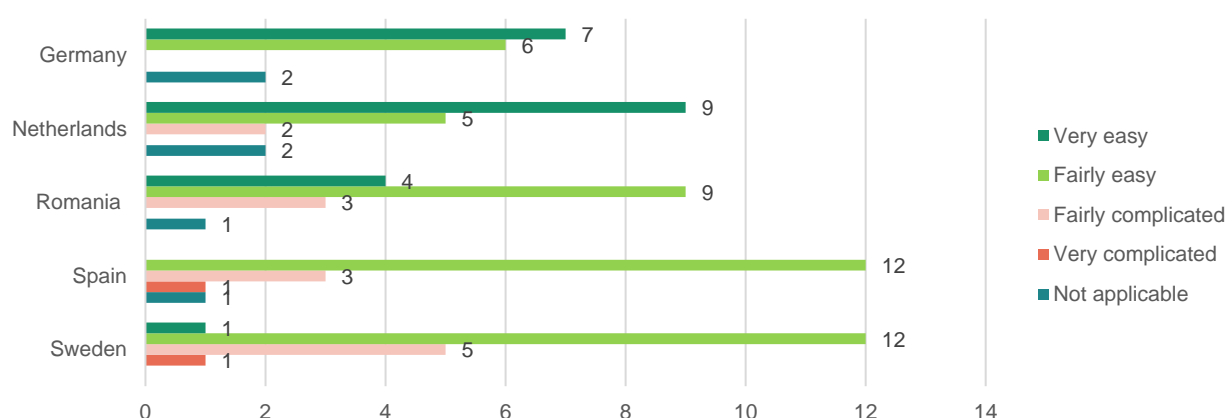
Figure 64 - Ease of withdrawing consent



Source: Authors based on mystery shopping results (five countries)

Looking at differences by country, only a few differences stand out. Sweden is the only country where shoppers reported for more than 5 tested products or services that the procedure to withdraw consent was complicated. In this country, shoppers assessed the process for 5 products or services as “fairly complicated” and for 1 product/service as “very complicated” (out of 19 observations). On the other hand, in Germany, none of the shoppers considered the process as complicated (out of 15 observations).

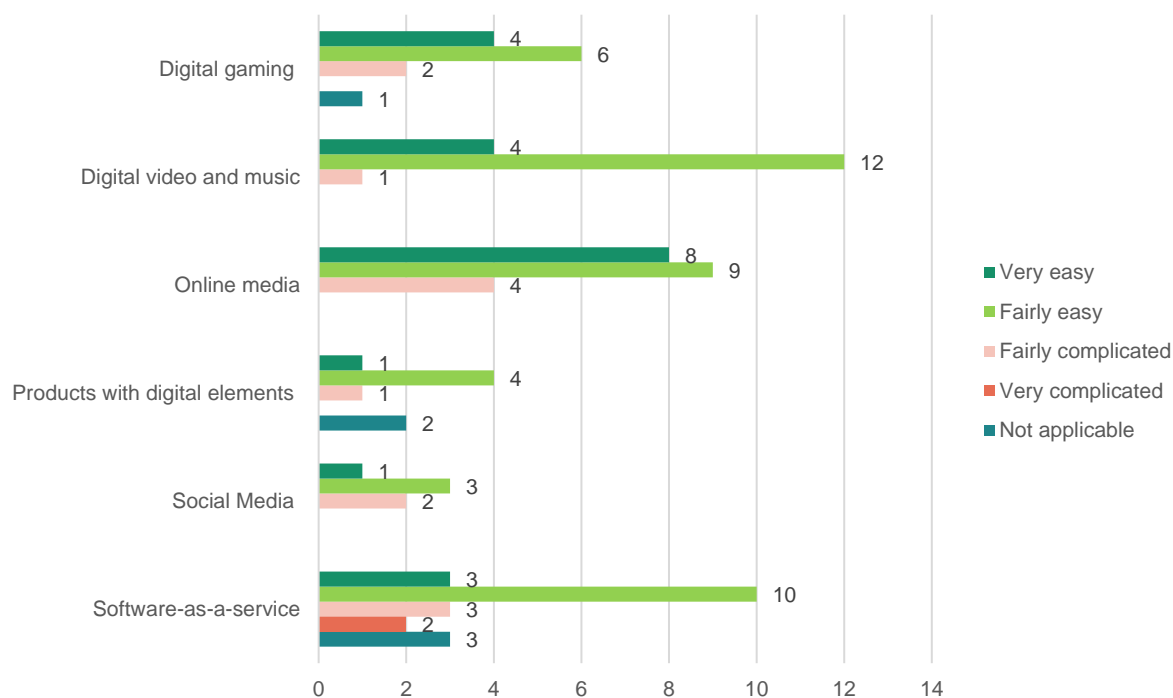
Figure 65 - Ease of withdrawing consent, by country



Source: Authors based on mystery shopping results (five countries)

When it comes to differences by sector, the mystery shopping did not reveal a clear trend on this question. Shoppers mentioned for some products or services from the software-as-a-service sector (5 out of 21 observations), the online media sector (4 out of 21 observations), and the social media sector (2 out of 6 observations) slightly more often that the procure is “fairly complicated” or “very complicated”.

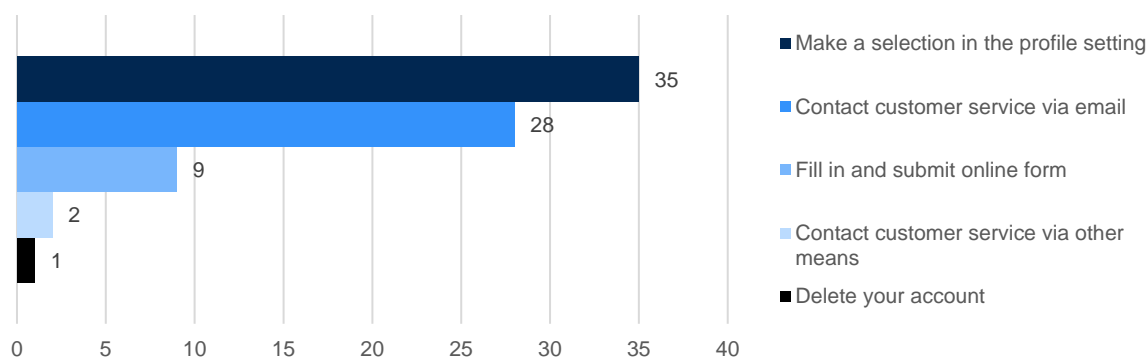
Figure 66 - Ease of withdrawing consent, by sector



Source: Authors based on mystery shopping results (five countries)

The mystery shoppers reported also what **type of procedure was available for consumers to withdraw consent**. Most often, the change could be initiated by making a selection in the profile setting (35 out of 75 observations), followed by contacting the customer service via email (28 out of 75 observations). Less often the procedure foresaw filling in and submitting an online form (9 out of 75 observations) or contacting the customer service by means other than email (2 out of 75 observations). In one case, shoppers reported that the procedure foresaw for customers to delete their account.

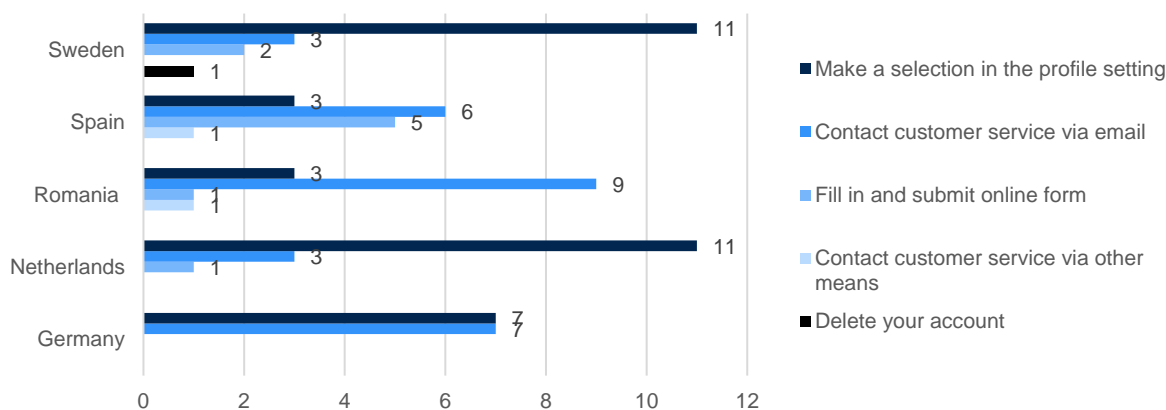
Figure 67 - Procedure of withdrawing consent



Source: Authors based on mystery shopping results (five countries)

There are few notable differences between countries. Making a selection in the profile settings were most often reported in products/services tested in Sweden, the Netherlands (both 11 observations), and Germany (7 out of 14 observations). Contacting the customer service via email on the other hand was most often mentioned in Romania (9 out of 14 observations), Germany (7 out of 14 observations) and Spain (6 out of 15 observations). Filling in and submitting an online form had a considerable share of mentions among products or services that were tested in Spain (5 out of 15 observations).

Figure 68 - Procedure of withdrawing consent, sorted by country

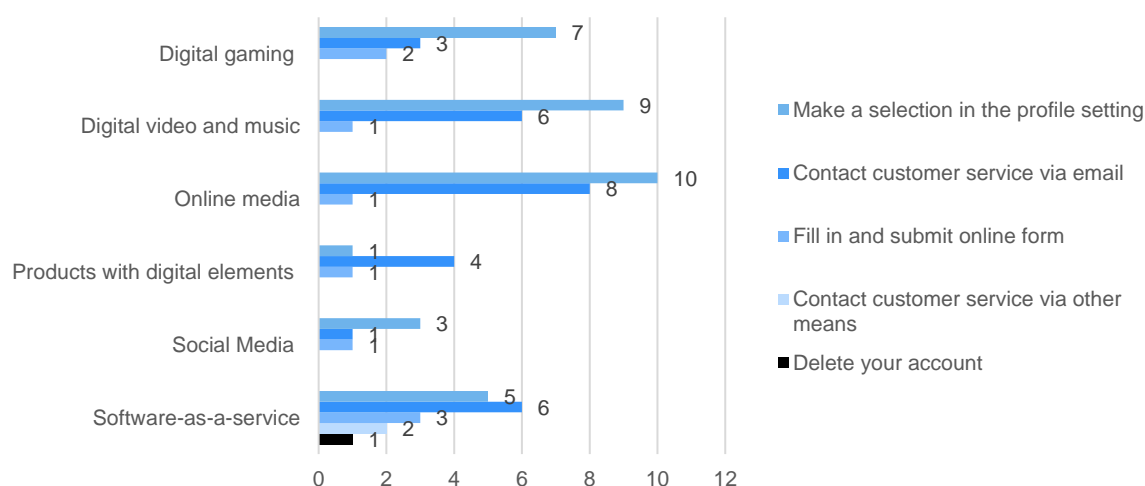


Source: Authors based on mystery shopping results (five countries)

There are clear differences by sector. Consent could be withdrawn by making a selection in the customer profile settings most often for products or services in the sectors of online media (10 out of 19 observations), digital video and music (9 out of 16 observations) and digital gaming (7 out of 12 observations). Relative to the number of observations, it emerged also as an important procedure for the products or services tested in the sector of social media (3 out of 5 observations). Contacting customer service via email was most often reported in the sectors of online media (8 out of 19 observations), software-as-a-service (6 out of 17 observations) and digital video and music (6 out of 16 observations). Considering

the number of observations, contacting customer service via email was also the most common procedure for products with digital elements (4 out of 6 observations).

Figure 69 - Procedure of withdrawing consent, sorted by sector

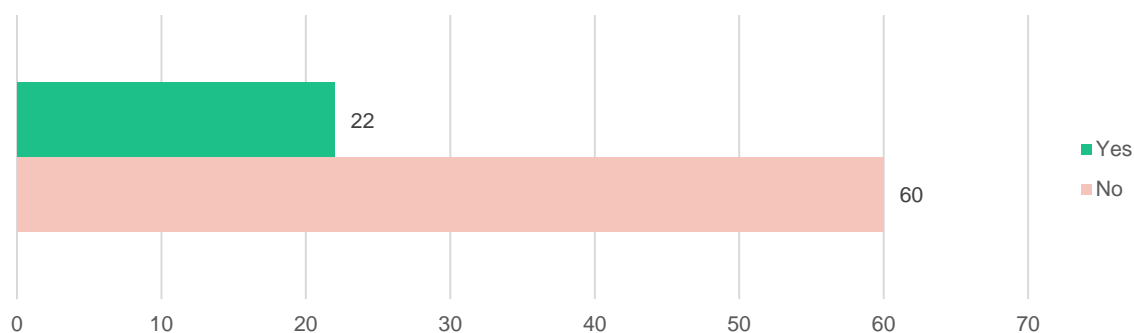


Source: Authors based on mystery shopping results (five countries)

Subsequently, mystery shoppers reported **whether the procedure for withdrawing consent is the same as or similar to the procedure for giving consent to the use of personal data**. In the majority of the tested products and services, this was not the case. Among those products/services where a specific procedure to withdraw consent was available to consumers, the procedure for withdrawing consent was in the majority of cases different than the initial procedure customers used to agree to the use of their personal data. The mystery shoppers reported in 22 observations (out of 82) that the procedure was the same or similar, while they documented in 60 observations (out of 82) that this was not the case.

According to the assessments of the mystery shoppers, the main reason why the procedures are different are either because it was required for consumers to send an email to the customer service or the settings to revoke their agreement to the use of their data were located on a different page in the customer profile settings. Many shoppers reported that consent was a prerequisite for signing up to the product and, in the experience of the shoppers, was not perceived as a separate step from the conclusion of a contract. It was rather smoothly engrained in the contractual process. However, withdrawing consent required them to take several actions and 'clicks' in case of applications with digital customer profiles. We could therefore draw a tentative conclusion that withdrawing consent tends to be either more complex or require more engagement on the side of consumers.

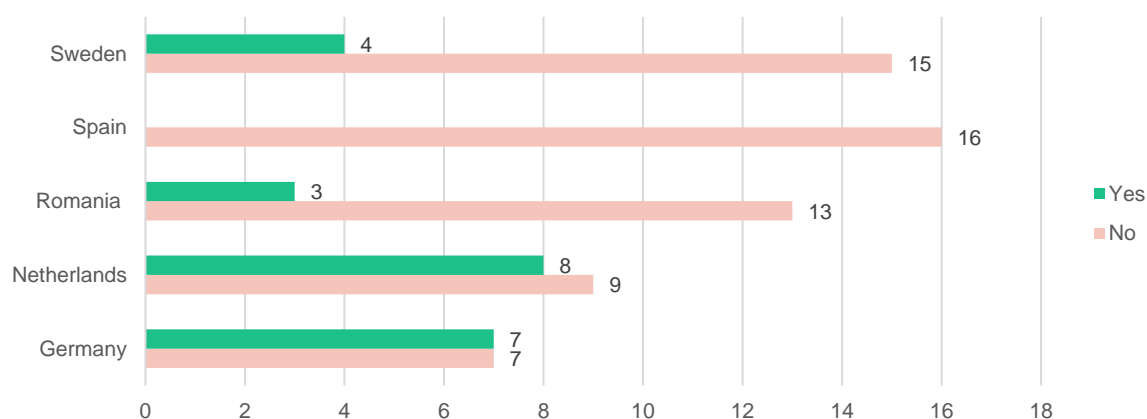
Figure 70 - Similarity between procedures to give and withdraw consent



Source: Authors based on mystery shopping results (five countries)

Several differences by country are clearly visible in the collected data. In Germany and the Netherlands, in roughly half of the cases where a specific procedure to withdraw consent to the use of personal data was offered, the procedure for withdrawing consent was the same or similar as for giving consent. On the other hand, in Spain, this was the case for none of the observations. In Sweden and Romania, for a small number of cases the procedure was the same (Sweden: 4 versus 15 observations, Romania: 3 versus 13 observations).

