Economic Study on Consumer Digital Content Products

Final Report

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Economic Study on Consumer Digital Content Products

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Directorate-General for Justice and Consumers

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Table of Contents

Abbreviations 1
1 Introduction 2
1.1 Objectives and scope of the study 2
1.2 Scope of the study 2
1.2.1 Market coverage 2
1.2.2 Geographic coverage 5
1.3 Structure of the Report 5
2 Overview of the Digital Content Market 6
2.1 Introduction 6
2.2 Headline overview 7
2.3 Comparative characteristics of select digital content markets 8
3 Analysis of Consumer Detriment 15
3.1 Introduction 15
3.2 Overall approach 15
3.2.1 Survey design and implementation 15
3.2.2 Indicators of consumer detriment 19
3.3 Data sources and calculations 21
3.4 Methodological notes 26
3.4.1 Consumer survey 26
3.4.2 Estimation and extrapolation 27
3.5 Headline results of survey 27
3.5.1 Number of consumers experiencing problems 27
3.5.2 Number of consumers experiencing financial losses 30
3.5.3 Gross financial detriment 32
3.5.4 Number of consumers receiving remedies 34
3.5.5 Net financial detriment 36
3.5.6 Non-financial detriment 38
3.5.7 Total monetised detriment (financial + non-financial) 42
3.5.8 Psychological detriment 44
3.6 Additional evidence from secondary sources and ECC-Net 46
ECC-Net example case: problems with gaming quality 47
ECC-Net example case: incompatibility with devices 47
4 Analysis of Business Impacts 48
4.1 Introduction 48
4.2 Overview of business interviews 48
4.2.1 Design and implementation 48
4.2.2 Limitations and mitigating measures 50
4.2.3 Results 50
Annex 1 Detailed Results of Market Analysis 54
1 Market Analysis 55
1.1 Scope of the market analysis 55
1.1.1 Digital content categories 55
1.1.2 Geographic coverage 57

1.1.3 Information sources ... 58
1.1.4 Limitations and caveats ... 60

1.2 Music ... 61

1.2.1 Headline summary ... 61
1.2.2 Market size and structure ... 62
1.2.3 Cross border activity ... 66
1.2.4 Distribution channels ... 67
1.2.5 Pricing models ... 69
1.2.6 Consumer behaviour and patterns ... 70
1.2.7 Future growth ... 71

1.3 Film and television content ... 73

1.3.1 Headline summary ... 73
1.3.2 Market size and structure ... 74
1.3.3 Cross border activity ... 82
1.3.4 Distribution/ sales channels ... 84
1.3.5 Pricing models ... 86
1.3.6 Consumer behaviour and patterns ... 87
1.3.7 Future growth ... 87

1.4 Games ... 88

1.4.1 Headline summary ... 88
1.4.2 Market size and structure ... 90
1.4.3 Cross border activity ... 96
1.4.4 Distribution/ sales channels ... 97
1.4.5 Pricing models ... 100
1.4.6 Consumer behaviour and patterns ... 101
1.4.7 Future growth ... 105

1.5 Digital Books ... 106

1.5.1 Headline summary ... 106
1.5.2 Market size and structure ... 108
1.5.3 Cross border activity ... 117
1.5.4 Distribution/ sales channels ... 119
1.5.5 Pricing models ... 120
1.5.6 Consumer behaviour and patterns ... 121
1.5.7 Future growth ... 121

1.6 Software and Apps ... 123

1.6.1 Headline summary ... 123
1.6.2 Market size and structure ... 124
1.6.3 Cross border activity ... 128
1.6.4 Distribution channels ... 129
1.6.5 Pricing models ... 130
1.6.6 Consumer behaviour and patterns ... 131
1.6.7 Future growth ... 132

1.7 Storage of Digital Content ... 133

1.7.1 Headline summary ... 133
1.7.2 Market size and structure ... 133
1.7.3 Cross border activity ... 136
1.7.4 Distribution/ sales channels ... 136
1.7.5 Pricing models ... 137
1.7.6 Consumer behaviour and patterns ... 138
1.7.7 Future growth ... 139

1.8 Streaming of Sports Events 141
1.8.1 Headline summary 141
1.8.2 Market size and structure 141
1.8.3 Cross border activity 143
1.8.4 Distribution/ sales channels 145
1.8.5 Pricing models 146
1.8.6 Consumer behaviour and patterns 147
1.8.7 Future growth 147
Annex 2 Consumer Survey Questionnaire 149
Annex 3 Detailed Results of Consumer Survey 197
1 Introduction 200
1.1 Methodology 200
2 Usage of digital content products 202
2.1 Usage of digital content products 202
2.2 Expenditure on digital content products 208
3 Problems 213
3.1 Incidence of problems 213
3.1.1 Paid versus free – combined products 213
3.1.2 Different formats 215
3.1.3 Incidence of different types of problem (quality, access, terms & conditions) 222
3.2 Time taken for problems to be resolved 244
3.2.1 Time taken for problems to be resolved: paid and free products 244
3.2.2 Time taken for problems to be resolved: tangible and intangible products 249
3.2.3 Time taken for different types of problem to be resolved 253
4 Action to resolve problems 258
4.1 Type of action taken to resolve problems 258
4.2 Target of action taken to resolve problem 266
4.3 Incidence of consumers taking action in response to problems 267
4.4 Incidence of consumers incurring costs 271
4.5 Estimates of costs incurred 283
4.5.1 All intangible digital content products 283
4.5.2 'Free' intangible digital content products 310
4.6 Time spent resolving problems 322
4.6.1 Time spent resolving problems with 'paid' and 'free' products 322
4.6.2 Time spent resolving problems with 'tangible' and 'intangible' products 325
4.6.3 Time spent resolving different types of problem 328
4.7 Psychological effects on consumers 331
4.7.1 All problems 331
4.7.2 Different types of problem 333
5 Remedies and resolution 344
5.1 Remedies offered by suppliers 344
5.2 Value of remedies offered 348
5.2.1 Value of remedies offered for 'paid' and 'free' products 348

5.2.2 Value of remedies offered for 'tangible' and 'intangible' products 351
5.2.3 Value of remedies offered for different types of problem 355
5.3 Supplier reactions to problems 358
5.4 Consumer satisfaction with outcomes 361
Annex 4 Business Questionnaire 363

Table of tables

Table 1: Scope of digital content categories covered by the study........................... 2
Table 2: Key market indicators by digital content category (NOTES TO THIS TABLE ARE INCLUDED AT THE END OF THIS SECTION)... 9
Table 3: Overview of sample size per country 16
Table 4: Margins at 95% confidence level on 1,000 sample size 17
Table 5: Example of weighting - UK 18
Table 6: Digital content products covered by the 2011 and the present study 18
Table 7 Percentage and number of consumers experiencing problems 29
Table 8 Percentage and number of consumers experiencing financial losses (as a share of those experiencing a problem)...31
Table 9 Estimated financial losses per problem per user and gross financial detriment, euros 33
Table 10 Percentage and number of consumers receiving remedies 35
Table 11 Estimated net financial detriment, euros..37
Table 12 Estimated non- financial detriment (BASED ON DISCOUNTED TIME VALUE OF LEISURE), euros...39
Table 13 Estimated non- financial detriment (LEISURE TIME IS VALUED SAME AS WORKING TIME), euros..41
Table 14 Estimated total detriment (i.e. financial and non-financial detriment), euros - BASED ON DISCOUNTED TIME VALUE OF LEISURE 43
Table 15 Estimated total detriment (i.e. financial and non-financial detriment), euros - LEISURE TIME IS VALUED SAME AS WORKING TIME...43
Table 16 Extent to which consumers have felt under stress, angry, worried or frustrated as a result of the problem (% of consumers who had experienced a problem) 45
Table 17 Types of digital content covered 49
Table 18 Types of remedy offered by interviewed businesses 51
Table 19 Reasons why interviewed businesses offer remedies 52
Table 20 Numbers of complaints in past 12 months, reported by interviewed businesses...52
Table 21 Views of interviewed businesses on the status quo 53
Table 22 Scope of digital content categories..55
Table 23 Industry associations consulted 59
Table 24 Estimates of market size 63
Table 25 Estimated cross-border activity, year 2014 66

Table 26 % of consumers accessing music online who did so by paying with money or for free, year 2014 68
Table 27 Average annual spend per online survey respondent on music €....71
Table 28 Estimates of market size 75
Table 29 Consumer spending in 2013 (Euro m) 77
Table 30 Number of transactions of physical video and consumer use of video-on-demand video 79
Table 31 Key players in film and television content 80
Table 32 Estimated cross-border activity, year 2014 82
Table 33 Estimated per cent of consumers accessing film and tv content online who do so by paying with money or for free, year 2014....85
Table 34 Estimates of market size, year 2014 (unless stated otherwise)....92
Table 35 Estimated cross-border activity, year 2014 (unless stated otherwise)....96
Table 36 % of online consumers that bought / accessed video games from physical retailers and online retailers (streaming and downloads), year 2012 98
Table 37 % of online consumers buying or accessing games online who do so by paying with money or for free 99
Table 38 Estimated % of consumers accessing games online, year 2013 (unless stated otherwise) 101
Table 39 Total consumer spending, by type of game played, year 2012 (unless stated otherwise) 103
Table 40 Average annual spending per online consumer of games € 104
Table 41 Growth rate of e-books and audiobooks sales in selected Member States, as of 2013 unless otherwise stated 108
Table 42 Estimates of market size, year 2013 unless stated otherwise 112
Table 43 Estimated cross-border activity, year 2015,2014 117
Table 44 Estimated % of consumers accessing e-books online who do so by paying with money or for free, year 2014 119
Table 45 Estimates of market size 124
Table 46 Estimated cross-border activity (software and apps), year 2015....128
Table 47 % of online consumers accessing software and apps online who do so by paying with money or for free, year 2015....129
Table 48 Average annual spend per online survey respondent on anti-virus software € 131
Table 49 Some players in storage of digital content 134
Table 50 Estimates of market size, year 2014 unless stated otherwise 135
Table 51 Estimated % of consumers accessing digital content storage services who do so by paying with money or for free, 2015....136
Table 52 Average annual spending per consumer on storage of digital content, € ...138
Table 53 Estimates of market size, year 2014 unless stated otherwise 142
Table 54 Estimated cross-border activity, year 2014 143
Table 55 Demand for cross-border streaming....144

Table 56 Estimated % of consumers streaming live events who do so by paying with money or for free, year 2014 146

Table 57 Survey sample 201

Table 58 Consumer usage of digital content products (% of consumers in each Member State) 203

Table 59 Consumer spend on digital content products (average annual spend per consumer in each Member State – all figures in €) 209

Table 60 Consumers experiencing any problems with 'paid' and 'free' digital content products (% of consumers who had accessed digital content products in each Member State) 214

Table 61 Consumers experiencing any problems with 'paid' and 'free' digital content products, as above, weighted and unweighted bases 214

Table 62 Consumers experiencing any problems with digital content products (% of consumers who had accessed digital content products in each Member State) 216

Table 63 Consumers experiencing any problems with digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000) 219

Table 64 Consumers experiencing problems with the quality of digital content products (% of consumers who had accessed digital content products in each Member State) 224

Table 65 Consumers experiencing problems with the quality of digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000) 227

Table 66 Consumers experiencing problems with access to digital content products (% of consumers who had accessed digital content products in each Member State) 231

Table 67 Consumers experiencing problems with access to digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000) 234

Table 68 Consumers experiencing problems with the terms & conditions of digital content products (% of consumers who had accessed digital content products in each Member State) 238

Table 69 Consumers experiencing problems with the terms & conditions of digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000) 241

Table 70 Time taken for problems to be resolved, for different digital content products (% of consumers who had experienced a problem with paid and free products) 245

Table 71 Time taken for problems to be resolved with different digital content products (% of consumers who had experienced a problem with paid and free products) 250

Table 72 Time taken to for different types of problem to be resolved (% of consumers who had experienced a problem with digital content products) 254

Table 73 Type of action taken to resolve problems (% of consumers who had experienced a problem with paid and free products) 259

Table 74 Type of action taken to resolve different types of problem (% of consumers who had experienced a problem with digital content products) 262

Table 75 Recipient of complaint (% of consumers who had made a complaint) 266

Table 76 Recipient of request for a replacement, repair, refund or compensation (% of consumers who had requested a replacement, repair, refund or compensation) 266

Table 77 Whether action has been taken to resolve problems (% of consumers who had experienced a problem with paid and free products) 268

Table 78 Whether action has been taken to resolve different types of problem (% of consumers who had experienced a problem with digital content products).............270

Table 79 Costs incurred by consumers who experienced problems with music products 272

Table 80 Costs incurred by consumers who experienced problems with games products 275

Table 81 Costs incurred by consumers who experienced problems with anti-virus software 278

Table 82 Costs incurred by consumers who experienced problems with cloud storage 281

Table 83 Estimates of costs incurred by consumers who experienced problems with all intangible music products (average cost per consumer in €) 284

Table 84 Estimates of costs incurred by consumers who experienced problems with all intangible digital games products (average cost per consumer in €)......................287

Table 85 Estimates of costs incurred by consumers who experienced problems with all intangible anti-virus software (average cost per consumer in €) 290

Table 86 Estimates of costs incurred by consumers who experienced problems with all intangible digital games products (average cost per consumer in €)......................293

Table 87 Estimates of costs incurred by consumers who experienced problems with all intangible anti-virus software (average cost per consumer in €) 296

Table 88 Estimates of costs incurred by consumers who experienced problems with all cloud storage (average cost per consumer in €) 299

Table 89 Estimates of costs incurred by consumers who experienced problems with ‘paid’ intangible games products (average cost per consumer in €).......................302

Table 90 Estimates of costs incurred by consumers who experienced problems with ‘paid’ intangible anti-virus software (average cost per consumer in €)...................305

Table 91 Estimates of costs incurred by consumers who experienced problems with ‘paid’ cloud storage (average cost per consumer in €) 308

Table 92 Estimates of costs incurred by consumers who experienced problems with ‘free’ intangible music products (average cost per consumer in €) 311

Table 93 Estimates of costs incurred by consumers who experienced problems with ‘free’ intangible games products (average cost per consumer in €) 314

Table 94 Estimates of costs incurred by consumers who experienced problems with ‘free’ intangible anti-virus software (average cost per consumer in €) 317

Table 95 Estimates of costs incurred by consumers who experienced problems with ‘free’ cloud storage (average cost per consumer in €) 320

Table 96 Time spent resolving problems with ‘paid’ and ‘free’ products by Member State (average time per consumer in hours) 323

Table 97 Time spent resolving problems with ‘tangible’ and ‘intangible’ products by Member State (average time per consumer in hours)...326

Table 98 Time spent resolving different types of problem, for different content categories, by Member State (average time per consumer in hours) 329

Table 99 Extent to which consumers have felt under stress, angry, worried or frustrated as a result of the problem (% of consumers who had experienced a problem) 332

Table 100 Extent to which consumers have felt 'under stress' as a result of any problems experienced (% of consumers who had experienced a problem) 334

Table 101 Extent to which consumers have felt 'angry' as a result of any problems experienced (% of consumers who had experienced a problem) 336

Table 102 Extent to which consumers have felt 'worried' as a result of any problems experienced (% of consumers who had experienced a problem) 338

Table 103 Extent to which consumers have felt 'frustrated' as a result of any problems experienced (% of consumers who had experienced a problem) 340

Table 104 Percentage of digital content users experiencing various forms of psychological detriment as a result of a problem 342

Table 105 Remedies offered by suppliers of digital content products (% of consumers who had experienced a problem) 344

Table 106 Remedies offered by suppliers of digital content products (number of consumers who had experienced a problem), thousands ('000) 345

Table 107 Percentage and number of consumers receiving remedies, per type of digital content 347

Table 108 Average value of replacement, alternative or remuneration offered by suppliers in Member State (€) – All products and all problems....................349

Table 109 Average value of remedy for problems with tangible products by Member State (€) – All problems 352

Table 110 Average value of remedy for problems with intangible products by Member State (€) – All problems 354

Table 111 Average value of remedy for different types of problem by Member State (€)....................356

Table 112 Supplier reactions to problems with digital content products – All problems 358

Table 113 Supplier reactions by type of problem with digital content products....................360

Table 114 Current status of problems experienced....................361

Table 115 Satisfaction with the outcome of remedies and resolution 361

Table of figures

Figure 1: Geographic scope of the analysis 5

Figure 2 Headline summary of market analysis.................... 7

Figure 3 Methodological approach to measuring consumer detriment 21

Figure 4 Geographic scope of the analysis....................58

Figure 5 Summary overview table of music market in Europe....................61

Figure 6 Summary overview table of film and television content market 73

Figure 7 Summary overview table of market for games 88

Figure 8 E-books and audiobooks as a relevant segment of the market analysis 106
Figure 9 Summary overview table of market for books 107
Figure 10 Summary overview table of software and apps market in Europe 123
Figure 11 Summary overview table of the cloud market 133
Figure 12 Summary overview table of the live events and streaming of sports events market 141
Figure 13 Time taken for problems to be resolved with all digital content products (paid and free) 247
Figure 14 Time taken for problems to be resolved with all digital content products (paid products only) 248
Figure 15 Time taken for problems to be resolved with all digital content products (free products only) 249
Figure 16 Time taken for problems to be resolved with music products (tangible and intangible products) 251
Figure 17 Time taken for problems to be resolved with games products (tangible and intangible products) 252
Figure 18 Time taken for problems to be resolved with anti-virus software (tangible and intangible products) 252
Figure 19 Time taken for different types of problem to be resolved 257
Figure 20 Type of action taken to resolve different types of problem (% of consumers who had experienced a problem with digital content products) 265
Figure 21 Comparison of whether action was taken to resolve problems, by type of digital content product 269

Abbreviations

The following abbreviations are used throughout this report and the annexes:

'MS' refers to Member States of the European Union

'DSM consumer survey' refers to a consumer survey conducted in 2015 by GfK for the Commission, 'Identifying the main cross border obstacles to the Digital Single Market and where they matter most'

'DSM business survey' refers to a business survey conducted in 2015 by TNS Political & Social for the Commission, 'Flash Eurobarometer 413: Companies engaged in online activities'.

1 Introduction

This document constitutes the Final Report for an "Economic Study on Consumer Digital Content Products" which was launched by the Directorate-General for Justice and Consumers in March 2015.

1.1 Objectives and scope of the study

The objective of the present study is to provide the following evidence and analyses to inform the Impact Assessment of the European Commission's legislative proposal on certain aspects concerning contracts for the supply of digital content and the online purchase of goods[1]:

- A **detailed analysis of the digital content market** based on targeted research covering seven digital content categories and 15 Member States (MS) – see section 1.2.
- Quantitative and qualitative **analysis of consumer detriment** resulting from issues with "access", "quality" and "unfair contact terms";
- An assessment of how the current legal framework affects businesses, both domestically and cross-border.

1.2 Scope of the study

1.2.1 Market coverage

The table below provides an overview of the digital content categories covered by the study as part of the market analysis (Task 1) and the assessment of business impacts (Task 3). As per the Terms of Reference, the analysis of consumer detriment (Task 2) covers only four digital content markets (music, games, anti-virus and cloud storage services[2]).

The study focuses on B2C transactions and covers: (i) domestic and cross border sales; (ii) paid for and free content; (iii) tangible and intangible content and (iv) both online and offline transactions.

Table 1: Scope of digital content categories covered by the study

Music
• Music and music video content bought on a **physical (tangible) carrier** (e.g. CDs, DVDs or Blu-ray) on-line, or offline through bricks and mortar shops • Music and music video content accessed on-line in **digital (intangible) formats** includes: • **downloads** of music (or music video) from service providers such as iTunes, Google Play Music, AmazonMP3 or HMV digital for fixed price (subscription or pay per track); • **streaming** of music from service providers such as Deezer and Spotify where consumers can listen to (and download) as many music tracks / videos as they want, for a pre-defined period of time:

[1] European Commission (2015) *Inception Impact Assessment - Proposal on contract rules for online purchase of digital content and tangible goods*. Available online at: http://ec.europa.eu/smart-regulation/roadmaps/docs/2015_just_008_contract_rules_for_digital_purchases_en.pdf

[2] On the request of the client, positioning and navigation services have been replaced by cloud storage services

- i) streaming of music based on subscription services - consumers pay a (monthly/yearly) fee to a service provider;
- ii) free ad-supported streaming of music - consumers access service for free but the service is restricted (e.g. includes ads, consumers cannot download music, sound quality is lower, …);
- **mobile services**: purchase of ringtones, ring back tones, video tones, and single track / video

Film and television content

- Film and television content on a **physical (tangible) carrier** (e.g. DVD / Blu-ray discs) sold on-line or offline through brick and mortar shops (e.g. HMV in the UK, or Fnac in France);
- Film and television content supplied **online**: e.g. Netflix, Youtube, Amazon, Lovefilm). Transactions include digital subscription (typically via streaming), and digital rental / retail on a per film / series basis (via streaming or download);
- **Digital TV** subscriptions and **video-on-demand** - film and television content provided via digital terrestrial /cable / satellite / Internet Protocol Television (IPTV) services (e.g. Movistar TV in Spain, VOD d'Orange in France).

Games

- Video games bought on a **physical (tangible) carrier**– such as packaged video games – bought online or offline though bricks and mortar distributors and/or retailers [e.g. GAME and HMV (UK); Karstadt and Galeria Kaufhof (DE); Media Markt]. Packaged games are typically played on consoles and/or personal computers (PCs). Payment is required up-front at the time of purchase. Additional payments may be required for expansion packs and downloadable content (DLC) –such as new game modes, levels, challenges or other features – related to complete and already released (packaged) games.
- Video games accessed **online**, such as:
- **browser games**: played over the internet using a web browser and including all video game genres that can be played as single-player or multiplayer games [where the latter is commonly referred to as MMO games (Massively Multiplayer Online games)];
- **social games**: typically accessed from social networking platforms (e.g. Facebook) and requiring one-off payments at the time of purchase and/or in-game payments for additional in-game features during game play;
- **mobile games ('ios' and 'Android')**: accessed online (e.g. through app stores) and downloaded and played on mobile devices for a one-off charge at the time of purchase and/or in-game payments for premium features of the game;
- **downloaded console and PC games**: accessed from online console stores and/or online distribution platforms (e.g. Steam) and played on consoles and personal computers

Digital Books

- E-books; audio books

Software and apps

- **B2C Software** defined as any set of instructions that directs a device processor to perform some specific tasks. This can include:
- Software systems: help run the computer hardware and computer system, and provide a platform for running application software: Operating system (e.g. Windows, Mac OS, Linux); Utility software (e.g. antivirus);
- Application software: this is installed onto a computer to allow users to perform tasks, functions or activities like creating text documents, listening to music, or surfing the web: Programs (e.g. Photoshop, Windows Media Player, Skype, Microsoft office); and Browsers (e.g. Firefox, Google Chrome)
- Software as a service: software where applications are hosted by a vendor or service provider and made available to customers over a network, typically the internet (e.g. Google search, Google Docs, Office 365, Facebook, Twitter, dating sites)
- Within the software market, particular information was gathered for:
- antivirus software and
- **navigation-positioning** or **GPS** software (Global Positioning System*).* GPS provides location information, and can be installed either on mobile telephones or PND (Portable Navigation Devices, i.e. mobile devices with integrated GPS receivers and digital maps).
- **B2C apps** defined as a dedicated software application, built specifically for smartphone or tablet operating system.
- Some of these categories overlap with the digital content categories discussed separately in this market analysis (like games) - to account for this, where appropriate, lower and higher estimates have been calculated to provide a range.

Storage of digital content

- **B2C online** web services that provide server space for individuals to store data, photos, videos and other files (e.g. Google Drive, DropBox and iCloud);
- Outside the scope of this analysis are:
- B2B cloud services;
- Note that Software as a Service (SaaS) (e.g. Google Docs, Office 365) is excluded from the scope of this category, but included in the scope of the 'software and apps' category.

Streaming of sports events

- Broadcast of sport events **on-line** in **real time**.

1.2.2 Geographic coverage

The market analysis and consumer survey include a targeted research covering the 15 EU Member States indicated in Figure 1.

Figure 1: Geographic scope of the analysis

1.3 Structure of the Report

- The remainder of this Report is structured as follows:
- Section 2 provides an overview of the digital content market, based on the detailed research for the seven digital content categories in the study scope;
- Section 3 provides an overview of the consumer detriment task, including the approach and headline results of the consumer survey;
- Section 4 provides an overview of the results of the business interviews undertaken in the context of this study;
- The main Report is supported by a number of annexes as follows:
- Annex 1: detailed results of the market analysis;
- Annex 2: consumer survey questionnaire;
- Annex 3: detailed results of the consumer survey;
- Annex 4: business questionnaire;

2 Overview of the Digital Content Market

2.1 Introduction

'Digital content' is a very broad term, which loosely refers to digital text, audio, video and images available for distribution on electronic media, on a tangible carrier (e.g. a CD/DVD) or in intangible formats (e.g. broadcasting, online streamlining, downloading). The digital content market forms part of the wider digital economy; an economy based on digital technologies. Measuring the size of digital economy remains a challenge[3], but based on data available from the European Commission, the digital economy is currently estimated to represent 7 per cent of the EU GDP[4].

The primary enabling factor for the existence and growth of the digital content market and digital economy is internet connectivity. 80 per cent or 317 million Europeans used the internet in 2014[5]. Alongside increased internet penetration and usage, a growing number of smartphones, e-readers and tablet users are fuelling the demand for digital content. Market analysts project that the global digital content market will grow at a CAGR[6] of ~ 14 per cent over the period 2014-2019 and "pass the US$ 500 billion [~€450 billion] mark by 2019"[7].

As part of this study, seven digital content markets were analysed in detail to get a picture of the size and characteristics of these markets:

- music;
- film and television content;
- games;
- books;
- software and apps;
- storage of digital content; and
- streaming of sports events.

In addition to reviewing secondary sources, contact was made with a range of EU and national industry associations[8] to collect information from them to inform this task. Draft market reports were submitted to the relevant industry associations for review and feedback. This Report contains the validated market analysis. Also, the analysis reflects results of the consumer survey (number of users, average spend) undertaken in this study.

This section provides a snapshot of the main findings of the team's market research. Detailed reports for individual content categories are available in Table 1

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[3] See Digital Economy - Facts & Figures for a discussion of challenges, can be accessed at http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/good_governance_matters/digital/2014-03-13_fact_figures.pdf

[4] As estimated in Digital Agenda for Europe – see 'digital economy & jobs' in glossary accessed at https://ec.europa.eu/digital-agenda/en/glossary#d

[5] Eurostat, Internet use by individuals 2014 % of individuals aged 16 to 74 in last 12 months before the survey [tin00028]

[6] Compound Annual Growth Rate

[7] Global Digital Content Market 2015-2019. Available at: http://www.researchandmarkets.com/research/zmm8wg/global_digital

[8] Namely: International Federation of the Phonographic Industry, International Confederation of Music Publishers, International Video Federation, Interactive Software Federation of Europe, European Games Developer Federation, Federation of European Publishers, French Publishers Association, German Publishers Association, UK Publishers Association, The Software Alliance, Cloud Industry Forum, Sports Rights Owners Coalition

2.2 Headline overview

Figure 2 *Headline summary of market analysis* provides a headline summary of the selected seven digital content markets based on a comparative overview of the key market indicators (Table 2.1). Key features of these markets can be summarised as follows:

- These markets are large and growing: around 80 per cent of the European consumers participate in these markets and collectively, the seven digital content markets under scrutiny represent a significant (0.35 per cent) and growing share of the EU economy;
- Germany, United Kingdom and France are the largest geographic markets in terms of industry turnover / consumer spend;
- These markets are dominated by the US based 'technology giants' like Google, Apple, Amazon and Microsoft;
- Cross border activity is low: on average, only 15 per cent of consumers who purchased or accessed digital content online reported doing so from providers based in another EU country ;
- Most of the digital content is accessed for free (meaning without payment in money).

Figure 2 Headline summary of market analysis

Market size and structure	Total industry turnover of the selected seven digital content categories in EU is estimated to be at least **42 billion Euros per year.** This accounts for 5 per cent of the total digital economy[9] or 0.35 per cent of EU28 GDP in 2014. **Germany, United Kingdom and France are the largest geographic markets** in terms of industry turnover / consumer spend[10] for the majority of the seven digital content markets. **Around 80 per cent of the European internet users access music, film and television content, games and software & apps online.** Streaming of sports events, storage of digital content and digital books are less popular (between 51 and 58 per cent of internet users access those types of content online)[11]. **US based companies Google, Apple, Amazon and Microsoft** are key market players in all or the majority of the digital content market in the scope of this analysis.

[9] As estimated in Digital Agenda for Europe – see 'digital economy & jobs' in glossary accessed at https://ec.europa.eu/digital-agenda/en/glossary#d

[10] Turnover may differ from consumer spending – for example, turnover from licensing agreements with other businesses does not represent consumer spending

[11] Based on DSM consumer survey. See Table 2.1 Indicator % of internet users accessing content online for detailed breakdown per content category and underlying sources

Cross border activity

Cross border activity is low[12]:

- Around 15 per cent of EU consumers who purchased or accessed digital content online did so from providers based in another EU country.
- Around 10 per cent of EU consumers who purchased or accessed digital content online did so from providers based in a non-EU country.

Distribution channels

Most of the digital content is accessed without payment in money[13]:

90 to 92 per cent of consumers who access software & apps or store digital content do it without paying with money;

- 77 per cent of consumers who stream events do it without paying with money;
- More than 50 per cent of consumers who download music, film and television content, games and digital books do it without paying with money[14];

Pricing models

Most common pricing models are:

- pay per purchase model;
- subscription based model;
- ad-supported model; and
- freemium

2.3 Comparative characteristics of select digital content markets

Table 2 provides a comparative overview of the key market indicators for each of the digital content categories covered by the study. 'Software and apps' represents the largest market in terms of industry turnover and consumer spending, followed by 'games' and 'film & television content'.

[12] Based on DSM consumer survey. See Table 2 Indicator % of online consumers purchasing or accessing content from a provider based in another EU country for a detail breakdown per content category

[13] Based on DSM consumer survey. See Table 2, Indicator Paid vs free content for exact figures per content category

[14] This is supported by results from the consumer survey undertaken as part of this study, where on average, 67% of consumers using intangible music content did so for free (in comparison to 39% who paid), 62% of those using intangible games content did so for free, and 62% of those using anti-virus software did so for free. The one exception was cloud storage, with an equal split between consumers paying and accessing for free, amongst those using cloud storage.