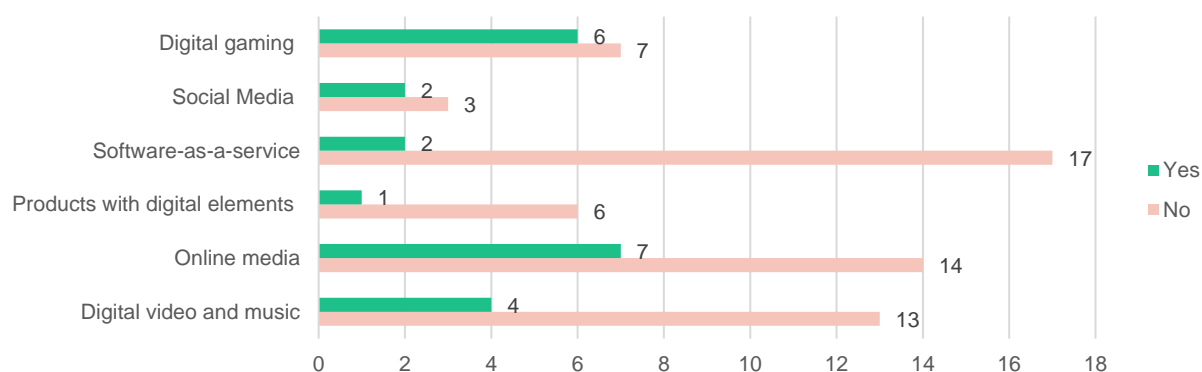
Figure 71 - Similarity between procedures to give and withdraw consent, sorted by country



Source: Authors based on mystery shopping results (five countries)

Looking at sector-specific differences, it can be noted that among the tested products/services, it was relatively common in the sectors of digital gaming and social media that the procedure for withdrawing consent to the use of personal data was the same as for giving consent, with shoppers reporting for nearly half of the observations in both sectors that this was the case. The procedures were most often different for products or services in the sector of software-as-a-service and in the sector of products with digital elements. Shoppers reported that in some cases of products or services in the digital video and music sector and online media sector, the procedure was the same, but this remained a minority.

Figure 72 - Similarity between procedures to give and withdraw consent, sorted by sector



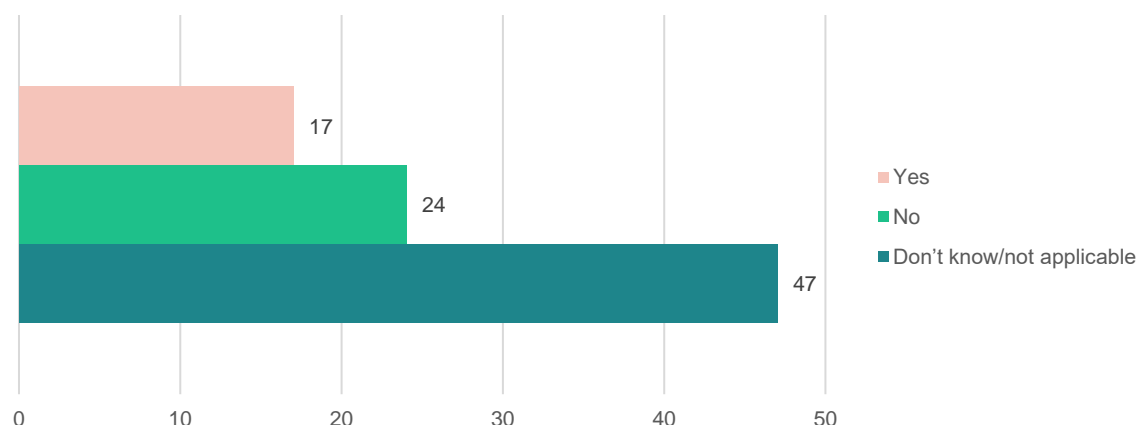
Source: Authors based on mystery shopping results (five countries)

7.1.3. Experience after withdrawing consent

After their observations of the procedures available to them as customers, the mystery shoppers withdrew their consent to the use of their personal data and observed the consequences this had for their use of the product or service. In cases where withdrawing consent was not foreseen as a procedure in the product or application, the shoppers contacted the customer service of the provider to withdraw their consent to their data use directly with them. Shoppers reported changes in the quality and scope of the product or services after they had withdrawn consent. They were also asked to document any other changes that occurred as a consequence from withdrawing their consent to the use of their personal data.

After having withdrawn their consent, shoppers were asked to report **whether the quality of the provided digital content, service or contact differed from the experience they had before**. In 17 out of 88 cases, the mystery shoppers observed a change in the quality provided. On the other hand, in 24 out of 88 cases, shoppers reported that there was no change. Furthermore, in 47 out of 88 cases, shoppers selected “don’t know/not applicable” as answer to this question, most commonly because either a change was not possible or their request to withdraw consent was not processed by the provider within a reasonable time frame. This provides us with a smaller sample of cases to analyse as to how the withdrawal of consent impacts the consumers’ experience of digital content or a digital service.

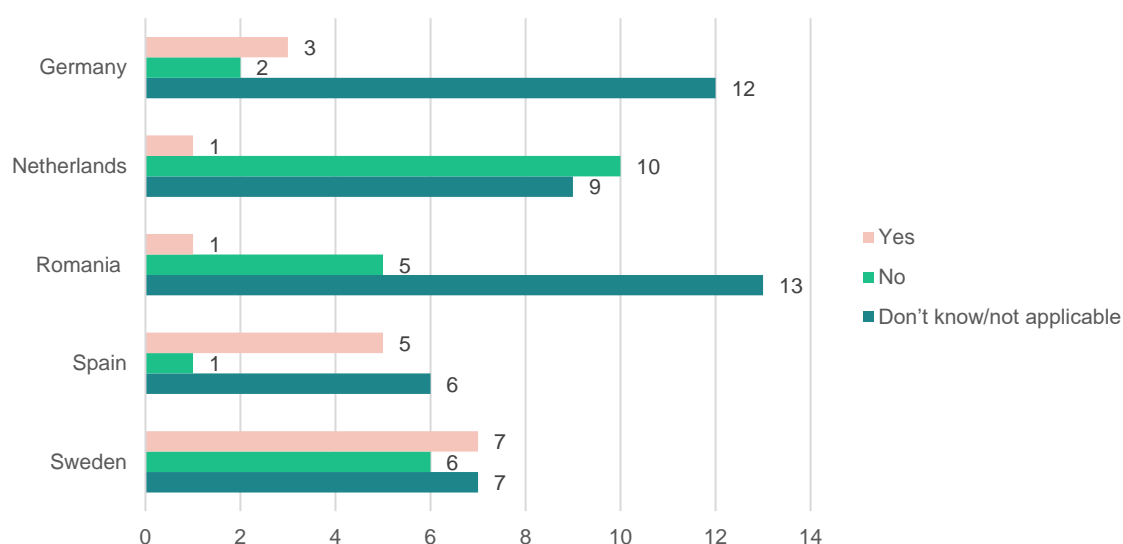
Figure 73 - Change in quality of digital content/service after consent withdrawal



Source: Authors based on mystery shopping results (five countries)

The results of the mystery shopping reveal some differences between countries. A change in the quality of the service or product provided was most often observed in Sweden (7 out of 20 observations) and Spain (5 out of 12 observations). At the other end of the scale, shoppers in the Netherlands reported in the majority of cases that no change in quality occurred (10 out of 20 observations). For shoppers in Romania and Germany, the question was hardest to answer, with a larger number of shoppers reporting “don't know/not applicable” (Romania: 13 out of 19 observations, Germany: 12 out of 17 observations).

Figure 74 - Change in quality of digital content/service after consent withdrawal, sorted by country

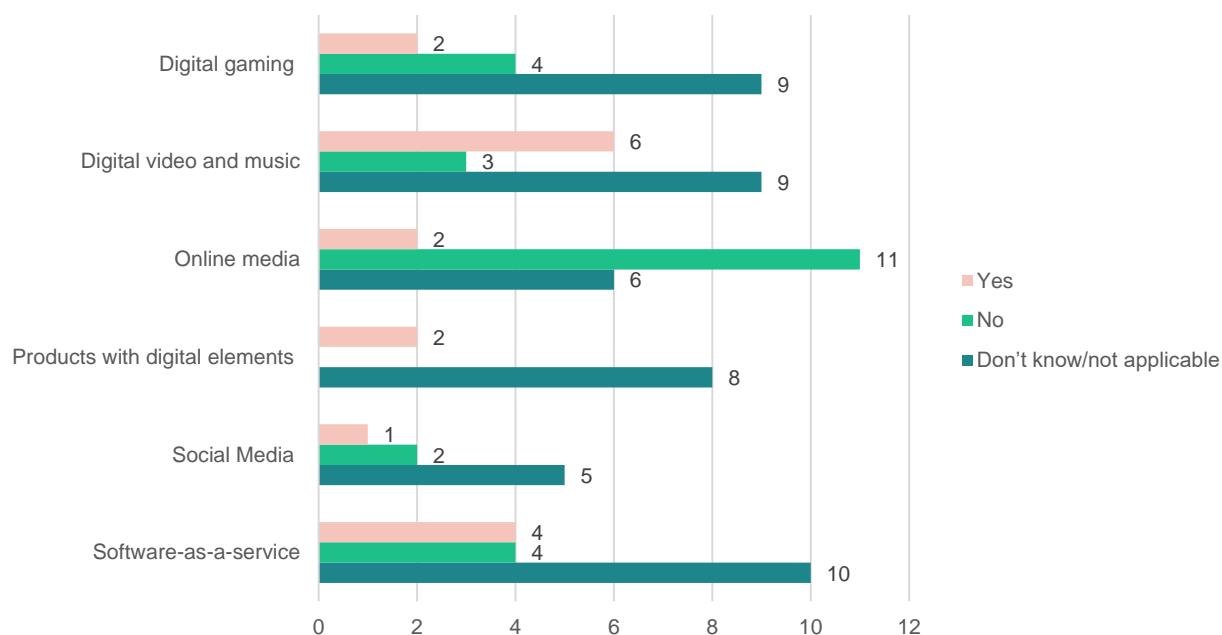


Source: Authors based on mystery shopping results (five countries)

Looking at differences by sector, a few findings stand out. In the majority of cases in the sector of online media, shoppers reported that no change occurred after they withdrew consent (11 out of 19 observations). This result was rarer in the sector of digital gaming (4 out of 15 observations) and the sector of software-as-

a-service (4 out of 18 observations). On the other hand, a change in the quality of the service, content or product provided was commonly reported by shoppers for the sector of digital video and music (6 out of 18 observations).

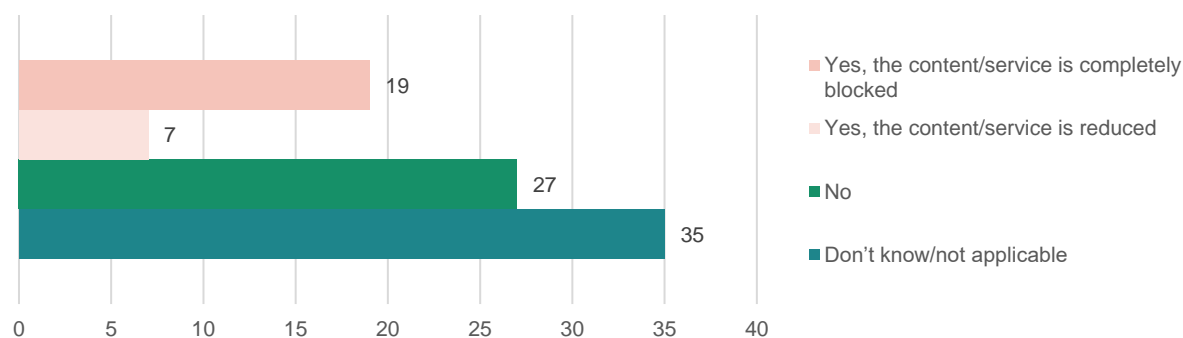
Figure 75 - Change in quality of digital content/service after consent withdrawal, sorted by sector



Source: Authors based on mystery shopping results (five countries)

Subsequently, the mystery shoppers were asked to **assess a change in the extent to which the content or service is provided. In 26 cases, shoppers experienced a change in the scope of the provided content or service.** They reported in 7 out of 88 observations that the scope of the provided content or service was reduced and in 19 out of 88 observations that it was completely blocked. Shoppers reported in 27 out of 88 cases that no change in the scope of the content or service occurred after they had withdrawn their consent. In 35 out of 88 cases, shoppers selected “don’t know/not applicable”, as they were not able to assess the consequences for scope of the provided content or service after consent is removed.

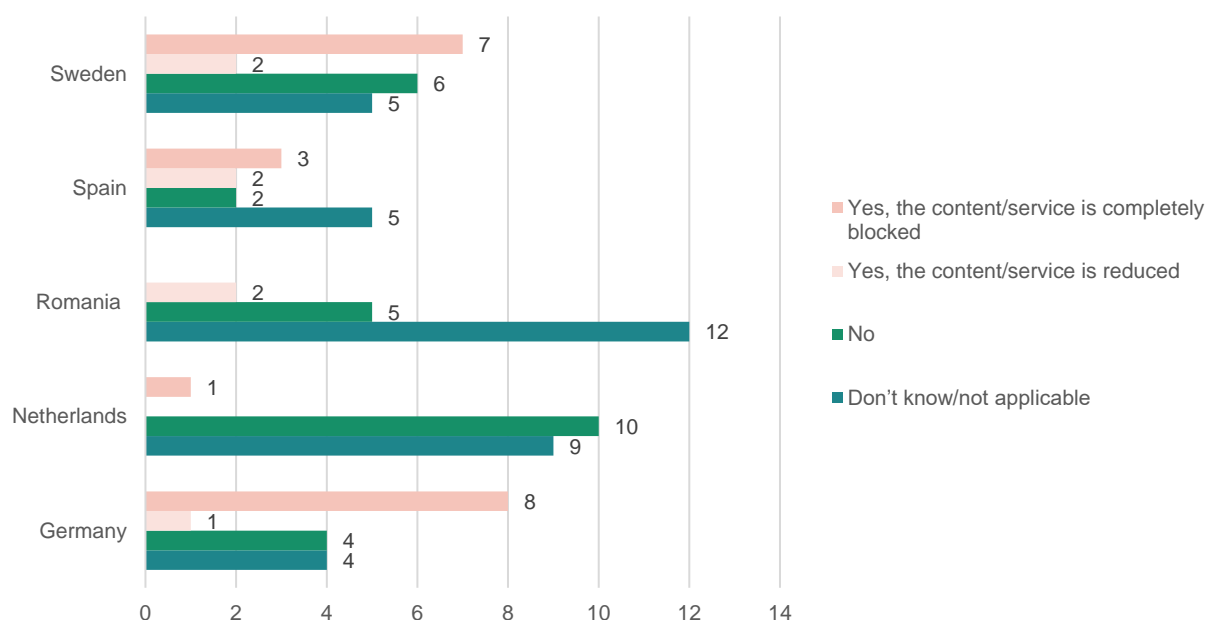
Figure 76 - Change in the content/service after consent has been withdrawn



Source: Authors based on mystery shopping results (five countries)

There are notable country differences. In the Netherlands, shoppers reported in half of cases that the scope of the provided content or service did not change after consent was removed (10 out of 20 observations), which was the highest result in the examined countries. This result was also often reported in Sweden (6 out of 20 observations) and in Romania (5 out of 19 observations). On the other hand, shoppers from Germany (8 out of 17 observations) and Sweden (7 out of 20 observations) were most likely to report that the content or service was completely blocked.

Figure 77 - Change in the content/service after consent has been withdrawn, sorted by country

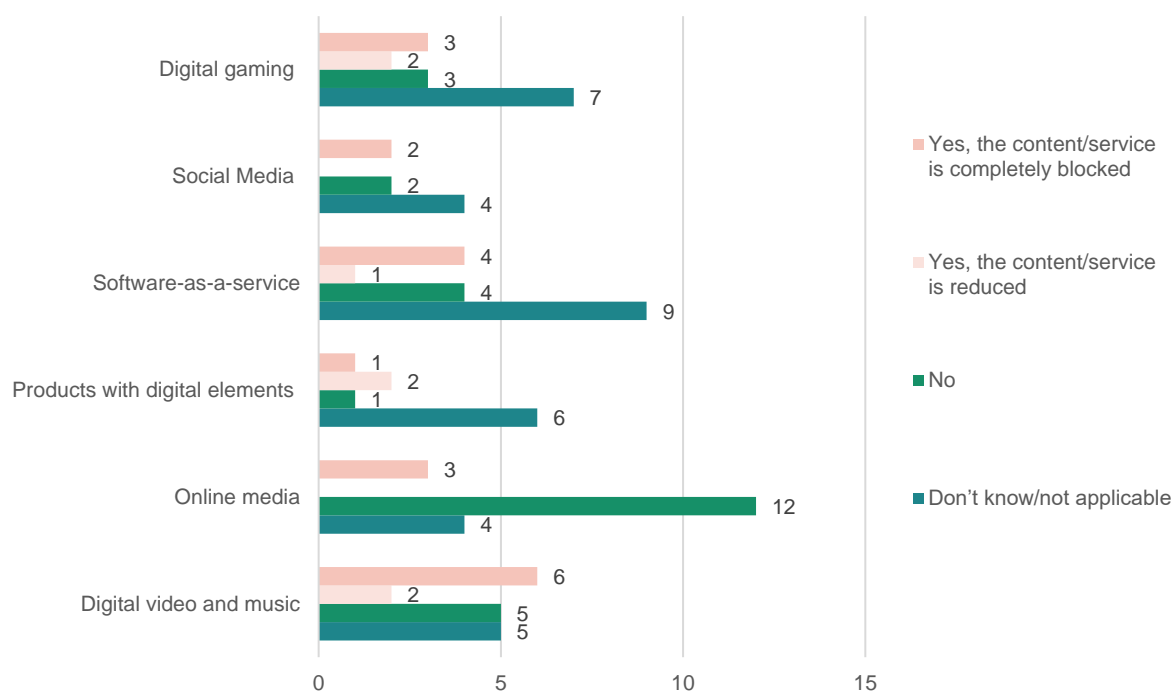


Source: Authors based on mystery shopping results (five countries)

Considering differences for this question by sectors, a few trends are noticeable. Mystery shoppers were most likely to report that no change of scope occurred when they tested products or services in the online media sector (12 out of 19 observations). In the sector of digital video and music, shoppers were most likely

to experience that the content or service was either reduced (2 out of 17 observations) or completely blocked (6 out of 17 observations).

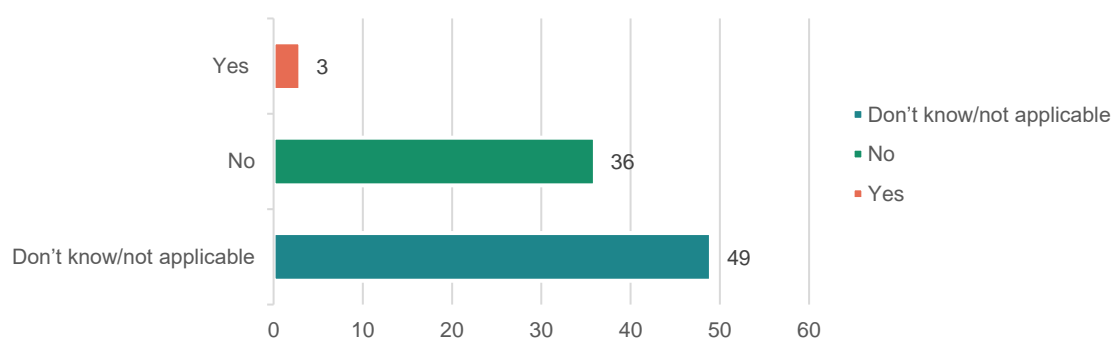
Figure 78 - Change in the content/service after consent has been withdrawn, sorted by sector



Source: Authors based on mystery shopping results (five countries)

In a follow up question, shoppers were asked **whether they noticed any other change after withdrawing consent**. Shoppers reported that they noticed a change in 3 observations (out of 88). For example, in one of these cases, the shopper specified that after withdrawing consent, no more ads appeared on the website (large company, online media, Germany).

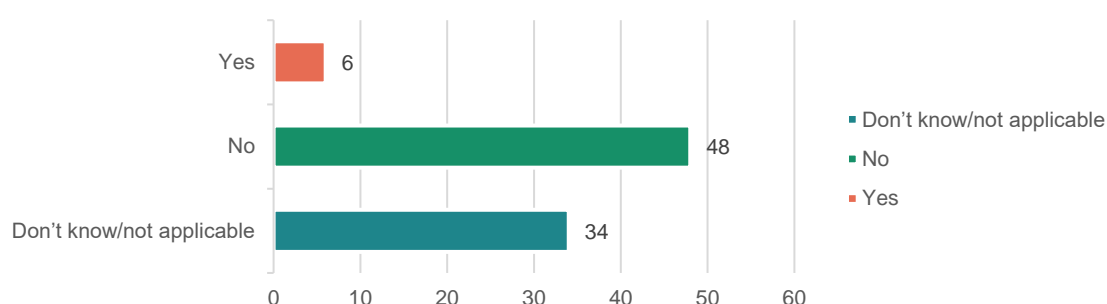
Figure 79 - Change in user experience



Source: Authors based on mystery shopping results (five countries)

Furthermore, the mystery shoppers **reported any additional requirements that occurred in case consent for the data use is withdrawn**. In 6 cases (out of 88), such additional requirements were reported. They occurred in 4 countries and were thus not linked to the specificity of one country. The additional requirements were most often reported for products or services in the sector of digital video and music. In two cases these requirements included service providers asking consumers for a proof of identity to process their request to withdraw consent. In two other cases, service providers asked consumers for a potential fee for processing their request. In one case, the shopper was asked to provide a valid telephone number to the service provider to notify their consent withdrawal.

Figure 80 - Additional requirements after withdrawing consent



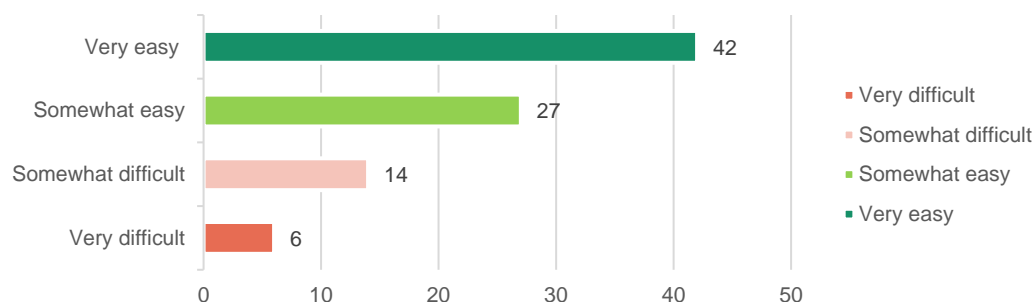
Source: Authors based on mystery shopping results (five countries)

7.1.4. Information on the observation process

After concluding their observation, the mystery shoppers provided some information about the process.

Following their observation, shoppers were asked to **assess how easy or difficult it was to obtain the relevant information from the provider in relation to data use**. In the majority of cases, shoppers reported that it was either “very easy” (42 out of 89 observations) or “somewhat easy” (27 out of 89 observations). In 14 cases (out of 89), shoppers found it “somewhat difficult” to obtain the relevant information, and in 6 cases (out of 89), “very difficult”. In other words, for more than three quarters of the tested products or services, accessing the information was easy for shoppers. For a bit less than a quarter of shoppers, obtaining the information required additional efforts, such as contacting the provider directly.

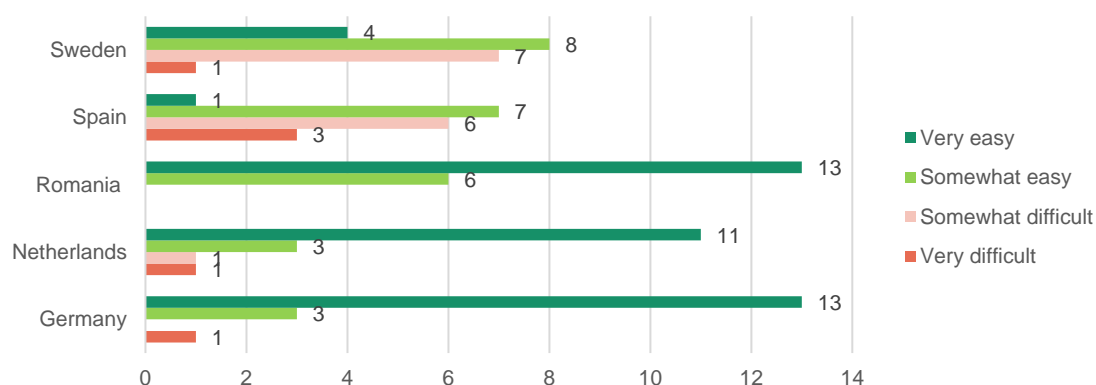
Figure 81 - Ease of obtaining personal data information as part of subscription



Source: Authors based on mystery shopping results (five countries)

Shoppers in Spain (9 out of 17 observations) and Sweden (8 out of 20 observations) were more likely to report difficulties to find the information in order to carry out the observation. Fewer difficulties were reported by the shoppers in Romania, Netherlands and Germany.

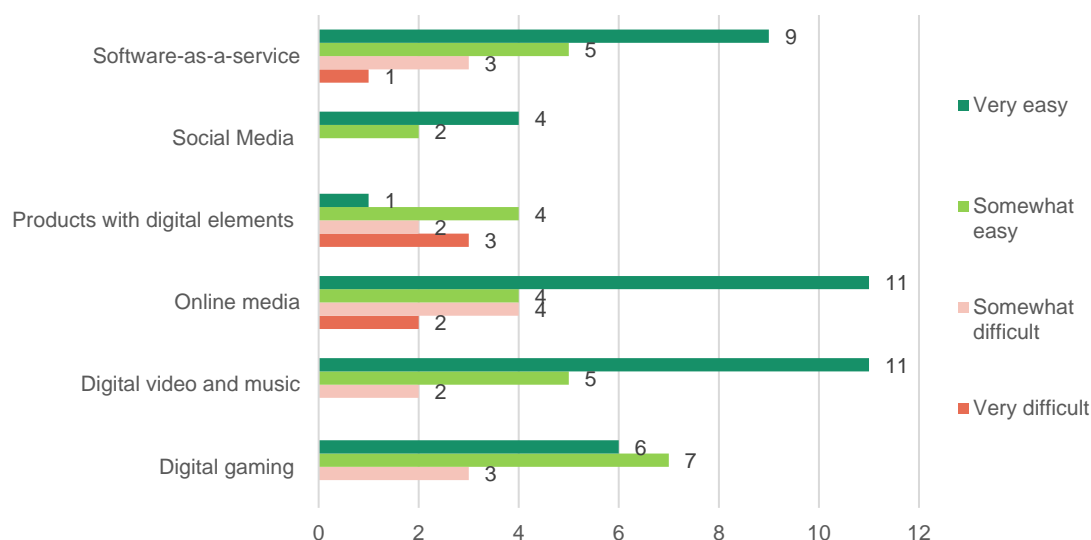
Figure 82 - Ease of obtaining personal data information as part of subscription, sorted by country



Source: Authors based on mystery shopping results (five countries)

In terms of sectors, in half of the examined cases shoppers experienced difficulties in accessing the information in the sector of products with digital elements (5 out of 10 cases). They also often had difficulties to find the information in the sectors of online media (6 out of 21 cases) and software-as-a-service (4 out of 18 cases). No difficulties occurred for shoppers when testing products or services from the sector of social media.

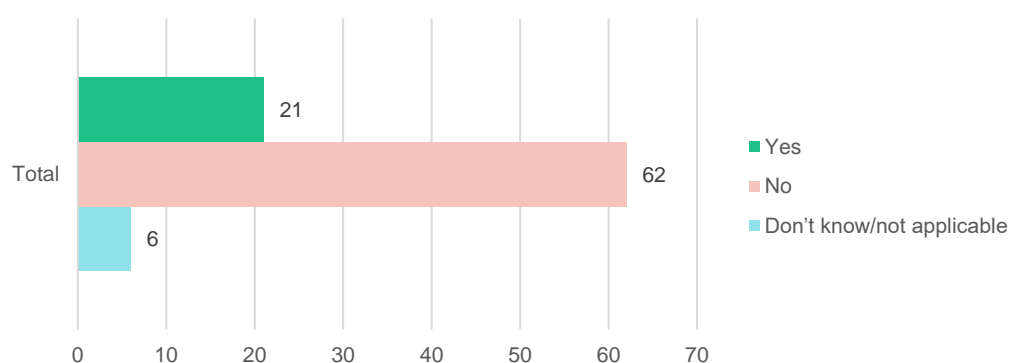
Figure 83 - Ease of obtaining personal data information as part of subscription, sorted by sector



Source: Authors based on mystery shopping results (five countries)

In a significant number of cases (21 out of 89 cases), **shoppers contacted the customer service of the provider directly via email to withdraw their consent to the use of personal data.** This was done across all countries and sectors. Shoppers recorded the number of days until they received an answer. After a period of 14 days, they concluded their observation if they had not received an answer from the customer service until then.

Figure 84 - Emails sent to customer service



Source: Authors based on mystery shopping results (five countries)

7.1.5. Tangible goods with digital elements

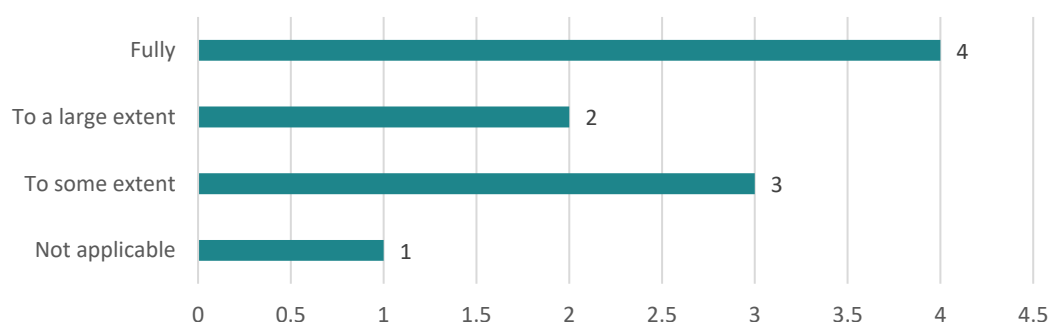
The mystery shopping study also covered goods with digital elements. These goods constitute a separate category compared to the other products or services covered by this study. These goods have particular characteristics. For example, they are often bundled with the provision of digital content or service which is integral to the use of these products. For instance, e-book readers require

consumers to continue paying for digital content (access digital books) after the product had been bought. Other product, like health trackers, can be bundled with an ongoing subscription to a software or app for which the consumer continues to pay.

Once the consumer buys the product, the rest of the consumer journey looks very similar to the journey for digital content and services. When trying to simulate the consumer journey, the mystery shoppers bought the product and then set it up to be able to use the service attached to it. During the exercise, shoppers had to check for procedures in place to withdraw consent.

The mystery shoppers were asked to what extent the terms and conditions covered the processing of personal data. For 9 out of 10 products they were covered to an extent, with the terms being covered either fully or partially, with only 1 having answered not applicable since in this case the information was not available online and the shopper had to contact the retailer for the information which was never provided.