Table 2: Key market indicators by digital content category (NOTES TO THIS TABLE ARE INCLUDED AT THE END OF THIS SECTION)

		Music	Film & television content	Games	Digital books	Software & apps	Storage of digital content	Streaming of sports events
Market size and structure	**Industry turnover**	€4 billion[i]	€8.5 billion[ii]	€11 to 16 billion[iii]	€1.1 billion[iv]	€17.5 billion (apps)[v]	:	:
	% of internet users purchasing or accessing content online[vi]	79 to 84%	72 to 81%	65 to 78%	51%[vii]	75 to 87%	55%[viii]	58%
	Estimated number of consumers purchasing or accessing online each digital content (millions)[ix]	199 to 213	184 to 205	166 to 197	129[x]	189 to 220	140	148
	Estimated annual spend per consumer purchasing or accessing online each digital content	€19 to €20[xi]	€41 to €46[xii]	€55 to €96[xiii]	~ €8.5[xiv]	€80 to €92 (apps)[xv]	€8 to €43[xvi]	:
	Largest geographic markets in terms of industry turnover /consumer spend	DE (26%)[xvii] UK (21%) FR (11%)	UK (29%)[xviii] DE (23%) FR (14%)	FR (35%)[xix] UK (19%) DE (19%)	UK[xx] DE	:	:	:
	Estimated number of businesses:							
	-content developers	23,104[xxi]	:	:	:	:	:	:
	-content distributors	230[xxii]	108,370[xxiii]	:	:	:	:	:

		Music	Film & television content	Games	Digital books	Software & apps	Storage of digital content	Streaming of sports events
	Key players	Apple iTunes Deezer Google Play Spotify	Apple iTunes Amazon Netflix YouTube	Steam Direct2Drive Origin Amazon Xbox Live Marketplace (Microsoft) PlayStation Network (Sony) Apple iTunes Google Play	Amazon Apple bookstore	Anti-virus Avast Microsoft Apps Apple Google Amazon Navigation Garmin TomTom	Amazon Apple Google Dropbox Box Onedrive	Eurosport Sky

Cross-border activity[xxiv]	% of consumers purchasing or accessing digital content online that do so from:							
	- a provider based in another EU country	15 to 23%	14 to 16%	16 to 17%	15%	15 to 16%	/	16%
	- a provider based in a non-EU country	11 to 14%	10%	10 to 11%	9%	10%	/	9%

		Music	Film & television content	Games	Digital books	Software & apps	Storage of digital content	Streaming of sports events
Formats	**Digital - as % of industry turnover**	31%[xxv]	23%[xxvi]	:	almost 100%	:	:	/
	Tangible - as % of industry turnover	> 50%[xxvii]	77%[xxviii]	:		:	:	/
Paid vs free content[xxix]	**% of consumers purchasing or accessing each type of digital content online that use paid download**	18%	14%	21%	28%	21 to 23%	/	/
	% of consumers purchasing or accessing each type of digital content online that use free download	58%	53%	66%	65%	90 to 91%	/	/
	% of consumers purchasing or accessing each type of digital content online that use paid streaming	12%	18%	11%	12%	/	12%[xxx]	28%
	% of consumers purchasing or accessing each type of digital content online that use free streaming	44%	49%	32%	26%	/	92%[xxxi]	77%

		Music	Film & television content	Games	Digital books	Software & apps	Storage of digital content	Streaming of sports events
Main pricing models xxxii	**Pay per purchase model**							
	Subscription based model							
	Ad-supported model							
	Freemium							
	Subsidies-supported model							
	Trial-ware							

Legend: Main pricing models Other pricing models

NOTES TO TABLE 2.1

i. IFPI (2015) Digital Music Report Accessed at http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf
ii. International Video Federation 2014 – European Video Yearbook 2014. Based on consumer spending for legal content. This figure does not include illegal and advertisement-supported film and television content.
iii. Data sources include: GDC Europe (2014); Newzoo (2013); Bigfishgames.com (2014); Ernst and Young (2012). Note that figures have been converted into euros at the prevailing rate where necessary
iv. [i]Rudiger Wishenbart Global eBook Report (2014)
v. Vision mobile. 2013. The European App Economy 2013
vi. For all product categories, these are ICF estimates based on DSM consumer survey. Footnote ix below explains reasons for the range.
vii. This may be an overestimation - national data sources indicate significantly lower usage (e.g. 6% of population, for Germany – from *German Booksellers and Publishers Association*)
viii. This is close to the 53% based on Ipsos survey in this study (for 15 MS)
ix. Estimated number of 18 – 99 years old consumers, based on DSM consumer survey micro-data on % using different types of online content, and Eurostat data on internet usage [proj_13npms].

   Since content categories in the scope of this study spill across different parts of the DSM consumer survey ((i) tangible goods purchased online for private use and services ordered online but used offline; (ii) services used online for private purposes; and (iii) digital content accessed online for private use) it was difficult to extract information on a 'like for like' basis. For example, the DSM consumer survey combines music and film categories together for offline sales on a tangible medium, e.g. physical CD, DVD, or Blu-ray Disc. To address this, lower and upper bounds have been calculated where appropriate. Lower bound refers only to content covered in iii), Higher bound refers to content covered in i) and iii).

   Lower bound is estimated based on the number of consumers that answered never to Q4a: Over the last 12 months, how many times on average have you used the Internet to access the following digital content (including both free and paid access): [digital content category x] * % of individuals that used internet in the last 12 months (Eurostat tin00028) * Estimated population in 2015 (Eurostat proj_13npms].

   Higher bound was estimated based on a combination of Q2a and Q4a: Over the last 12 months I have never used the internet to buy or order [tangible goods & services category x] (ordered online but used offline) or used internet to access the following digital content: [digital content category x] * % of individuals that used internet in the last 12 months (Eurostat tin00028) * Estimated population in 2015 (Eurostat proj_13npms].

x. This may be an overestimation – see footnote vii.
xi. Ipsos 2015 consumer survey conducted in this study
xii. Estimated as consumer spending / number of online consumers
xiii. Estimated as industry turnover / number of online consumers
xiv. ibid
xv. ibid
xvi. Ipsos 2015 consumer survey conducted in this study
xvii. IFPI (2015) Digital Music Report Accessed at http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf
xviii. International Video Federation 2014 – European Video Yearbook 2014
xix. European Commission (2013)
xx. Rudiger Wishenbart Global eBook Report (2014)

[xxi.] No. of record labels in 2012: Includes sound recording and music publishing enterprises in 2012 (source Eurostat sbs_sc_1b_se_r2)

[xxii.] IFPI (2014) The Evolution of Music in Europe Accessed at http://www.ifpi.org/downloads/Europe-Music-Industry-2014.pdf

[xxiii.] Sum of businesses selling content in physical form, and those selling OTT / TV-based services. Data sources are: Physical: International Video Federation 2013 – European Video Yearbook 2013 / OTT and TV-based services: EC. On-demand audio-visual markets in the European Union. 2014

[xxiv.] DSM consumer survey. Higher and lower estimates based on the questions: Over the last 12 months, where did you access online digital content from?: i) Tangible goods and services bought online but used offline: [tangible goods & services category x]; ii) Tangible goods and services bought online but used offline: [tangible goods & services category x] or [digital content category x] See footnote ix for further explanation of higher and lower estimates.

[xxv.] IFPI, 2014. The evolution of music in Europe. Available at: http://www.ifpi.org/downloads/Europe-Music-Industry-2014.pdf

[xxvi.] International Video Federation 2014 – European Video Yearbook 2014

[xxvii.] IFPI, 2014. The evolution of music in Europe.

[xxviii.] International Video Federation 2014 – European Video Yearbook 2014

[xxix.] DSM consumer survey. Figures based on question Q4d: In the last 12 months, how did you access [digital content category x]?

[xxx.] Refers to use of services

[xxxi.] Ibid

[xxxii.] Categorisation of pricing models is based on a qualitative assessment. See Annex 1 for a detailed account for each content category.

3 Analysis of Consumer Detriment

3.1 Introduction

This section provides an overview of the consumer survey:

- the methodology used for quantifying the scale of personal consumer detriment being experienced by consumers of four types of digital content (music, games, anti-virus and cloud storage) across the EU;
- data sources;
- limitations and caveats to the analysis; and
- headline results. A more detailed discussion of results from the consumer survey is provided at Annex 3.
- The section also contains additional evidence collected on problems experienced by consumers of digital content from the ECC-net and from secondary sources.

3.2 Overall approach

Consumer detriment or harm arises when market outcomes fall short of their potential, resulting in welfare losses (financial, health, etc.) for consumers. A 2007 study on consumer detriment[15], widely recognised as an important contribution to the development of the concept of consumer detriment, establishes two distinct forms of consumer detriment:

- Personal detriment: negative outcomes for individual consumers, relative to reasonable expectations.
- Structural detriment: the loss of consumer welfare (measured by consumer surplus) due to market failure or regulatory failure.

The present study focusses on personal consumer detriment. In line with the Terms of Reference and given the scope of the proposed EU policy action, the study focuses specifically on problems relating to "quality", "access" and "terms and conditions". Problems relating to data protection and security, information and transparency, geo-blocking etc. are not included in the scope of the study

This study uses a survey-based approach to assess the nature and scale[16] of personal detriment being experienced by consumers. The following sub-sections provide further information on survey design and implementation (section 3.2.1) and indicators of consumer detriment that have been quantified using the survey results (section 3.2.2).

3.2.1 Survey design and implementation

An online survey[17] was conducted by Ipsos MediaCT in 15 sample countries (see 0) to collect data on:

- *Usage and spending patterns of consumers*– types of digital content accessed (on tangible/ intangible medium, online/ offline, paid/ free content) and average spend per product category;
- *Prevalence of problems* - the extent to which consumers had encountered specific problems relating to "quality", "access" and "terms and conditions" (measured in terms of the percentage of consumers experiencing a particular problem).

[15] Europe Economics (2007), "An analysis of the issue of consumer detriment and the most appropriate methodologies to estimate it".

[16] Measured both in terms of incidence of detriment and quantified/ monetised estimates of detriment

[17] Fieldwork took place in June and July 2015

- For the two most recent problems reported by consumers, the survey included questions on:
  - *Action taken by the respondent to resolve the problem(s)* e.g. whether the respondent had exercised right of withdrawal, sought replacement, sought compensation for harm caused, made a complaint etc.;
  - *Result of the action taken* - whether or not they have received any remedies from the supplier of the digital service; the type of remedies received; and the value of remedies (i.e. where financial remedies were received).
  - *Impact of the problem(s)* – financial and non-financial (i.e. loss of time and psychological detriment experienced), detriment resulting from recent problem(s), as reported by consumers. The survey did not include questions exploring the impact of problems on consumer confidence, behaviour or future usage patterns (e.g. changes in the choices made by consumers between different suppliers and products).

3.2.1.1 Questionnaire design

Alongside literature on good practices in questionnaire design, a range of existing studies were taken into consideration in the design of the survey questionnaire:

- DSM consumer survey (i.e. a consumer survey conducted in 2015 by GfK for the Commission, 'Identifying the main cross border obstacles to the Digital Single Market and where they matter most');
- The 2011 Europe Economics study[18];
- The 2014 consumer detriment survey commissioned by the Competition and Consumer Protection Commission of Ireland[19];
- UK's Consumer focus survey on consumer detriment[20];
- OFT study on Consumer detriment: Assessing the frequency and impact of consumer problems with goods and service[21].

3.2.1.2 Sample sizes and composition

A total of 15,001 interviews were completed across 15 sample countries amongst online panel members who access the internet at least weekly. A sample size of 1,000 was used in each country as it provides robust results with relatively low levels of margin of error.

Table 3: Overview of sample size per country

Country	Panel source	Sample size	Number of survey completes
UK	Ipsos	1000 x age 18-65 y/o	1,000
France	Ipsos	1000 x age 18-65 y/o	1,000
Germany	Ipsos	1000 x age 18-65 y/o	1,000
Italy	Ipsos	1000 x age 18-65 y/o	1,000

[18] Europe Economics (2011) Digital Content Services for Consumers: Assessment of Problems Experienced by Consumers

[19] http://corporate.nca.ie/eng/Research_Zone/Consumer-Detriment-Survey-2014-Report.pdf

[20] http://www.consumerfocus.org.uk/files/2012/10/TNS-for-Consumer-Focus-Consumer-Detriments-2012.pdf

[21] http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.oft.gov.uk/shared_oft/reports/consumer_protection/oft992.pdf

Country	Panel source	Sample size	Number of survey completes
Spain	Ipsos	1000 x age 18-65 y/o	1,000
Netherlands	Ipsos &	1000 x age 18-65 y/o	1,000
Poland	Ipsos	1000 x age 18-59 y/o	1,000
Czech	Cint	1000 x age 18-55 y/o	999
Sweden	Ipsos &	1000 x age 18-65 y/o	1,000
Denmark	Userneeds	1000 x age 18-65 y/o	1,002
Ireland	Research Now	1000 x age 18-65 y/o	1,000
Bulgaria	Cint	1000 x age 18-55 y/o	1,000
Latvia	Cint	1000 x age 18-55 y/o	1,000
Slovenia	Mindtake	1000 x age 18-55 y/o	1,000
Austria	Bilendi	1000 x age 18-65 y/o	1,000
			15,001

NB: Minimum age of 18 was chosen to reflect that a person needs to be 18 in order to own a credit card to make online purchases on digital content

Table 4: Margins at 95% confidence level on 1,000 sample size

% giving 'x' survey response (e.g. accessing a particular product/format)	Margins
5% or 95%	+/-
10% or 90%	+/-
20% or 80%	+/-
30% or 70%	+/-
40% or 60%	+/-
50%	+/-

For each country, sample quotas were applied in terms of age within gender and region to provide the correct composition of completed interviews.

The survey was carried out using Ipsos panels, or where appropriate using approved panel partners (as indicated in Table 3). Ipsos' online access panel consists of a global network of millions of people who have agreed to be contacted by Ipsos for research. The access panel is recruited and maintained to the highest quality possible[22], ensuring a representative panel in every market and strict monitoring of survey completes for each project that is administered through it. For example, respondents with a tendency to speed through a survey just to receive an incentive are identified and removed from the sample to ensure that every respondent has given due care and consideration to their answers.

[22] Ipsos leads the industry in quality standards and guidelines, with the UK business being the first agency to be accredited to ISO 20252 – the international market research specific standard. And this standard and requirements are being rolled out across the wider Ipsos business. Ipsos operates in accordance with all industry standards and guidelines including those published and recommended by Esomar, the ARF, Efamro, MRA, MRS and Casro; and complies with relevant ISO.

3.2.1.3 Weighting

Survey results were weighted for interlocked age and gender to be representative of the online population of adults aged 18 – 65 in each sample country, with an equal split between males and females. An example of the UK weighting is provided below for illustrative purposes.

Table 5: Example of weighting - UK

Age bracket	Weighting
18-24	16.2%
25-34	23.2%
35-44	23.2%
45-54	20.8%
55-65	16.6%
Total	100%

3.2.1.4 Key differences with the survey carried out as part of the 2011 Europe Economics Study

The main differences between the present survey and the 2011 survey are as follows:

- Sample sizes: the 2011 survey was based on a much larger budget and sample sizes of ~1,500
- Country coverage: the 2011 survey covered 13 countries (12 EU Member States[23] and the USA)
- Product scope: the two surveys covered different products as indicated in the table below.

Table 6: Digital content products covered by the 2011 and the present study

	Email	SNS	Anti-virus	Games	E-learning	Music	PNS	Ringtones	Cloud
2011 study	✓	✓	✓	✓	✓	✓	✓	✓	
Present study			✓	✓		✓			✓

- Weighting: weighting was not applied to the 2011 survey. According to the study, quotas for age and gender profile of the online population were met in most of the sample countries and hence assumed to be overall representative of the online population in each country.

[23] 12 MS covered: CZ, FI, FR, DE, EL, HU, IT, NL, PL, RO, ES, UK

- Problems covered: while the present study focuses on three problem areas ("quality", "access" and "terms and conditions"), the 2011 study also covered problems relating to data protection and security, information and transparency
- Questionnaire design: there are major differences in the wording of questions relating to problems encountered by consumers. The 2011 study included a generic set of statements for all product categories illustrating the range of problems that consumers might face. To avoid mis-interpretation and response biases, the problem sets were tailored for each product category in the present survey.

3.2.2 Indicators of consumer detriment

In line with the Commission's Handbook to assess consumer detriment[24], the following indicators of personal detriment were estimated using the data generated by the survey and Eurostat statistics on population, internet usage and wages:

Financial detriment

Gross financial detriment (monetised indicator): financial losses suffered by consumers as a result of the problems experienced with digital content. These include:

- Cost of the original product or service, if it was unusable or was not delivered;
- Cost of any telephone calls, postage or stationery incurred by the consumer to seek remedies for the unusable or non-delivered content;
- Travel costs;
- Legal costs;
- Costs of getting any other type of expert advice or assistance;
- Cost incurred as a result of any advance or over-payment that had not been reimbursed;
- Costs of repairing or resolving the problem at consumers' own expense, e.g. cost of repairs;
- Costs of buying a replacement/substitute product or alternative service at own expense;
- Costs of any knock-on /consequential damages e.g. damage to the consumer's computer/ mobile phone or other device, loss of documents or audio-visual content stored on a device or cloud server, loss of emails etc.;
- Costs associated with the reduced functioning of the goods concerned as a result of the problem e.g. poor audio-visual quality of digital content or services, unexpected interruptions (e.g. crashes, unannounced maintenance) preventing consumers from fully using / accessing the digital content or service;
- Cost of any inconvenience such as lost earnings by consumer not being able to work while taking time off to resolve the problem;
- Any other costs not included above.

Net financial detriment (monetised indicator): gross detriment adjusted for any redress/ compensation received by consumers in the form of

- Replacement;
- Substitute- an alternative product or service;
- A full refund;
- A partial refund;
- Monetary compensation;

[24] European Commission, Handbook to assess consumer detriment. Available at:

http://ec.europa.eu/consumers/consumer_evidence/market_studies/docs/handbook_consumer-detriment.pdf

- Compensation in the form of a credit note or in vouchers.

Non-financial detriment

Non-financial detriment refers to the "negative non-financial impacts which consumers may experience including loss of time and psychological detriment". The following indicators of non-financial detriment have been estimated:

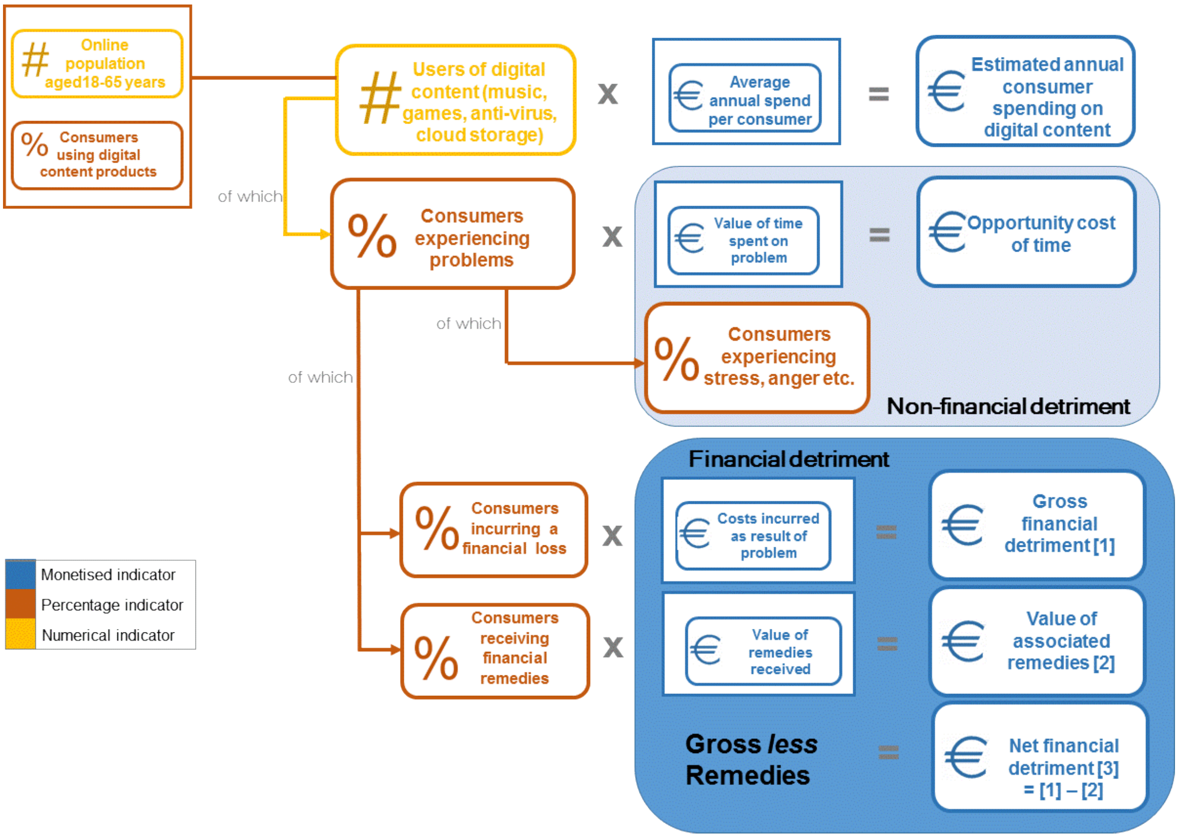
- *Opportunity cost of lost time (monetised indicator):* monetary value of the (leisure) time spent by consumers in resolving problems. While it can be assumed that many of the consumers will try to resolve problems in their leisure time, there might however, be some double-counting between this indicator and the loss of earnings reported by consumers (who took time out of work to resolve the problem). The reported average lost earnings per country for all problem types and goods is displayed below (note small sample sizes lead to biases in some cases):

	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Music	92	29	58	600	750	31	7	55	114	16	7	27	1500	75	98
Gaming	31	76	124	53	25	2.5	7	14	12	47	-	44.08	-	9	-
Anti-virus	125	55	46	7	-	65	300	41	-	83	-	110	2100.	32	600
Cloud	73	155	24	37	708	20	-	217	300	17	-	51	747	155	48

- Share of consumers experiencing psychological detriment such as feelings of anger, frustration, stress etc.

The overall approach to measuring (personal) consumer detriment is summarised in the figure below. The specific calculations and data sources used are outlined in section 3.3.

Figure 3 Methodological approach to measuring consumer detriment



3.3 Data sources and calculations

The table below sets out the specific data sources and calculations underpinning the analysis. For each Member State (MS) covered in the sample, the aggregate number of users of digital content [music/ games/ anti-virus/ storage] was calculated as follows:

Number of users of digital content = population {Eurostat} x population aged 18-65 who regularly access the internet {Eurostat} x proportion of consumers using digital content products {survey}

The survey results were used to calculate the following indicators for each MS included in the sample and the sample as a whole:

- percentage of users of digital content experiencing at least one problem during the last 12 months;
- the average financial loss per person per problem;
- the average net financial loss per person per problem (i.e. the average loss adjusted for any financial redress/ compensation received);
- the average time spent by users in resolving the most recent problem encountered.

The samples averages were extrapolated across non-sample MS to derive aggregate estimates for EU-28.

	Indicator		Sub-indicators	Source	Extrapolation
1	Number of users of digital content	(a)	Population aged 18-65 (year: 2014)	Eurostat	Average usage rate (sample countries) X Online population aged 18-65 (non-sample countries – i.e. (a) X (b), using the same Eurostat source as used for sample countries)
		(b)	MULTIPLY proportion of population aged 16-65 who regularly access the internet i.e. once a week	Eurostat	
		(c)	MULTIPLY percentage of survey respondents using digital content products	Ipsos survey, Q3 [0014 of output data]	
2	Average spend per consumer, euros	(a)	Total spend reported by survey respondents DIVIDED BY those respondents who paid for any digital product in past 12 months	Ipsos survey, Q5 [0064 of output data]	Not applicable
3	Total consumer spend on digital content , euros	(a)	Average spend per consumer	Calculated: Indicator 2a	Average spend per consumer (sample countries) X Number of users of digital content (non-sample countries – based on the extrapolation for indicator 1)[25]
			MULTIPLY number of users of digital content	Calculated: Indicator 1	
4	Number of consumers experiencing problems		Number of users of digital content	Calculated: Indicator 1	% of digital content users experiencing problems

[25] The sample countries were selected to be representative of the EU28, including countries outside the sample (i.e. the variation within the sample countries should be representative of the variation outside the sample countries).

	Indicator		Sub-indicators	Source	Extrapolation
		(a)	MULTIPLY percentage of survey respondents reportedly experiencing a problem	Ipsos survey, Q6	(sample countries) X Number of users of digital content (non-sample countries – based on the extrapolation for indicator 1)
5	Gross financial detriment reported by consumers for the most recent problem experienced, euros		Number of consumers reporting problems	Calculated: Indicator 4	Average costs incurred as a result of most recent problem (sample countries) X Number of consumers experiencing problems (non-sample countries – based on the extrapolation for indicator 4)
		(a)	Number of consumers incurring costs as a result of their most recent problem	Ipsos survey, Q17	
		(b)	MULTIPLY number of consumers reporting problems by average costs incurred as a result of their most recent problem (by problem type and costs for all consumers with problems) [Due to small sample size relating to costs reported, the averages relate to the number of consumers reporting problems]	Ipsos survey, Q17b	
6	Number of consumers experiencing problems who received financial remedies for their most recent problem		Number of consumers reporting experiencing a problem	Calculated: Indicator 4	Share of those reporting problems receiving financial remedies (sample countries) X Number of consumers experiencing problems (non-sample countries – based on the extrapolation
		(a)	MULTIPLY percentage of survey respondents reporting a problem who received a remedy of financial value for their most recent problem	Ipsos survey: Q19	

	Indicator		Sub-indicators	Source	Extrapolation
			NB: remedies of financial value include replacement, alternative or remuneration		for indicator 4)
7	Average value of financial remedies received by consumers for most recent problem, euros	(a)	Total value of financial remedies received by survey respondents	Ipsos survey: Q20	Not applicable
			DIVIDED BY number of respondents who reported receiving remedies	Ipsos survey: Q19	
8	Financial remedies received for most recent problem, euros CAVEAT: Due to very small sample sizes, data on value of remedies received by consumers should be treated with caution	(a)	Number of consumers experiencing problems (by product & MS, by type of remedy)	Calculated: Indicator 6	Average value of financial remedies received by consumers for most recent problem (sample countries) X Number of consumers experiencing a problem– based on the extrapolation for indicator 6)
			Average value of financial remedies received by consumers for most recent problem [Due to small sample size relating to costs reported, the averages relate to the number of consumers reporting problems]	Calculated: Indicator 7	
9	Net financial detriment for most recent problem, euros	(a)	Gross financial detriment reported by consumers	Calculated: Indicator 5	Not applicable
			LESS Financial remedies received for most recent problem	Calculated: Indicator 8	
10	Non-financial detriment for most recent problem: opportunity cost of	(a)	Number of consumers experiencing a problem	Calculated: Indicator 4	

	Indicator		Sub-indicators	Source	Extrapolation
	lost time, euros CAVEAT: Some of the people who lose time due to problems with digital content services may not be in work (e.g. unemployed, younger adults still in education) and these people may have a lower time valuation; while those in high paid jobs will have a higher time valuation	(b)	Time spent, on average, trying to resolve problem	Ipsos survey, Q18	Average time spent resolving problem (sample countries) X Cost of leisure time (non-sample countries) X Number of consumers experiencing problems (non-sample countries – based on the extrapolation for indicator 4)
		(c)	MULTIPLY sub-indicator 10.a. by 10.b. by cost of leisure time (labour costs)	Annual labour cost data per MS (Eurostat), discounted (by 0.3)[26]	
11	Non-financial detriment for most recent problem: psychological detriment, Number of consumers	(a)	Number of consumers experiencing problems	Calculated: Indicator 4	% consumers experiencing psychological detriment (sample countries) X Number of consumers experiencing problems (non-sample countries – based on the extrapolation for indicator 1)
			MULTIPLY percentage of survey respondents reporting psychological detriment (of those experiencing problems)	Ipsos survey, Q21	

[26] See methodology for valuation of time savings: http://www.its.leeds.ac.uk/projects/WBToolkit/Note10.htm

3.4 Methodological notes

3.4.1 Consumer survey

It is important to be aware of the inherent characteristics of a survey-based approach, most notably:

- A survey can only measure detriment that is known to and recalled by the respondent:
    - It does not capture detriment that has yet to come to light (or may never come to light) to the respondent (for example, any detriment from unauthorised use of personal data by provider of digital content, which may only become evident to the consumer at a much later stage, if at all) As such, a survey based approach measures revealed or stated detriment but it does not measure unrevealed or hidden detriment. It is not possible to accurately measure hidden detriment, but rough estimates could potentially be derived if the mechanisms or channels through which hidden detriment might occur could be identified.
    - A survey is based entirely upon respondent recall of particular problems, in this case during the last 12 months, the costs associated with these problems, remedies received and the number of hours spent attempting to deal with the problem(s). Alternative methods such as consumer diaries could yield more accurate information on the incidence, nature and impact of problems encountered by consumers.
- A survey relies solely on respondent's perceptions and views. The survey questions were carefully worded to help consumers accurately identify and report issues with the quality of the digital content they consumed; nonetheless, the possibility of some response bias cannot be totally excluded. In the context of digital content, quality and access issues (e.g. service interruptions, inability to download, poor audio-visual quality) can arise due to internet connectivity/ infrastructure and consumers may not always be able to accurately identify whether the problem was with the quality and access of digital content or with the internet service. Some of the problems relating to the quality of digital content and services may arise from unreasonable expectations on the part of consumers due to technological complexity of some digital services. If consumers do not fully understand the technology they are using, what they may consider as a problem may in fact be related to a technical limitation or certain operational feature of the product.

The following caveats should be noted in relation to the consumer survey carried out in the context of the present study:

- The question on the value of financial losses resulting from problems was only asked to a subset of the sample population – i.e. those who had experienced a problem and who had indicated having incurred financial losses as a result of the problem. This resulted in relatively small samples within cost estimates of problems - roughly between 2 to 11 per cent of the overall sample, as an average across Member States. There is therefore, the potential for small sample bias, whereby individual cases of high or low cost tend to skew the average costs upwards or downwards. Ranges were not used to avoid adding a further layer of complexity to the analysis.
- Similarly, the sample sizes for the question on value of remedies received is small.
- Further, in a large majority of cases, problems that resulted in financial loss were not the same problems that led to compensation. Thus, compensation was much more likely to have been provided where non-financial types of detriment were incurred.