Figure 85 - Extent to which terms and conditions covered the provision of personal data



Source: Authors based on the mystery shopping results (five countries)

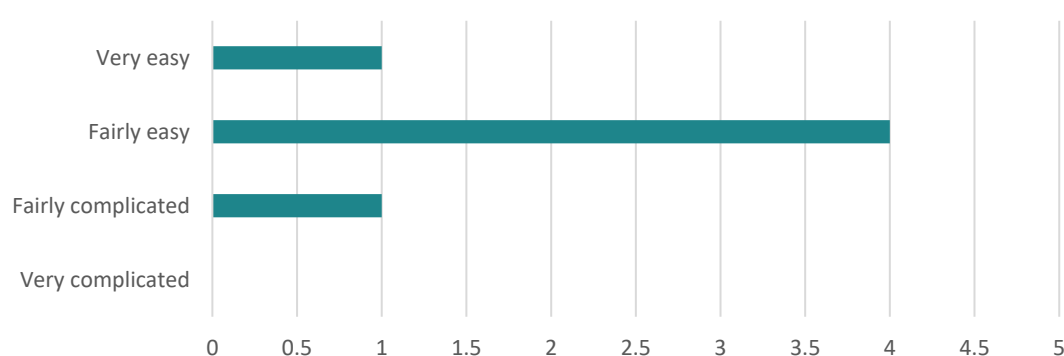
When asked about the use of the personal data, six of the shoppers said that these products needed personal data to be able to provide the digital service, especially in case of smart watches. When asked about other reasons for collection of the data, in the case of two eBook readers, shoppers noted that these data were collected for marketing reasons..

Moreover, when asked if the consequences if consumers withdraw consent for the processing of their personal data were described, half of the shoppers (5) reported that there were clauses in the terms and conditions that describe the consequences. However, only two shoppers reported that the terms and conditions also contained clauses that describe consequences in case the data contract is voided after it has been performed.

When in the contract execution stage, the shoppers were asked if there was a specific procedure to withdraw consent to the use of personal data, here six of the shoppers reported that there was a specific procedure to withdraw consent to the use of their personal data. Two of the shoppers said they did not find any information relating to this (for a smart watch and an e-book reader) and two said not applicable (for an e-book reader and ear buds).

Out of these shoppers, 5 said that it was easy for them to withdraw consent and while one said it was fairly complicated.

Figure 86 - Ease of withdrawing consent



Source: Source: Authors based on the mystery shopping results (five countries)

The procedures given as options to the shoppers were either to contact the customer service, make a selection in the profile settings, and filling out and submitting a form online. From those that did have a procedure available, most shoppers (4 out of 6) said that the product required contacting the customer service via email, one said that required it making a selection in the profile setting and one said it required filling and submitting a form online. This meant that there was only one case where the procedure for withdrawing consent for the use of personal data was the same as the procedure for giving consent for the use of personal data. For the other five, the process was different.

When asked about whether the process of withdrawing consent was easy, from the six cases where the procedure was available, the shoppers reported that in five of the cases withdrawing consent was easy (for the ring it was complicated).

In cases where the process required sending the email to the customer service or the data protection officer (4), the shoppers had to wait a few days before they received a reply but, in some cases (2), the shoppers never received a reply so they could effectively not withdraw consent and proceed further on the consumer journey.

When asked to check if there were other means of withdrawing consent, the shoppers reported that they could either cancel the service by deleting their

account or ask to have their data deleted. This essentially rendered the data contract voided.

In the last stage of the journey (after withdrawing consent), the shoppers were asked to check whether there were any differences in the consumer experience after they withdrew consent – and these were indeed noticeable. In the cases where sellers still had access (in some cases it was completely blocked), the service had been reduced and some of the features could not be accessed anymore. This was the same result as what was found in the digital services and content.

Lastly, the shoppers were asked how easy it was to receive the information related to the personal data from the seller. Five of the mystery shoppers said that getting information related to personal data from the seller was easy while five said it was difficult. This was because it required shoppers to contact the customer service or make additional efforts to get the right information rather than it being available in the product or website.

7.1.6. List of services / goods that were part of the mystery shopping exercise

Product/Service	Country
Adblock Plus	Germany
Angry birds evolution	Germany
Babbel	Germany
Bild	Germany
Buzzfeed Deutschland	Germany
Der Spiegel	Germany
Flickr	Germany
GMX	Germany
Joyn	Germany
MagentaTV	Germany
Railway empire	Germany
Soundcloud	Germany
Steam/Destroy all humans	Germany
Suddeutsche Zeitung	Germany
Tandem	Germany
Tolino page reader 2	Germany
Xiami Smart band	Germany
AD (Algemeen Dagblad)	Netherlands
AllTrails	Netherlands
Amazon Prime	Netherlands
Crossy Road	Netherlands
De Telegraaf Digitaal	Netherlands
Kindle reader	Netherlands
LessonUp	Netherlands
LinkedIn	Netherlands
Monopoly Sudoku	Netherlands
Poly Island (in-app purchases) UPDATED SUBMISSION	Netherlands
QuietOn 3 sleep earbuds	Netherlands
Quora	Netherlands
RTL XL	Netherlands
TomTom Monthly Subscription	Netherlands
Trouw	Netherlands
Videoland Subscription	Netherlands
Volkskrant Subscription	Netherlands
Wakanim	Netherlands
WeTransfer	Netherlands
Zoeken	Netherlands
123 Form Builder	Romania
Adevarul.r	Romania
Among US	Romania
Antena Play	Romania

Product/Service	Country
Bookeen	Romania
Clash of Clans	Romania
Data Grab	Romania
Digi24	Romania
Gandul	Romania
Garmin vivofit 4	Romania
Hotnews.ro	Romania
MakeOver Run	Romania
Mondly	Romania
Playtika, Best Friends	Romania
Reddit	Romania
TIFF Unlimited	Romania
Vimeo	Romania
Voyo	Romania
WeChat	Romania
www.brio.ro	Romania
2 € / month La Vanguardia subscription	Spain
ABC.es	Spain
Akamon Slots casino	Spain
Antena 3 player	Spain
El Mundo	Spain
El Pais 1-month subscription	Spain
El Periódico de Catalunya	Spain
Frizbit	Spain
Liseuse DIVA	Spain
Lodgify subscription	Spain
Medium Subscription	Spain
Mitele Plus 1 month	Spain
Payment per movie/video	Spain
Pocoyo Racing: Kids Car Race (in app purchases)	Spain
Samsung Galaxy Fit 2	Spain
Snapchat	Spain
The Red Strings Club	Spain
Twitch Turbo	Spain
WeChat	Spain
World of Warcraft	Spain
www.correcto.es	Spain
www.travelperk.com	Spain
Candy Crush	Sweden
Cmore	Sweden
Dagens Nyheter	Sweden
Evernote Personal	Sweden
Gamergate, trying the product game Constructor.	Sweden
Göteborgs-Posten	Sweden
Kobo Nia e-reader	Sweden

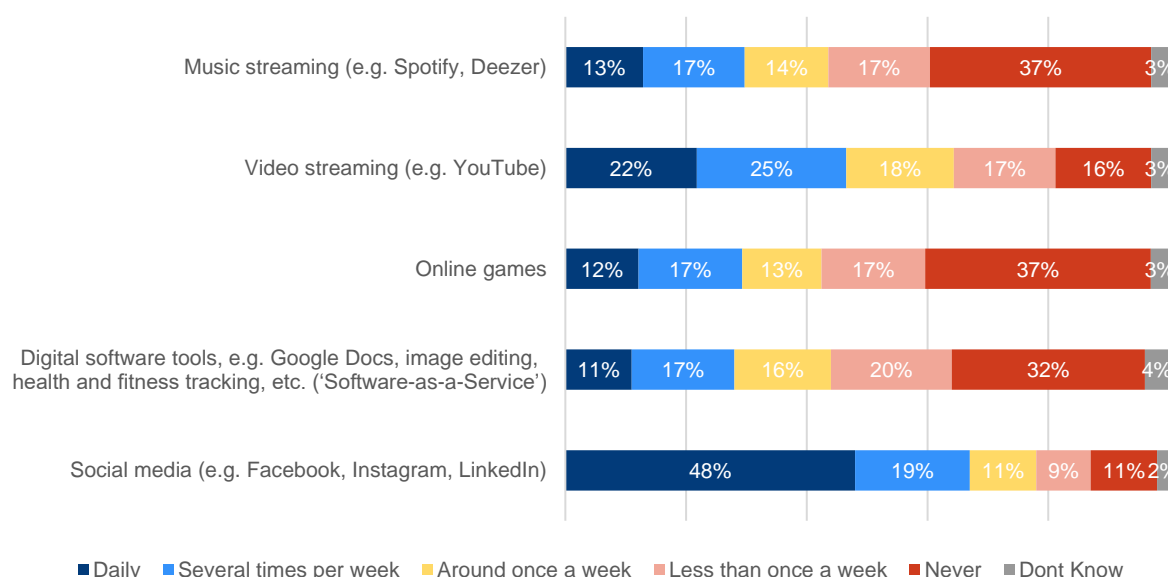
Product/Service	Country
Minecraft for Android	Sweden
Oura Ring	Sweden
Pinterest	Sweden
Pixlr	Sweden
Sfanytime	Sweden
Spotify (Free)	Sweden
Spotify (Premium)	Sweden
SurveyLegend	Sweden
SvD digital standard (199SEK)	Sweden
Svenska Dagbladet account	Sweden
The Atlantic account	Sweden
Tresorit Personal	Sweden
Tumblr account	Sweden
TV4	Sweden

7.2. Annex 2: Results from the consumer survey

The following section summarises the results from the consumer survey, conducted in 10 EU Member States (France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Spain, Sweden) in the period 6-28 April 2022. The survey was conducted online and overall, 10,144 respondents have been interviewed.

The first question asked respondents about the frequency with which they use digital content or services in various categories.

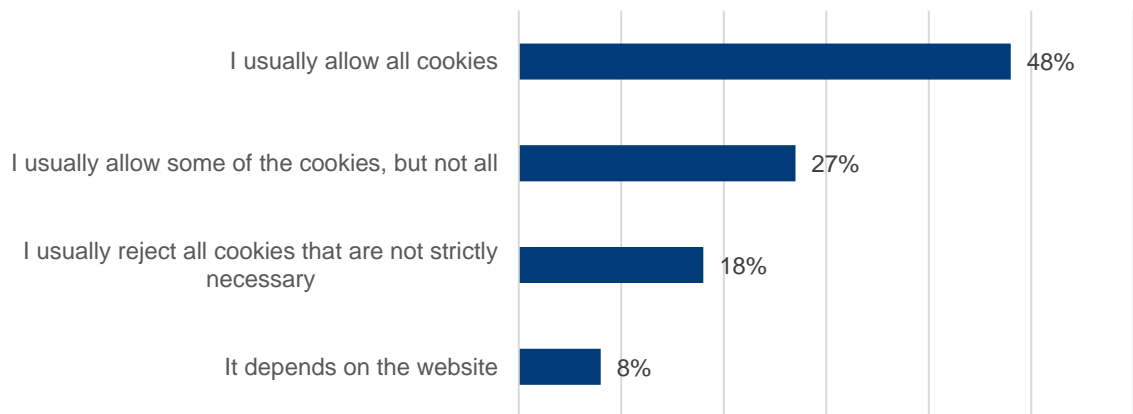
How often do you use such digital content or digital services from the categories below?



Base: all respondents (n=10,144)

The following question asked respondents about the use of cookies on websites. Nearly half (48%) report that they usually allow all cookies.

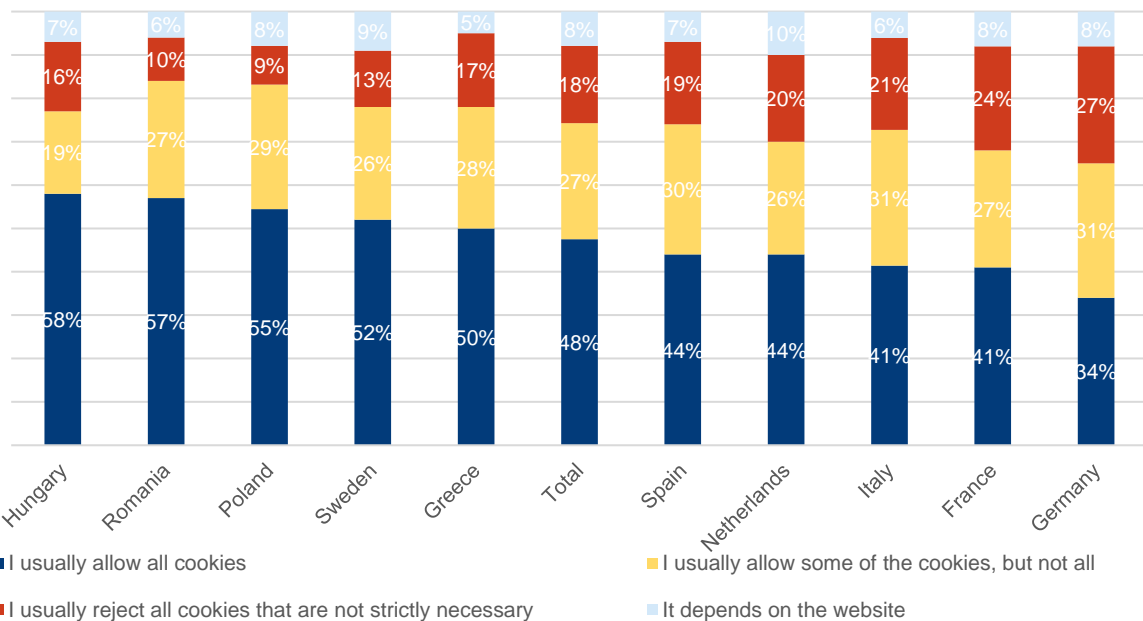
What do you usually do when a website (typically a pop-up window) asks you to confirm your preferences with regard to cookies?



Base: all respondents (n=10,144)

The distribution of answers to this question varies by country.

What do you usually do when a website (typically a pop-up window) asks you to confirm your preferences with regard to cookies?

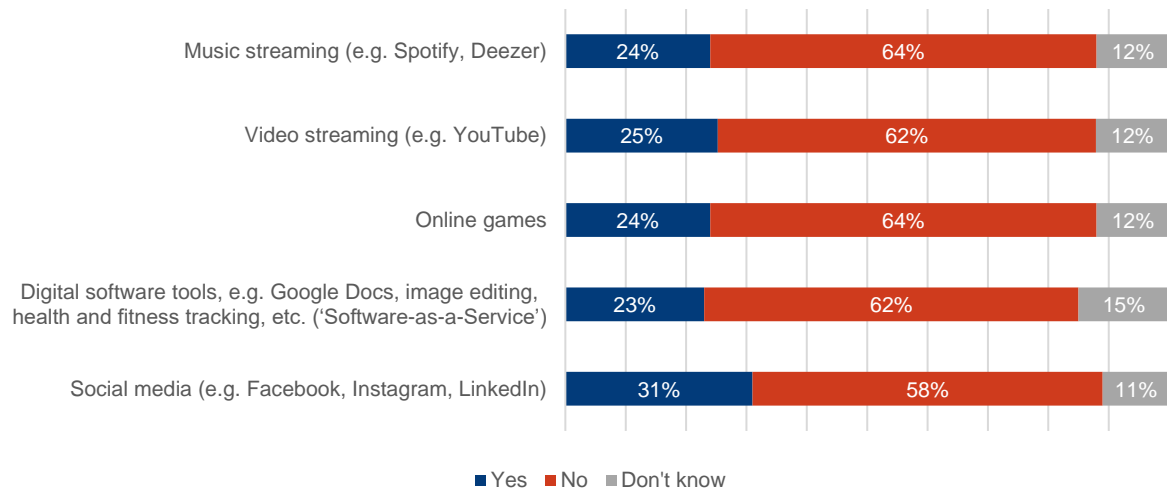


Base: all respondents (n=10,144)

The survey respondents were asked whether they have withdrawn consent they previously gave to a digital content/service provider.

In the past 12 months, have you withdrawn your previously given consent to a digital content/service provider from the below categories for processing your personal data?

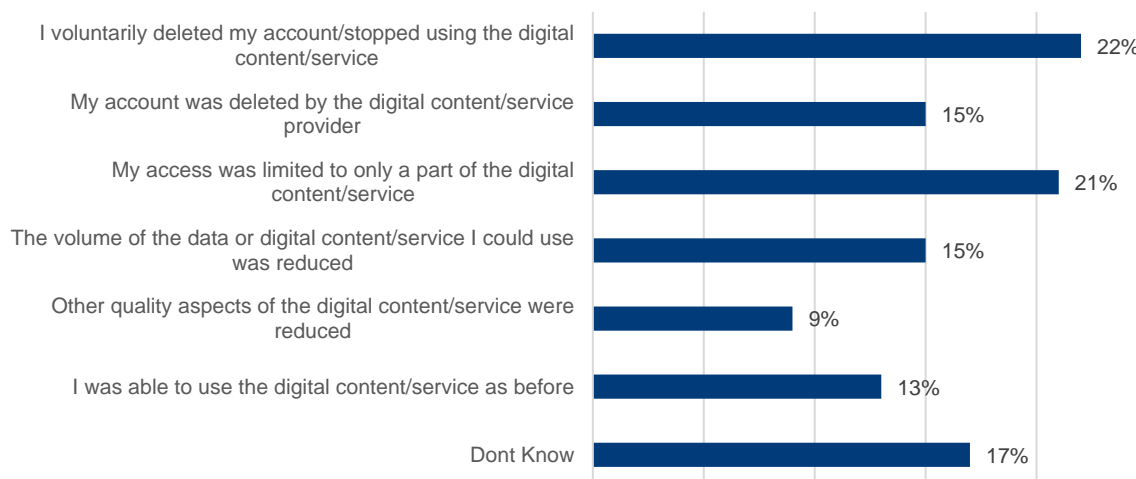
Study to support the Commission's policy development on promoting repair of consumer goods and contracts in the data economy



Base: all respondents (n=10,144)

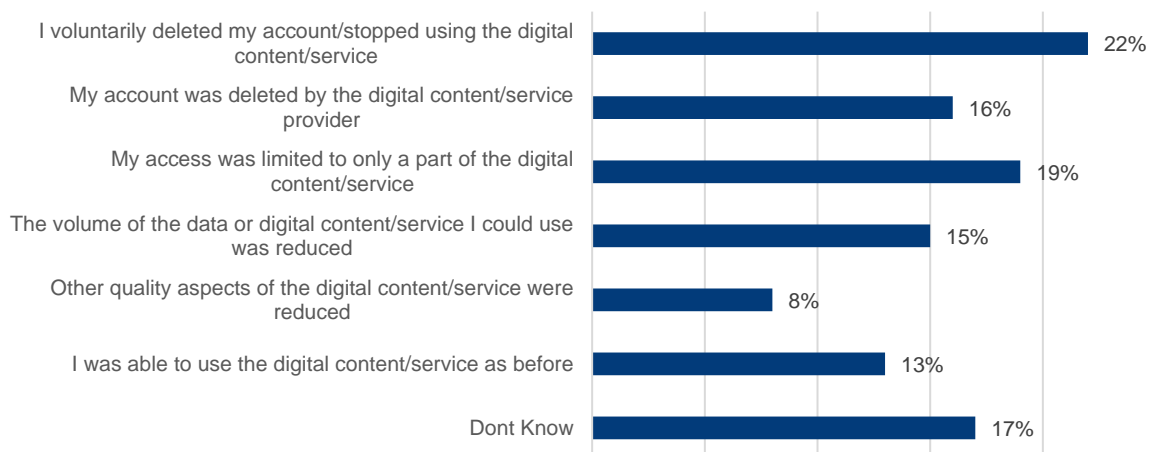
Consumers who withdrew consent reported the consequences that followed when they withdrew consents. The charts below summarises these answers for various applications.

What happened after withdrawing your consent? - Music streaming apps or platforms



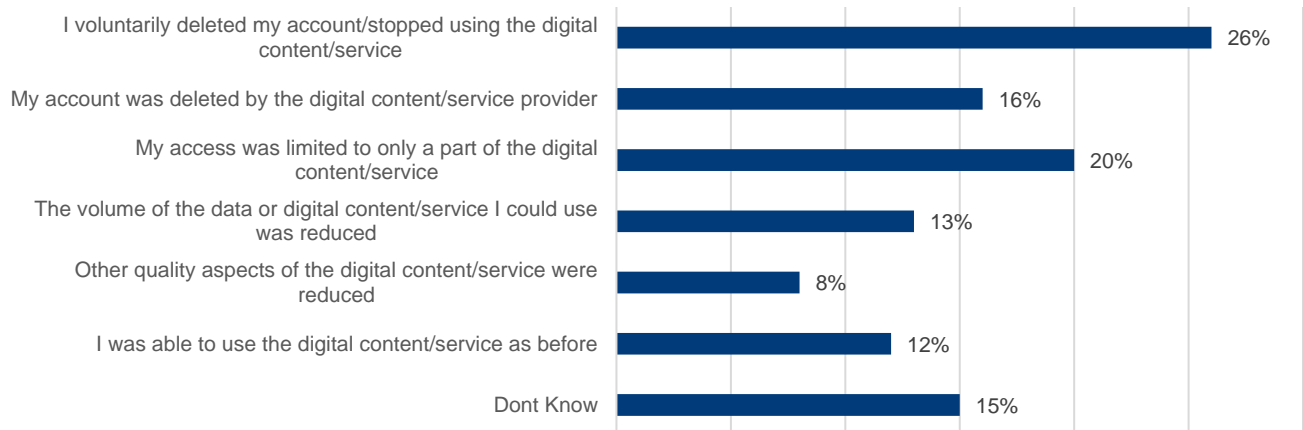
Base: consumers who withdrew consent (n=2,514)

What happened after withdrawing your consent? - Video streaming apps or platforms



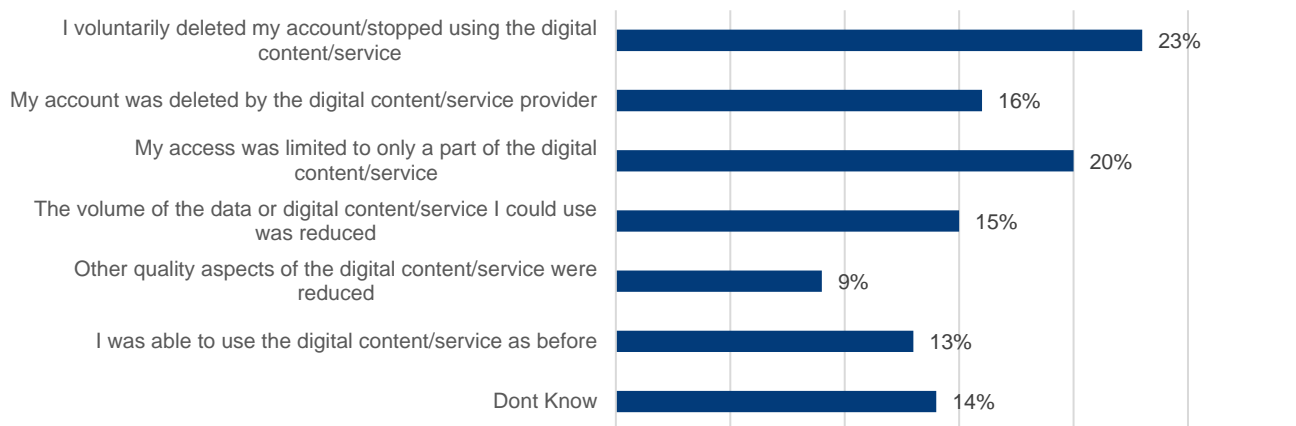
Base: consumers who withdrew consent (n=2,651)

What happened after withdrawing your consent? - Online games



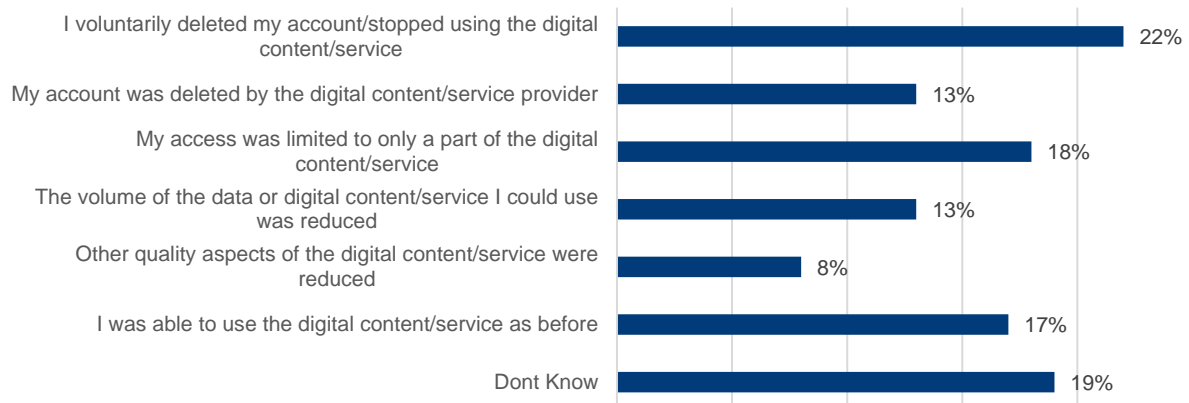
Base: consumers who withdrew consent (n=2,519)

What happened after withdrawing your consent? – Digital software tools



Base: consumers who withdrew consent (n=2,432)

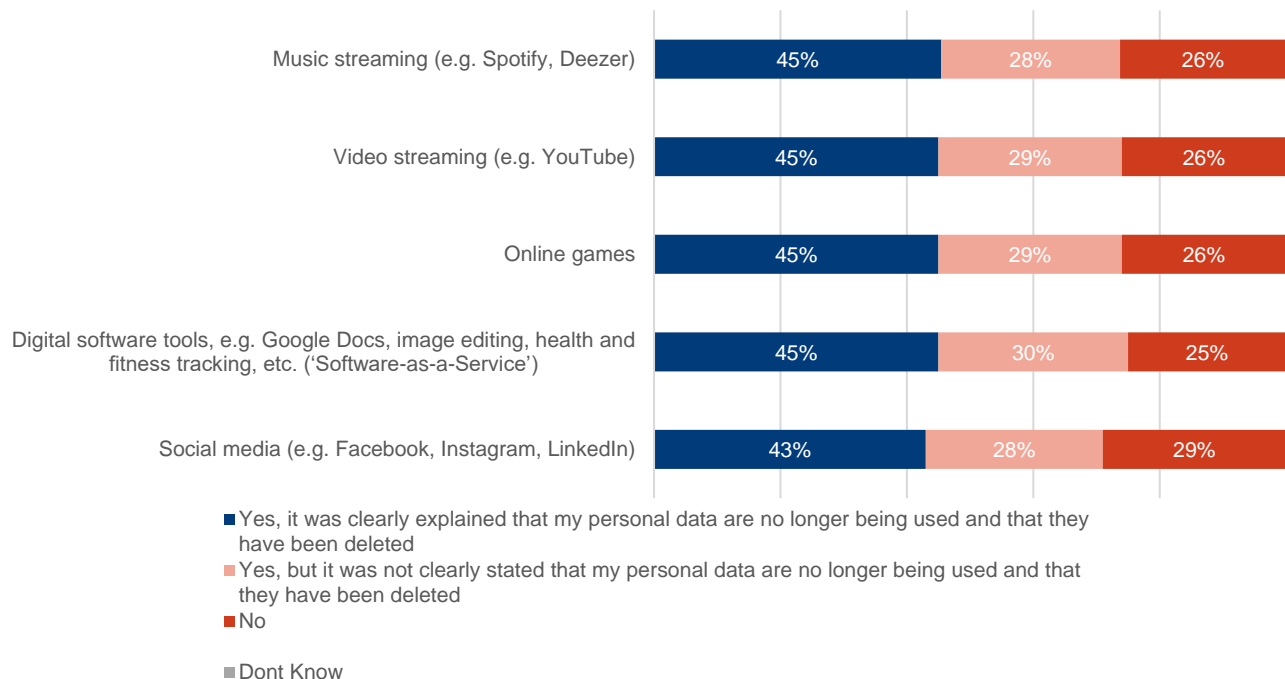
What happened after withdrawing your consent? - Social media apps or platforms



Base: consumers who withdrew consent (n=3,186)

When consumers withdraw consent, less than half of respondents across all types of applications report that it was clearly explained that their personal data is no longer used and have been deleted.

When you withdrew your consent, did you receive a notification from the digital content/service provider that it would comply with your request?



Base: consumers who withdrew consent (n=between 2,432 and 3,186)

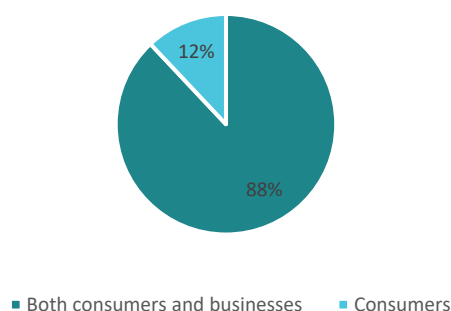
7.3. Annex 3: Results from the business survey

The businesses targeted were selected from a Kantar Public business registry. The businesses selected were among the sectors that were the focus of the study, namely online media, social media, SaaS, digital gaming, digital video and music and tangible goods. There are limitations to the use of an online business survey (i.e., limited sectors relevant to the study topic, limited control over the response rate, low response rate among businesses, complexity of the topic) and the responses received cannot be considered as representative to the whole business economy in those sectors (albeit some sectors, such as social media, digital video and music have few companies that are established in the EU). While the results cannot be considered as representative, these provide insightful information about business practices around contracts in the data economy.

The results of the survey are presented below.

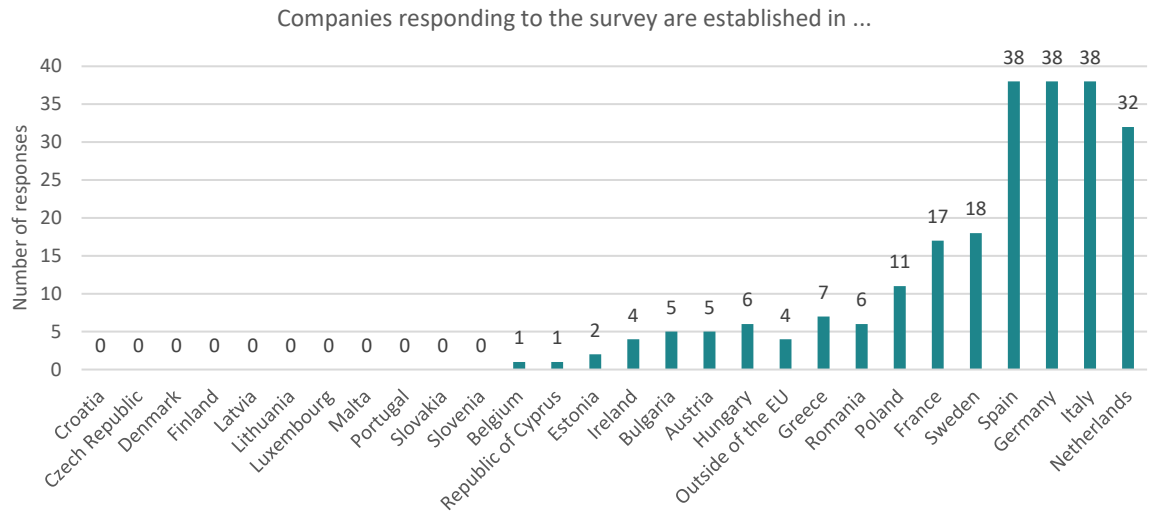
Who are your clients?

Companies responding to the survey sell to ...