3.4.2 Estimation and extrapolation

The results are based on two extrapolations: from the survey sample to the national level, and then from sample MS to non-sample MS. They should therefore be treated with a certain caution. It should be noted however that, to ensure robustness, survey results were weighted for interlocked age and gender to be representative of the online population of adults aged 18 – 65 in each sample country. The extrapolation of sample MS to non-sample MS was based on latest (2014) Eurostat data on population.

The estimates of consumer detriment are based on online population in the 18-65 age band[27]. As such, the study excludes consumer detriment suffered by (a) consumers who do not use the internet (and may be consuming digital content on tangible medium that has been purchased offline); and (b) consumers under the age of 18 and over the age of 65.

Overall, a conservative approach has been used in the estimation of consumer detriment to provide defendable results. The study estimates detriment experienced by consumers as a result of most recent problems (and not all problems experienced during the last 12 months).

Respondents were first asked to identify the full range of specific problems experienced with each product/format. They were then asked detailed questions regarding remedies and impacts of two most recent problems. Consumer detriment was estimated on the basis of the two most recent problems reported by consumers.

In contrast, some survey-based studies have estimated the personal detriment experienced by consumers over a 12 month period as follows:

Gross financial detriment = Average financial loss per problem per consumer X Aggregate number of problems

where

Aggregate number of problems = Average number of problems per person per year X Number of consumers experiencing problems

This approach (not used in this study) may lead to a significant over-estimation of consumer detriment:

- It is likely that consumers will only recall the more significant problems they have experienced when reporting financial losses resulting from the most recent problem. Therefore, using these data to calculate the average financial loss per problem per consumer and then applying this figure to the aggregate number of problems would overstate the value of gross detriment
- In answering a question on the total number of problems experienced during the last 12 months, there is a risk that respondents might count multiple occurrences of exactly the same problem (e.g. their music streaming service buffered on 20 different occasions) or simply not be able to recall.

3.5 Headline results of survey

This section summarises the headline results from the survey for the sample countries and extrapolated to non-sample countries to arrive at EU-28 aggregates.

3.5.1 Number of consumers experiencing problems

On average across all content types, almost 1 in 3 online users of digital content have experienced at least one problem with the digital content or service they used during the 12-month period preceding the survey. It is estimated that at least 70 million

[27] This age-band was chosen for consistency with the survey sample

consumers[28] across the EU have experienced one or the other problem with just the four types of digital content covered by the study.

[28] There exists potential overlap in consumers between product categories, therefore the estimate is derived from 'games – intangible medium', which is the maximum number of consumers affected in one category. It is likely the number will exceed 70 million - however it is not possible to deduce the precise number from the information available.

Table 7 Percentage and number of consumers experiencing problems

	Music		Games		Anti-virus		Storage
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
% of digital content users experiencing problems	36%	13%	39%	28%	28%	34%	34%
Number of digital content users experiencing problems							
Sample MS	52,680,000	12,599,000	61,127,000	15,543,000	43,209,000	14,773,000	34,979,000
Non-sample MS	9,240,902	2,210,063	10,722,639	2,726,487	7,579,540	2,591,417	6,135,868
EU-28	**61,920,902**	**14,809,063**	**71,849,639**	**18,269,487**	**50,788,540**	**17,364,417**	**41,114,868**

3.5.2 Number of consumers experiencing financial losses

Of those consumers who experienced a problem, between 24 per cent and 46 per cent reported experiencing financial losses as a result of the problem with the digital content or service they used during the 12-month period preceding the survey.

Table 8 Percentage and number of consumers experiencing financial losses (as a share of those experiencing a problem)

	Music		Games		Anti-virus		Storage
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
% of digital content users who experienced financial losses	24%	56%	25%	54%	32%	26%	38%
Number of digital content users experiencing financial losses							
Sample MS	12,860,470	7,033,470	15,583,540	8,453,220	13,834,380	3,805,100	13,134,680
Non-sample MS	2,255,929	1,233,781	2,733,598	1,482,828	2,426,768	667,475	2,304,030
EU-28	**15,116,399**	**8,267,251**	**18,317,139**	**9,936,048**	**16,261,148**	**4,472,575**	**15,438,710**

3.5.3 Gross financial detriment

Gross financial detriment is calculated by multiplying the average financial loss per problem per user by the number of consumers who have experienced a problem with digital content or service in the 12-month period preceding the survey. Based on extrapolation of the survey results, the gross financial detriment resulting from the most significant problem encountered by consumers with the four types of digital content covered by the survey is estimated at approximately €3.4 billion for the online population in the EU28. Estimated gross financial detriment across the four categories ranges between €617 million (music) and €963 million (games). The actual value of gross financial detriment will be much higher if all problems experienced by EU-28 consumers are taken into account.

Table 9 Estimated financial losses per problem per user and gross financial detriment, euros

	Music		**Games**		**Anti-virus**		**Storage**
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
Average financial loss per problem per user, €	6.61	13.99	7.59	20.26	12.63	18.51	20.71
Gross financial detriment							
Sample MS	348,268,154	176,210,945	463,679,191	314,944,051	545,935,257	273,440,195	724,553,760
Non-sample MS	61,091,721	30,910,175	81,336,636	55,246,147	95,765,653	47,965,719	127,098,151
TOTAL EU-28: 3,346,445,754	**409,359,875**	**207,121,120**	**545,015,827**	**370,190,198**	**641,700,910**	**321,405,914**	**851,651,911**

Issues relating to terms and conditions account for 36 to 40 per cent of the estimated gross financial detriment; 31 to 36 per cent of the detriment stems from access related problems, while quality issues account for 28 to 33 per cent of the detriment. A full breakdown by problem type can be found in Annex 3 of this study (see Section 3.1.3).

3.5.4 Number of consumers receiving remedies

Based on the extrapolation of the survey results, on average about 1 in 10 online users who experienced a problem with the digital content or service during the 12-month period preceding the survey received a remedy. This corresponds to more than five million[29] EU consumers who reported a problem with the four types of digital content covered by the study,

[29] There exists potential overlap in consumers between product categories; therefore the estimate is derived from 'games – intangible medium', 'music – intangible medium' and 'storage – intangible medium', which is the maximum number of consumers affected in one category. It is likely the number will exceed 5 million - however it is not possible to deduce the precise number from the information available.

Table 10 Percentage and number of consumers receiving remedies

	Music		Games		Anti-virus		Storage
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
Share of those reporting problems receiving financial remedies	9%	11%	8%	8%	10%	10%	14%
Number of digital content users receiving remedies							
Sample MS	4,562,000	1,399,000	4,896,000	1,317,000	4,128,000	1,492,000	4,868,000
Non-sample MS	800,247	245,407	858,836	231,023	724,116	261,720	853,924
EU-28	**5,362,247**	**1,644,407**	**5,754,836**	**1,548,023**	**4,852,116**	**1,753,720**	**5,721,924**

3.5.5 Net financial detriment

The following table provides estimates of net financial detriment, i.e. after any financial remedies received. Net financial detriment is estimated to be just over €3 billion across the four content categories. There is little difference between gross and net detriment, showing that limited financial remedies were received by consumers who encountered problems with any of the four types of digital content covered by the study. Given the small sample sizes for value of remedies received by survey respondents, these figures are highly tentative and should be treated as such.

Finally, it should be noted that these figures do not include any estimates of value of the non-financial remedies received by consumers (such as an apology, explanation or resolution of problem). It is not appropriate to monetize these impacts for consumers as these remedies do not have any financial implications. Nor was it appropriate to allocate an associated willingness to pay for non-financial impacts (such as reduction in stress), due to subjective bias. A qualitative consideration of consumers' satisfaction with the outcome can be viewed in Annex 3 (see Section 5.4).

Table 11 Estimated net financial detriment, euros

	Music		Games		Anti-virus		Storage
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
Sample MS	325,775,674	145,307,465	446,358,527	268,996,211	517,536,918	256,668,625	660,766,769
Non-sample MS	57,146,186	25,489,218	78,298,319	47,186,172	90,784,137	45,023,722	115,908,907
TOTAL EU-28: 3,081,246,850	**382,921,860**	**170,796,683**	**524,656,846**	**316,182,383**	**608,321,055**	**301,692,347**	**776,675,676**

3.5.6 Non-financial detriment

The table below provides monetary estimates of the value of the time spent by consumers trying to resolve the problems encountered, based on relative discounted wage costs[30]. Non-financial detriment for EU-28 consumers of the four types of digital content is estimated at €5.7 billion. The monetary value of non-financial detriment is significant. These figures however, need to be used cautiously for the following reasons: (i) there might be a tendency among consumers to over-estimate time spent on resolving problem; (ii) it could be argued that part of it is already included in gross financial detriment (e.g. lost earnings) and finally (iii) some of the people who lose time due to problems with digital content will not be in full time employment (e.g. students, unemployed, part-time). Some argue that these persons should be attributed a lower time valuation for leisure.

[30] A discount rate of 0.3 is applied.

Table 12 Estimated non- financial detriment (BASED ON DISCOUNTED TIME VALUE OF LEISURE), euros

	Music		**Games**		**Anti-virus**		**Storage**
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
Sample MS	780,889,686	316,983,860	1,013,622,883	420,594,218	912,924,272	519,414,907	750,550,837
Non-sample MS	163,389,800	63,630,701	219,796,459	105,455,047	202,081,575	90,190,114	150,661,450
TOTAL EU-28: 5,710,185,811	**944,279,487**	**380,614,561**	**1,233,419,342**	**526,049,265**	**1,115,005,848**	**609,605,021**	**901,212,287**

The above calculation is based on the assumption that working time has a greater economic value than leisure time. The European Commission’s recent discussions with experts on consumer detriment suggest that discounting of wage costs might not reflect the true value that consumers place on their leisure time. According to these experts, people might value leisure time at least as high or even higher than working time. To account for this, non-financial detriment was also calculated as an upper bound without discounting leisure time– these results are presented in Table 3.12. Non-financial detriment using this approach is estimated at almost €8.2 billion

Table 13 Estimated non- financial detriment (LEISURE TIME IS VALUED SAME AS WORKING TIME), euros

	Music		Games		Anti-virus		Storage
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
Sample MS	1,115,556,695	452,834,086	1,448,032,689	600,848,883	1,304,177,532	742,021,295	1,072,215,481
Non-sample MS	233,414,001	90,901,002	313,994,942	150,650,068	288,687,965	128,843,021	215,230,642
TOTAL EU-28: 8,157,408,300	**1,348,970,695**	**543,735,088**	**1,762,027,631**	**751,498,950**	**1,592,865,496**	**870,864,316**	**1,287,446,124**

3.5.7 Total monetised detriment (financial + non-financial)

The combined value of the financial and non-financial detriment resulting from the most recent problem with the four types of digital content covered by the study and the value of the time spent trying to resolve problems encountered during the last 12 months is estimated to be in the range of €9 to 11 billion for EU-28. As pointed out above, the calculation of financial detriment considers the most recent problems, but does not take into account the losses associated for all problems encountered by consumers during the last 12 months. It is therefore to be considered as a conservative estimate. On the other hand, non-financial detriment might be considered as over-estimated when leisure time is not valued as highly as working time, as assumed by the study.

Table 14 Estimated total detriment (i.e. financial and non-financial detriment), euros - BASED ON DISCOUNTED TIME VALUE OF LEISURE

	Music		Games		Anti-virus		Storage
	Intangible medium	Tangible medium	Intangible medium	Tangible medium	Intangible medium	Tangible medium	Intangible medium
Sample MS	1,106,665,360	462,291,325	1,459,981,409	689,590,429	1,430,461,191	776,083,532	1,411,317,605
Non-sample MS	220,535,986	89,119,919	298,094,778	152,641,219	292,865,712	135,213,836	266,570,357
TOTAL EU-28: 8,791,432,660	**1,327,201,347**	**551,411,244**	**1,758,076,188**	**842,231,648**	**1,723,326,903**	**911,297,368**	**1,677,887,962**

Table 15 Estimated total detriment (i.e. financial and non-financial detriment), euros - LEISURE TIME IS VALUED SAME AS WORKING TIME

	Music		Games		Anti-virus		Storage
	Intangible medium	Tangible medium	Intangible medium	Tangible medium	Intangible medium	Tangible medium	Intangible medium
Sample MS	1,441,332,368	598,141,551	1,894,391,216	869,845,093	1,821,714,450	998,689,920	1,732,982,250
Non-sample MS	290,560,187	116,390,219	392,293,261	197,836,240	379,472,102	173,866,742	331,139,550
TOTAL EU-28: 11,238,655,149	**1,731,892,555**	**714,531,770**	**2,286,684,477**	**1,067,681,333**	**2,201,186,552**	**1,172,556,662**	**2,064,121,800**

3.5.8 Psychological detriment

Aside from financial detriment and loss of time, a significant share of digital content users report experiencing psychological detriment as indicated below. As can be seen, consumers were most likely to feel frustrated and angry, with between 65 and 70 per cent of consumers surveyed reporting at least a 'little' frustrated or angry. Just over half of consumers experiencing problems admitted feeling at least a little 'under stress'. Overall, consumers were more likely to feel worried and under stress as a result of problems with anti-virus software and cloud storage.

Table 16 Extent to which consumers have felt under stress, angry, worried or frustrated as a result of the problem (% of consumers who had experienced a problem)

To what extent have you felt… (under stress, angry, worried or frustrated)	**Under stress**				**Angry**				**Worried**				**Frustrated**			
	Music	**Games**	**Anti-virus**	**Cloud storage**	**Music**	**Games**	**Anti-virus**	**Cloud storage**	**Music**	**Games**	**Anti-virus**	**Cloud storage**	**Music**	**Games**	**Anti-virus**	**Cloud storage**
A great deal	7%	7%	10%	11%	12%	11%	12%	13%	6%	6%	9%	10%	13%	14%	13%	14%
A fair amount	18%	17%	21%	18%	21%	23%	22%	20%	14%	13%	22%	20%	27%	25%	25%	23%
A little	26%	26%	27%	27%	29%	30%	28%	27%	25%	25%	30%	29%	30%	31%	27%	30%
Not at all	46%	47%	38%	41%	35%	33%	34%	37%	51%	52%	35%	38%	27%	27%	31%	30%
Don't know	3%	3%	4%	3%	3%	3%	4%	3%	4%	4%	4%	3%	3%	3%	4%	3%

Source: Q21 – To what extent have you felt… (under stress / angry / worried / frustrated)

Base: Those who had experienced a problem

3.6 Additional evidence from secondary sources and ECC-Net[31]

A range of additional evidence on problems experienced by digital content users was collected from ECC-net and from secondary sources.

The consumer survey in this study suggests that the most often cited type of problem was that **terms and conditions** were too long and as a result, users did not read them[32]. This problem was most often cited by music and cloud storage users.

A Eurobarometer study[33] supports this, reporting that particularly in regards to terms and conditions, consumers do not read these (27%) or do not read them carefully and completely (30%). A European Commission Study[34] looks into costs of problems associated with consumers not reading through terms and conditions properly, suggesting that 21 per cent had suffered costs as a result of blindly accepting online terms and conditions meaning consumers are often bound to terms that may leave them without appropriate remedies[35].

Other types of problems cited by users in the same European Commission study included:

- A lack of understanding around their rights due to unclear terms and conditions[36];
- An exclusion of supplier responsibility for problems arising with the digital content [37]; and,
- Contractual rights of the supplier to remove or amend content without notice, or to close accounts without giving users the opportunity to retrieve data[38].

The next most cited types of problem in the consumer survey relate to **access**. This supports the finding of a 2013 OECD report[39] which reported that problems with access were among the most prevalent in terms of the number of problems.

The types of problems cited by users surveyed related most often to unexpected interruptions preventing full use of the digital content or service. This was a more prominent problem for game users (13 per cent of all users across the 15 countries reporting this problem) and for music users (10 per cent of users reporting this problem). Other access problems included problems with download or access because

[31] ECC-Net is a network of European Consumer Centres (ECC) in all 28 Member States of the European Union, Norway and Iceland. The ECC-Net promotes the understanding of EU consumers' rights and assists in resolving complaints about purchases made in another country of the network, when travelling or shopping online.

[32] This was reported by 15% of music product users across all 15 countries, 7% of intangible game users, 4% of tangible game users, 13% intangible anti-virus software users, 11% of tangible anti-virus software users and 16% of cloud storage users.

[33] Special Eurobarometer 342 (2011)

[34] European Commission (2015) A Digital Single Market Strategy for Europe – Analysis and Evidence

[35] Based on UK survey data

[36] 5% of music users, 4-7% games users, 5% anti-virus users and 7% of cloud storage users.

[37] 5% of music users, 4-6% of games users, 4-6% of anti-virus users and 6% of cloud storage users.

[38] These issues were more prevalent for games and cloud storage users (~5% in both cases), less for music and anti-virus software users.

[39] OECD (2013) Protecting and Empowering Consumers in the Purchase of Digital Content Products

of a poor internet connection[40] as well as more limited access than expected following the information from the supplier[41].

In relation to **quality problems** cited by users, the most common problem related to poor quality of the digital content in comparison to other similar digital content products. This was reported to a similar degree for games and music digital content (approximately eight per cent of intangible content users, and four per cent for tangible content users) with roughly five per cent of anti-virus and cloud storage users also reporting this problem.

ECC-Net example case: problems with gaming quality

A number of cases relating to gaming have been reported by the ECC-net in Luxembourg. In these cases, the consumers have either subscribed or downloaded a game. After purchasing, the consumers felt that what they had received was not in conformity - either because the description did not match the actual game, or due to technical defects. In both cases consumers are seeking refunds or reimbursement.

Other quality problems included:

- Digital content not working properly in comparison to what was promised by the supplier;
- Incompatibility with users' hardware / software despite suppliers' suggestions it would be compatible.

ECC-Net example case: incompatibility with devices

In Austria, a consumer purchased an update for their GPS navigation system via a website. Subsequently, it was found that the download was not possible due to the memory capacity of his existing GPS despite taking action to clear memory space. The consumer was never informed that the update was only possible for certain types of GPS systems.

Roughly three per cent of all users said the digital content caused damage to their computer, mobile phone or other device.

[40] Reported by 8% of music users across the 15 Member States, 3-7% of game users, 3-5% of anti-virus software users and 6% of cloud storage users.

[41] Between 6 and 8 per cent across all content categories.

4 Analysis of Business Impacts

4.1 Introduction

The aims of the business impacts task in this study are, as per the Terms of Reference:

- Determine the extent to which the existing legal framework in the contract law prevents or reduces the interest for traders and in particular SMEs' to develop their activities, both domestically and cross-border;
- Determine the impact that clear and balanced EU wide consumer contract law rules would have on the development of the traders' activities, both domestically and cross-border;
- Determine to what extent these new rules would ultimately encourage traders to provide better quality digital content and better access to digital content to consumers.

Interviews with businesses were conducted to collect the data required to achieve the above aims. This section provides an overview of these interviews (and accompanying consultations with business associations), comprising:

- design and implementation;
- limitations / mitigating measures; and
- results.

In addition to the interviews, the ICF research team sought to collect statistics on court cases from sources including ECC-net and CPC network. The review suggests that whilst there is some data available on court cases for B2B transactions, there is very limited data on cases for B2C transactions.

4.2 Overview of business interviews

4.2.1 Design and implementation

A questionnaire for businesses was developed and signed off with the Client prior to being rolled out. The questionnaire asks a series of questions relating to[42]:

- Contractual terms and conditions for the supply of digital content to consumers, including to what extent businesses are clear about existing legislation
- Remedies offered by businesses
- Numbers of complaints received
- Impacts on businesses of current gaps in EU legislation and divergent national laws
- Potential impacts on businesses of proposed policy options

The study team's initial approach was to contact a wide range of EU / national level business associations and umbrella organisations, as an entry point for arranging consultations with their members. Although the industry associations were cooperative in providing access to industry reports and market data, they were less helpful in terms of facilitating access to their members for the purpose of setting up interviews. The following concerns were raised by many of the associations:

- Lack of adequate time for businesses to respond;

[42] The full questionnaire is available at: https://www.snapsurveys.com/wh/s.asp?k=143653965871

- Parallel and ongoing studies contributing to 'consultation fatigue' e.g. Commission's public consultation, parallel studies launched by other Commission services;
- Confidentiality concerns, particularly in regard to data on legal costs, complaints and remedies.

In view of the low response rate, the study team took a number of steps to encourage more business responses, including:

- Making further rounds of contact with the associations:
  - highlighting the importance of responding to the questionnaire – with a view to ensuring that this Study, and ultimately the Commission's policy development, is well informed by businesses' views.
  - providing reassurances that the information provided by businesses would be shared with the Commission in aggregated form, to preserve the anonymity of respondents.
- Setting up an easy-to-complete online questionnaire to facilitate business responses.
- Drawing on the market analysis to identify a sample of 100 individual businesses, representing the seven content categories in the study scope. Team members were in repeated contact with these businesses by phone and email, to identify the appropriate contact(s) in the business, and so to elicit responses to the questionnaire.
- Promoting the online questionnaire through platforms like LinkedIn and requesting Industry Associations to add a link to the survey on their websites.

In total, 14 responses have been received from individual businesses, comprising:

- 8 SMEs[43] and 6 large businesses
- Businesses headquartered in the following MS: France, UK, Austria, Germany, Poland, Italy, Finland, Sweden - plus 1 business headquartered outside the EU
- 10 respondents supply digital content cross-border within the EU, whilst three do not[44]

Table 17 Types of digital content covered[45]

	Music	Movies and videos	Games	E-books	Streaming of sports events	Software and apps	Storage of digital content
Number of businesses that provide the product	5	5	4	4	2	3	0

[43] Defined as a company employing less than 250 full time equivalent staff, with a turnover of less than €50m and a balance sheet total of less than €43m.

[44] One business did not respond to this question

[45] Note: these numbers are not mutually exclusive – many of the businesses interviewed sell more than one type of digital content.

4.2.2 Limitations and mitigating measures

4.2.2.1 Limitations of an interview-based approach

An interview-based approach has some inherent limitations. It can only measure complaints and costs to businesses to the extent that these are disclosed and truthfully recalled by the respondent. Also, some of the questions ask businesses to predict their revenues / costs under different scenarios and policy options – these estimates are by their nature uncertain.

4.2.2.2 Response rate

Given the low response rate, the views expressed by businesses should be interpreted as a qualitative indication rather than a quantitative assessment.

In view of the low response rate, the team took the following mitigating measures:

- Additional feedback on the status quo legislation, and preferences on policy options, was collected directly from business associations - in written form or through focus group. Six business associations (namely Digital Europe, ISFE, EGDF, Cloud Industry Forum, IFPI, French Publishers' Association) offered views on policy options on behalf of their respective members.
- In compiling the business baseline and impacts on businesses, the primary evidence gathered from businesses / associations has been used more as a check against information gathered from secondary sources. The main secondary sources used were:
    - Flash Eurobarometer 396 'Retailers' Attitudes Towards Crossborder Trade and Consumer Protection, May 2015
    - Flash Eurobarometer 413 'Companies engaged in online activities', May 2015 – and underlying data supplied by the Client. Referred to elsewhere in this Report as 'DSM business survey'.
    - European Commission Staff Working Paper: Impact Assessment Accompanying the Proposal for a Regulation of the European Parliament and of the Council on a Common European Sales Law on a Common European Sales Law, October 2011
    - Consumer Rights Bill: Supply of Goods – Revised Impact Assessment: Final, UK Department for Business and Skills (BIS) January 2014. This draws on analysis of business costs in the 2013 publication 'Consumer Rights and Business Practices', prepared for BIS by IFF
    - Eurostat

4.2.3 Results

4.2.3.1 Contractual terms and conditions for the supply of digital content to consumers

Businesses reported that the contract is concluded between the consumer and:

- the company's headquarters based outside the EU – for 1 business
- the company's headquarters based in the EU – for 12 businesses
- the company's branches / subsidiary in the EU country where the consumer is located – for 1 business
- Businesses then reported that the applicable law in their contracts is:
- The trader's (home country) law - for 10 businesses
- The law of the consumer's country of residence – for 6 businesses

Businesses were asked whether it is clear to them what legislation applies to their contracts in case the content proves defective or fails to live up to their customers' (reasonable) expectations:

- Nearly all businesses interviewed – 24 out of 27 responses across tangible/intangible and paid/free formats[46] - said they were clear (either 'very clear' or 'reasonably clear') about the rules for *domestic* provision of digital content.
- However, businesses were less clear about rules in the case of *cross-border* provision –8 out of 26 responses across tangible/intangible and paid/free formats[47] were 'not particularly clear' about the rules.
- Businesses were less clear about rules in the case of *free* content – 6 out of 16 responses across domestic/cross-border types of provision[48] said they were 'not particularly clear' about the rules, compared to 3 out of 13 in the case of *paid* content.

4.2.3.2 Remedies

0 below shows the types of remedy offered by interviewed businesses. The most common remedies are to update / replace digital content or to provide a full refund (11 businesses each), followed by extension of contract period for free (7), referring matter to manufacturer / developer (7), and compensation in the form of credit notes and vouchers (6).

-

Table 18 Types of remedy offered by interviewed businesses

	Full refund	**Partial refund**	**Compensation (credit note/ vouchers)**	**Monetary compensation for damages to customer's equipment / other digital content**	**Update / replace digital content**	**Offer different type of digital content for free**	**Extension of contract period for free**	**Refer matter to manufacturer / developer**
Number of businesses offering this type of remedy:	11	5	6	3	11	2	7	7

ICF survey; n=14 respondents

Businesses were then asked why they offer remedies – the most common reason given was that it is a legal obligation to provide remedies if products/services are faulty or not as described.

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[46] Each business was asked to provide separate responses for tangible, intangible, paid and free – hence the number of 'responses' is greater than the number of businesses interviewed.

[47] See above

[48] See above

Table 19 Reasons why interviewed businesses offer remedies

	It is a legal obligation to provide remedies if products/services are faulty or not as described	**Wish to offer a good consumer service**
Number of businesses stating this as a reason why they offer remedies:	11	5

ICF survey; n=14 respondents

4.2.3.3 Complaints

0 below shows the numbers of complaints reported by businesses interviewed – the most common areas of complaint were 'faulty digital content' and 'digital content being different from its description', with 9/11 businesses and 9/12 businesses, respectively, reporting complaints.

The number of businesses reporting complaints regarding 'unfair terms and conditions' was 6/12; for disagreements over whether products/services match the description the number was 6/11, and for disagreements on entitlement to a remedy the number was 5/12.

Table 20 Numbers of complaints in past 12 months, reported by interviewed businesses

	None	**1-100**	**101-500**	**501-1000**	**>1000**
Customer complaints regarding faulty digital content	2	6	1	0	2
Customer complaints regarding digital content being different from its description	3	8	1	0	0
Customer complaints regarding unfair terms and conditions	6	5	1	0	0
Disagreement with customers about whether products or services match the description provided	5	5	0	0	1
Your customer thought they were entitled to a remedy which your company did not think it was obliged to provide under the current law	7	5	0	0	0

ICF survey; n=14 respondents

4.2.3.4 Implications of status quo

Businesses were asked a series of questions regarding the effects of the status quo legislation on their cross-border activity and costs of business practices – the responses are summarised in 0. Due to legislative gaps and divergent national legislation on faulty / defective digital content or unfair contract terms and conditions:

- 11/14 businesses reported that they do (either to some extent or to a large extent) experience additional costs to expand their business to other EU countries
- 3/14 businesses refrain from developing their activities cross border, resulting in lost revenues
- 11/13[49] businesses reported that they experience additional costs to offer remedies and / or handle complaints.

Table 21 Views of interviewed businesses on the status quo

	To a large extent	**To some extent**	**Not at all**
Does this result in additional costs for your company to expand its business to other EU countries?	4	7	3
Does your business refrain from developing its activities cross border due to divergent national legislation on faulty or defective digital content or unfair contract terms and conditions?	1	2	11
Do these result in lost revenues for your company?	1	2	10
Does this result in additional costs to offer remedies and/or handle complaints?	2	9	2

ICF survey; n=14 respondents

[49] One business did not respond to this question

Annex 1 Detailed Results of Market Analysis

1 Market Analysis

This annex provides a detailed market analysis of the seven digital content categories covered by the study. The document is structured as follows:

- Section 1.1 briefly presents the scope of the market analysis. It also provides an overview of the main information sources used, stakeholders consulted, and data gaps and caveats to the analysis;
- Sections 1.2 to 1.8 present the market analysis for each of the following types of digital content:
  - music;
  - movies and videos;
  - games;
  - books;
  - software and apps;
  - storage of digital content; and
  - streaming of sports events.

1.1 Scope of the market analysis

1.1.1 Digital content categories

The table below provides an overview of the seven digital content categories covered by the market analysis. The analysis focuses on B2C transactions and covers: (i) domestic and cross border sales; (ii) paid for and free content; (iii) tangible and intangible content and (iv) both online and offline transactions.

Table 22 Scope of digital content categories

Music
• Music and music video content bought on a **physical (tangible) carrier** (e.g. CDs, DVDs or Blu-ray) on-line, or offline through bricks and mortar shops • Music and music video content accessed on-line in **digital (intangible) formats** includes: • **downloads** of music (or music video) from service providers such as iTunes, Google Play Music, AmazonMP3 or HMV digital for fixed price (subscription or pay per track); • **streaming** of music from service providers such as Deezer and Spotify where consumers can listen to (and download) as many music tracks / videos as they want, for a pre-defined period of time: • i) streaming of music based on subscription services - consumers pay a (monthly/yearly) fee to a service provider; • ii) free ad-supported streaming of music - consumers access service for free but the service is restricted (e.g. includes ads, consumers cannot download music, sound quality is lower, …); **mobile services**: purchase of ringtones, ring back tones, video tones, and single track / video

Film and television content
• Film and television content on a **physical (tangible) carrier** (e.g. DVD / Blu-ray discs) sold on-line or offline through brick and mortar shops (e.g. HMV in the UK, or Fnac in France); • Film and television content supplied **online**: e.g. Netflix, Youtube, Amazon, Lovefilm). Transactions include digital subscription (typically via streaming), and digital rental / retail on a per film / series basis (via streaming or download); • **Digital TV** subscriptions and **video-on-demand** - film and television content provided via digital terrestrial /cable / satellite / Internet Protocol Television (IPTV) services (e.g. Movistar TV in Spain, VOD d'Orange in France).
Games
• Video games bought on a **physical (tangible) carrier**– such as packaged video games – bought online or offline though bricks and mortar distributors and/or retailers [e.g. GAME and HMV (UK); Karstadt and Galeria Kaufhof (DE); Media Markt]. Packaged games are typically played on consoles and/or personal computers (PCs). Payment is required up-front at the time of purchase. Additional payments may be required for expansion packs and downloadable content (DLC) –such as new game modes, levels, challenges or other features – related to complete and already released (packaged) games. • Video games accessed **online**, such as: • **browser games**: played over the internet using a web browser and including all video game genres that can be played as single-player or multiplayer games [where the latter is commonly referred to as MMO games (Massively Multiplayer Online games)]; • **social games**: typically accessed from social networking platforms (e.g. Facebook) and requiring one-off payments at the time of purchase and/or in-game payments for additional in-game features during game play; • **mobile games ('ios' and 'Android')**: accessed online (e.g. through app stores) and downloaded and played on mobile devices for a one-off charge at the time of purchase and/or in-game payments for premium features of the game; **downloaded console and PC games**: accessed from online console stores and/or online distribution platforms (e.g. Steam) and played on consoles and personal computers
Digital Books
• E-books; audio books
Software and apps
• **B2C Software** defined as any set of instructions that directs a device processor

to perform some specific tasks. This can include:

- Software systems: help run the computer hardware and computer system, and provide a platform for running application software: Operating system (e.g. Windows, Mac OS, Linux); Utility software (e.g. antivirus);
- Application software: this is installed onto a computer to allow users to perform tasks, functions or activities like creating text documents, listening to music, or surfing the web: Programs (e.g. Photoshop, Windows Media Player, Skype, Microsoft office); and Browsers (e.g. Firefox, Google Chrome)
- Software as a service: software where applications are hosted by a vendor or service provider and made available to customers over a network, typically the internet (e.g. Google search, Google Docs, Office 365, Facebook, Twitter, dating sites)
- Within the software market, particular information was gathered for:
- antivirus software and
- **navigation-positioning** or **GPS** software (**G**_lobal_ **P**_ositioning_ **S**_ystem). GPS_ provides location information, and can be installed either on mobile telephones or PND (Portable Navigation Devices, i.e. mobile devices with integrated GPS receivers and digital maps).
- **B2C apps** defined as a dedicated software application, built specifically for smartphone or tablet operating system.