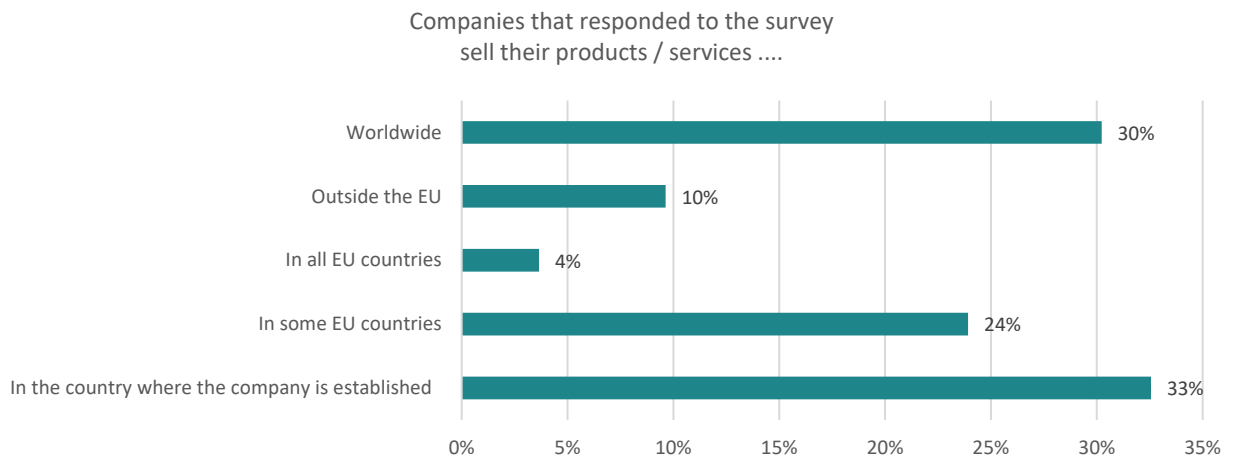
Base=233 respondents

In which country is your company established?



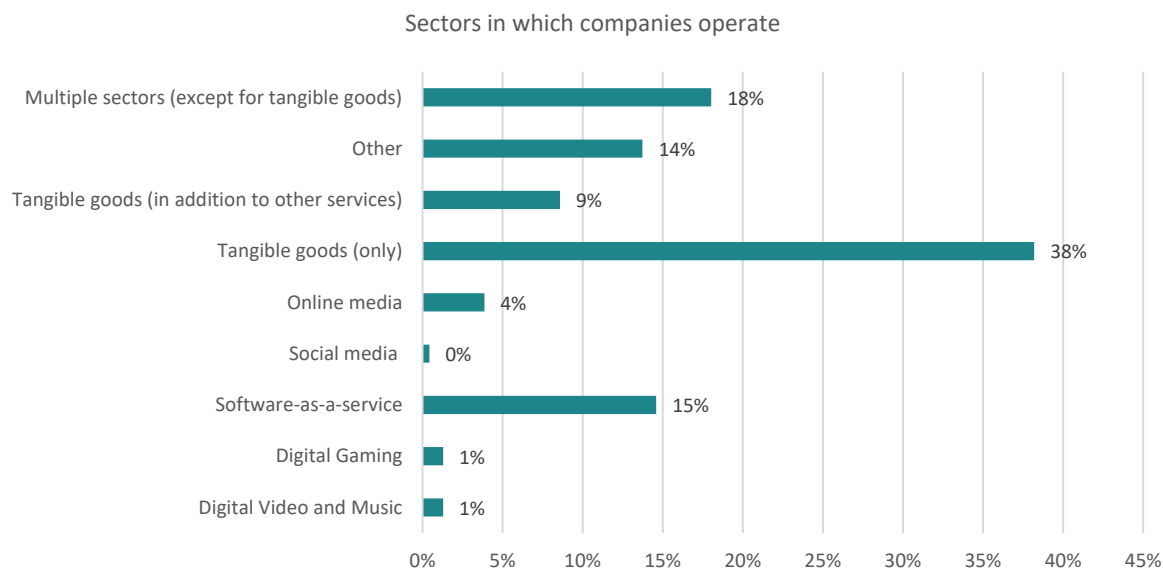
Base=233 respondents

Where do you sell your services / goods?



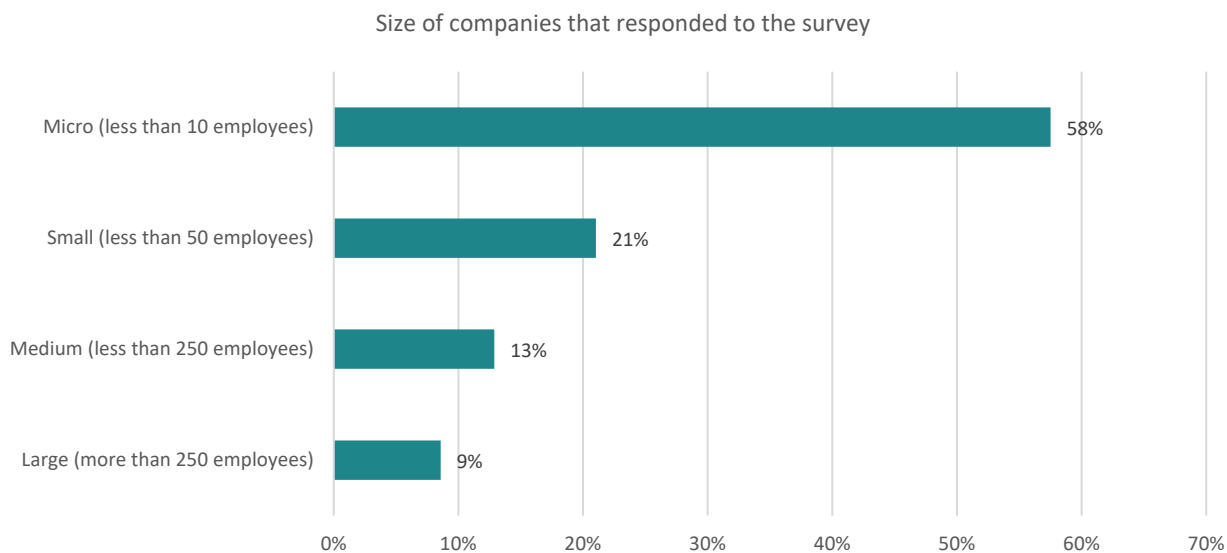
Base=233 respondents (multiple answers were possible)

In which sector does your company operate?



Base=233 respondents

What is the size of your company?

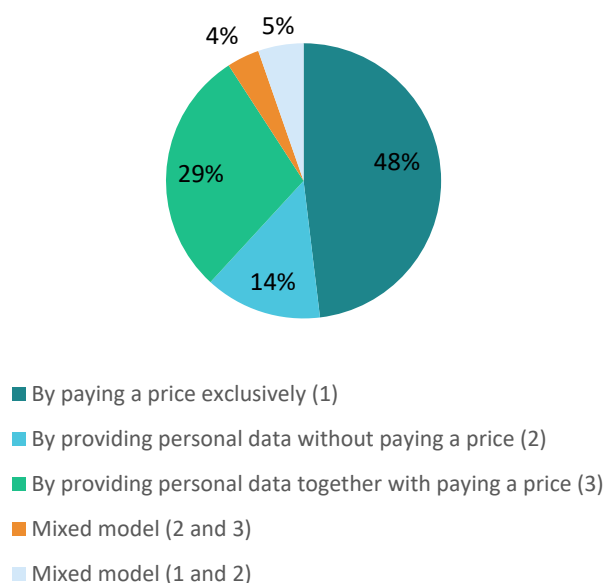


Base=233 respondents

7.3.1. The structure of the market for data contracts for the supply of digital content or service

Traditionally, consumers get access to digital content or services by paying a price. In addition, in the data economy, they may obtain access to digital content or digital services also without paying a price but in exchange of their personal data, for the processing of which they give their consent (data contracts)

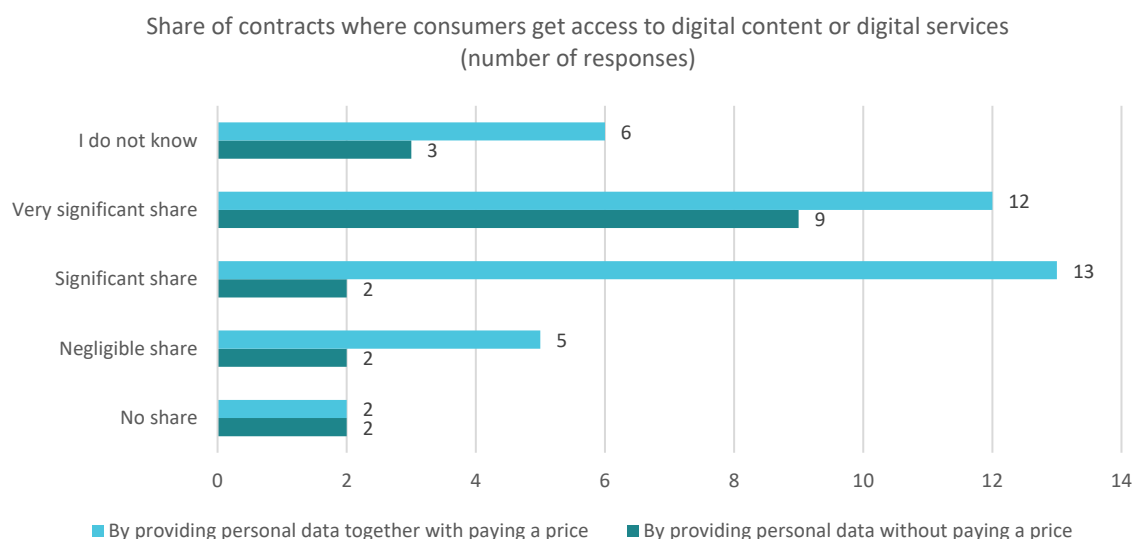
How can consumers get access to your digital content/service? You can select several options.



Base=124 respondents from the digital content/services sector

Note: Responses from companies that responded "By paying a price exclusively" are not analysed further (screened out)

In your company, how big is the share of the contracts where consumers give their consent for the processing of their personal data to get access to your digital content or digital service?

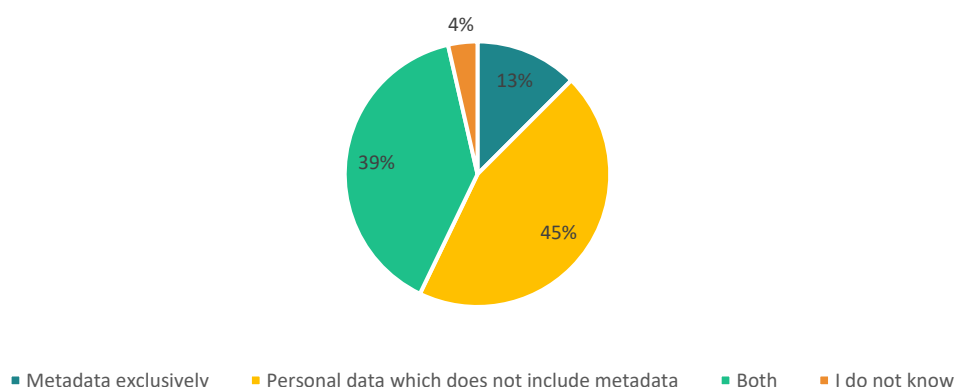


Base=56 respondents from the digital content/services sector (mixed models are not included)

Note: Only companies which provide access to services/content through provision of personal data together with paying a price and provision of personal data without paying a price

What kind of data do you process in the context of the data contracts? (Metadata refers for instance to information concerning the consumer's device or browsing history)

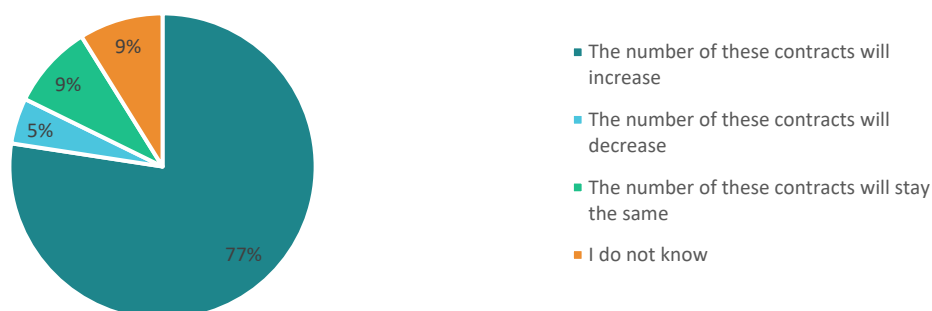
Data that companies process in the context of the data contracts for the supply of digital content or service



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

How do you estimate the development of the market of data contracts within the next ten years?

Estimated development of the market of data contracts for the supply of digital content or services within the next ten years (all companies from offering digital content or services)



Base=124 respondents from the digital content/services sector (including those companies offering consumers access only by paying a price)

7.3.2. Current practices in relation to data contracts for the supply of digital content or service and tangible goods

Consequences if consumer withdraws consent for the processing of personal data

How often in a year do consumers usually withdraw their consent given for the processing of their personal data?

Frequency of consumers withdrawing their consent for the processing of their personal data in the context of data contracts for the supply of digital content services (in a year)



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Do situations where consumers withdraw their consent for the processing of their personal data represent a problem for your business model?

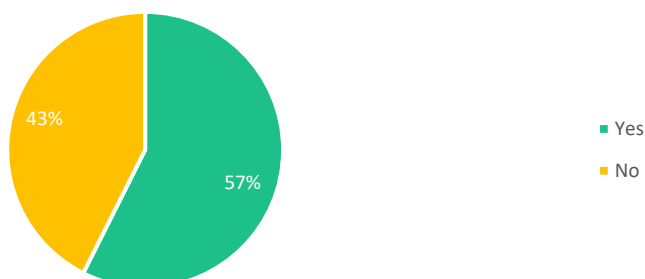
Situations where consumers withdraw their consent for the processing of their personal data represent a problem for the company's business model



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Do the contracts you conclude with consumers contain terms or conditions on the consequences of a withdrawal of the consent for the processing of their personal data?

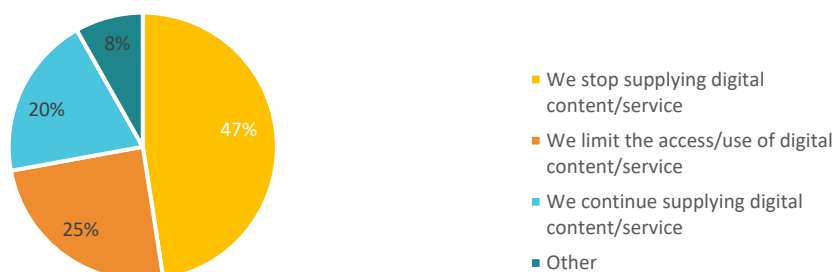
Contracts for the supply of digital content/services include terms and conditions on the consequences of a withdrawal of the consent for the processing of personal data



Base=54 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

What are the actions you take when a consumer stops providing his personal data or withdraws consent for the processing of personal data?

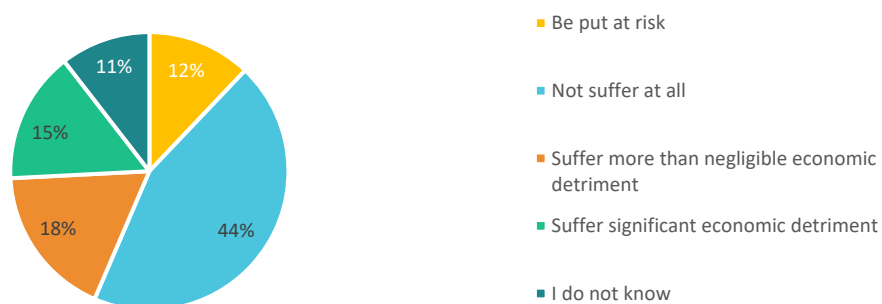
Actions taken when a consumer stops providing his personal data or withdraws consent for the processing of personal data



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

If you could not stop or limit the supply of digital content or service when the consumers withdraw their consent for the processing of their personal data, would your business model:

If you could not stop/limit the supply of digital content or service when the consumers withdraw their consent for the processing of their personal data, your business model would



Base=124 respondents from the digital content/services sector (including those companies offering consumers access only by paying a price)

Restitution of contractual performance after the contract has been voided

How often in a year do you face situations where data contracts are annulled with retroactive effect after the contract has been performed?