Some of these categories overlap with the digital content types discussed separately in this market analysis (like games) - to account for this, where appropriate, lower and higher estimates have been calculated to provide a range.

Storage of digital content

- **B2C online** web services that provide server space for individuals to store data, photos, videos and other files (e.g. Google Drive, DropBox and iCloud);
- Outside the scope of this analysis are:
- B2B cloud services;

Note that Software as a Service (SaaS) (e.g. Google Docs, Office 365) is excluded from the scope of this category, but included in the scope of the 'software and apps' category.

Streaming of sports events

Broadcast of sport events **on-line** in **real time**.

1.1.2 Geographic coverage

The market analysis is based on a targeted research covering 15 EU Member States listed in the terms of reference for the study (countries shaded in blue in Figure 4). Quantified estimates of market size, growth etc. – where feasible – are provided for each of the 15 sample countries along with aggregates for EU28.

Figure 4 Geographic scope of the analysis

1.1.3 Information sources

Data for the markets in the scope of this study is scarce and scattered. Each of the seven markets suffers from inconsistencies in approaches to measurement and definitions, across different data sources.

A two-step approach was adopted to address these issues:

- *Step 1: desk-based market research.* The study team triangulated different pieces of information collected from secondary sources (see section 1.1.3.1), and identified gaps in the data;
- *Step 2: consultation with industry associations.* Industry associations were consulted to elicit further information for the market analysis, supplementing the secondary sources and addressing identified gaps (see section 1.1.3.2). Several industry associations have also scrutinised, validated and commented upon the market analysis presented here.

1.1.3.1 Desk based research: main sources of information

The main secondary sources of information used were:

- **DSM consumer survey** micro-data for the year 2014;
- IPSOS consumer survey conducted in 2015 within the framework of the current assignment;
- **Policy research and evaluations of digital content products conducted for the European Commission** or other international organisations. For instance, the Europe Economics study from 2011 was used for content categories that overlap with the present study: music, games, positioning and navigation services and anti-virus software.
- Market research published by industry associations and private market research providers;
- News articles and blogs.

The market analysis is based on roughly 150 different documents, reports and articles. A comprehensive list of secondary material reviewed is provided at the end of this Annex.

1.1.3.2 Primary research: consultation with industry associations

Table 23 Industry associations consulted Table 23 provides an overview of the industry associations that were consulted for each content category.

Table 23 Industry associations consulted

Content category	Associations consulted
Music	International Federation of the Phonographic Industry International Confederation of Music Publishers
Movies and videos	International Video Federation
Games	Interactive Software Federation of Europe European Games Developer Federation
Books	Federation of European Publishers French Publishers Association German Publishers Association UK Publishers Association
Software and apps	The Software Alliance
Storage of digital content	Cloud Industry Forum
Streaming of sports events	Sports Rights Owners Coalition

1.1.4 Limitations and caveats

The following data gaps and caveats should be noted:

- Data on the number of businesses operating in EU28 and each of the 15 Member States is generally not available, except for videos and music. For content categories where some data is available regarding the number of businesses, existing figures mostly relate to content developers and not the B2C content distributors which are the main focus of this study;
- Industry turnover (sales) figures proved difficult to gather for the following content categories: music and videos, games, software and apps, storage of digital content and streaming of sports events. For the games category there were very different estimates depending on the source. In general, information is scarce for software and apps, storage of digital content and streaming of sports events - for instance most of the available information for software and storage of digital content relate to B2B markets which are out of the scope of this analysis and were hence omitted.
- For all except videos and movies content category, there are limited estimates on average annual spending per consumer and total consumer spending. Our consumer survey conducted in parallel to this market analysis provided information to fill these gaps, for some content categories;
- There is very little data available – either from primary or secondary sources - on future growth rates for individual content categories. .

Many estimates are based on the DSM consumer survey (e.g. total number of consumers, share of cross-border sales, paid vs unpaid access etc.). This survey is the only recent source of primary data that encompasses all the content categories and Member States in the scope of this assignment.

There were challenges in using and interpreting the DSM consumer survey data:

- For some markets (e.g. e-books), the results generated by the DSM consumer survey are significantly different from the industry statistics. These differences have been explicitly highlighted.
- Certain content categories in the scope of this study spill across different categories in the DSM consumer survey, making it difficult to extract information on a 'like for like' basis. For example, the DSM consumer survey combines music and film categories together for offline sales on a tangible medium, e.g. physical CD, DVD, or Blu-ray Disc. To address this, lower and upper bounds have been reported where appropriate;
- For average spending per consumer, the number of responses is very low (for many Member States and product categories sample sizes are lower than 10 respondents). Therefore, consumer spending data has been sourced from IPSOS survey for the four content categories covered by the survey (music, games, storage and anti-virus).
- DSM consumer survey is the only available source of information for certain content categories (software and apps and streaming of sports events) or indicators (e.g. cross border trade) - as such, triangulation of data to check for robustness has not always been possible;
- The consumer responses on cross-border sales should be interpreted with caution as consumers might not always be aware whether they were buying from a provider based in another EU country.

1.2 Music

1.2.1 Headline summary

The European music industry is rapidly evolving. The market is expected to grow in 2015 after 12 years of little or no growth. Free ad-supported streaming and subscription services are expected to be the main growth generator for the market in future at the expense of physical format sales and digital download sales.

Figure 5 Summary overview table of music market in Europe

Market size and structure	• **€4 billion** revenues generated by the music industry in EU-28 in 2014 • Two types of businesses operate on the market: record labels and service providers • **Market is highly concentrated with few large international players** (record labels - Universal Music Group / EMI[50], Sony Music Entertainment, Warner Music Group and service providers - Apple(iTunes), Deezer, Google Play and Spotify) • There are many small national record labels (23,104 in EU28) and service providers (230 in EU28) • Between 79 and 84 per cent of online survey respondents purchased or accessed music content in 2014
Cross border activity	• In 2014 between 15 and 23 per cent of EU consumers who accessed music in a tangible or digital form online did so from a provider based in another EU country • Between 11 and 14 per cent of EU consumers who accessed music in a tangible or digital form online did so from a provider based in a non-EU country in 2014
Distribution channels	• 31 per cent of industry turnover generated by digital format sales - share of digital format is increasing. • **37 per cent of digital format sales from streaming of music** - the share of streaming is increasing and the share of download is decreasing • More than 50 per cent of industry turnover is still in physical sales

[50] In 2012, UMG purchased EMI recorded Music as a result of which UMG has a global market share of more than 30% and holds market-leading positions in most of the world's major music markets, including the United States, the United Kingdom, France and Germany.

Pricing models	• **Pay per purchase model** used for physical (tangible) formants, downloads of music and mobile services; • **Subscription based model** used by streaming providers; and • **Ad-supported model** used by streaming providers • Only between 13 and 25 per cent of European online consumers accessing music, pay for music in digital format
Consumer behaviour	• In general, consumers spend more on tangible than intangible music content
Future growth	• Streaming services such as Spotify, Deezer and Beats Music are expected to be the main driver of growth through the subscription based model.

1.2.2 Market size and structure

IFPI estimates that European music revenue (sales) in 2014 amounted to € 4,030 million, a 0.2% decrease from 2013.

The three largest markets in Europe are Germany (26% of total EU revenue), United Kingdom (21% of total EU revenue) and France (11% of total EU revenue)[51].

Two types of business operate in the music market:

- Record labels: businesses which record and publish music; and
- Service providers: businesses which buy licences from record labels to distribute music in tangible and intangible formats.

The record labels market is highly concentrated with three US companies dominating the 'space'. In 2013, nearly 72% of the physical and digital market revenue of record labels globally was earned by three major US businesses[52]:

- Universal Music/EMI[53] (37% of global market share in 2013);
- Sony Music Entertainment (22% of global market share in 2013); and
- Warner Music group (16% of global market share in 2013).

The combined market share of the three businesses in Europe is more than 80%[54].

[51] IFPI (2015) Digital Music Report Accessed at http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf

[52] Based on Music & Copyright's annual survey Accessed at https://musicandcopyright.wordpress.com/2014/05/06/umg-and-wmg-see-gains-in-recorded-music-market-share-in-2013-while-sonyatv-dominates-music-publishing/

[53] In 2012, UMG purchased EMI recorded Music as a result of which UMG has a global market share of more than 30% and holds market-leading positions in most of the world's major music markets, including the United States, the United Kingdom, France and Germany.

Apart from the dominance of three US companies, the rest of the European music sector consists of thousands of independents. Based on Eurostat Structural business statistics (sbs) 23,104 independents were operating in EU28 in 2012 (see Table 1.3). Among the 15 Member States (MS) in the scope of the analysis, the highest number of independents were based in France (4,452) and Sweden (4,183). According to Impala[55], independents account for 80% of music sectors' jobs in Europe.

The service providers market is also highly concentrated:

- Digital download music market in Europe is dominated by US company Apple Inc. with its music store iTunes;
- In the streaming market, major players include EU businesses such as Deezer (FR) and Spotify (UK). US based Google Play is also a major market player;
- In 2014, there were around 230 service providers across Europe[56].

Based on the DSM consumer survey, in 2014 between 79 per cent and 84 per cent of EU-28 internet users accessed music on digital or tangible format online (see Table 24). In 2011, the Europe Economics consumer survey[57] also estimated that the average usage rate of music is 79 per cent. This suggests that the number of users between 2011 and 2014 is reasonably stable.

However, estimates based on the survey conducted by Ipsos within the framework of the current study are systematically lower than in the DSM consumer survey. In the Ipsos survey, on average, 70 per cent of EU-15 internet users accessed music on digital or tangible format in 2014. It should be noted that there were methodological differences in the two surveys, which may explain the differences in the results.

Table 24 Estimates of market size

Member State	No. of businesses – music producers (2012)	No. of businesses – service providers (music distributors)	Industry turnover (sales) in 2011 € million	% of online population using product in 2014 (DSM consumer survey)	Estimated number of online consumers (DSM consumer survey 2014), millions	% of consumers using the product in intangible format in (IPSOS)	% of consumers using the product in tangible format in (IPSOS)	Total consumer spend on intangible product in one year (IPSOS) ,000 €	Total consumer spend on intangible product in one year (IPSOS) ,000 €	(historic) Growth rate % (2013 – 2014)
Austria	652	Data not	85	72 - 80	3 – 4	70	48	106,74	71,087	

[54] Impala. European Music in Numbers Accessed at http://www.impalamusic.org/node/9

[55] Ibid.

[56] IFPI (2014) The Evolution of Music in Europe Accessed at http://www.ifpi.org/downloads/Europe-Music-Industry-2014.pdf

[57] Europe Economics (2011) Digital Content Services for Consumers: Assessment of Problems Experienced by
Consumers (Lot 1)

Member State	No. of businesses – music producers (2012)	No. of businesses – service providers (music distributors)	Industry turnover (sales) in 2011 € million	% of online population using product in 2014 (DSM consumer survey)	Estimated number of online consumers (DSM consumer survey 2014), millions	% of consumers using the product in intangible format in (IPSOS)	% of consumers using the product in tangible format in (IPSOS)	Total consumer spend on intangible product in one year (IPSOS) ,000 €	Total consumer spend on intangible product in one year (IPSOS) ,000 €	(historic) Growth rate % (2013 – 2014)
		available						4		
Bulgaria	121			93 – 94	3	81	35	17,417	12,068	
Czech Republic	1,538			87 – 90	5	57	39	1,154	970	+4.6
Denmark	543		72	69 – 75	2	67	31	96,351	47,937	2.0
France	4,452		458 (2014)	72 - 78	24 - 26	68	45	658,038	558,508	-3.4
Germany	1,664		1,060	73 - 82	33 - 37	56	51	1,380,565	948,629	1.9
Ireland	207 (2011)			84 - 88	2	78	49	61,486	39,363	
Italy	1,116		302	80 - 83	19 - 20	83	47	491,662	313,276	
Latvia	56			85 - 87	1	71	27	5,247	4,016	
Netherlands	1,646		172	63 - 70	6 - 7	53	33	197,436	136,873	
Poland	932		58	91 –	16	79	45			

Member State	No. of businesses – music producers (2012)	No. of businesses – service providers (music distributors)	Industry turnover (sales) in 2011 € million	% of online population using product in 2014 (DSM consumer survey)	Estimated number of online consumers (DSM consumer survey 2014), millions	% of consumers using the product in intangible format in (IPSOS)	% of consumers using the product in tangible format in (IPSOS)	Total consumer spend on intangible product in one year (IPSOS) ,000 €	Total consumer spend on intangible product in one year (IPSOS) ,000 €	(historic) Growth rate % (2013 – 2014)
				93				194,057	142,810	
Slovenia	133			90 – 92	1	73	36	8,612	6,671	
Spain	383		136	83 – 86	19 - 20	76	42	423,568	315,115	+15.2
Sweden	4,183		111	74 - 81	4	76	30	227,179	76,451	
United Kingdom	2,582		869 (2013)	76 - 86	28 - 31	69	55	1,551,121	956,728	-2.8
EU28	23,104	230	4,030 (2014)	79 - 84	199 - 213					-0.2

Sources and assumptions:

No. of record labels in 2012: Includes sound recording and music publishing enterprises in 2012 (source Eurostat sbs_sc_1b_se_r2)

Industry turnover € million: IBF International Consulting (2011), otherwise FR SNEP bilan (2014), UK BPI yearbook (2014), EU28 from IFPI Digital market Report 2015.

% population using product DSM consumer survey: ICF estimates based on DSM consumer survey micro-data. N=22,848

% population using product IPSOS: ICF estimates based on IPSOS survey 2015 and equals % of respondents. For tangible: Share of respondents noting they have bought music on CD in the past 12 months. For intangible: Share of respondents noting they have paid to download music, streamed music for free or paid a subscription fee to stream music (or music videos).

No. of consumers: Estimated number of 18 – 99 years old consumers based on DSM consumer survey micro-data and Eurostat [proj_13npms]. Lower bound is estimated based on the number of consumers that answered never to Q4a: Over the last 12 months, how many times on average have you used the Internet to access the following digital content (including both free and paid access) – music * % of individuals that used internet in the last 12 months (Eurostat tin00028) * Estimated population in 2015 (Eurostat proj_13npms]. Higher bound was estimated based on a combination of Q2a and Q4a: Over the last 12 months I have never used the internet to buy or order tangible music & film (CD, DVD or blue-ray) (ordered online but used offline) or used internet to access the following digital content – music * % of individuals that used internet in the last 12 months (Eurostat tin00028) * Estimated population in 2015 (Eurostat proj_13npms].

Total consumer spend on intangible product in one year 2014 (IPSOS) €: Estimate based on IPSOS usage rate and average spent per consumer in the last 12 months

(Historic) Growth rate % (2013-2014): IFPI Digital market Report 2015

1.2.3 Cross border activity

Between 15 and 23 per cent of EU consumers who bought or accessed music online in a digital or tangible format in 2014 reported doing so from a provider based in another EU country. Between 11 and 14 per cent of EU consumers who bought or accessed music online in a digital or tangible format in 2014 reported doing so from providers based in non-EU country (see Table 1.4)[58].

Major service providers of both digital download and streaming of music operate in most, if not all EU-28 MS[59].

Table 25 Estimated cross-border activity, year 2014

Member State	% consumers who bought or accessed music online doing so cross-border within EU	% consumers who bought or accessed music online doing so cross-border outside EU
Austria	29 - 49	9 - 12
Bulgaria	17 - 22	9 - 12
Czech Republic	11 - 16	8 - 11
Denmark	13 - 23	11 - 13
France	13 - 21	12 - 17
Germany	12 - 17	11 - 12

[58] It should be noted however, that consumers reported buying nationally as well as cross-border at the same time, hence the numbers are not mutually exclusive.

[59] iTunes and Deezer, operate in EU-28, Spotify in EU-25, Google play in EU 15.

Member State	% consumers who bought or accessed music online doing so cross-border within EU	% consumers who bought or accessed music online doing so cross-border outside EU
Ireland	29 - 49	16 - 22
Italy	18 - 30	9 - 15
Latvia	19 - 21	15 - 17
Netherlands	12 - 15	13 - 15
Poland	13 - 18	8 - 11
Slovenia	21 - 25	15 - 18
Spain	16 - 28	11 - 17
Sweden	14 - 19	11 - 15
United Kingdom	12 - 22	11 - 17
EU28	15 - 23	11 - 14

Sources and assumptions:

DSM Consumer Survey

Higher and lower estimates based on the questions: Over the last 12 months, where did you access online digital content from?: i) Tangible goods and services bought online but used offline – Music & film (on a tangible medium, e.g. physical CD, DVD or Blu-ray); ii) Tangible goods and services bought online but used offline – Music & film (on a tangible medium, e.g. physical CD, DVD or Blu-ray) or – Digital content – Music;

NB: These are multiple choice questions – one consumer could be buying from national as well as cross border providers.

1.2.4 Distribution channels

Distribution channels can be segmented by:

- type of sales: online (internet) vs. offline sales (bricks & mortar retailers);
- type of format: music content offered in physical (tangible) format (CD, DVDs or Blu-ray) vs. digital format (download, streaming, mobile services);

Currently, there is no publicly available data on online vs. offline sales of music on a tangible medium (e.g. CDs) in the EU-28.

Distribution channels by type of format or medium are rapidly changing from physical (tangible) to digital formats. In 2014, 31 per cent of EU industry turnover was based on sales of digital formats[60]. But in some countries like Sweden and Denmark, digital sales account for more than 50 per cent of total music revenues. According to IFPI, digital sales in Europe grew by 26 per cent in 2011, 22 per cent in 2012 and 13.2 per cent in 2013.

Within digital sales, streaming services account for 37 per cent of digital revenue in Europe (or 11.5 per cent of total music revenue). The number of paid subscribers is estimated to be 11 million (around 3 per cent of total users of music). But the use of streaming services varies across different MS. For instance, in the Netherlands and Poland streaming of music accounts for 70 per cent and 71 per cent of digital revenues, whereas in Spain it stands at 67 per cent and in the UK 41 per cent[61].

Based on DSM consumer survey (see Table 26), free downloading is still the most common channel to access digital music formats in Europe; more than half (58 per cent) of EU consumers who accessed music online reported downloading music for free. Free streaming of music is also widespread; 44 per cent of EU consumers who accessed music online reported free streaming of music. Based on DSM consumer survey data, ICF estimates that only between 13 per cent and 25 per cent of European consumers accessing music online pay for music in digital format.

Table 26 % of consumers accessing music online who did so by paying with money or for free, year 2014

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Austria	18	52	9	43
Bulgaria	6	70	6	41
Czech Republic	11	57	7	45
Denmark	17	45	19	51
France	20	57	15	48
Germany	23	50	13	45
Ireland	17	53	12	49
Italy	12	61	12	47

[60] IFPI, 2014. The evolution of music in Europe. Available at: http://www.ifpi.org/downloads/Europe-Music-Industry-2014.pdf

[61] IFPI (2015), IFPI Digital Music Report 2015. Available at: http://www.ifpi.org/digital-music-report.php

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Latvia	5	55	5	57
Netherlands	12	51	13	5
Poland	14	64	12	49
Slovenia	8	73	8	39
Spain	13	79	10	31
Sweden	18	44	25	45
United Kingdom	34	50	16	40
EU28	18	58	12	44

N=17,937

Source: DSM consumer survey. Figures based on question Q4d: In the last 12 months, how did you access the digital content (Music)?

NB: These are multiple choice questions – one consumer could be accessing digital content for payment and for free.

Despite rapid growth in digital sales, physical format still accounts for more than half of the industry revenue in Europe in 2014[62]. For Germany and France physical music sales are still an important revenue source. Together, they generated more than 50 per cent of global physical sales in 2014.

1.2.5 Pricing models

Three main pricing models are used depending on the type of distribution channel:

- **Pay per purchase model** used for physical (tangible) formants, downloads of music and mobile services;
- **Subscription based model** used by streaming providers; and
- **Ad-supported model** used by streaming providers.

Traditionally, pay per purchase model was the main model adopted by the industry. However, recently subscription based model and ad-supported model have become mainstream pricing models of digital music. This is linked to an increase in streaming of music from service providers. A shift to streaming and subscription models is

[62] IFPI, 2014. The evolution of music in Europe.

leading to more consumers paying for music. IFPI notes that many consumers which previously used pirate services are now streaming[63].

In view of this change, record labels have also adapted their business models towards licensing which is now based on access to music (used by streaming services) and not ownership (downloading, or music content in a tangible format)[64]. For instance, in 2015 Warner Music Group (WMG) revealed that it already makes more money from streaming than from download sales[65].

1.2.6 Consumer behaviour and patterns

Consumers access music content through a variety of hardware supports such as computers, smartphones, tablets, TV and other electronic devices such as MP3 player. According to a study commissioned by Spotify, the computer is the device most commonly used to listen to music in online format, followed by smartphone, MP3 player and tablet.

According to the British Phonographic Industry, in the UK, consumers spent on average £34 on physical format and £37.9 on digital format, in 2013.[66]

However, based on the Ipsos survey conducted in this study, consumers tend to spend more on tangible music content compared to intangible content. Average spend on intangible music content across 15 MS ranges from €7 to €51 whereas average spend on music content on a tangible medium ranges from €13 to €49 (see Table 1.6).

[63] Ibid.

[64] Ibid.

[65] The Guardian, *Warner Music reveals streaming income has overtaken downloads*, 12th May 2015. Available at http://www.theguardian.com/technology/2015/may/12/warner-music-spotify-streaming-income-downloads

[66] BPI (2014), The UK Digital Music Market, http://www.bpi.co.uk/digital-music-stats.aspx

Table 27 Average annual spend per online survey respondent on music €

Member State	Average spend per year per consumer on intangible music content, € IPSOS	Average spend per year per consumer on music content on a tangible medium, € IPSOS
Austria	34	34
Bulgaria	14	14
Czech Republic	7	13
Denmark	51	48
France	19	38
Germany	35	43
Ireland	25	36
Italy	26	29
Latvia	9	16
Netherlands	34	45
Poland	15	19
Slovenia	51	49
Spain	22	34
Sweden	18	20
United Kingdom	44	49

Source: IPSOS survey 2015. Base: those who had purchased music.

1.2.7 Future growth

It is expected that the share of physical (tangible) formats will continue to decline in the future and consumers will increasingly shift towards digital (intangible) formats. Within the digital (intangible) formats, downloads of music will decrease and streaming of music is expected to surge.

Streaming services such as Spotify, Deezer and Beats Music are expected to be the main driver of growth through the subscription based model. Based on the Credit

Suisse global forecast subscription revenues will reach between 50 and 60 per cent of the overall market in 2015 and 2016. Streaming services are expected to increase penetration from 5 per cent in 2014 to 20 per cent in 2025 in the top 10 global music markets[67].

However, this growth will depend on the ability of streaming services to achieve sustainable business models. Spotify records losses and the more each song is streamed, the greater the service has to pay an amount to the record labels, creating a cost barrier that is hard to shrink[68]

[67] Ibid.

[68] The guardian, *Streaming: the future of the music industry, or its nightmare?* 2February 2015. Available at http://www.theguardian.com/technology/2015/jan/02/streaming-music-industry-apple-google [Accessed on 27 May 2015]

1.3 Film and television content

1.3.1 Headline summary

The European market for film and television content is estimated to around €8.5 billion in 2013. Most of the market is based on the physical format sales. Physical formats such as CDs and DVDs represent 77% of the market. The market is however, shifting towards online and TV-based videos. The sales of CDs/DVDs are expected to decline in the future.

Figure 6 Summary overview table of film and television content market

Market size and structure	• Market size **€8.5 billion** in 2013, 77 per cent from physical sales, 14 per cent from digital (OTT) format sales and 9 per cent from TV-based video on-demand. • **72 to 81 per cent** of online survey respondents purchased or accessed videos in 2014 • The physical format market is declining while the digital format and TV-based formats are growing at a rate of **73 per cent** and **13 per cent** respectively. • The digital video market is dominated by **four major US groups** (Apple iTunes division, Amazon, Netflix and YouTube (a free content provider)). However, a large proportion of consumers also use local or national online video services.
Cross border activity	• In 2014 between 14 and 16 per cent of EU consumers who accessed films and TV content online did so from a provider based in another EU country; • In 2014, 10 per cent of EU consumers who accessed films and TV content online did so from a provider based in a non-EU country; • There are significant barriers to cross-border activities, mainly related to language and cultural characteristics.
Distribution channels	• **77 per cent** of consumer spending is generated by physical format sales. • Only **14 per cent** of EU consumers who accessed film and television content online pay for downloading videos and **18 per cent** of them pay for streaming. **53 per cent** of EU consumers who accessed film and television content online download for free and **49 per cent** of them stream for free.

Pricing models	• Four main types of revenue models operate on the market: • Pay per purchase model; • Subscription based model; • Ad-supported model; • Subsidies-supported model • Models are frequently mixed.
Consumer behaviour	• Consumer behaviour drives the adoption of digital (OTT) formats.
Future growth	• The market for physical formats is expected to decline, while the market for digital and TV-based formats is anticipated to expand within the EU28. • **Obstacles** for growth of the digital video market include: piracy and illegal consumption, infrastructure problems and technical issues.

1.3.2 Market size and structure

Based on total consumer spend figures from International Video Federation, the total EU28 market of film and TV content[69] is estimated at €8.5 billion, of which 77 per cent is from physical sales, 14 per cent from digital (OTT) format and 9 per cent from TV-based video-on-demand[70].

In the EU28, there are around 108,660 businesses selling and renting videos offline in physical formats (94,790 outlets and kiosks stocking retail video and 10,870 video rental outlets in 2013[71]). In addition, 2,221 businesses provide digital (OTT) services and 489 businesses provide TV-based services[72].

Based on DSM consumer survey, between 72 per cent and 81 per cent of online survey respondents purchased or accessed videos in 2014. The market size in EU28 in 2014 is estimated to be in the range of 184 to 205 million online consumers (see table 1.7 for further breakdowns).

69 Based on consumer spending for legal content. This figure does not include illegal and advertisement-supported film and television content.

70 International Video Federation 2014 – European Video Yearbook 2014

71 ibid

72 EC. March 2015. The development of the EU market for on-demand audiovisual services. (VOD Generalist, Films, TV fiction, Films&TV fiction, Children/animation, branded channels, catch-up TV services, Film/TV archives)

Table 28 Estimates of market size

Member State	No. of businesses			Industry turnover (€ million)			% of online population using product in 2014	Estimated number of online consumers (DSM consumer survey 2014), millions	Total consumer spend on both physical and digital video (€ million) (2013)	(historic) Growth rate % (change in total consumer spend 2012/2013)
	Physical (2012)	Digital (OTT) (2013)	TV-based (2013)	Physical (2012)	Digital (OTT) (2013)	TV-based				
Austria		105	10				65 – 78	3 - 4		
Bulgaria		18	7				91 – 93	2 - 3		
Czech Republic		105	9				85 – 89	5		
Denmark	4,200*	28	16	90			61 – 72	2	183	-0.8
France	19,490	240	74	636			65 – 74	22 - 25	1,229	-12.3
Germany	13,300	210	70	879			65 – 78	29 - 35	1,916	7.0
Ireland	1,600 ^	20	2	56			79 – 85	2	143	-8.2
Italy	34,600	138	13	177			69 – 76	17 - 18	331	-9.7
Latvia		9	11				80 – 82	1		
Netherlands	2,010 ^	94	23	143			52 – 64	5 - 6	254	-12.4
Poland	2,950*	74	32	42			92 – 95	16 - 17	91	-6.2
Slovenia		9	9				78 – 82	1		
Spain	1,9660	89	12	87			79 – 83	18 - 19	225	-13.3
Sweden	4,770*	88	10	126			71 – 79	4	306	-0.7

Member State	No. of businesses			Industry turnover (€ million)			% of online populatio	Estimate d number of online	Total consumer spend on	(historic) Growth rate %
	*									
United Kingdo m	6,310 ^	545	83	1,257			74 – 86	27 - 31	2,501	-4.5
EU28	105,66 0	2221	489	4,267	2,900	n/a	72 – 81	184 - 205	8,503	-4.2

*: Figure for 2011 **: Figure for 2010 ^: No figure available for number of kiosks stocking retail video

Sources and assumptions:

No. of businesses: Physical: International Video Federation 2013 – European Video Yearbook 2013 / OTT and TV-based services: EC. On-demand audio-visual markets in the European Union. 2014

Industry turnover: Physical: International Video Federation 2013 – European Video Yearbook 2013/ OTT: Strategy Analytics. 2014. European OTT Video Revenue to Reach $9.25 Billion by Year-End 2018

% population using product: ICF estimates based on DSM consumer survey micro-data. N=22,848

No. of consumers: Estimated number of 18 – 99 years old consumers based on DSM consumer survey micro-data.