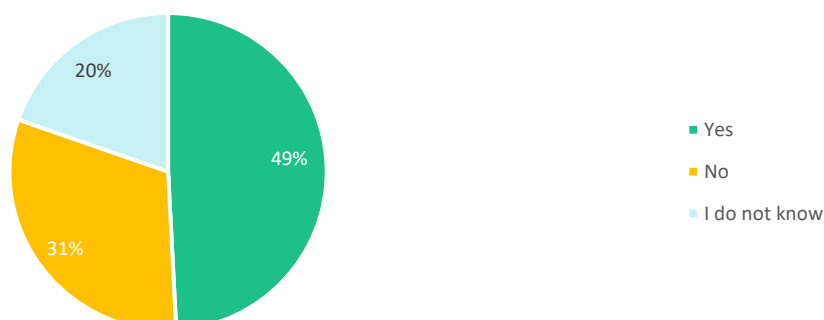
Frequency of withdrawals from contracts for the supply of digital content with retroactive effect, per year



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Do the data contracts you conclude with consumers contain terms or conditions on the consequences of an annulment of a contract after it has been performed?

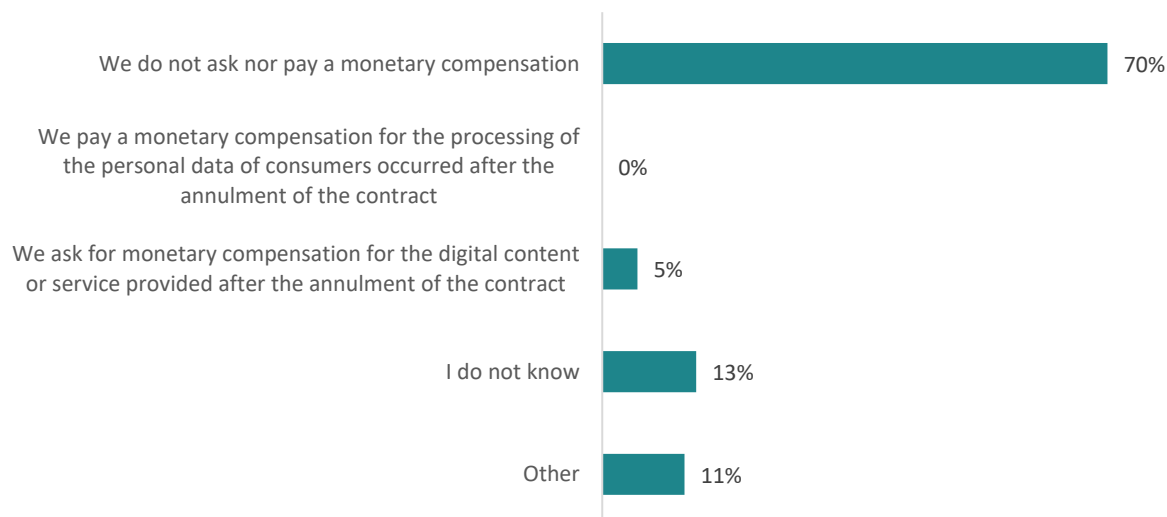
Contracts concluded with costumers include clauses on the consequences of the annulment of the contract after the latter has been performed



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

What are the actions you take when a data contract is annulled with retroactive effect after it has been performed?

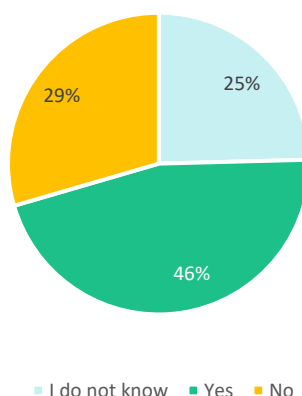
Action taken when a data contract for the supply of digital content or services is annulled with retroactive effect



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Do you consider it fair that there should be a monetary compensation for the digital content or service supplied and/or the personal data processed until the contract has been voided?

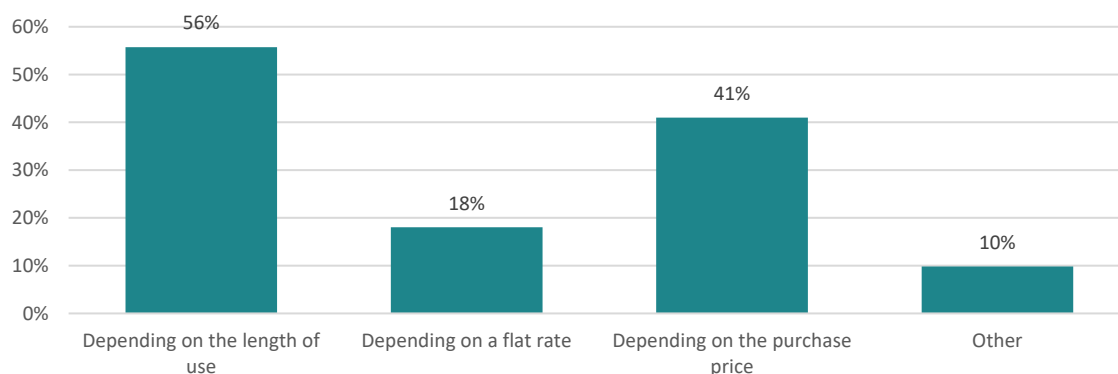
Perceived fairness to envisage a monetary compensation for the digital content or service supplied and/or the personal data processed until the contract has been voided



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

How could the monetary compensation be calculated?

Ways in which the monetary compensation could be calculated (multiple answers are possible)

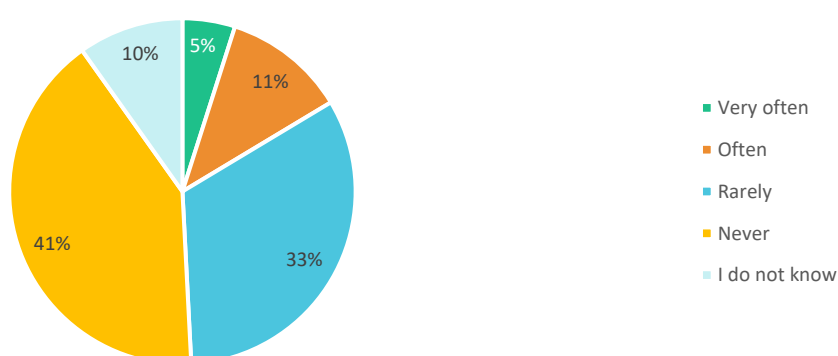


Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

Consumer does not provide personal data as agreed

How often is it impossible for you to supply the digital content or service because the consumer has undertaken to provide personal data but then refrains from doing it?

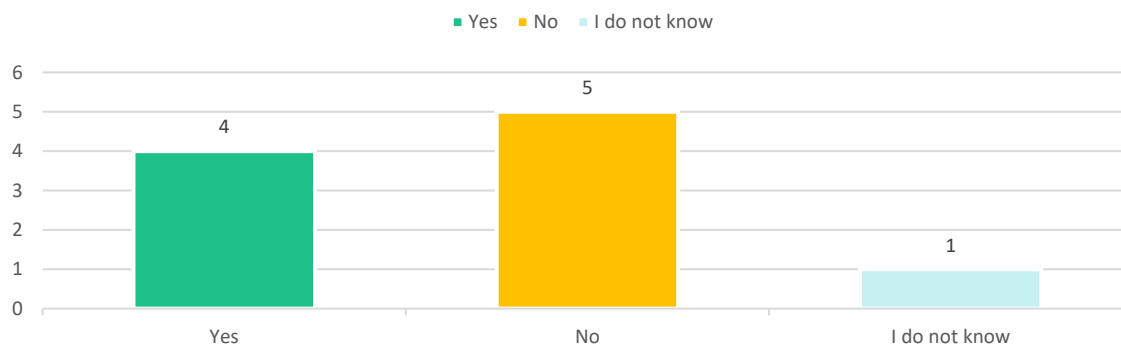
Frequency of cases in which the consumer refrains from providing personal data after having undertaken to do so, making the supply of digital content/services impossible



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

In these situations, if consumers do not provide personal data, do you try to enforce consumers' undertaking to provide such data?

If consumers do not provide personal data, companies try to enforce consumers' undertaking to provide such data

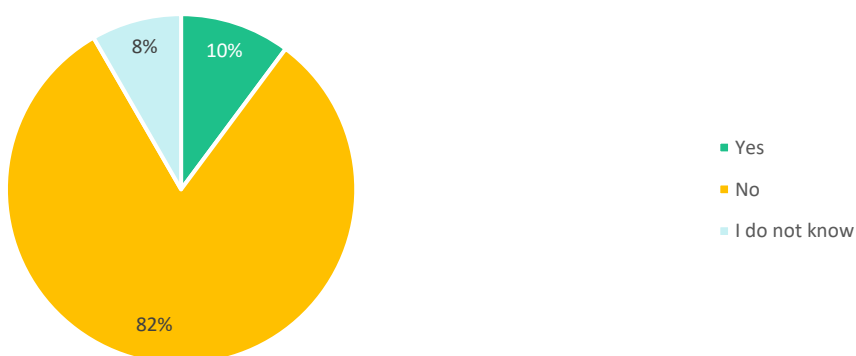


Base=10 respondents (that responded "often" or "very often" in question 21)

Market structure of data contracts for the sale of goods

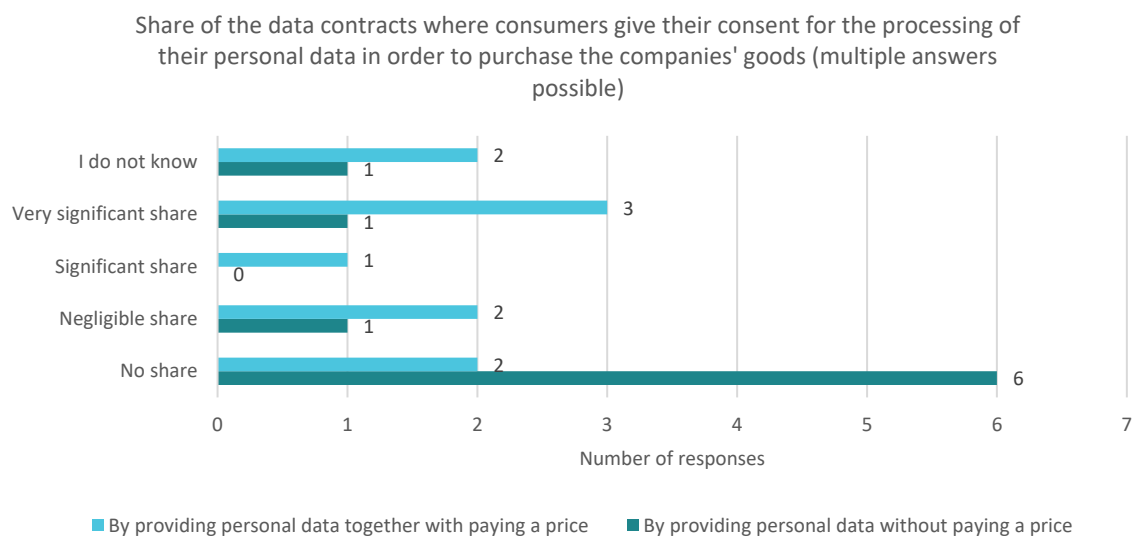
Does your company sell physical goods to consumers in exchange of their personal data (which are provided either exclusively or in addition to a price)?

The companies sells tangible goods to consumers in exchange of their personal data



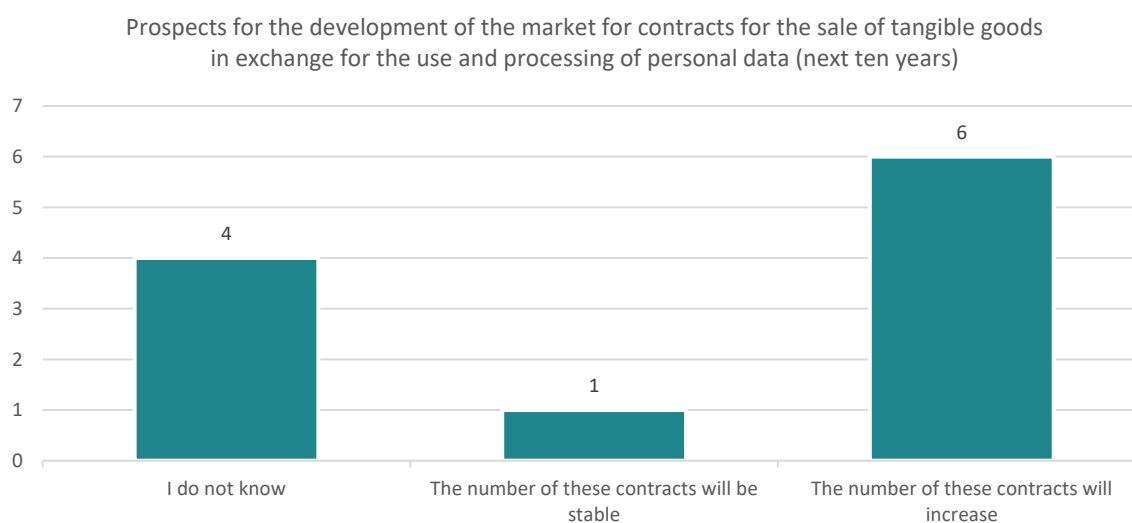
Base=108 respondents from the tangible goods sector

In your company, how big is the share of the data contracts where consumers give their consent for the processing of their personal data in order to purchase your goods?



Base=11 respondents from the tangible goods sector (only those that say "yes" in question 23)

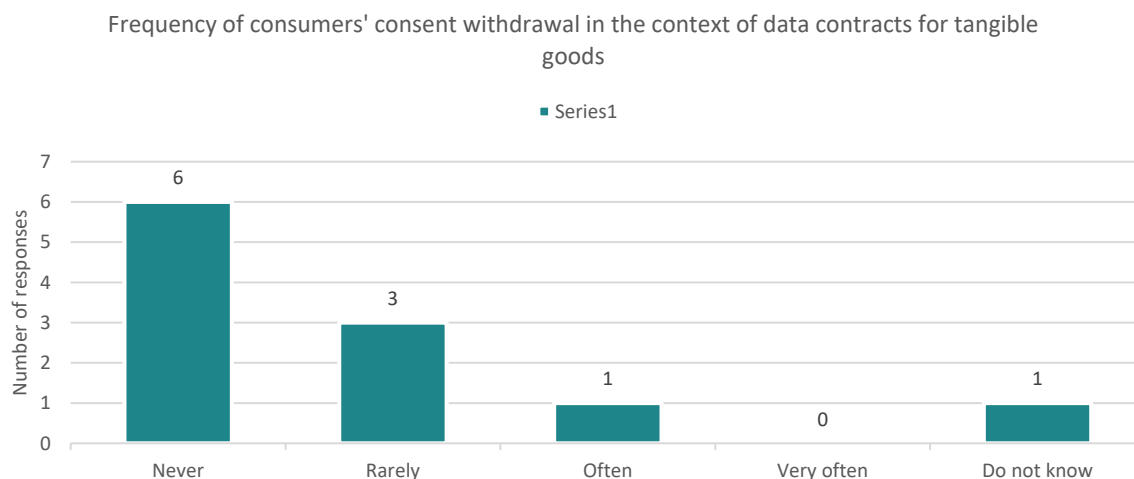
How do you see the development of the market for contracts for the sale of goods for which consumers provide personal data or give consent for the processing of their personal in the next ten years?