Total consumer spent: International Video Federation 2014 – European Video Yearbook 2014

(Historic) Growth rate %: International Video Federation 2014 – European Video Yearbook 2014

Note: Because there is no single source of information that gives an overview for one specific year, ICF has compared data spanning across several years.

Table 29 provides a further breakdown of consumer spending between physical, digital (OTT) and TV-based video formats per Member States in the scope of this analysis.

Physical videos and films (DVDs and Blu-ray Discs) are the preferred type of video consumption with 77 per cent of total video spending, representing €6.53 billion (most of which retail sales). However, despite the introduction of Blu-ray Discs, consumer spending on physical video is declining at an average rate of 10 per cent per year. Conversely, in 2013, spending on digital (OTT) formats and TV-based formats combined represented €1.97 billion, growing by 43 per cent. Italy is the only country where consumer spending declined in 2013. In contrast, countries such as Denmark or Sweden experienced a growth in spending of more than 100 per cent[73].

The three main European markets for film and television content are the UK, Germany and France:

The UK is the largest of the European video markets. It accounts for 29.3 per cent of total consumer spending on video in Europe. The physical video market has recently undergone significant changes[74]. In 2013, combined digital (OTT) videos and TV-based videos accounted for 25.4 per cent of total video market (compared to only 16.9 per cent in 2013). Growth in the digital video market can be explained by the increasing popularity of the subscription-based model (+123.7 per cent in 2012)[75].

Germany is the second largest of the European video markets. It accounts for 22.5 per cent of total consumer spending on video in Europe. The German physical video market is stable, at around €1.6 billion since 2009. Combined digital (OTT) videos and TV-based videos account for only 15.5 per cent of total video market. However, the digital video market is growing. The introduction of Netflix in the second half of 2014 has contributed to the expansion of the German digital video market[76].

The French video market accounts for 14.4 per cent of total consumer spending on video in Europe. However the market is in decline. Spending on physical video dropped by 16.5 per cent in 2013. Combined digital (OTT) videos and TV-based videos account for 22.7 per cent of total video market. Despite a growing number of online subscription services, the growth of the digital (OTT) and TV-based video markets is slowing down[77].

Table 29 Consumer spending in 2013 (Euro m)

Member State	Total spending on all video	Change 2012/13	Physical videos	Change 2012/13	OTT videos	Change 2012/13	TV-based videos	Change 2012/13
Austria								
Bulgaria								
Czech Republic								
Denmark	183.1	-0.8	128.5	-20.9	42.0	285.4	12.7	12.0
France	1,228.5	-12.3	950.1	-16.6	106.4	35.3	127.2	18.8

[73] International Video Federation 2014 – European Video Yearbook 2014
[74] In 2013, HMV was bought by Hilco and Blockbuster closed
[75] International Video Federation 2014 – European Video Yearbook 2014
[76] ibid
[77] ibid

Germany	1,915.9	7.0	1618.5	1.2	208.9	65.7	88.5	32.7
Ireland	143.0	-8.2	115.9	-15.7	19.2	58.9	7.9	25.4
Italy	330.8	-9.7	261.6	-10.3	19.9	-0.4	49.3	-10.0
Latvia								
Netherlands	253.5	-12.4	181.3	-23.3	15.3	70.9	56.8	28.6
Poland	91.1	-6.2	47.4	-10.2	8.7	106.9	35.1	22.4
Slovenia								
Spain	224.8	-13.3	180.7	-19.6	27.0	91.9	17.1	-17.0
Sweden	305.5	-0.7	220.2	-18.3	62.5	231.4	22.8	9.8
United Kingdom	2,500.6	-4.5	1866.3	-10.1	452.5	62.2	181.9	11.3
EU28	8,502.9	-4.2	6,532.2	-12.9	1,183.4	72.8	787.2	13.4

Sources: International Video Federation 2014 – European Video Yearbook 2014

As shown in Table 30 below, there were 528.8 million DVD and Blu-ray Discs sold and 231.3 million rented in the EU28 in 2013[78]. In the 28 MS, almost 40 per cent of households subscribed to a form of video-on-demand in 2014[79]. Five countries (France, Denmark, Ireland, the Netherlands and the UK) were above this threshold. In Latvia and the Czech Republic, less than 20 per cent of households subscribed to any form of video-on-demand.

[78] International Video Federation 2014 – European Video Yearbook 2014

[79] EU. Digital Economy and Society Index

Table 30 Number of transactions of physical video and consumer use of video-on-demand video

Member State	**Number of DVD and Blu-rays sales (million) (2013)**	**Number of DVD and Blu-rays rentals (million) (2013)**	**Percentage of households subscribing to any form of Video on Demand, normalised indicator (2015)**	**Daily use of digital (OTT) videos (% of individuals) (2014)**
Austria			20.85	
Bulgaria			26.28	
Czech Republic			13.37	
Denmark	8.7	6.04	73.81	
France	70.9	6.79	77.00	16
Germany	117.1	77.1	25.14	10
Ireland	7.2	8.24	71.44	
Italy	18.9	18.52	20.38	33
Latvia			19.60	
Netherlands	15.5	2.57	65.65	12
Poland	6.739	1.09	41.40	
Slovenia			39.64	
Spain	11.1	17.5	21.45	28
Sweden	15	16.58	44.26	
United Kingdom	162.2	50.91	54.81	17
EU28	528.8	231.3	39.74	25

Sources:

Number of transactions of physical video International Video Federation 2014 – European Video Yearbook 2014Percentage of households subscribing to any form of Video on Demand: EU. Digital Economy and Society Index

Daily use of digital (OTT) videos: VPRT. 2014. TV- und Online-Videonutzung im internationalen Vergleich

Note: Because there is no single source of information that gives an overview for one specific year, ICF has compared data spanning across several years.

With the exception of Germany (where 91 per cent of the total turnover was achieved by physical products in 2013), the physical in-store retail business has faced many difficulties in the last few years, mainly due to the reduction in the sales of physical video (DVD, Blu-ray)[80]. Store-based sales fell from 1.07 billion euros in 2009 to 510 million euros in 2013 and were not compensated by an increase in online sales of DVDs and Blu-ray Discs.

The major trend in the market structure is the decline of specialised brick and mortar activities - examples include leading chains such as the HMV Group in the UK, Virgin Stores in France and the Blockbuster rental stores in various countries. In Italy, kiosks sales registered a loss in value equivalent to 30 per cent in 2013[81].

This decline has left the EU market with a much reduced store-based video specialist sector through which consumers can buy or rent DVDs and Blu-rays. Supermarkets are important players in the DVD and Blu-ray discs markets: in Denmark, 51 per cent of all DVDs were bought in supermarket chains in 2013. In the UK, the market share of supermarkets for all disk sales was 43 per cent[82].

The market for film and television content is increasingly dominated by online digital (OTT) service providers.

There are four major US digital (OTT) service providers operating on the EU market[83]:

- Apple iTunes division;
- Amazon (sales AV Media);
- Netflix; and
- YouTube.

Table 31 Key players in film and television content

Large players	**Information**	
Paid-for film and television content services		
iTunes	Activities: retail of digital content, including music, video, games, applications and books. Occupies a leading position on most of the world national markets for transactional video-on-demand (sales and rental). Turnover in 2009: 4,036; in 2013: 16,051 (in USD million)	

[80] IHS/International Video Federation

[81] International Video Federation 2014 – European Video Yearbook 2014

[82] ibid

[83] EC. March 2015. The development of the EU market for on-demand audio-visual services

Large players	**Information**
amazon	Activities: retail of online "media products" such as books, records, DVDs and Blu-ray discs, video games. Turnover in 2009: 7,664; in 2013: 13,030 (in USD million)
NETFLIX	Activities: subscription video-on-demand (originally rentals of DVDs and Blu-ray discs) Very quick expansion in the EU market. Netflix captured 66per cent of the world subscription video-on-demand market in 2013. Turnover in 2009: 1,670; in 2013: 4,374 (in USD million)
Free film and television content services	
YouTube	Activities: open user generated video content platform and branded channels operated by companies and institutions. Owned by Google Inc. Google Inc. also launched Google Play in March 2012 (music, film and television, applications, books, video games). Turnover in 2009: 500; in 2013: 5,600 (in USD million)

Source: EC. March 2015. The development of the EU market for on-demand audio-visual services

Other major actors include Sony Entertainment network, Google Play, Vudu and Xbox.

Smaller players see these large branches not only as potential competitors but also as a potential to influence the mass-market take-up of digital video consumption.

A large proportion of consumers also use local or national online video services: 47per cent in France, 43 per cent in the UK, 39 per cent in Spain, 34 per cent in Italy and 32 per cent in Germany[84]. Traditional players have launched their own video-on-demand offers (Canal+ launch Canal Play in France, BskyB launched NowTV in the UK, and Sky Deutschland launched Sky Snap in Germany).

The European Audio-visual Observatory provides information on 3,057 on-demand audio-visual services.[85] Key market players by MS are further presented in Annex.

[84] Accenture. Hearts, Minds and Wallets Winning the Battle for Consumer Trust Accenture Video-Over-Internet Consumer Survey 2012

[85] For more details: MAVISE Database on TV and on-demand audio-visual services and companies in Europe; available at: http://mavise.obs.coe.int/

1.3.3 Cross border activity

A recent study [86] suggests that cross border activity in Europe is low and unlikely to increase in the future, due to language barriers and cultural preferences. The study mentions that demand for films is fragmented along territorial borders. This means that service providers need to work on a territorial basis. Some video-on-demand services such as BBC's iPlayer try to get launched in several countries, but they prioritise countries with the same language. These trends are likely to remain in the coming years. The study also notes that making film and television content available in other territories entails additional costs: acquiring different language licences, dubbing and subtitling costs.

According to the same study[87], operators in the audio-visual sector are hampered in their ability to provide cross border services by long, costly and complicated rights clearance processes, which make it risky to set up innovative content offers. The International Video Federation disagrees with this statement and pinpoints that once the negotiations to pay for the rights are over, there is no additional costs.

Another market characteristic pointed out by the above study[88] consists in issues related to harmonisation across the EU. Different regulations apply according to the MS. For example, age ratings differ between countries. In addition, different tax systems apply to video-on-demand across Europe. This poses a problem of competitiveness between local and foreign-based services. Restrictive tax systems can restrict the possibilities to establish a service abroad.

Based on the DSM consumer survey, between 14 and 16 per cent of EU consumers who bought or accessed film and television content online reported doing so from providers based in another EU country. The highest percentage was reported in Austria (between 28 and 48 per cent) and Ireland (between 31 and 51 per cent). In addition, 10 per cent of EU consumers who bought or accessed film and television content online reported doing so from non-EU providers.

Table 32 Estimated cross-border activity, year 2014

Member State	% EU consumers buying or accessing film and television content that did so cross-border from EU providers	% EU consumers buying or accessing film and television content that did so cross-border from non-EU providers
Austria	28 - 48	8 - 10
Bulgaria	13 – 20	8 - 11
Czech Republic	9 – 14	5 - 8

[86] EC. 2014. Fragmentation of the single market for on-line video-on-demand services: point of view of content providers, https://ec.europa.eu/digital-agenda/en/news/fragmentation-single-market-line-video-demand-services-point-view-content-providers

[87] ibid

[88] ibid

Member State	% EU consumers buying or accessing film and television content that did so cross-border from EU providers	% EU consumers buying or accessing film and television content that did so cross-border from non-EU providers
Denmark	14 – 24	14 - 15
France	15 – 23	12 - 16
Germany	12 – 17	10 - 12
Ireland	31 - 51	21 - 26
Italy	16 - 30	10 - 15
Latvia	16 - 19	23 - 24
Netherlands	13 - 15	13 - 15
Poland	11 - 16	6 - 9
Slovenia	12 - 18	10 - 13
Spain	16 - 29	9 - 15
Sweden	15 - 20	14 - 18
United Kingdom	13 - 22	11 - 17
EU28	14 - 16	10

Sources and assumptions:

DSM Consumer Survey, N=17,359

For each type of provider shares have been calculated on the basis of a single respondent being treated as a separate user.

Lower and higher bound estimates are based on the questions i) Q4d. Over the last 12 months, where did you access online digital content– Films and TV series from? and ii) Q2b. Over the last 12 months, where did you buy or order tangible goods or services from? - Music & film (on a tangible medium, e.g. physical CD, DVD or Blu-ray)?

NB: These are multiple choice questions – one consumer could be buying from national as well as cross border providers.

1.3.4 Distribution/ sales channels

Distribution channels can be segmented by:

- type of sales:
    - offline sales (bricks & mortar retailers);
    - online sales (internet);
    - TV sales (via cable / satellite / Internet Protocol Television (IPTV) services).

Video transactions can take place via PCs, laptops, tablets, smart phones, smart TVs, games consoles or other connected devices. As an example of the different access channels to digital film and television content: in 2013, Netflix users watched videos[89]:

- Directly on computer: 44per cent
- On mobile phone: 23per cent
- Wii:21per cent
- Internet-enabled TV: 17per cent
- Connecting computer to TV: 16per cent
- PS3: 16per cent
- On iPad: 15per cent
- On other tablet: 15per cent
- Internet-connected Blu-ray: 15per cent
- Xbox live: 14per cent
- Roku box: 11per cent.

New forms of digital media players such as AppleTV, Roku media player or Amazon Fire TV as well as connected HDMI dongles (e.g. Google's Chromecast, Amazon's Fire TV Stick, Mozilla's Matchstick, Microsoft's Wireless Display Adapter) are expected to further increase the consumption of online and on-demand film and television content[90]. In the 15 MS studied in this report, the proportion of TV household that have digital receivers ranged from 68.8 per cent in Germany to 100 per cent in the UK and Italy (2013)[91].

So far, Netflix is the first video-on-demand service to tackle managed TV platforms. Netflix has concluded a deal with Virgin Media in the United Kingdom, Com Hem in Sweden and Waoo! in Denmark for inclusion on TiVO and set-top boxes[92].

The necessity to provide content on different devices as well as in different formats further increases costs for video-on-demand services. For some video-on-demand platforms, a partial solution to that problem consists in having an in-house department directly dealing with technical matters, rather than outsourcing this externally[93]. However, R&D costs are prohibitive for many smaller players and possibilities to transfer content across multiple devices are limited.

Digital Rights Management (DRM) solutions are crucial to get access to some film and television content (for instance Hollywood and other European studios). However,

[89] EC. On-demand audio-visual markets in the European Union. 2014

[90] EC, The development of the EU market for on-demand audio-visual services. 2015

[91] VRTD. TV-Haushalte und Geräteausstattung in Europa 2013

[92] EC. On-demand audio-visual markets in the European Union. 2014

[93] EC. 2014. Fragmentation of the single market for on-line video-on-demand services: point of view of content providers

some video-on-demand platforms believe the costs of licensing DRM are too high to allow to launch a service on multiple platforms[94]. Some solutions are emerging, such as the US-initiated UltraViolet system (a cloud-based digital rights library for film and television content that allows consumers to stream and download licensed content to multiple platforms and devices).

Based on DSM consumer survey (see Table 33), free streaming and free downloading are the most common channels to access digital film and television content formats in Europe; 53 and 49 per cent respectively of European consumers who accessed films and TV series online reported downloading or streaming films and TV series for free. Only 14 per cent of European consumers who accessed film and television content online pay for downloading videos and 18 per cent pay for streaming videos.

Table 33 Estimated per cent of consumers accessing film and tv content online who do so by paying with money or for free, year 2014

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Austria	10	44	16	54
Bulgaria	4	69	6	42
Czech Republic	13	58	7	44
Denmark	14	33	39	46
France	15	54	18	56
Germany	16	42	20	52
Ireland	11	42	29	52
Italy	9	52	18	55
Latvia	2	54	4	58
Netherlands	13	44	22	53
Poland	15	55	17	54
Slovenia	11	71	12	38

[94] ibid

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Spain	12	75	14	34
Sweden	15	44	31	46
United Kingdom	23	47	26	45
EU28	14	53	18	49

N=17,359

Source: DSM consumer survey. Figures based on question Q4b: In the last 12 months, how did you access the digital content (Films and TV series)? This question was not asked for Tangible goods and services bought online but used offline – Music & film (on a tangible medium, e.g. physical CD, DVD or Blu-ray);

Note: DSM consumer survey did not ask consumers to differentiate between legal and illegal content.

1.3.5 Pricing models

For the non-physical video market, there are two main types of revenue model[95]:

- Direct revenues from the users
    - **Pay-per-purchase model**: users pay for every consumption act (i.e. downloaded video or streamed video).

With Transactional Video on Demand (TVOD), users can:

a) pay to get unlimited viewing access to a video (Electronic Sell Through - EST);
b) access a film for a limited period of time in exchange for a transactional fee (Download to Rent - DTR).

    - **Subscription-based model:** users pay a fee to have access to as many content as they want in the library (Subscription Video on Demand - SVOD)

- Indirect revenues
    - **Ad-supported model:** revenues stem from partners interested in reaching an audience (Advertisement-supported Video on Demand - AVOD);
    - **Subsidies-supported model** or licence fees: revenues come from institutions as a part of their objectives.

Most video-on-demand services rely on a direct revenue model. Major key players such as Netflix or Lovefilm rely on a subscription-based model strategy. But some

[95] EC. 2014. Fragmentation of the single market for on-line video-on-demand services: point of view of content providers.

service providers use hybrid models combining both the pay-per-purchase and the subscription-based models or "freemium" models which is a mix between the subscription-based model and the ad-supported model).

Prices vary greatly among countries and services. This can be explained by differences in tax levels, VAT and purchasing powers. For example, for the pay-per-purchase model, prices range from €0.60 on the Romanian Muvix to €8.99 on the French and German ArteVOD. Another example is for monthly subscription prices: they range from €1 per month for the Romanian Seenow to €21.9 per month for the Italian 'Film Is Now'.[96]

1.3.6 Consumer behaviour and patterns

A survey carried out by GfK in 2014 among 2,700 subscribers of subscription videos services found that the leading reasons for subscribing were:

- having access to a wide catalogue of films (66per cent)
- having access to a wide catalogue of TV programs (series) (50per cent)
- having access to a catalogue of recent films (47per cent)
- watching programs when you want (40per cent)
- watching several episodes in a row (32per cent).[97]

Consumers value that the services are offered anytime, anywhere and on any device, that the videos are available ahead of the DVD release and simultaneously with the theatrical release, that services offer attractive content libraries thanks to exclusive licencing deals with major studios and networks and that services offer original programming financed by the major digital videos operators ("House of Cards" on Netflix for example). This drives the increase for demand for film and television content in digital format.

1.3.7 Future growth

The market for physical video is expected to decline, while the market for digital and TV-based videos is anticipated to expand within the EU28.

The rapid growth of the digital market can be explained by a number of drivers, such as the proliferation of connected devices and the increasing number of internet users. Digital video is expected to expand also thanks to its attractive price, its simplicity of use and its ability to personalise and enhance video viewing experience thanks to the adoption of new technologies.

However, there are also several obstacles to growth:[98]

- Piracy and illegal consumption: Users prefer to access content online for free. In Spain for instance, the authorities are struggling to reduce online piracy, and the online distribution market is modest in size. Different ways exist to address piracy: national anti-piracy groups carrying out daily enforcement activities (criminal and civil), case law developed at EU and national level based on current

[96] ibid

[97] EC. 2015. New French and European film markets Digital: a new growth driver for intra-community circulation and export?

[98] EC. 2014. Fragmentation of the single market for on-line video-on-demand services: point of view of content providers.

legislation, voluntary enforcement initiatives pursued at national and EU level, and efforts at national level to increase consumer awareness of legal offer (e.g. the Content Map in the UK, Offre Legale in France, Mappa dei Contenuti in Italy). Some effective initiatives include Share with Care in Denmark, Hadopi law in France, the blocking of illegal sites implemented by BREIN, the Dutch anti-piracy organisation;

- Infrastructure - broadband and device penetration: whereas Nordic countries have a good broadband connection, countries such as Spain and Ireland do not have well-developed device penetration, which hampers the evolution of consumption habits;
- Barriers to enter the market: providing a video-on-demand service may entail significant costs to set-up and operate the service. Stand-alone video-on-demand service can struggle to cover all costs. Economies of scale are a way to reduce such costs, for example by sharing the same technical infrastructure between different services. Such economies of scale exist in Germany for example, where RTL Interactive groups six video-on-demand /catch-up services.

1.4 Games

1.4.1 Headline summary

The landscape of the EU games market has changed significantly over the past few years. Digital sales are expected to overtake physical sales in the long run. Frontline digital retailers (e.g. Steam, Direct2Drive) and casual digital retailers (e.g. BigFish, Pogo) will continue to capture a rising share of the games market.

In particular, mobile gaming has continued to advance into the mainstream and is gradually catching up with and expected to become as big as console and PC gaming. The trend is based on a growing number of users downloading games from app stores and playing them on their smartphones and other portable devices (e.g. tablets).

Figure 7 Summary overview table of market for games

Market size and structure	• The **scale of revenues** generated by the European games market could **range between €11.0 bn and €16.0 bn** according to recently-published data; • There are **two types of businesses** operating at the core of the value chain: **publishers/developers** and **distributors/retailers** (offline and online); • The games market consists of a wide range of different companies of various sizes; • US companies feature among the largest publishers and distribution platforms and have a strong presence in Europe; • Online distribution is dominated by **a few publishers** who have their **own distribution channels**. Examples include the following **distribution platforms**: Steam; Origin; Xbox Live Marketplace; PlayStation Network. Additionally, **online portals** play an important role in the

	distribution of browser games; • Between 65 and 78 per cent of European consumers accessed games on digital or tangible format online
Cross border activity	• In 2014, 16 to 17 per cent of EU consumers who accessed games online in a tangible or digital form bought or accessed it from a provider based in another EU country; • In 2014, 10 to 11 per cent of EU consumers who accessed games online in a tangible or digital form bought or accessed it from a provider based outside of the EU.
Distribution channels	• Free download of games is the preferred mode of access in Europe. 66 per cent of EU consumers who accessed games online downloaded games for free in 2014; • A decline in physical sales has been observed in the European market. In some Member States, such as the UK, digital sales have already overtaken physical sales.
Pricing models	• Pay per purchase, subscriptions, freemium and ad-supported are popular pricing models in the online games market; • **Freemium is growing in popularity**. This trend is set to persist in the coming years; • The concept of "episodic games" has also recently emerged as a new and innovative pricing strategy.
Consumer behaviour	• **Across the EU**, mobile gaming (up to 93 per cent of consumers in Spain); social/casual gaming (up to 90 per cent of consumers in Poland); and console gaming (up to 72 per cent of consumers in France) were the **most commonly-accessed platforms for online gaming**; • However, mobile gaming is increasingly popular in the leading EU markets, notably: Spain, Italy and the UK.
Future growth	• More players are engaging in **cross-platform gaming**; • Free or freemium games are growing in popularity; • **Substantial growth** is expected in the **mobile games market segment** and certain emerging technologies, notably virtual / augmented reality and wearables.

1.4.2 total monthly software sales (PC + console) at retailMarket size and structure

Estimates for the size of the revenues generated by the European digital gaming industry range between €11 billion and €16 billion[99].

The leading European markets are: France (accounting for about 34.5 per cent of total EU digital gaming revenue as of 2013), UK (18.5 per cent), Germany (18.5 per cent) and Italy (9.8 per cent)[100].

There are two types of businesses at the core of the games industry value chain, namely[101]:

- **publishers and developers**: the former relates to businesses that fund and manage the development of computer games; the latter relates to businesses that manufacture the end-product. Development companies can be independent, part-owned or wholly-owned by a publisher.
  - there are a few large publishers/developers and a large number of small and medium –sized independent publishers and developers;
  - as of 2014, the ten largest publishers and developers earned about €36 billion in revenue globally, representing a near 20 per cent increase from the previous year[102];
  - the five largest companies – Tencent (China), Sony (Japan), Microsoft (US), Electronic Arts (US) and Activision Blizzard (US) – accounted for almost 70 per cent of overall revenue.
  - a total of 1,902 independent development studios has been recorded in the UK, potentially the highest in Europe. Some independent developers choose to work with other game publishers while others choose to self-publish their titles. Rovio, Supercell and King feature among the most successful self-publishing companies at EU level[103].
- **distributors and retailers (online and offline)** are businesses that sell video games on behalf of developers and/or publishers.

Data regarding the overall market share of distributors and retailers in Europe or globally is scarce. The rapid proliferation of digital technology has led various game companies to creating their own platforms for digital distribution. The most popular platforms at EU level include: Steam (founder company: Valve); Direct2Drive (Gamefly); Origin (Electronic Arts); Amazon; Xbox Live Marketplace (Microsoft); PlayStation Network (Sony); App Store (Apple) and Googleplay[104].

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[99] Data sources include: GDC Europe (2014); Newzoo (2013); Bigfishgames.com (2014); Ernst and Young (2012). Please note that figures have been converted into euros at the prevailing rate where necessary

[100] Market shares have been calculated based on figures available from vgsales.wikia.com

[101] European Commission, 2013. *The Industry and Policy Context for Digital Games for Empowerment and Inclusion* http://ftp.jrc.es/EURdoc/JRC77656.pdf

PEGI. *Facts and Figures* http://www.pegi.info/en/index/id/42/

[102] Newzoo, 2014. *Top 10 public companies by game revenues* http://venturebeat.com/wp-content/uploads/2015/04/Newzoo_Top10_Public_Companies_Game_Revenues_FY2014_v2.png

Please note that all figures have been converted into euros at the prevailing rate.

[103] Source: ICF consultation with EGDF

[104] http://techsavvyglobal.com/top-10-digital-distribution-platforms/
https://en.wikipedia.org/wiki/Digital_distribution_in_video_games#Independent_Game_Development

Based on the DSM consumer survey, in 2014, between 65 per cent and 78 per cent of EU-28 internet users accessed games on digital or tangible format online (see Table 1.14). In 2012, the Interactive Software Federation of Europe estimated that 81 per cent of consumers across the EU accessed or played an online game (or various games) over the course of the year[105]. Estimates based on the survey conducted by Ipsos in this study are also systematically higher than those in the DSM consumer survey – the Ipsos survey suggests that on average 79% of internet users accessed games in digital format in 15 MS. This in turn suggests that the actual number of users in 2014 could be closer to the upper-bound DSM estimate, potentially reaching the levels of around 80 per cent.

[105] ISFE, 2012. Videogames in Europe – Consumer Study

Table 34 Estimates of market size, year 2014 (unless stated otherwise)

Member State	**Number of businesses (developers and publishers)**	**Number of businesses (distributors and retailers)**	**Industry turnover (sales) in 2014 (€ million)**	**Number of online consumers 2014 DSM consumer survey (million)**	**% of online population using product in 2014[106]**	**% of consumers using the product in intangible format in 2014 (IPSOS)**	**% of consumers using the product in tangible format in 2014 (IPSOS)**	**Total consumer spend on intangible product (IPSOS) €**	**Total consumer spend on intangible product (IPSOS) €**	**Total consumer spend on product (€ million)**	**(historic) Growth rate % (2012-13)**
Austria				3	62 – 69	80	26	31,815	68,250		
Bulgaria				2	80 – 85	89	21	11,844	18,390		
Czech Republic		Data not available	131	4 - 5	79 – 84	85	14	480	616		
Denmark	120 (2011)		79	2	54 – 63	75	19	46,445	38,079		
France	300		6,900 (2013)	20 - 23	60 – 67	69	24	100,347	424,477	286 (2012)	+ 72.5%

Member State	Number of businesses (developers and publishers)	Number of businesses (distributors and retailers)	Industry turnover (sales) in 2014 (€ million)	Number of online consumers 2014 DSM consumer survey (million)	% of online population using product in 2014[106]	% of consumers using the product in intangible format in 2014 (IPSOS)	% of consumers using the product in tangible format in 2014 (IPSOS)	Total consumer spend on intangible product (IPSOS) €	Total consumer spend on intangible product (IPSOS) €	Total consumer spend on product (€ million)	(historic) Growth rate % (2012-13)
Germany			3,700 (2013)	28 - 45	63 – 100	70	23	324,907	532,833	412 (2012)	+ 10.1%
Ireland	83 (2012)		248	2	66 – 75	80	34	17,037	44,654		
Italy			2,000 (2013)	16 - 18	68 – 74	84	29	143,460	271,405	134 – 634 (2012)	
Latvia				1	55 - 61	86	12	1,461	2,510		+ 6.0%
Netherlands	173		807 (2013)	4 - 5	45 – 55	72	18	41,294	91,553	29 – 230 (2012)	
Poland			278	14 - 15	77 – 83	81	28	59,080	128,852		
Slovenia				1	74 – 79	87	16	3,010	6,438		

Member State	Number of businesses (developers and publishers)	Number of businesses (distributors and retailers)	Industry turnover (sales) in 2014 (€ million)	Number of online consumers 2014 DSM consumer survey (million)	% of online population using product in 2014[106]	% of consumers using the product in intangible format in 2014 (IPSOS)	% of consumers using the product in tangible format in 2014 (IPSOS)	Total consumer spend on intangible product (IPSOS) €	Total consumer spend on intangible product (IPSOS) €	Total consumer spend on product (€ million)	(historic) Growth rate % (2012-13)
Spain	330 (2013)		872 (2011)	16 -18	72 – 77	79	32	98,961	361,540	121 – 692 (2012)	
Sweden	170		752 (2013)	3 - 4	55 – 65	68	20	49,276	83,620		
United Kingdom	1,902		3,900	22 - 26	61 – 72	73	33	382,056	1,015,868	453 (2012)	+ 41%
EU28			11,000-16,000	166 - 197	65 – 78					13,000	- 6.1%

Sources and assumptions:

Number of businesses: (a) Scandinavian Game Developers (2011); (b) France Diplomatie (2014); (c) McCormick J. (2012); (d) Hollandtrade.com (2010); (d) Spanish Association for the Game and Entertainment Software Development and Publishing Industry (2013); (e) Swedish Games Industry (2014); (f) Nesta (2014); (g) UKIE (2014);

Industry turnover: (a) SuperData (2014); (b) vgsales.wikia.com; (c) AESVI (2011); To note that industry turnover of main MS (FR, DE, IT, UK) > 16 billion. This figure is not consistent with the European industry turnover reported earlier (€11 to 16 billion) as different sources of information have been used

% population using product: ICF estimates based on DSM consumer survey micro-data. N=22,848;

% population using product IPSOS: ICF estimates based on IPSOS survey 2015 and equals % of respondents. For tangible: I have bought a game on DISC/CARTRIDGE For intangible: I have downloaded a game over the internet (paid or free); or I have played FREE online games (e.g., free games on social network sites); or I have PAID a subscription fee to play a specific multiplayer online game; or I have downloaded an APP game (paid or free).

Number of consumers: estimated number of 16+years old online consumers based on DSM consumer survey micro-data and Eurostat. Lower bound is estimated based on the number of consumers that answered never to Q4a: Over the last 12 months, how many times on average have you used the Internet to access the following digital content (including both free and paid access) – games. Higher bound was estimated based Q2a and Q4a: Over the last 12 months I have never used the internet to buy or order computer games and software (CD, DVD or physical) (ordered online but used offline) and used internet to access games in intangible format;

Total consumer spend on intangible product in one year (IPSOS) €: Estimate based on IPSOS usage rate and average spent per consumer in the last 12 months

Total consumer spend on product: (a) NPD (2012); (b) IBF/European Commission (2013);

Growth rate (2012-13): vgsales.wikia.com.

1.4.3 Cross border activity

Based on Europeans Games Developers Federation (EGDF), the games market is by nature global and the notion of the cross border activity does not apply. In their opinion, there are a few game developers focusing only on national markets (and are usually extremely small (e.g. in Austria)). In practice, if a developer uploads a game to Application store, or to Steam, it is usually available globally and sells to consumers all over the world[107].

However, findings from the DSM consumer survey indicate that, in 2014, between 16 and 17 per cent of European consumers who bought or accessed games online (in digital or tangible format) did so from a provider based in another EU country. Conversely, between 10 and 11 per cent of consumers who bought or accessed games online (in digital or tangible format) did so from providers based in a non-EU country (see Table 35). Given the opinion of the industry regarding cross border sales, this estimates should be interpreted with caution as consumers responding to the survey might not be aware from which country they are purchasing games.

Table 35 Estimated cross-border activity, year 2014 (unless stated otherwise)

Member State	% EU consumers buying or accessing games online that did so cross-border within the EU	% EU consumers buying or accessing games online that did so cross-border outside the EU
Austria	29 - 48	8 - 11
Bulgaria	15 - 21	9 - 13
Czech Republic	10 - 19	6 - 10
Denmark	15 - 24	16
France	–6 - 24	13 - 18
Germany	12 - 14	9 - 10
Ireland	37 - 53	25 - 29
Italy	16 - 32	10 - 17
Latvia	23 - 20	15 - 33
Netherlands	15 - 17	16 - 17
Poland	13 -22	7 - 9

[107] ICF's consultation with EGDF (2015)

Member State	% EU consumers buying or accessing games online that did so cross-border within the EU	% EU consumers buying or accessing games online that did so cross-border outside the EU
Slovenia	13 -25	10 - 16
Spain	18 -31	10 - 15
Sweden	20 - 23	18 - 19
United Kingdom	16 - 20	13 - 16
EU28	16 - 17	10 - 11

Sources and assumptions:

DSM Consumer Survey, N=22,848

Note: For each type of provider shares have been calculated on the basis of a single respondent being treated as a separate user.

Lower and higher bound estimates are based on the questions i) Q4d. Over the last 12 months, where did you access online digital content– Digital content – Games (including in-game purchases)Computer games and software (on a tangible medium, e.g. physical CD, DVD or Blu-ray ? and ii) Q2b. Over the last 12 months, where did you buy or order tangible goods or services from? - Computer games and software (on a tangible medium, e.g. physical CD, DVD or Blu-ray ?

NB: These are multiple choice questions – one consumer could be buying from national as well as cross border providers.

1.4.4 Distribution/ sales channels

Distribution channels can be segmented by:

- **type of sales**: online (internet) vs. offline sales (bricks & mortar retailers); and
- **type of format**: game content offered in physical (tangible) format (i.e. CD, DVDs or Blu-ray) vs. digital format (i.e. downloads, streaming, mobile services).

Consumers are rapidly switching from offline to online gaming. This had a negative impact on publishers and (offline) distributors and retailers. Online games are now more commonly distributed over a digital network. Publishers are increasingly distributing their games to end consumers directly, i.e. without the need for an intermediary or distributor (referred to as "disintermediation"). Publishers are also increasingly opting for Internet Service Providers (ISPs) to distribute games (referred to as "re-intermediation”). ISPs provide portals for game distribution.

Data from GfK and IHS indicates that digital sales overtook physical purchases for the first time in 2013 in the UK[108]. Digital downloads of console, mobile and PC games in the UK generated £1.2 billion, representing an annual increase of 16.4 per cent. In contrast, video games earned £1.0 billion at retail, down by 2.9 per cent when compared to sales figures in 2012.

Yet, although the decline in physical game sales versus digital appears to be on-trend, various market forecasts indicate that it is uncertain whether digital distribution will wholly replace disc-buying in the near future[109]. In the console market, in particular, logistical and other barriers (e.g. the ability to trade in physical games, a lack of network infrastructure, frequently higher digital pricing) could allow physical distribution to remain[110].

The proportion of online consumers buying / accessing games in physical and digital formats are provided in Table 36.

Table 36 % of online consumers that bought / accessed video games from physical retailers and online retailers (streaming and downloads), year 2012

Member states	% of online consumers buying or accessing …		
	… any packaged games (offline)	… any online games	… downloads
Austria	21%	34%	24%
Bulgaria			
Czech Republic	26%	48%	29%
Denmark	16%	35%	19%
France	28%	44%	20%
Germany	23%	32%	21%
Ireland			
Italy	18%	34%	19%
Latvia			
Netherlands	27%	39%	23%

[108] GfK Chart-Track / IHS cited in http://www.digitalspy.co.uk/gaming/news/a540998/digital-game-sales-overtake-physical-as-uk-market-returns-to-growth.html#~pgBOJ86ghGpk4X

[109] MarketCast, 2014. MarketCast Study Reveals Console Gamers Resisting Shift to Digital Downloads

[110] PWC, 2014. Video games – key insights at a glance

Member states	% of online consumers buying or accessing …		
	… any packaged games (offline)	… any online games	… downloads
Poland	22%	43%	27%
Slovenia			
Spain	21%	31%	17%
Sweden	31%	45%	30%
United Kingdom	28%	29%	16%

Source: ISFE (2012). Please note that this source does not explicitly set out the definition used for "online games."

Note: columns don't add up to 100 percent as figures represent the share of online respondents that reported accessing games offline/online.

Data from the DSM consumer survey (see Table Table 37) indicate that free download is the preferred mode of access among users of digital games. 66 per cent of European consumers that bought or accessed games online reported downloading games for free in 2014; 32 per cent reported streaming games for free. Only 21 per cent reported paying for downloading, and 11 per cent paid for streaming.

Table 37 % of online consumers buying or accessing games online who do so by paying with money or for free

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Austria	23	62	7	29
Bulgaria	12	69	5	36
Czech Republic	20	55	10	39
Denmark	27	57	13	32
France	23	70	12	32
Germany	26	63	9	33

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Ireland	29	60	11	29
Italy	14	70	10	33
Latvia	8	61	4	47
Netherlands	22	63	10	36
Poland	22	59	14	39
Slovenia	12	73	9	34
Spain	17	80	11	23
Sweden	29	58	12	29
United Kingdom	29	64	15	29
EU28	21	66	11	32

Source: DSM consumer survey; N=22,848. Figures are based on question Q4d: in the last 12 months, how did you access the digital content (games)?

1.4.5 Pricing models

There are four main pricing or revenue models commonly used by businesses in the video games market:

- **Pay per purchase:** in this model, players purchase game titles or software along with game-play devices including: handhelds, consoles, personal computers and smartphones from physical retailers[111].
- **Subscriptions**: in this model, the sale of digital content (such as video games) by subscriptions involves the use of paywalls[112]. Paywalls are arrangements between the provider and user that restrict access to users who have paid to subscribe to the game. This model is very popular among providers of MMO games.
- **Freemium**: in this model, software, media, games or web services are provided free of charge, but money (i.e. a premium) is charged for proprietary features and functionality (e.g. virtual goods, time reduction).

[111] Lee, 2013. Business Models and Strategies in the Video Game industry: an analysis of Activision-Blizzard and Electronic Arts

[112] getelastic.com, 2012. *7 Business Models for Monetizing Digital Content* http://www.getelastic.com/7-business-models-for-monetizing-digital-content/

- **Ad-supported**: advertisement in video games can be categorized into two types: (1) banner advertisement (e.g. banner ads); and (2) in-game advertisement (e.g. in-game ads). The banner-ad refers to an advertisement placed in the page of a game's homepage. In-game advertisement, on the other hand, refers to the placement of a brand in a game. This model is mainly used by streaming providers.

Traditionally, the 'pay per purchase' model was the main pricing model adopted by the video games industry. However, over the past decade, the move to a 'digital' distribution of video games has triggered a change in the business strategy of video game developers:

- the **freemium model** has become a widely-adopted pricing strategy in the industry. Two types of freemium games have emerged in the process: (1) "pay-to-entertain" games, whereby premium content is purely decorative and serves as a way for consumers to individualise the game according to their preferences; and (2) "pay-to-progress" / "pay-to-win" games, whereby additional content is functional and allows premium consumers to progress faster in the game (e.g. by enhancing the performance of their in-game character);
- the **'episodic game'** model has also recently emerged. An episodic game is typically divided into separate episodes that stand on their own, but are part of a larger concept. The different episodes are released over a defined period of time – typically several months – and, tend to have a relatively short duration of play than the overall game.

1.4.6 Consumer behaviour and patterns

Consumers access games through a variety of hardware supports – such as: consoles, TVs, personal computers, smartphones, tablets and handhelds. Along with a network connection (where necessary), hardware devices allow users to play games acquired in physical formats (e.g. packages games) and digital formats (e.g. games supported by online platforms and networks such as MMOs and social/casual websites, apps/mobile games).

Table 38 shows that in 2013, the majority of players (91 per cent) accessed video games via their personal computers. Consoles were also widely used, with more than 60 per cent of players accessing video games through this medium. Mobile gaming was also popular – nearly half of gamers accessed games through their smartphones or tablets. Mobile gaming was the preferred mode of access in some of the leading European games market, notably: Spain (93.3 per cent); UK (85.9 per cent); Italy (84.3 per cent); the Netherlands (75.0 per cent); and Germany (73.6 per cent).

Table 38 Estimated % of consumers accessing games online, year 2013 (unless stated otherwise)

Member State	% consumers accessing games online through one of more of the following access methods					
	TV/Console	PC/MAC	MMO	Mobile (tablet/smartphone)	Handheld	Social/casual website
Austria (2012)	25%	36%		24%	10%	13%
Bulgaria						

Member State	% consumers accessing games online through one of more of the following access methods					
	TV/Console	**PC/MAC**	**MMO**	**Mobile (tablet/smartphone)**	**Handheld**	**Social/casual website**
Czech Republic (2012)	16%	49%		25%	8%	22%
Denmark (2012)	17%	36%		26%	6%	12%
France	71.5%	55.7%	34.9%	61.7%	29.2%	80.0%
Germany	57.0%	66.1%	40.2%	73.6%	20.6%	57.0%
Ireland						
Italy	67.6%	68.1%	42.9%	84.3%	26.7%	84.8%
Latvia						
Netherlands	53.8%	40.0%	28.8%	75%	18.8%	80%
Poland	46.2%	71.6%	44.8%	56.0%	8.2%	90%
Slovenia						
Spain	70.3%	64.1%	47.7%	93.3%	35.4%	85.1%
Sweden (2012)	37%	47%		38%	11%	23%
United Kingdom	70.6%	60.0%	40.0%	85.9%	25.6%	79.8%

Sources: ISFE (2012); Newzoo (2013); Newzoo (2014) – infographics for leading EU markets.

Please note that the percentages have been calculated based on data available from Newzoo's infographics on: (1) the total number of users/gamers in Member States (mainly in 2013); and (2) the number of users/gamers by access method (TV/Console; PC/Mac; MMO; Mobile; Handhleld; and Social website). Also note that percentages across the Member States may not add to 100% as users access digital games via one or more of the different mediums.

In the second quarter of 2012, it is reported that consumer spending on games content on a tangible medium in France, UK and Germany totalled €217 million, while digital format sales in those three countries (i.e. full game and add-on content downloads, subscriptions, mobile games and social network games) generated an additional €878 million in sales in the same period[113].

As indicated in Table 39, consumer spend on (digital) console games was highest in all leading European markets: UK (€1.9 billion); France (€1.6 billion); Germany (€1.4 billion).

Table 39 Total consumer spending, by type of game played, year 2012 (unless stated otherwise)

Member State	Total spending on video games – physical and online spend (in €m)					
	Physical sales	Digital sales				
	PC/MAC packaged	PC/MAC download	Social/Casual website	MMO	Mobile	Console
Austria						
Bulgaria						
Czech Republic						
Denmark						
France	390	260	380	300	220	1,570
Germany	870	540	650	560	360	1,480
Ireland						
Italy	240	210	300	200	190	710
Latvia						
Netherlands	61	52	85	64	54	257
Poland						
Slovenia						

[113] Source: http://www.hollywoodreporter.com/news/american-consumers-video-game-288-billion-q2-359996

Member State	Total spending on video games – physical and online spend (in €m)					
	Physical sales	Digital sales				
	PC/MAC packaged	PC/MAC download	Social/Casual website	MMO	Mobile	Console
Spain			290	240	180	775
Sweden						
United Kingdom	504	396	744	504	468	1,942
EU28					About €8,000 million	About €5,000 million

Source: European Commission (2013)

Finally, based on the estimates from the Ipsos survey conducted for this study, consumers on average spent more on games in tangible format than games in intangible format (see Table 40).

Table 40 Average annual spending per online consumer of games €

Member State	Average spend per year per consumer on intangible games content, € IPSOS	Average spend per year per consumer on games content on a tangible medium, € IPSOS
Austria	32	63
Bulgaria	16	38
Czech Republic	15	23
Denmark	61	65
France	22	58
Germany	40	57
Ireland	25	61

Member State	Average spend per year per consumer on intangible games content, € IPSOS	Average spend per year per consumer on games content on a tangible medium, € IPSOS
Italy	23	43
Latvia	8	24
Netherlands	26	54
Poland	10	29
Slovenia	42	83
Spain	19	51
Sweden	17	45
United Kingdom	44	88

Source: IPSOS survey 2015. Base: those who had purchased games.

1.4.7 Future growth

There are various factors driving growth and change in the global video games marketplace. The five key trends set to impact the videogames industry include:

- **More players engaged in cross-platform gaming**: gamers used to play mainly on two screens: the TV and the PC[114]. It is however reported that players were playing on up to four screens as of 2013. This trend is expected to persist over the course of the coming years, giving room for more time and ultimately money spent on gaming.
- **Growing popularity of free games**: in-game spending business models, whereby games are free-to-play and are monetized through add-ons or premium items to purchase, are growing in popularity. This trend is set to persist in the future[115];
- **Increasing availability of high speed and capacity networks**: it is expected that the continuing growth in wired broadband and Wi-Fi access (including the recent launch of 4G) will facilitate access to video games[116]
- **High growth in mobile data traffic**: in recent years, mobile games have shown substantial growth compared to other games market segments[117]. Global figures

[114] Newzoo, 2013. *The Global Games Market - Key Facts & Insights On the Global Games Market 2012-2016* http://www.newzoo.com/wp-content/uploads/2011/06/Newzoo_Free_Global_Trend_Report_2012_2016_V2.pdf

[115] Ibid.

[116] Ibid.

[117] Newzoo, 2013a. *Trend Report-Mobil Games* http://www.newzoo.com/wp-content/uploads/Newzoo_Mobile_Games_Trend_Report_Free.pdf

show that 33 per cent of all downloads to mobile devices (smartphones and tablets) were games. It is also reported that there are more than 500 million mobile gamers worldwide, with 35 per cent spending money on mobile games[118] More than 50 million gamers play on their smartphones or tablets in the leading European games markets: UK (22 m or 79 per cent of all gamers); Germany (21 m or 68 per cent); and France (14 m or 62 per cent). The share of gamers playing on mobile devices is expected to grow further in the coming years.

- **Pioneer in the development and commercialisation of augmented/virtual reality and/or wearable technology**: games currently account for 76 per cent of all virtual reality content[119]. This is expected to grow further in the near future as more developers invest in augmented reality projects. This emerging technology is also expected to spur interest in other markets, notably entertainment and video content.

However, a significant funding gap in the market might be restricting growth in the digital games industry. Low availability of private and public finance currently restricts the growth potential of games companies, particularly start-ups and small games businesses[120].

1.5 Digital Books

- Figure 8 *E-books and audiobooks as a relevant segment of the market analysis* provides an overview of the digital books market. The market for printed books and whole book market is often cited in this analysis for benchmarking purposes.

Figure 8 E-books and audiobooks as a relevant segment of the market analysis

1.5.1 Headline summary

While revenue sales from printed books have been declining across Europe, the e-books market has experienced impressive growth over the last few years. The two digit growth rate of e-books market is expected to continue in many Member States. The size of the audiobooks markets is much smaller, with a few exceptions like Germany.

Large online retailers, predominantly Amazon, have a strong position in terms of e-books sales.

[118] Ibid

[119] develop-online.net (2015) http://www.develop-online.net/news/virtual-reality-will-reach-11m-users-by-2016/0203391.

[120] TIGA (2015) http://www.tiga.org/repository/documents/editorfiles/reports/tiga_budget_submissions_2015_screen.pdf

Figure 9 Summary overview table of market for books

Market size and structure	• Sales revenue of e-books amounts to about €1.1 billion, or **3.5 to 5 per cent** of total sales revenue of the book market. Audiobooks market is several times smaller than e-books. • Two main types of businesses operate on the market: p**ublishers and retailers**. Bricks & mortar retailers still account for an important share of sales of printed books yet e-books and audiobooks are purchased predominantly via Internet. **Amazon** is a leading retailer of e-books and has a strong position in some MS. Amazon owned **Audible** has a strong position in the audiobook market.
Cross border activity	• **In 2014, 15 per cent** of EU consumers that read e-books online bought or accessed them from a provider based in another EU country; • **In 2014, 9 per cent** of EU consumers that read e-books online reportedly bought or accessed them from a provider based in a country outside the EU; • Cross-border sales of e-books are higher than cross border sales of printed books, while sales of audiobooks remain largely within a given Member State's market. • **Different VAT rates** for e-books and audiobooks across EU Member States remain a material obstacle for cross-border commerce.
Distribution channels	• The vast majority of e-books are accessed **on-line**. • 65 per cent of EU consumers that accessed e-books online downloaded them for free; • 26 per cent of EU consumers that accessed e-books online streamed them for free; • Only 28 per cent of EU consumers that accessed e-books online paid to download them, and 12 per cent paid to stream them
Pricing models	• **Pay-per-purchase model is a dominant pricing model** used on the market. Subscription based model marginal. • Prices of e-books are typically **30-50 per cent** lower than printed books. Audiobooks on the other hand are more expensive than printed books (and e-books). • E-book market has been strongly driven by **price competition**.

Consumer behaviour	• Continuously **increasing take up of technology devices** (e-reader, tablets, and smartphones) contributes to growth of the e-books market. •
Future growth	• **E-books sales will continue to grow substantially**. Changes in the consumption pattern driven by rapid take up of new devices (e-readers, tablets, smart phones) as well as competitive prices of e-books will remain key drivers; • E-books are expected to increase their share in terms of sales revenue of the whole book market from **5 per cent in 2014 to 21 per cent in 2017**

1.5.2 Market size and structure

1.5.2.1 Market size and growth

It is estimated that the e-books' market represented between 3.5 and 5 per cent of the total books' sales in the EU in 2013, or approximately EUR 1.1 billion. The market is the fastest growing segment of the book market in most EU Member States and this growth is expected to continue (see Table 41 Growth rate of e-books and audiobooks sales in selected Member States, as of 2013 unless otherwise stated). However, the European market is still relatively small compared to the US, where e-books' sales accounted for around 25 per cent of total market sales.

Table 41 Growth rate of e-books and audiobooks sales in selected Member States, as of 2013 unless otherwise stated

Country	Value of market in € million	% increase/decrease to previous year	Growth magnitude
UK e-books	375 as of 2013 704 as of 2014	20% between 2012-2013 11% between 2013-2014	Considerable growth although some slowdown was observed over recent years
audiobooks	12.5 as of 2014[121]	6.8% between 2012 and 2013 Sales revenue of audiobooks grew by 175% between 2009 and 2014	Moderate growth although audiobooks growth is expected to accelerate in the coming years

[121] Note that large discrepancies between revenue sales from audiobooks in the UK exist. UK Publishers Association reports £10 million as of 2014 while some other secondary sources report the figure to the tune of £126 million

Germany *e-books*	475 (176 as of 2014)[122]	67% between 2012-2013, 10% between 2013-2014	Rapid growth, yet slowing down recently
audiobooks	180 as of 2014	3.6% between 2012-2013, -1.2% between 2013-2014	Negative growth most recently
France *e-books*	100 as of 2013, 161 as of 2014	55% 91% between 2011 and 2012[123]	Rapid growth
audiobooks	8 as of 2014		
Spain e-books	135	100%	Extremely rapid
audiobooks			
Netherlands *e-books*	64	38%	Rapid growth
audiobooks			
Poland *e-books*	28	117%	Extremely rapid
audiobooks	6.9 as of 2012	23% between 2011 and 2012 45% between 2009 and 2012 6% between 2012-2013	Rapid growth though rather disappointing growth between 2012-2013

Sources and assumptions:

Value of e-book market: Rudiger Wishenbart Report on Global eBook (2014), Analysis of book markets in selected countries of Bureau of Analysis of Polish Parliament (2015), European Book Publishing Statistics, (2014).

% increase/decrease to previous year: Rudiger Wishenbart Report on Global eBook (2014), Polish Book Institute (2013), IBIS World Market Research (2014), Statistica (2014), Le Monde Livres (2014), Express.be (2013), iDBOOX Marché du livre numérique France 2014 (2014), National Association of Publishers in France (2015).

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122 In blue are figures provided by alternative sources.

123 Express.be, Le livre numerique en plein boom en Belgique. Available at: http://www.express.be/business/fr/marketing/le-livre-numerique-en-plein-boom-en-belgique/186687.htm

Note 1: large discrepancies between revenue sales from audiobooks in the UK exist. UK Publishers Association reports £10 million as of 2014 while some other secondary sources report the figure to the tune of £126 million[124].

Note 2: large discrepancies between the revenue sales data from e-books in Germany as of 2013 (EUR 475 million as of 2013) reported in the Rudiger Wishenbart Report on Global eBook (2014) and figures provided by Association of German Booktraders (EUR 176 million as of 2014) exist.

Both e-book and audiobook markets comprise increasing shares of the whole book market, given a general decline (or stagnation at best) in sales of printed books in Europe[125]. Yet, in 2013 printed books still accounted for circa 96 per cent of total book sales in Europe. Also, most recently some signs of reprise of print books were observed while e-book growth seems to be slowing down in the most developed markets (UK and US)

At the Member State level, e-book markets differ significantly:

- UK and Germany have the largest e-book markets;
- In the UK the share of e-books sales is estimated at around 17 per cent of total book market sales;
- In the Czech Republic and Bulgaria or Poland, e-books generate less than 1 per cent of total book market sales.

The audiobooks market is much smaller than the e-book market, and there is very little data available. It is estimated that audiobooks account for less than 0.5 per cent of the EU book market:

- Audiobooks in a foreign language are rarely available on the national markets;
- The publishing industry is expecting that the share of audiobooks in the whole book market will keep increasing in the coming years.[126] ;
- Similarly to e-book market, German and British markets are the most developed audiobooks markets in Europe;
- Germany is most likely the only EU market where the sales of audiobooks surpass the sale e-books;
- Audiobooks also have a strong position in the Scandinavian markets (500 titles in Norwegian, Swedish and Finnish) and are developing in Italy, Poland and Spain. Markets are still in their infancy in other European countries.

Based on DSM consumer survey for 2014, 51 per cent of Europeans used internet to access e-books in the last 12 months. Based on this, the estimated number of online consumers in the EU-28 accessing e-books in 2014 was 129 million. However, these statistics compared with other industry statistics seem to overestimate the current use of e-books. For those Member States where other additional data on percentage of consumers using e-books is available, the figures are significantly lower – the proportion of population using e-books varies between 0.4 (Poland) and 6 (Germany) per cent of the population.

[124] GoodEreader, 2014. Available at: http://goodereader.com/blog/digital-publishing/global-audiobook-trends-for-2014

[125] In Spain and Italy sales of printed books through brick & mortar shops dropped by 12 and 5.3 per cent respectively between 2012 and 2013. The decline between 2013 and 2014 was -2.1 per cent in Germany, -2.7 per cent in Italy, -3.4 per cent in Austria,-6.5 per cent in Spain and -8 per cent in Netherlands (iDBOX, 2014)

[126] GoodEReader, 2014. Available at: http://goodereader.com/blog/digital-publishing/global-audiobook-trends-for-2014

Table 41 and Table 42 provide details on key market characteristics for the 15 Member States selected for the sample in this study.

Table 42 Estimates of market size, year 2013 unless stated otherwise

Member State	No. of businesses	Book Industry sales € million	E-book sales in € million	Audiobooks sales in € million	% internet users using e-books in 2014	Estimated No. of consumers using e-books in 2014 DSM consumer survey (million)	% of internet users accessing e-books or tangible books online in 2014	No. of internet users accessing e-books or tangible books in 2014 (million)
Austria		792			42	2	74	3
Bulgaria					76	2	82	2
Czech Republic		400	3.2		56	3	70	4
Denmark					33	1	60	2
France		3,900	175.5	8.5 as of 2014	37	12	68	23
Germany		9,500	475 (163), 176 as of 2014	184, 190 as of 2014	42 (6 in 2013)	19 (4.2 in 2013)	77	34 (60 2013)[127]
Ireland					57	1	78	2

[127] Polish Bureau of Parliamentary Analysis. Available at: http://orka.sejm.gov.pl/WydBAS.nsf/0/CACF2DACE51E60F8C1257DE2003FC42F/$file/Analiza_BAS_2014_121.pdf

Member State	No. of businesses	Book Industry sales € million	E-book sales in € million	Audiobooks sales in € million	% internet users using e-books in 2014	Estimated No. of consumers using e-books in 2014 DSM consumer survey (million)	% of internet users accessing e-books or tangible books online in 2014	No. of internet users accessing e-books or tangible books in 2014 (million)
Italy		3,100	124		54	13	74	18
Latvia					42	0.4	49	0.5
Netherlands	307 publishers and 195 retailers that sell eBooks as of Q1/2015	1,360	64		29	3	50	5
Poland	Audiobook publishers as of 2012: 90	1,050	28	7	72 (0.4 in 2013)	13 (0.115 in 2013) on average 4.3 per consumer	85	15
Slovenia		80-100			54	1	65	1
Spain		2,700	135		64	15	74	17E-readers and tablet combined consumers base is

Member State	No. of businesses	Book Industry sales € million	E-book sales in € million	Audiobooks sales in € million	% internet users using e-books in 2014	Estimated No. of consumers using e-books in 2014 DSM consumer survey (million)	% of internet users accessing e-books or tangible books online in 2014	No. of internet users accessing e-books or tangible books in 2014 (million)
								7-10 million[128] In 2013, 55% of Spaniards bought at least 1 book.
Sweden		783			33	2	63	3
United Kingdom		4,125 (as of 2014)	375 as of 2013, 704 as of 2014	157.5	57	21	82	30[129]
EU28		36,000 - 38,000	1,100		51*	129*	74	187

Sources and assumptions:

[129] Data discrepancies: according to the UK Booksellers Association circa 50% of the UK population purchased at least one book in 2014

Number of businesses: CB (2015), Polish Book Institute (2013)

Book industry/e-book sales: Rudiger Wishenbart Report on Global eBook (2014), Analysis of book markets in selected countries of Bureau of Analysis of Polish Parliament (2015), Federation of European Publishers' European Book Publishing Statistics, (2014).

Note: Significant discrepancies between the data regarding revenue sales from e-books reported in Rudiger Wishenbart Report on Global eBook (EUR 475 million) and data provided by German Booksellers and Publishers Association (EUR 163 million) exist. Difference can partly account for the fact that latter figure does not include school books and academic books.

Audiobook sales: Rudiger Wishenbart Report on Global eBook (2014), German Booksellers and Publishers Association, Bureau of Analysis of Polish Parliament (2015)

Note: sales revenue from audiobook reported by German Booksellers and Publishers Association may be underestimated.

Number of consumers using e-books/ number of consumers using e-books in tangible format accessed online: Based on DSM consumer survey micro-data

* Data overestimates the use of e-books

1.5.2.2 Market structure

Two main types of operators can be identified on the supply side: publishers and retailers.

In terms of publishers, significant variations between Member States exist. In some countries large publishing houses (i.e. Pearson, Bertelsmann, Hachette) possess significant market share while in others a larger number of smaller publishers operate and hold substantial market share. Although traditionally publishers used retailers to distribute books, many now have direct sales via designated websites.

Retailers can be distinguished into those who sell from physical stores (brick and mortar retailers) and those without physical presence (online retailers):

- Brick and mortar retailers (main types):
    - Book shops;
    - Large surface specialised shops (i.e. FNAC in France);
    - Large surface non-specialised shops (i.e. supermarkets).
- Online retailers:
    - Large multinationals (i.e. Amazon);
    - National online retailers.

In general, the sale of e-books takes place nearly entirely on-line while brick and mortar retailers still play an important role in terms of audiobooks sales. For instance, in Spain direct sales from publishers' websites accounted for 20.5 per cent of revenues in 2013 while sales through specific digital distribution platforms (e-retailers) represented 74.5 per cent[130].

A strong shift to online sales channels is noted in the traditional (printed) books segment. Large chain book stores, as well as super markets and department stores are now losing ground to online sales.

There are two key players dominating the online retail market:

- Amazon is the predominant platform for online sales of printed books and has even larger share when it comes to e-books. For instance, in Germany it owns circa 50 per cent of the e-books sales revenue (its leadership position having been overtaken by Tolino in late 2014). In the UK, Amazon dominates the market with over 70 per cent e-readers purchasing their e-books regularly through their website (60 per cent in 2010), which some estimates corresponds to 80-90% of sales. In France, it is estimated that Amazon will become the leader in the sales of all types of books by 2017[131];
- Yet, Amazon's position varies between Member States. It has localised web-stores with significant catalogues in the UK, Germany, France, Spain and Italy while it does not provide such customised services in Scandinavia and Netherlands[132];
- Apple book store is the second most popular platform for online sales. In UK it accounts for around 15.9 per cent of the e-book market[133].