Base=11 respondents from the tangible goods sector (only those that say "yes" in question 23)

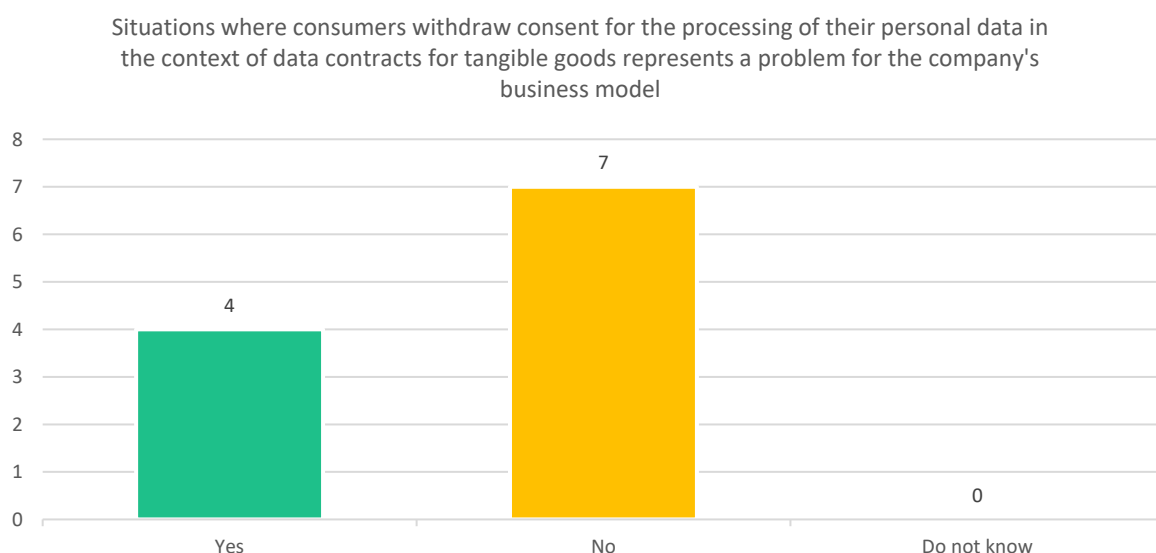
Current practices in relation to data contracts for the sale of goods

How often do consumers withdraw their consent given for the processing of their personal data in the context of the data contracts for tangible goods?



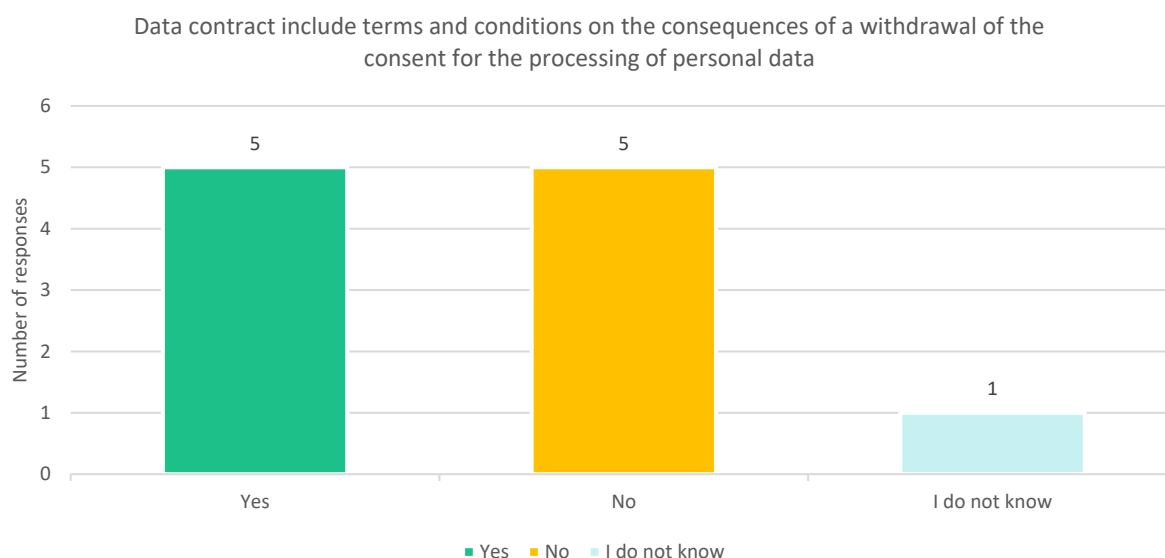
Base=11 respondents from the tangible goods sector (only those that say "yes" in question 23)

Do situations where consumers withdraw their consent for the processing of their personal data in the context of data contracts for tangible goods represent a problem for your business model?



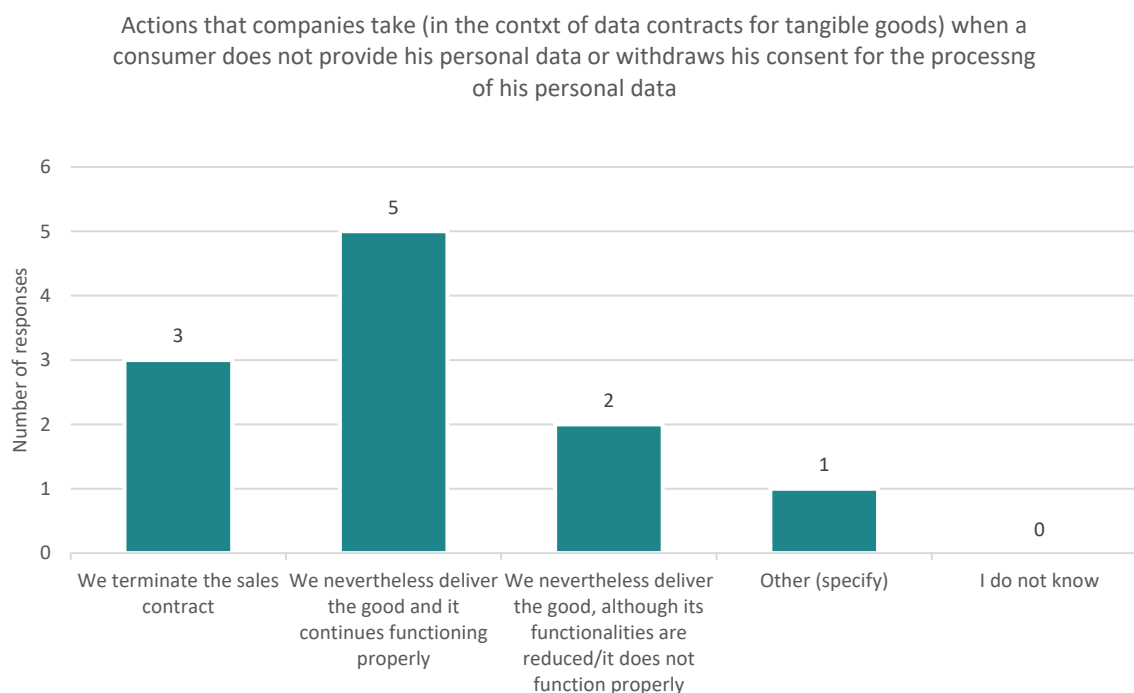
Base=11 respondents from the tangible goods sector (only those that say "yes" in question 23)

Do the data contracts for tangible goods you conclude with consumers contain terms or conditions on the consequences of a withdrawal of the consent for the processing of their persona data?



Base=9 respondents from the tangible goods sector (only those that say "yes" in question 23)

What actions do you take when a consumer does not provide his personal data or withdraws his consent for the processing of his personal data?

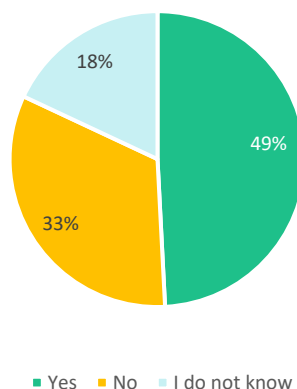


Base=11 respondents from the tangible goods sector (only those that say "yes" in question 23)

Possible uncertainties and fragmentation of current legal frameworks

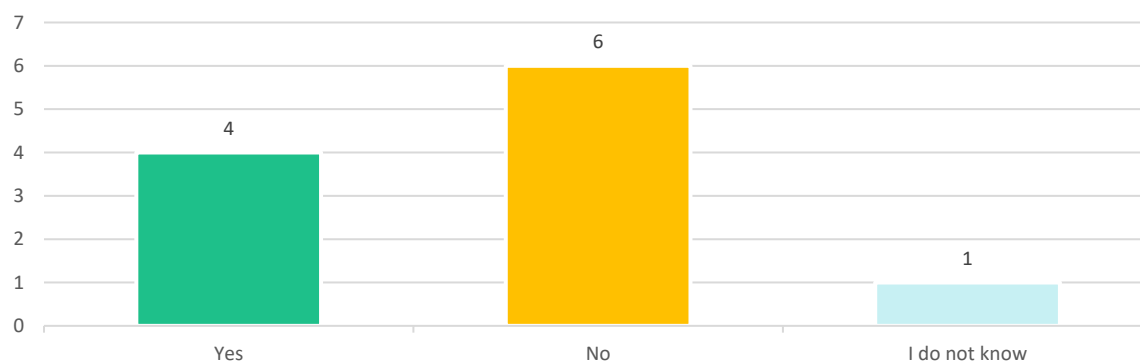
Do differing national rules on data contracts have a negative impact on your business' interest to develop activities cross-border?

Companies views on whether national rules on data contracts have a negative impact on businesses' interest to develop activities cross border (digital services/content)



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

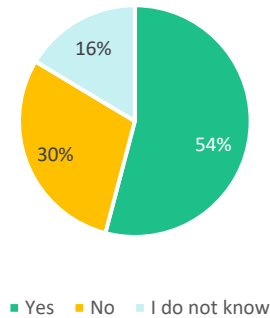
Companies views on whether national rules on data contracts have a negative impact on businesses' interest to develop activities cross border (tangible goods)



Base=11 respondents from the tangible goods companies that sell their goods in exchange of personal data (fully or partially)

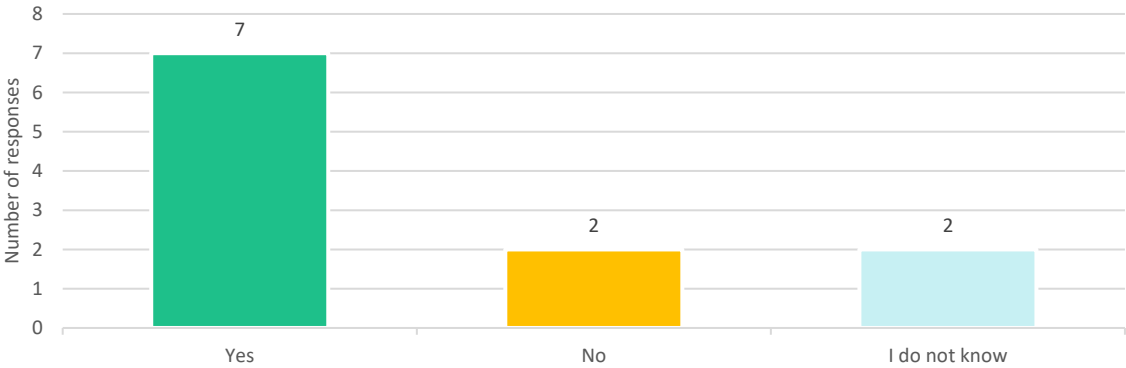
Are national rules concerning data contracts unclear in the country or countries where you sell your digital content/service or goods?

The extent to which national rules concerning data contracts are unclear in the country or countries where businesses sell your digital content/service



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

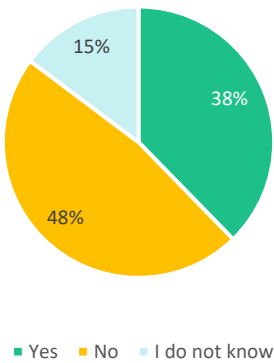
The extent to which national rules concerning data contracts are unclear in the country or countries where businesses sell your goods



Base=11 respondents from the tangible goods companies that sell their goods in exchange of personal data (fully or partially)

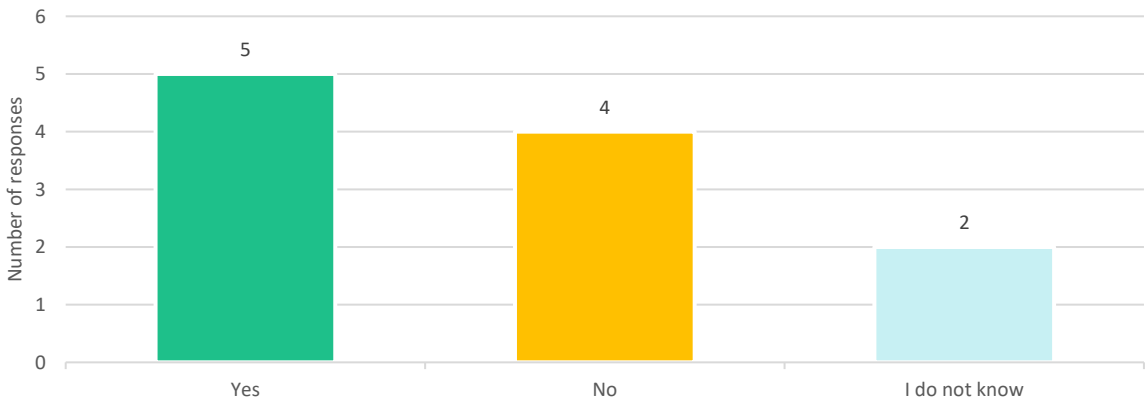
Does the unclarity of national rules have a negative impact on the development of your business domestically?

Extent to which unclarity of national rules have a negative impact on the development of businesses domestically



Base=61 respondents from the digital content/services sector (excluding those companies offering consumers access only by paying a price)

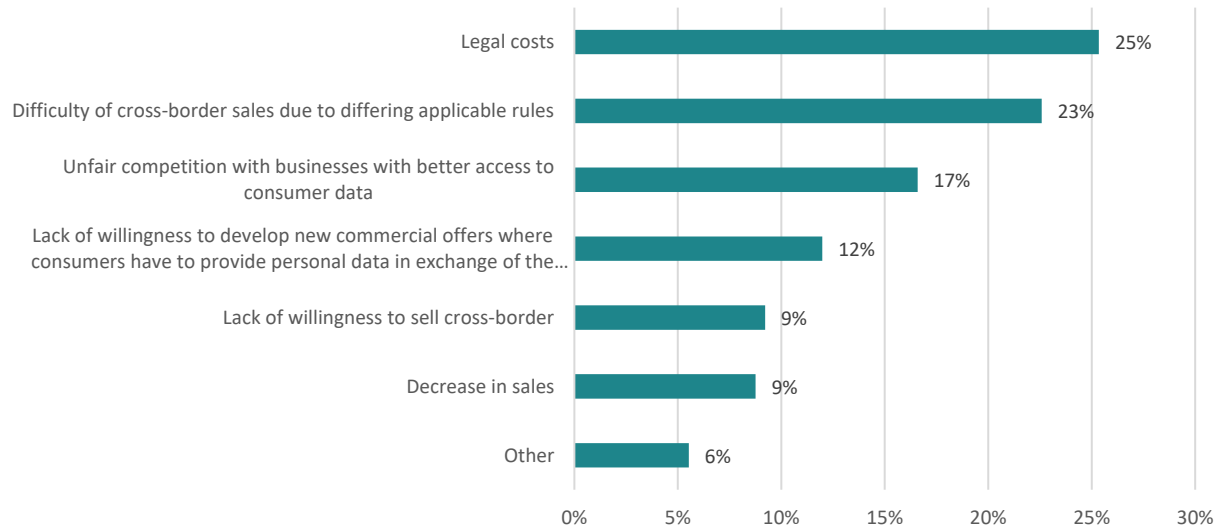
Extent to which unclarity of national rules have a negative impact on the development of businesses domestically (tangible goods)



Base=11 respondents from the tangible goods companies that sell their goods in exchange of personal data (fully or partially)

If you replied “yes” to the previous questions, what are the main negative impacts stemming from the current uncertainty and fragmentation of the legal framework on your business? Pick maximum 4.

Main negative impacts stemming from the current uncertainty and fragmentation of the legal framework on businesses



Base=42 respondents from the digital content/services sector (that responded “yes” to at least one of the questions 30-32)

7.4. Annex 4: List of sources

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