[130] IPA Country Report, 2014. Spanish Bookmarket Data. Available at: http://www.internationalpublishers.org/images/reports/2014/ipa-country-report-spain-book-market.pdf

[131] L'OBS, 2014. Jousqu'ou ira le livre numérique. Available at: http://bibliobs.nouvelobs.com/salon-du-livre-2014/20140320.OBS0581/jusqu-ou-ira-le-livre-numerique.html

[132] Rudiger Wischenbart, 2015. Global eBook. Available at: http://www.wischenbart.com/upload/1234000000358_04042014_final.pdf

In terms of the audiobooks, the most dominant content distribution platform is currently Amazon's owned Audible.[134]

1.5.3 Cross border activity

Based on DSM consumer survey, 15 per cent of European consumers buying or accessing e-books did so from a provider based in another EU country (Table 1.22). No data on cross-border sales of audiobooks is available. However it is plausible that cross-border sales of audiobooks are far smaller than e-books due to the prevalence of audiobooks provided only in national language.

The estimate of e-books cross-border sales is in line with the data for overall book market from the Federation of European Publishers which estimates cross-border sales of all books from EU publishers (including sales of physical books) at 19 per cent of total sales or circa EUR 4.2 billion. These cross-border sales have been increasing (in 2009 the cross-border sales accounted for 15 per cent)[135].

In general, cross-border activity is driven by languages:

- High activity is observed among countries speaking the same language (e.g. Germany-Austria; France-Belgium; Spain-Latin American markets);
- It is estimated that half of the e-books published worldwide are in English which explains why UK exports are large. In the UK, the export of e-books was estimated at EUR 196 million as of 2014, circa 28 per cent of all e-books sold[136].
- In addition, cross-border commerce is also fostered by the very strong position of large selling platforms such as Amazon.

Table 43 Estimated cross-border activity, year 2015,2014

Member State	% businesses selling cross-border	% of EU consumers buying or accessing e-books that did so cross-border from EU providers	% of EU consumers buying or accessing e-books that did so cross-border from non-EU providers
Austria		37	8
Bulgaria		12	6
Czech Republic		11	5
Denmark		10	9
France	26	20	14

133 Ibid.

134 GoodEReader, Global Audiobook Trends, 2014. Available at: http://goodereader.com/blog/digital-publishing/global-audiobook-trends-for-2014

135 European Book Publishing Statistics, 2014. Available at: http://www.fep-fee.eu/European-Book-Publishing-636

136 Interview with UK Publishers Association

Member State	% businesses selling cross-border	% of EU consumers buying or accessing e-books that did so cross-border from EU providers	% of EU consumers buying or accessing e-books that did so cross-border from non-EU providers
Germany	20	13	7
Ireland		36	18
Italy		17	9
Latvia		21	16
Netherlands		15	11
Poland		10	4
Slovenia		14	9
Spain	20	16	10
Sweden		15	13
United Kingdom	38	13	11
EU28		15	9

Sources and assumptions:

DSM Consumer Survey, N=22,848

% consumers buying e-books cross-border in EU or outside EU: Assuming that all the consumers who reported buying or accessing e-books from other EU country did not access it from any other non-EU or national provider. The shares are hence overestimated.

% business selling cross-border: Bureau of Polish Parliamentary Analysis (2015). The source is not clear whether this refers to e-books or books in general.

Some industry representatives see different VAT rates applied to sales of e-books depending on the trader and buyer location as a significant barrier for cross-border commerce[137].

[137] Federation of European Publishers, 2013. The e-book sector: a publisher perspective. Available at: https://ec.europa.eu/licences-for-europe-dialogue/sites/licences-for-europe-dialogue/files/E-books-Editis_0.pdf

1.5.4 Distribution/ sales channels

E-books and audiobooks can be accessed online or offline. The available data suggest that online channels account for vast majority of sales for e-books. In the UK for instance, 88 per cent of all e-books are bought online[138]. There is no data available for the audiobooks market but it is plausible that the online channel is less frequent than offline sales (brick and mortar retailers).

E-books and audiobooks accessed online can be:

- Downloaded: Based on the DSM consumer survey, in 2014 70 per cent of EU consumers who accessed e-books online did so through downloading;
- Streamed: Based on the DSM consumer survey, in 2014 30 per cent of EU consumers who accessed e-books online did so through streaming.

In addition, based on DSM consumer survey, less than a third of EU online consumers that used e-books paid for downloaded/streamed e-books (Table 44)

In terms of sales channels in the whole book market, sales at bricks and mortars retailers still account for the majority of sales but online sales have been consistently growing. As of 2013, online sales in Spain, Italy, Poland and France oscillated between 15-20 per cent of total sales while the UK has been the European leader with online sales standing at around 45 per cent of all sold books[139].

Table 44 Estimated % of consumers accessing e-books online who do so by paying with money or for free, year 2014

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Austria	43	55	8	18
Bulgaria	8	77	5	28
Czech Republic	21	58	9	33
Denmark	29	54	15	29
France	28	65	15	34
Germany	39	56	14	23
Ireland	30	61	12	24
Italy	27	64	13	28

[138] Interview with UK Publishers Association

[139] Rudiger Wischenbart, 2015. Global eBook. Available at: http://www.wischenbart.com/upload/1234000000358_04042014_final.pdf

Member State	Paid Download	Free Download	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Latvia	11	69	3	41
Netherlands	28	61	11	21
Poland	23	70	11	29
Slovenia	12	74	7	28
Spain	21	79	10	20
Sweden	27	58	19	26
United Kingdom	41	59	16	21
EU28	28	65	12	26

Sources and assumptions:

DSM Consumer Survey, N=11,791

1.5.5 Pricing models

There are two main pricing models available in the market of e-books and audiobooks:

- **Pay per purchase model** where consumers pay for every audiobook or e-book purchased online or offline. It is a dominant model on the market;
- **Subscription based model** which is becoming popular in Scandinavian countries[140].

Prices of e-books are typically between 30-50 per cent lower than the prices of printed books. Prices of audiobooks are typically higher than prices of e-books. This is due to the so called 'billable hours'; time spent by lecturers in the recording studio to record the audiobook based on the script[141] (see Annex 2 for some further data).

As opposed to printed books, prices of e-books and audiobooks are typically affected by higher VAT. For instance, in the UK VAT applied to printed books is 0% while VAT applied to e-books is 20 per cent.

In terms of e-books, promotional campaigns have been most frequently driven by low prices applied for a limited period of time[142]. For instance, in 2013 in the UK the battle

[140] Interaktywnie.com, 2013. Audiobook to juz showbussines. Available at: http://interaktywnie.com/biznes-od-kuchni/audiobooki-to-juz-show-biznes-tak-sie-na-nich-zarabia-245853?page=2

[141] Time required to record the audiobook is on average 12 hours

[142] Rudiger Wischenbart, 2015. Global eBook. Available at: http://www.wischenbart.com/upload/1234000000358_04042014_final.pdf

around e-book pricing saw Sony and Amazon offering 20p e-book prices[143]. Likewise, in the rapidly increasing Polish market, competition among e-book sellers is focused predominantly on price[144]. There has been less pressure on lowering prices in Germany and France. Several countries, such as Austria, France, Germany, Greece, Norway, Slovenia and Spain have in fact extended their fixed book price regime to e-books, mostly to avoid the detrimental effects of concentration associated with aggressive discounts practices of operators with a dominant position in the US and in the UK.

1.5.6 Consumer behaviour and patterns

In terms of devices used for consumption of e-books and audiobooks, consumers use the following formats:

- E-books: tablets, e-readers, smartphones and computers. ;
- Audiobooks: phones, computers and tablets, mp3 players;

For e-books, there is a noticeable trend of reading from tablets in many Member States. Amazon Kindle is the most frequently used dedicated e-reader.

In France there were over 6.2 million consumers who already had tablets as of 2013 - an increase of 58 per cent from 2012[145] - and tablets accounted for 24 per cent of all devices used by consumers of e-books[146]. In the UK, tablets are expected to surpass e-readers as the primary device used for consumption of e-books, though PwC estimates that 50 per cent of the UK population would own an iPad, Kobo, Kindle or similar e-reader device by 2018.[147] In Netherlands, there are 10 million smartphones owners, 7.9 million tablet owners and 1.4 million of e-reader owners as of 2015[148].

Further data on consumer behaviour and patterns is scarce.

1.5.7 Future growth

It is forecast that the share of e-books in total sales revenue generated by the book market in the EU will increase from around 5 per cent in 2014 to 21 per cent in 2017[149]. This forecast is supported by some reorientation of the industry’s business strategies as well as increase in investment in e-books by key European publishing houses like Pearson, Wolters Kluver, Hachette Livre and Random House[150].

[143] Ibidem.

[144] InnovationPR, 2014. Prawie pol miliona sprzedanych ksiazek cyfrowych w Polsce. Available at: http://media.innovationpr.pl/pr/266446/prawie-pol-miliona-sprzedanych-ksiazek-cyfrowych-w-polsce-virtualo-podsumowuje-rok-2013-i-przedstawia-prognoze-na-2014

[145] Le MOTiF, 2014. Les grands chiffres du numérique. Available at: http://www.lemotif.fr/fr/etudes-et-donnees/chiffres-cles/le-numerique-en-2013/

[146] Ibidemhttp://www.lemotif.fr/fr/etudes-et-donnees/chiffres-cles/le-numerique-en-2013/.

[147] BBC, 2014. E-books to outsell print by 2018 says new report. Available at: http://www.bbc.co.uk/news/entertainment-arts-27694650

[148] http://aldus2006.typepad.fr/.a/6a00d8342e8a5353ef01b7c779a293970b-pi

[149] Statistica, 2014. E-book market share in Europe in 2013 and 2017. Available at: http://www.statista.com/statistics/292092/ebook-market-share-europe/

[150] IBF, 2013. Study on Digital Content Products. Available at: http://ec.europa.eu/consumers/enforcement/sweep/digital_content/docs/dcs_complementary_study_en.pdf

In France, the sales of ebooks and audiobooks are forecasted to increase by 64 per cent between 2015 and 2017[151] reaching nearly 9 per cent of the whole book market[152].

The following aspects may hamper or foster the development of the e-book and audiobook market.

Factors fostering the growth of the e-books and audiobook markets:

- Changes in consumption patterns related to technological progress. New devices allowing users to read books via mobiles, tablets and e-readers have been embraced by consumers in all EU markets, yet with different speeds depending on the Member State;
- Competitive price of the e-books, relative to traditional printed books;
- Potential decrease of the VAT level on e-books[153];

Factors hampering growth:

- Different VAT rates have been one of the aspects hampering the development of the e-books market in the EU. The VAT on paper books ranges between 0 and 10%, with the exception of three Member States while the vast majority of the 28 EU Member States levy VAT rates ranging from 18 to 25%[154]. The United Kingdom levies 20% VAT on e-books and the Irish Republic VAT is 23%. Germany charges 19% VAT, Luxembourg 17% VAT, Spain 21% VAT and Italy 4% VAT. On January 1st 2015 the European Commission mandated that VAT will be paid based on location of the buyer and not the seller;
- Changes in macroeconomic environment resulting in decline in purchasing power and hence potential demand for ebooks/ audiobooks (high income elasticity);
- Still relatively high piracy level in some Member States.

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[151] Le MOTiF, 2014. Les grands chiffres du numérique. Available at: http://www.lemotif.fr/fr/etudes-et-donnees/chiffres-cles/le-numerique-en-2013/

[152] Journal du Net, 2015. Livre numérique: un marché de 250 million d'euros en 2015 en France. Available at: http://www.journaldunet.com/ebusiness/le-net/marche-e-books-selon-xerfi.shtml

[153] InnovationPR, 2014. Prawie pol miliona sprzedanych ksiazek cyfrowych w Polsce. Available at: http://media.innovationpr.pl/pr/266446/prawie-pol-miliona-sprzedanych-ksiazek-cyfrowych-w-polsce-virtualo-podsumowuje-rok-2013-i-przedstawia-prognoze-na-2014

[154] Reuters, 2015. France, Luxembourg lose lower VAT rate battle on e-books. Available at: http://www.reuters.com/article/2015/03/05/us-europe-ebooks-tax-idUSKBN0M11A120150305

1.6 Software and Apps

1.6.1 Headline summary

The software and apps market is large and diverse. Within it:

- GPS software is rapidly changing – Portable Navigation Devices are facing an increased competition from the mobile-based navigation services.
- The antivirus software remains fairly stable with a few key players maintaining their market position.

The "apps" market is comparatively new, fast growing and highly concentrated.

Figure 10 Summary overview table of software and apps market in Europe

Market size and structure	• In 2014 between **75 percent and 87 percent** of European internet users used software and apps products • **39 per cent of European internet users** used Portable Navigation Devices in 2011. • Total revenues for the European **apps market** in 2013 equalled **€17.5 billion**. The market is **highly concentrated** with a few key players; • In 2011 **64 percent** of European internet users used antivirus software and **39 percent** of European internet users used Portable Navigation Devices. • Portable Navigation Devices are facing increased competition from mobile-based navigation services.
Cross border activity	• In 2014, between 15 and 16 per cent of EU consumers that bought or accessed software and apps online did so from a provider based in another EU country; • In 2014, 10 per cent of European consumers that bought or accessed software and apps online did so from a provider based in a non-EU country;
Distribution channels	• Free downloading is still the most common channel to access software and apps in Europe; • **Between 90 and 91 per cent** of EU consumers that bought or accessed software and apps online **reported downloading software and apps for free,** while only between 21 and 23 per cent of them pay for software and apps in digital format.

Pricing models	• Pay-per-purchase, Freemium and Trialware are the main pricing models; • Freemium and Trialware are common pricing models for antivirus software; • A freemium pricing system is also popular amongst app developers.
Consumer behaviour	• [There is no specific information available on consumer behaviour]
Future growth	• The global antivirus software package **market is expected to grow at** around 11% over the period 2013-2018. **The app market growth rate is estimated at 29 per cent** in the same period. • The world shipments of Portable Navigation Devices will decrease by 19 per cent in 2012- 2015.

1.6.2 Market size and structure

The software and apps market is estimated to have between 189-220 million customers in 2015. In 2014, 75-87 percent of European population used software and apps products (see Table 45 for details).

Table 45 Estimates of market size

Member State	Software and apps (DSM)		Antivirus software (IPSOS)				Antivirus software (EE)	PNS (EE)
	% of online population using product in 2014 (DSM consumer survey)	No. of online consumers in 2014 million (DSM consumer survey)	% of consumers using the product in intangible format in 2014 (IPSOS)	% of consumers using the product in tangible format in 2014 (IPSOS)	Total consumer spend on intangible product in one year (IPSOS) €	Total consumer spend on intangible product in one year (IPSOS) €	% population using product in 2011	% population using product in 2011
Austria	74 – 83	3 - 4	77	21	58697	6,955		
Bulgaria	88 - 92	2 - 3	84	30	19351	1,811		

Member State	**Software and apps (DSM)**		**Antivirus software (IPSOS)**				**Antivirus software (EE)**	**PNS (EE)**
	% of online population using product in 2014 (DSM consumer survey)	**No. of online consumers in 2014 million (DSM consumer survey)**	**% of consumers using the product in intangible format in 2014 (IPSOS)**	**% of consumers using the product in tangible format in 2014 (IPSOS)**	**Total consumer spend on intangible product in one year (IPSOS) €**	**Total consumer spend on intangible product in one year (IPSOS) €**	**% population using product in 2011**	**% population using product in 2011**
Czech Republic	81 – 89	4 - 5	78	26	1274	68	70	43
Denmark	69 - 79	2 - 3	63	14	57623	2,984	73	36
France	62 - 75	21 - 25	69	13	335091	43,965	61	36
Germany	74 – 100	33 - 45	72	19	594916	100,386	62	43
Ireland	82 - 88	2	77	32	39141	6,452		
Italy	78 - 86	19 -21	74	28	290045	50,953		
Latvia	68 - 74	1	72	32	4751	583		
Netherlands	61 - 73	6 - 7	69	11	133758	7,860	59	32
Poland	88 - 93	16	81	28	169725	18,508	68	37
Slovenia	82 - 92	1	83	37	8685	655		
Spain	79 - 87	18 - 20	75	22	223460	29,695	65	39
Sweden	70 - 81	4	63	12	78835	3,976		
United Kingdom	73 - 84	27 - 30	69	21	607605	91,351	64	39

Member State	Software and apps (DSM)		Antivirus software (IPSOS)				Antivirus software (EE)	PNS (EE)
	% of online population using product in 2014 (DSM consumer survey)	No. of online consumers in 2014 million (DSM consumer survey)	% of consumers using the product in intangible format in 2014 (IPSOS)	% of consumers using the product in tangible format in 2014 (IPSOS)	Total consumer spend on intangible product in one year (IPSOS) €	Total consumer spend on intangible product in one year (IPSOS) €	% population using product in 2011	% population using product in 2011
EU28	75 - 87	189 - 220					64	39

Sources and assumptions:

Software and apps (DSM) DSM Consumer Survey, N=22,848. Assumption: figures are representative of the population +16.

Population using product: ICF estimates based on DSM consumer survey micro-data. N=22,848. Lower bound was based on the number of consumers that answered never to Q4a: Over the last 12 months, how many times on average have you used internet to access the following digital content (including both paid and free access) – Software (including apps). Higher bound was estimated based on the number of consumers that answered never to the use of Software (including apps) and Computer games and software (on a tangible medium, e.g. physical CD, DVD, or Blu-ray) and Web-based software applications (e.g. Google Docs, Office 365).

No. of consumers: Estimated number of 18 – 99 years old consumers based on % population using product in 2014 and Eurostat population projections [proj_13npms].

Antivirus software (IPSOS)

% population using product IPSOS: ICF estimates based on IPSOS survey 2015 and equals % of respondents. For tangible: Share of respondents noting they have obtained (paid or free) a disc containing anti-virus software for a computer. For intangible: Share of respondents noting they have PAID to download anti-virus software for a computer or smartphone/tablet; I have PAID an annual subscription fee for anti-virus software; or I downloaded FREE anti-virus software for a computer or smartphone/tablet

Antivirus software and PNS (EE) Europe Economics Digital Content Services for Consumers 2011**%**

Total consumer spending on intangible product in one year 2014 (IPSOS) €: Estimate based on IPSOS usage rate and average spent per consumer in the last 12 months

1.6.2.1 Apps

Total revenues for the European apps market in 2013 equalled €17.5 billion. In June 2013 alone, there were 357 million apps downloaded in the UK, 217 million in France and 154 million in Germany.[155] The UK app industry is very important, as it represents a third of EU revenues (£4 billion in 2014).[156]

The market is dominated by key US-headquartered app stores such as Apple, Google and Amazon. These have a worldwide presence and are listed in detail in Annex 1. The success of EU app companies is limited to Germany, France, and the UK. Those Members States have a number of app companies that are successful outside of their native markets.[157]

1.6.2.2 Antivirus software

It is estimated that in 2011 64 per cent of European internet users used antivirus software (Table 1.25 above). The world antivirus market is dominated by 10 main companies, as shown in Appendix 1, where Avast and Microsoft alternately lead the market. Currently Avast is the market leader, with a market share of 21.4 percent while Microsoft is the second largest player with a market share of 19.4 percent.

Half of the ten most commonly used antivirus programmes are produced by European companies. Avast and AVG were founded in the Czech Republic[158], Avira in Germany, ESET in Slovakia and Bitdefender in Romania. Kaspersky Lab is based in Russia and the rest (Microsoft, Symantec, McAfee and Comodo) are American.

1.6.2.3 Navigation and positioning services

Market data on navigation-positioning services is scarce. Based on Europe Economics study, 39 percent of European population used Portable Navigation Devices in 2011 (Table 1.25 above).

In the GPS software market consumers can use a smartphone navigation app, or opt for a dedicated GPS device from a leading manufacturer such as Garmin or TomTom. For example, Portable Navigation Devices are available for between $90 and $250. Smartphones generally have a monthly cost about $30 with a two-year contract, plus any charges for the handset. Smartphone turn-by-turn navigation apps range in price from free to $49. Smartphone navigation apps usually do not carry map update fees.[159]

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[155] Vision mobile. 2013. The European App Economy 2013

[156] The Inquirer. 2014. Google says that UK app industry will be worth £30bn by 2025.http://www.theinquirer.net/inquirer/news/2352180/google-says-that-uk-app-industry-will-be-worth-gbp30bn-by-2025

[157] Mark Mulligan and David Card, Sizing the EU app economy, 2014.

[158] The main reasons identified to explain why two of the leading antivirus firms are from the Czech Republic are: i) technological quality of staff rather than skills in management, marketing and sales (legacy of highly-skilled technical human capital inherited from the communist regime); ii) a lack of available funding for high-risk, technologically innovative companies (technical talent was steered towards companies that could finance their expansion from retained earnings, i.e. the antivirus industry). See Beblavy, Kurekova. 2014. Into the first league: the competitive advantage of the antivirus industry in the Czech Republic and Slovakia. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2497909

[159] http://gps.about.com/od/gpsproductoverview/a/smartphone-vs-dedicated-gps.htm.

1.6.3 Cross border activity

15-16 per cent of EU consumers who accessed software and apps online reported doing so from a provider based in another EU country, while 10 per cent reported doing so from a non-EU provider (Table 46).

- In the apps market, it is easier than in traditional industries to obtain global exposure and success, thanks to lower entry barriers and a global digital marketplace. However, accessing apps across borders (and especially from a non-EU provider) is difficult because of language barriers, and different approaches to data protection and e-Commerce.

Table 46 Estimated cross-border activity (software and apps), year 2015

Member State	% of EU consumers buying or accessing software or apps online that did so cross-border from EU providers	% of EU consumers buying or accessing software or apps online that did so cross-border from non-EU providers
Austria	30 - 43	9 - 10
Bulgaria	16 - 21	8 - 13
Czech Republic	12 - 17	6 - 10
Denmark	16 - 23	11 - 13
France	14 - 21	14 - 18
Germany	14 - 15	11
Ireland	28 - 49	17 - 24
Italy	17 - 28	10 - 16
Latvia	20 - 23	12 - 14
Netherlands	12 - 15	13 - 14
Poland	14 - 20	7 - 10
Slovenia	19 - 23	11 - 15
Spain	17 - 26	8 - 14
Sweden	15 - 20	13 - 15

Member State	% of EU consumers buying or accessing software or apps online that did so cross-border from EU providers	% of EU consumers buying or accessing software or apps online that did so cross-border from non-EU providers
United Kingdom	12 - 19	10 - 15
EU28	15 - 16	10

Sources:

Based on DSM consumer survey

Assumption: Assuming that all the consumers who accessed online digital content from other EU or non-EU country did not access it from any other provider.

Lower and upper bonds were constructed by i) lower bound = number of consumers assessing digital content – Software (including apps) and ii) higher bound = number of consumers assessing digital content – Software (including apps) or Tangible goods and services bought online: Computer games and software (on a tangible medium, e.g. physical CD, DVD, or Blu-ray). Category Online services: Web-based software applications (e.g. Google Docs, Office 365) does not provide breakdowns for cross border access.

1.6.4 Distribution channels

Based on DSM consumer survey (see Table 47), free downloading is still the most common channel to access software and apps in Europe; currently 90-91 per cent of European consumers who accessed software and apps online reported that they download them for free, while between 21-23 per cent reported that they pay for software and apps in digital format.

Table 47 % of online consumers accessing software and apps online who do so by paying with money or for free, year 2015

Member State	Paid Download	Free Download
Austria	21 - 22	91 - 95
Bulgaria	15 - 19	90 - 98
Czech Republic	23 - 25	85 - 98
Denmark	23 - 28	91 - 97
France	21 - 23	90 - 91
Germany	23 - 26	76 - 88
Ireland	24 -29	88 -97

Member State	Paid Download	Free Download
Italy	17 - 20	93 - 97
Latvia	11 - 13	95 - 100
Netherlands	20 -24	88 - 91
Poland	21 -25	90 - 95
Slovenia	12 -16	93 - 95
Spain	17 -19	91 - 94
Sweden	28 - 32	85 - 94
United Kingdom	25 - 29	88 - 93
EU28	21 - 23	90 - 91

N=22,848

Source: DSM consumer survey. Two estimates were calculated based on i) Number of consumers assessing digital content – Software (including apps) and ii) Number of consumers assessing digital content – Software (including apps) or number of consumers assessing online services: Web-based software applications (e.g. Google Docs, Office 365). Category tangible goods and services bought online: Computer games and software (on a tangible medium, e.g. physical CD, DVD, or Blu-ray) did not ask for paid vs. free accesses.

Assumption: For each payment type percentages have been calculated on the basis of a single respondent being treated as a separate user for each method of access used.

Concerning antivirus software, a survey found that in Western Europe, 26% of users pay for antivirus programs (the 74% others choose a free solution)[160] which is in line with the estimated figures for software and apps market based on the DSM consumer survey. Users tend to think that free solutions provide sufficient security.

1.6.5 Pricing models

There are three main pricing models in the market for software and apps:

- **Pay-per-purchase** (software and apps): users pay for software and are typically able to use all functionalities. When apps are sold online, Apple and Google, as the platform owners, typically charge a 30% royalty fee for each app sold[161].

[160] Kaspersky Lab. 2012. Perception and knowledge of IT threats: the consumer’s point of view. https://www.kaspersky.com/downloads/pdf/kaspersky-lab_ok-consumer-survey-report_eng_final.pdf

[161] Gigaom Research. 2012. A demographic and business model analysis of today’s app developer

- **Freemium** (antivirus software and apps): users get a basic service free of charge, but money is charged for additional features. For instance, app developers usually offer their apps in two forms:
  - A free version, sponsored with ads and with limited functionality.
  - A version for sale, with no ads and full functionality.
- **Trialware** (software in general): users can try out software during a trial period and when it is over they need to pay a licence fee to continue to access the software. According to Kaspersky Labs, Trialware is commonly used as a pricing model for antivirus software. Many computers and laptops are sold with a pre-installed trial version of an antivirus program. It is estimated that about 60% of respondents use these programs, but that only 13% purchase the licence one the trial period is over.[162].

1.6.6 Consumer behaviour and patterns

Table 48 Average annual spend per online survey respondent on anti-virus software €

Member State	Average spend per year per consumer on intangible content, € IPSOS	Average spend per year per consumer on tangible content, € IPSOS
Austria	33	17
Bulgaria	34	8
Czech Republic	25	5
Denmark	51	18
France	47	22
Germany	33	20
Ireland	40	19
Italy	41	18
Latvia	27	7
Netherlands	39	16
Poland	28	9
Slovenia	47	17

[162] Kaspersky Lab. 2012. Perception and knowledge of IT threats: the consumer's point of view. https://www.kaspersky.com/downloads/pdf/kaspersky-lab_ok-consumer-survey-report_eng_final.pdf

Member State	Average spend per year per consumer on intangible content, € IPSOS	Average spend per year per consumer on tangible content, € IPSOS
Spain	36	14
Sweden	37	9
United Kingdom	49	23

Source: IPSOS survey 2015. Base: those who had purchased anti-virus software.

1.6.7 Future growth

- Software and apps market is expected to grow in the future:
- According to a study conducted by TechNavio, the global antivirus software package market is expected to grow at a CAGR[163] of 10.88 per cent over the period 2013-2018.[164] Main market drivers are: rapid growth of internet users; increasing frequency of security threats, driven by the easy availability of malicious software and infrastructure that can be used to launch advanced targeted attacks[165];
- The apps market is expected to grow at an even higher rate; CAGR 29.2 per cent over the period 2013-2018[166]. The main market drivers are:
    - continued innovation in the quality of apps and supporting hardware, bringing a range of benefits to consumers[167].
    - however, the fact that 4G is not available across all EU countries could be an obstacle to market growth;

As for navigation-positioning services, in the future mobile-based navigation services are likely to increase substantially, to the detriment of Portable Navigation Devices. Berg Insight report estimates that world shipments of Portable Navigation Devices will decrease by 19 per cent in the period 2012 - 2015.168 There is no data available regarding possible future growth of mobile-based navigation or the market as a whole.

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[163] Compound annual growth rate

[164] TechNavio. 2014. Global antivirus software package market. http://www.technavio.com/report/global-antivirus-software-package-market-2014-2018

[165] Gartner. 2014. Press release. http://www.gartner.com/newsroom/id/2828722

[166] Mark Mulligan and David Card, Sizing the EU app economy, 2014. Available at: http://research.gigaom.com/report/sizing-the-eu-app-economy/

[167] Gigaom Research. 2012. A demographic and business model analysis of today's app developer. http://research.gigaom.com/report/a-demographic-and-business-model-analysis-of-todays-app-developer/

[168] Berg Insight, Personal Navigation Devices, Report summary, 2012.

1.7 Storage of Digital Content

1.7.1 Headline summary

Figure 11 Summary overview table of the cloud market

Market size and structure	▪ Turnover of storage of digital content is small ▪ **Main providers are US companies** (Apple (iCloud), Amazon, Google, Dropbox); ▪ A very competitive market ▪ **Between 21 per cent and 55 per cent of European internet users used storage of digital content in 2014**
Cross border activity	*There is no data on cross-border activity for storage and cloud services*
Distribution channels	▪ Consumers increasingly access their storage services through smartphones; ▪ **92 per cent of European internet users who use storage services access these services for free**
Pricing models	▪ Free trials followed by paid subscription; ▪ Free service for limited storage capacity (2 to 15 GB) and paid subscription for larger storage capacity;
Consumer behaviour	▪ EUR 1 to 5 per month for an account with up to 100 GB capacity; ▪ Based on research in the US, consumers mainly store music
Future growth	▪ Obstacles to growth include: Uncertainty regarding security, data protection and data location, performance related issues, interoperability and portability issues (data portability between cloud service providers); ▪ The main driver of growth is increasing penetration of the Internet and rapid adoption rate of cloud storage gateways by consumers – the ease of accessing files from several devices or locations is the main reason for using storage services

1.7.2 Market size and structure

Overall, the storage of digital content has been experiencing high growth in recent years, but most of the consumers access these services for free. As such, in terms of sales, online web services that provide server space for individuals to store data, photos, videos and other files, generate little revenues directly from consumers.

There is no industry data that would estimate the overall size of the storage of digital content market for consumers. According to European Commission, EU cloud sector (majority represented by B2B services) could reach EUR 80 billion by 2020[169].

Based on Eurostat's annual model questionnaires on ICT (Information and Communication Technologies) 21 per cent of the Europeans aged 16-74 used internet storage space to save documents, pictures, music, videos or other files[170]. Significant differences are observed across Member States (MS): in Poland, Lithuania and Romania only 8 per cent of individuals[171] used cloud storage services whereas in Denmark the usage rate hits 42 per cent[172]. 26 per cent of individuals who used internet were not aware of the existence of such services. These differences in usage were also noted in some internet blogs, reporting that for instance Dropbox is still rarely used by Internet users in Poland or Romania as opposed to other markets like Scandinavia[173].

However, data collected through the DSM consumer survey suggests that the share of Europeans[174] using storage for digital content is much higher and estimated to 55 per cent. The differences between MS are also much smaller. The lowest usage rate is estimated in Latvia (42 per cent) and the highest usage rate in Portugal (68 per cent). A higher share is also confirmed by data from the survey conducted by Ipsos for this study (on average 53 per cent of consumers used storage of digital content in 15 MS).

The EU market is dominated by US service providers like Dropbox, Microsoft's One Drive and iCloud (see Table 1.28). For instance, as of early 2015, Dropbox had 120 million users in Europe and reported faster growth than on the US market. Most of the service providers (e.g. Amazon, Google and Dropbox) also offer services for business which present their main revenue stream.

Table 49 Some players in storage of digital content [175]

Players in personal cloud storage

[169] European Commission, 2015. Digital Agenda. Could Computing. Available at: http://ec.europa.eu/digital-agenda/en/cloud

[170] Eurostat. Internet and cloud services - statistics on the use by individuals Accessed at http://ec.europa.eu/eurostat/statistics-explained/index.php/Internet_and_cloud_services_-_statistics_on_the_use_by_individuals#Use_of_cloud_services

[171] Between 16-74

[172] Eurostat. Internet and cloud services - statistics on the use by individuals

[173] http://www.chip.pl/news/internet-i-sieci/dyski-internetowe-i-serwery/2014/10/dropbox-w-polsce-to-na-razie-nisza-1

[174] Between 18-99

[175] Cisco Global Cloud Index, 2013

Table 50 Estimates of market size, year 2014 unless stated otherwise

Member State	No. of businesses	Industry turnover (€ million)	% population using product (Eurostat 2014)	% online population using product (DSM consumer survey, 2014)	No. of online consumers (million) (DSM consumer survey, 2014)	% of consumers using the product in 2014 (IPSOS)	Total consumer spending on product (IPSOS) € 000
Austria	*No data available*	*No data available*	22	43	3	50	5,353
Bulgaria			11	61	2	55	4,667
Czech Republic			16	55	3	44	58
Denmark			42	52	2	60	10,394
France			21	46	16	34	20,578
Germany			21	50	22	39	52,448
Ireland			28	62	1	63	5,881
Italy			17	59	14	55	76,576
Latvia			14	42	0.4	47	854
Netherlands			34	46	5	45	15,685
Poland			8	63	11	45	19,362
Slovenia			18	66	1	66	1,038
Spain			24	63	15	64	35,693
Sweden			35	50	3	54	13,419
United Kingdom			38	56	20	57	77,675
EU28			21	55	140		

Sources and assumptions:

% population using product (Eurostat 2014):

% population using product (DSM consumer survey) and No. of consumers (DSM consumer survey): *ICF estimates based on DSM consumer survey micro-data. N=22,848. Based on question Q3a: Over the last 12 months, how many times on average have you used the following online services (including both paid and free services)? (Storage and transfer of files (e.g. Dropbox, Icloud). Population aged 18 – 99.*

% population using product IPSOS: ICF estimates based on IPSOS survey 2015 and equals % of respondents stating to use an online 'cloud' storage service provided as part of my home internet service subscription package or a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox or a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox in the last 12 months.

1.7.3 Cross border activity

The DSM consumer survey did not ask European consumers about cross border activity of storage of digital content. Industry representatives consulted in this study suggested that differences in national consumer protection rules are less important as a barrier to cross-border transactions than other barriers like language and culture.

1.7.4 Distribution/ sales channels

Storage of digital content was traditionally accessed through home computers / laptops. However in recent years consumers are increasingly accessing services via smartphones.

Large providers like Dropbox are teaming up with national telecom companies (e.g. Deutsche Telecom) to provide storage services on the phone for European consumers. The deal demonstrates the broader trend where storage providers start collaborating with telecoms to provide 'mobile storage services'.

Based on the DSM consumer survey, 92 per cent of EU consumers who access storage of digital content online do so for free. Only 12 per cent of those who accessed digital content storage online reported paying for this service (see Table 51. This trend is confirmed by Eurostat's annual model questionnaires on ICT (Information and Communication Technologies) reporting that only one in ten cloud users paid for internet storage space to save or share their files[176].

Table 51 Estimated % of consumers accessing digital content storage services who do so by paying with money or for free, 2015

Member State	% of Paid use	% of Free use
Austria	8	95
Bulgaria	7	93
Czech Republic	11	91

[176] http://ec.europa.eu/eurostat/statistics-explained/index.php/Internet_and_cloud_services_-_statistics_on_the_use_by_individuals#Use_of_cloud_services

Member State	% of Paid use	% of Free use
Denmark	12	90
France	17	90
Germany	9	94
Ireland	12	91
Italy	11	91
Latvia	6	95
Netherlands	10	93
Poland	13	91
Slovenia	9	94
Spain	9	93
Sweden	16	87
United Kingdom	18	89
EU28	**12**	**92**

Sources and assumptions:

DSM Consumer survey. Q3B. How did you use these online services? (Storage and transfer of files (e.g. Dropbox, iCloud)

For each service type percentages have been calculated on the basis of a single respondent being treated as a separate user for each method of access used

1.7.5 Pricing models

Intense competition on the consumer storage market is decreasing the prices of paid services and this is expected to continue in the future[177]. For instance, some European markets, like Poland, recently saw substantial price decreases for services provided by Dropbox and Google Drive[178].

The main types of pricing models are:

- 14 to 30 days free trials followed by paid subscription based on storage capacity;

[177] http://www.techweekeurope.co.uk/mobility/mobile-apps/amazon-unlimited-cloud-storage-165302

[178] http://maslowski.myapple.pl/posts/6977-dropbox-obniza-ceny-i-staje-sie-bardzo-powaznym-kandydatem-na-moja-osobista-chmure

- Free service limiting storage capacity to 2 and 15 Gigabytes (GB)[179] and paid subscription fee for larger storage capacity.
- Monthly fee for an account with up to 100 GB capacity varies between EUR 1 to 5 per month. For instance, in 2014 users of Google Drive paid ~EUR 1.5 per month for storage capacity between 15 and 100 GB[180].

1.7.6 Consumer behaviour and patterns

There is little data regarding the profile of European consumers of storage services for digital content.

Not surprisingly, Eurostat's annual model questionnaires on ICT (Information and Communication Technologies) concluded that the proportion of young people aged 16-24 using cloud services for saving files is more than three times higher than the proportion of 55 – 74 years old. Cloud services are also less used than social media for sharing files, and the majority of cloud users in the EU use it to share photos[181].

By contrast, based on US data, storage is overwhelmingly dominated by music, and around 90% of Apple, Amazon and Google cloud users, store music files. Even Dropbox, which is not specifically associated with any type of content, sees around 45% of its users storing music files'[182]

Based on the data from the survey conducted by Ipsos as part of this study, consumers that paid for storage of digital content spend between €7.60 - €43.20 per year on storage of digital content.

Table 52 Average annual spending per consumer on storage of digital content, €

Member State	Average spending per year per consumer
Austria	22
Bulgaria	31
Czech Republic	8
Denmark	32
France	18
Germany	25
Ireland	30
Italy	41

179 NetworkComputing, 2013. 8 Great Cloud Storage Services. Available: http://www.networkcomputing.com/cloud-infrastructure/8-great-cloud-storage-services/d/d-id/1109155?

180 http://www.techweekeurope.co.uk/workspace/google-drive-141667

181 Eurostat. Internet and cloud services - statistics on the use by individuals

182 http://www.computerworlduk.com/news/it-vendors/apple-leads-consumer-cloud-storage-wars-3436576/

Member State	Average spending per year per consumer
Latvia	20
Netherlands	43
Poland	14
Slovenia	29
Spain	27
Sweden	18
United Kingdom	33

Source: IPSOS survey 2015. Base: those who had purchased storage of digital content.

In the future, consumers are expected to increasingly use storage of digital content through smartphones. This might lead to problems of interoperability, if consumers are unable to transfer their data when switching or upgrading phones. At the same time consumers' data may be vulnerable to service disruption when stored in the cloud via their smartphone[183].

1.7.7 Future growth

The main drivers of growth for storage of digital content are:

- rapid adoption rate of cloud storage gateways by consumers because of the ease of accessing files from several devices or locations;
- Increasing penetration of the Internet (i.e. broadband development). CISCO GCI indicates fairly strong correlation between the popularity of consumer cloud storage and Internet penetration in Western Europe[184]

The main obstacles to growth of the cloud market are:

- Uncertainty regarding security, data protection and data location;
- Performance related issues;
- Interoperability and portability issues (data portability between cloud service providers); and
- New data protection rules being prepared by the EC may reduce market positioning of the large operators in the EU[185];

Cisco GCI estimates that by 2018, 53 percent (2 billion) of the global consumer Internet population will use personal cloud storage, up from 38 percent (922 million

[183] Europe Economics, 2011.

[184] http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud_Index_White_Paper.html

[185] http://www.computing.co.uk/ctg/news/2413109/eus-new-data-protection-regulations-will-kill-cloud-computing-warn-amazon-cisco-ibm-and-sap

users) in 2013. It estimates that the average number of cloud storage devices per internet user in Western Europe will be 6.34 in 2018[186].

[186] http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud_Index_White_Paper.html

1.8 Streaming of Sports Events

1.8.1 Headline summary

Figure 12 Summary overview table of the live events and streaming of sports events market

Market size and structure	▪ **58 percent** of European internet users stream live events (including sport events, concerts etc.) ▪ Two type of players operate on the market: **Content developers** – the organisers of the sports competitions and **Broadcasters** ▪ **The Market is territorial and diversified.** There are almost no pan-European broadcasters.
Cross border activity	▪ **Cross border activity** in streaming of sports events is low. Geo-blocking applies when exclusive rights have been sold in a territory (i.e. often for the popular competitions, almost never outside of the core market for the less popular sports; ▪ **In 2014, 16 per cent of EU consumers streaming sport events** accessed the content from a provider based in another EU country; ▪ **In 2014, 9 per cent of EU consumers streaming sport events** accessed the content from a provider based in a non-EU country; ▪ Between **5 and 11 per cent of European consumers streaming sport events** reported issues with geo-blocking (e.g. concerts, sports);
Distribution channels	▪ **77 per cent of EU consumers who stream sports events do so without paying with money**
Pricing models	▪ **Content developers** sell territorial licences; ▪ **Broadcasters** can adopt three types of pricing models: – Free to air; – Subscription (bundles); – Pay-per-view;
Consumer behaviour	▪ The **demand for tailor based sport content** by fans drives the territorial characteristics of the streaming of sports events market;
Future growth	▪ Streaming of sports events is increasing but traditional TV viewing is expected to remain unchallenged

1.8.2 Market size and structure

Streaming of sports events is part of the wider streaming of live events market, which in addition to sports includes concerts and other one-off events like presidential debates[187]. But according to industry research in the US[188], sports streaming is one of the biggest drivers of on-line viewing today.

The market is in fact characterised by the format of delivering real time sports content to consumers; internet. More traditional formats include terrestrial television, satellite signal and cable television. Streaming services for sports are in the huge majority of cases added to traditional TV subscriptions / channels. As such there is no real market on its own for streaming of sports events and EU and global market data is scare; As of June 2015 there was no publicly available studies or data regarding market size of streaming of sports events.

However, based on the DSM consumer survey from 2014, ICF estimates that around 58 per cent of European internet users watch live events (e.g. sports, concerts) online. The number of online consumers in EU28 in 2015 is estimated to 148 million.

In the streaming of sports events market two main players operate on the market:

- **Content developers** – the organisers of the sports competitions (e.g. football leagues) which sell exclusive rights to broadcast content in a territory. The rights are usually sold in a transparent and non-discriminatory tendering procedure. The buyer (i.e. the winning bidder) acquires the exclusive right to broadcast live events in a certain territory for a given duration. The exclusivity for a certain territory is normally guaranteed by the use of territorial broadcast restrictions such as geo-blocking. The content is sold on a platform neutral basis (one price for all platforms internet, TV, cable);
- **Broadcasters** buy the rights from content developers and distribute the content to the consumers in a given territory via different formats (including on-line streaming).

The broadcaster market is extremely territorial and diversified across Europe because sport is territorial by nature[189]. Therefore, there are almost no pan-European broadcasters of sports events with the slight exception of Eurosport[190] (which has different versions according to the different countries), and more recently Sky[191]. National broadcaster for selected sports are further presented in Annex 1 for each of the Member States in the scope of this analysis.

Table 53 Estimates of market size, year 2014 unless stated otherwise

Member State	No. of businesses in 2015	Industry turnover € million	% of online population using product	No. of online consumers million
Austria	*No data available*	*No data available*	47	2
Bulgaria			81	3

[187] Streamingmedia.com. The Economics of Live Events. 2012. Accessed at http://www.streamingmedia.com/Articles/Editorial/Featured-Articles/The-Economics-of-Live-Events-66648.aspx

[188] Streaming Industry Stats, 2014

[189] SROC Paper of the Sports Rights Owners Coalition (SROC) on the territoriality, cross-border access to content and portability issues

[190] In 2014, US media group Discovery acquired Eurosport for €902 million. Eurosport broadcasts in 20 languages and reaches over 129 million homes across 59 countries.

[191] News Corporation's Sky has 30 million customers and 31,000 staff across the UK, Ireland, Italy, Germany and Austria. Annual revenues of the company are estimated to £11 billion.

Member State	No. of businesses in 2015	Industry turnover € million	% of online population using product	No. of online consumers million
Czech Republic			73	4
Denmark			44	1
France			50	17
Germany			51	23
Ireland			61	1
Italy			65	16
Latvia			65	1
Netherlands			36	4
Poland			74	13
Slovenia			71	1
Spain			67	15
Sweden			46	2
United Kingdom			55	20
EU28			58	148

Sources and assumptions:
% population using product: ICF estimates based on DSM consumer survey micro-data. N=22,848 based on the number of consumers that answered never to Q4a: Over the last 12 months, how many times on average have you used internet to access the following digital content (including both paid and free access) – Live events (e.g. sports, concerts, etc.)
No. of consumers: Estimated number of 18 – 99 years old consumers based on % population using product and Eurostat population projections [proj_13npms].

1.8.3 Cross border activity

Sports Rights Owner Coalition (SROC)[192] estimates, that the demand for cross-border streaming in Europe is low. It is likely to be less than 3 per cent of total European consumers and expected to be closely linked to intra-European mobility (those Europeans who do not live in their home country and would like to watch sports content from a home broadcaster).

The estimate based on the DSM consumer survey for 2014 is slightly higher and accounts for 9 per cent. 16 per cent of internet users that reportedly watch streaming of online events watch them from providers based in other EU country.

Table 54 Estimated cross-border activity, year 2014

[192] The Sports Rights Owners Coalition (SROC) gathers more than 50 international, European and national sports bodies.

Member State	% EU consumers streaming online events that did so cross-border from providers based in other EU countries	% of EU consumers streaming online events that did so cross-border from non-EU providers
Austria	20	8
Bulgaria	16	6
Czech Republic	12	5
Denmark	14	9
France	16	14
Germany	14	7
Ireland	27	14
Italy	16	10
Latvia	15	11
Netherlands	13	12
Poland	14	5
Slovenia	14	6
Spain	18	8
Sweden	19	10
United Kingdom	15	10
EU28	**16**	**9**

Source:

DSM consumer survey sampling weights applied. Based on DSM consumer survey, Q4d. Over the last 12 months, where did you access online digital content from?

Content developers apply geo-blocking tools only when more than one exclusive territorial right is sold. For instance, for major sport events (like Premier League) exclusive territorial rights are sold to every Member State and hence geo-blocking applies. Estonian Football League which is available on the Estonian Public Service Broadcaster in Estonia and on the streaming platform of this broadcaster outside of Estonia. This is due to the fact that no broadcaster (be it traditional or internet) have bought the rights for Estonian football outside of Estonia

Based on the results of the DSM consumer survey from 2014, less than half (38 per cent) of European consumers tried to stream live events in another EU country. Half (51 per cent) of those users who tried to stream live events in another country experienced problems. (Table 1.33)

Table 55 Demand for cross-border streaming

Member State	I tried and it worked	I tried, but I was not allowed by the content provider	I tried, but I was not allowed by the internet provider	I tried, but it didn't work for another reason	I travelled to another EU country but did not try	I did not travel to another EU country
Austria	14	7	4	5	42	25
Bulgaria	26	9	7	4	4	50
Czech Republic	20	6	6	2	21	45
Denmark	13	5	6	6	34	35
France	20	7	8	4	25	34
Germany	12	7	6	5	33	35
Ireland	15	12	6	5	35	24
Italy	21	8	8	5	22	35
Latvia	19	6	2	1	34	38
Netherlands	15	7	6	7	33	30
Poland	19	7	5	6	21	42
Slovenia	14	9	6	4	32	34
Spain	21	8	9	6	20	34
Sweden	14	6	6	5	33	35
United Kingdom	22	10	9	7	22	28
EU28	**19**	**7**	**7**	**5**	**25**	**36**

Source:
Based on DSM consumer survey, Q4c. Over the last 12 months, when being in another EU country, did you try to view Live events (e.g. sports matches) via streaming that you could normally view in your country of residence?
DSM consumer survey sampling weights applied. For response type percentages have been calculated on the basis of a single respondent being treated as a separate user.

1.8.4 Distribution/ sales channels

Based on the DSM consumer survey from 2014, it is estimated that 77 per cent of consumers streaming events online do so without paying with money. The high number of online consumers reporting streaming live events for free could be a result of two market characteristics:

- Increase in digital piracy affecting the rights owners. The members of the Sports Rights Owner Coalition are noting an increase in the number of websites streaming their content illegally. Based on a case study of the sports rights owner sector included in the OECD Piracy of Digital content study[193] major European football leagues[194] on average accounted for 91 infringing sites during 2007 – 2008 season. However, Bundesliga alone estimated that illegal sites doubled between 2009 and 2014 season. In 2014 they counted already 22,000 illegal

[193] OECD. Piracy of digital content (2009)

[194] Premier League, Bundesliga, La Liga, Serie A

streams (one site can stream several sports events illegally). These sites generate ad-supported revenues and do not pay for the content rights;

- Based on AVMS directive[195] some nationally important sports events need to be broadcasted for free (e.g. national team playing at the World Cup).

Table 56 Estimated % of consumers streaming live events who do so by paying with money or for free, year 2014

Member State	Paid Streaming/ Viewing/ Using online	Free Streaming/ Viewing/ Using online
Austria	22	80
Bulgaria	15	87
Czech Republic	21	81
Denmark	30	75
France	26	80
Germany	30	75
Ireland	30	75
Italy	30	73
Latvia	9	92
Netherlands	28	78
Poland	27	80
Slovenia	20	84
Spain	34	72
Sweden	34	74
United Kingdom	39	68
EU28	28	77

Legend: Shaded grey area= not applicable

Sources and assumptions:
Based on DSM consumer survey, Q4d: How did you access the digital content (events)?
DSM consumer survey sampling weights applied. For each access type percentages have been calculated on the basis of a single respondent being treated as a separate user

1.8.5 Pricing models

The majority of content developers in Europe obtain their revenues based on one main type of model:

[195] http://europa.eu/legislation_summaries/audiovisual_and_media/l24101_en.htm

- selling **territorial licences** to broadcasters of sports events. In practice, there is almost no demand from broadcasters for the delivery of sports content on a pan European basis. Content developers argue that this model allows to maximise both their own revenue stream as well as the benefits for the European consumers. However, recent[196]

Broadcasters generally adopt one or more of the following pricing models:

- **Free to air;** allows any person to watch the content for free. Service costs are covered by advertising or/and sponsorship. Content developers also stream for free in those territories where rights are not purchased;
- **Subscription;** consumers pay monthly or yearly subscription to watch sports matches. Subscription rights are usually sold in bundles combining different sports together.
- **Pay-per-view;** consumers pay for each sport event they would like to see.

1.8.6 Consumer behaviour and patterns

Streaming of sports events is a rapidly growing market at the expense of a more traditional TV viewing. Live sports streaming is a big driver for online viewing. However, the Sports Rights Owners Coalition (SROC) still predicts that traditional TV viewing will remain the main channel for real time viewing of sports events in the future.

By nature, sports fans expect to watch competitions or matches broadcast in ways that meet their cultural preferences. Hence, the content needs to be edited/tailor made to meet their demands. This includes commentary in national language, by nationally/regionally recognised commentators. The analysis is focused on home country players and in team sports, consumers expect that after-match interviews will be conducted with the coaches/managers and players from their national or club team[197]. This consumer behaviour drives the territorial characteristics of the streaming of sports events market.

1.8.7 Future growth

The number of sports events being streamed on the web is growing. For many broadcasters, offering an online streaming is an extension of their brand and is now a necessity. However, the Sports Rights Owners Coalition (SROC) still predicts that traditional TV viewing will remain the main channel for real time viewing of sports events in the future.

Sports Rights Owner Coalition expects that the market will remain territorial based. It seems that there is currently also no interest from major international players (like Google) to invest into creating '*Netflix for sports*' since the content needs to be edited to meet territorial demands[198][199].

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[196] BBC 29June 2015 Eurosport wins Olympic TV rights for Europe Accessed at http://www.bbc.com/news/entertainment-arts-33311902

[197] SROC Paper of the Sports Rights Owners Coalition (SROC) on the territoriality, cross-border access to content and portability issues

[198] Interview with SROC

[199] *Sportcal 26 January 2015 "Speaking at the SpoBiS conference in Düsseldorf last year, Claude Ruibal, YouTube's global head of sports content partnerships, said: "We think the engagement around a live event isn't an area [in which] we are necessarily strong. We're not going to go out and get NFL, Bundesliga or English Premier League live content on our platform. "We don't have the revenue streams to do that, we don't have the wherewithal, that's not our strength. We're not a content creator or curator, we're a distributor of content. But we do think*

Virtual reality technology is expected to be the new broadcast medium to reach fans. There is a trend to offer exclusive live content on the web. For instance, the viewers are now able to see a high-definition 360-degree image from one of multiple set points at whatever sporting event they are attending by using a virtual reality headset[200].

we're really good at having a conversation with your fans outside of game day and outside of the white lines."

[200] Sporttechie. NextVR Looks To Revolutionize Sports Streaming Market With Virtual Reality. 2015 Accessed at http://www.sporttechie.com/2015/03/26/nextvr-looks-to-revolutionize-sports-streaming-market-with-virtual-reality/

Annex 2 Consumer Survey Questionnaire

DIGITAL CONTENT QUESTIONNAIRE (FINAL)

Countries:

- **Great Britain** (1,000 x aged 18-65)
- **France** (1,000 x aged 18-65)
- **Germany** (1,000 x aged 18-65)
- **Italy** (1,000 x aged 18-65)
- **Spain** (1,000 x aged 18-65)
- **The Netherlands** (1,000 x aged 18-65)
- **Poland** (1,000 x aged 18-59)
- **Czech Republic** (1,000 x aged 18-55)
- **Sweden** (1,000 x aged 18-65)
- **Denmark** (1,000 x aged 18-65)
- **Ireland** (1,000 x aged 18-65)
- **Bulgaria** (1,000 x aged 18-55)
- **Latvia** (1,000 x aged 18-55)
- **Slovenia** (1,000 x aged 18-55)
- **Austria** (1,000 x aged 18-65)

INTRODUCTION (ALL)

Thank you for taking part in this survey. The survey asks about music, games and other types of content. All the information we collect will be kept **completely anonymous**, and used for research purposes only.

SCREENER SECTION

Sample: Quotas representative of internet users in each country:

QS1 - Gender **(use standard Ipsos question)**

QS2 – Exact Age – survey eligibility as above **(use standard Ipsos question)**

QS3 - Region **(use standard Ipsos question)**

ASK ALL

QS4

Would you describe the place that you live as…?

SINGLE CODE

A city
A suburb of a city
A town
A village or rural area
Don’t know

Patterns of obtaining digital content products

INTRODUCTION (ALL)

This section asks questions about digital content you may have obtained or accessed for personal use in the past 12 months.

1	**I have PAID to download music** from a digital store such as iTunes, Google Play Music, AmazonMP3 or HMV digital
2	**I have streamed music (or music videos) for FREE** using digital music services / internet radio services such as the FREE versions of Spotify, Deezer, Rdio, Soundcloud or LastFM, or using FREE online video services such as YouTube
3	**I have PAID a subscription fee to stream music (or music videos)** using digital music services such as the PAID versions of Spotify, Deezer, Rdio, Google Play Music All Access, or using YouTube Music Key (YouTube's ad free music subscription service)
4	**I have bought music on CD**
5	**I have bought a game on DISC/CARTRIDGE** for a games console, handheld games device or computer
6	**I have downloaded a game over the internet** (paid or free) for a games console, handheld games device or computer
7	**I have played FREE online games** (for example, free games on social network sites, free online multiplayer games or free browser-based games). These games might include options for paid extras, but it is possible to play for free
8	**I have PAID a subscription fee to play a specific multiplayer online game** (such as World of Warcraft or EVE online)
9	**I have downloaded an APP game** (paid or free), **or made an in-app payment within a game,** on a smartphone or tablet
10	I have **obtained (paid or free) a disc containing anti-virus software** for a computer
11	I have **PAID to download anti-virus software** for a computer or smartphone/tablet
12	I have **PAID an annual subscription fee for anti-virus software** for a computer or smartphone/tablet
13	I **downloaded FREE anti-virus software** for a computer or smartphone/tablet (this could include free trials)
14	I have used an **online 'cloud' storage service provided as part of my home internet service subscription package**, to back up / store files (e.g. photos,

	video, music or documents)
15	**I have used a FREE online 'cloud' storage service** such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox to back up / store files (e.g. photos, video, music or documents)
16	**I have used a PAID online 'cloud' storage service** such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox to back up / store files (e.g. photos, video, music or documents)

Digital content includes things you download or stream over the internet, apps on smartphones/tablets and content contained on a physical CD/disc.

Please EXCLUDE any pirated content.

ASK ALL

Q3

Which, if any, of the following have you personally done in the past 12 months?

ASK ACROSS 4 SEPARATE SCREENS: RANDOMISE ORDER OF THESE: SCREEN A: ITEMS 1-4 [MUSIC] / SCREEN B: ITEMS 5-9 [GAMES] / SCREEN C: ITEMS 10-13 [ANTI-VIRUS] / SCREEN D: ITEMS 14-16 [CLOUD STORAGE]. DO NOT RANDOMISE ORDER WITHIN EACH SCREEN

SIDE OF GRID: SINGLE CODE PER ROW

TOP OF GRID: SINGLE CODE PER ROW

YES – I have personally done this in the past 12 months

NO – I have NOT personally done this in the past 12 months

Don't know

IF NOT CODED YES TO ANY ITEM AT Q3 THEN CLOSE (AND DO NOT COUNT AS COMPLETED SURVEY)

NOTE: THERE IS NO Q4

ASK ALL CODING YES TO ANY OF ITEMS 1, 3-13, 16 AT QUESTION 3

Q5

How much did you personally spend, in total, on each of these in the past 12 months? Your best estimate is fine.

SIDE OF GRID: ONLY SHOW ITEMS CODED YES AT Q3

1	**PAID to download music** from a digital store such as iTunes, Google Play Music, AmazonMP3 or HMV digital
2	**NA**
3	**PAID a subscription fee to stream music (or music videos)** using digital music services such as the PAID versions of Spotify, Deezer, Rdio, Google Play Music All Access, or using YouTube Music Key (YouTube's ad free music subscription service)
4	**Bought music on CD**
5	**Bought a game on DISC/CARTRIDGE** for a games console, handheld games device or computer
6	**Downloaded a game over the internet** (paid or free) for a games console, handheld games device or computer
7	**PAID for extras for FREE online games** (for example, free games on social network sites, free online multiplayer games or free browser-based games)
8	**PAID a subscription fee to play a specific multiplayer online game** (such as World of Warcraft or EVE online)
9	**Downloaded an APP game** (paid or free), **or made an in-app payment within a game,** on a smartphone or tablet
10	**Obtained (paid or free) a disc containing anti-virus software** for a computer
11	**PAID to download anti-virus software** for a computer or smartphone/tablet
12	**PAID an annual subscription fee** for anti-virus software for a computer or smartphone/tablet
13	**PAID to upgrade anti-virus software** that you had downloaded for free for a computer or smartphone/tablet (this could include paying at the end of a free trial)
14	**NA**
15	**NA**
16	**Used a PAID online 'cloud' storage service** such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox to back up / store files (e.g. photos, video, music or documents)

TOP OF GRID: SINGLE CODE PER ROW

Nothing/I have only done this for free **DO NOT ALLOW FOR ITEMS 1/3/4/5/8/11/12/16**

Less than €5

€5 to €9

€10 to €24

€25 to €49

€50 to €99

€100 to €199

€200 to €499

€500 or more

Don’t know

Problems encountered by consumers

INTRODUCTION (ALL CODING 'YES' TO ANY ITEM AT Q3)

This section asks you questions about problems and issues you may have been experiencing when obtaining / accessing digital content for personal use. For this survey, we are interested only in problems relating to:

Quality

Access

Terms and conditions

ASK ALL CODING 'YES' TO ANY ITEM AT Q3

ASK EACH ITEM ON A SEPARATE SCREEN

RANDOMISE ORDER OF QUESTIONS IN 4 BLOCKS: BLOCK A: ITEMS 1-4 [MUSIC] / BLOCK B: ITEMS 5-9 [GAMES] / BLOCK C: ITEMS 10-13 [ANTI-VIRUS] / BLOCK D: ITEMS 14-16 [CLOUD STORAGE]

Q6

You said that you had personally done the following in the past 12 months:

INSERT EACH ITEM CODED YES AT QUESTION 3 (ONE ITEM PER SCREEN)

In the past 12 months, which, if any, of these problems have you personally encountered when doing this? Please select all that apply.

MULTI-CODE. RANDOMISE ORDER OF CODES IN 3 BLOCKS (AND WITHIN BLOCKS): BLOCK A: 1-8

[QUALITY] / BLOCK B: 9-15 [ACCESS] / BLOCK C: 16-22 [T&Cs]. KEEP THE SAME ORDER FOR EACH RESPONDENT FOR ALL ITERATIONS OF THIS QUESTION

PRODUCT	SUPPRESS CODES
1	5, 12
2	5, 12
3	5, 12
4	6, 9-22

5	-
6	5
7	5
8	5
9	5
10	-
11	5
12	5
13	5
14	5
15	5
16	5

HEADING	**Quality**
1	The digital content caused damage to my computer, mobile phone or other device
2	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
3	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
4	The quality of the digital content was poor compared to what one would normally expect from similar digital content
5	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
6	I did not receive updates for the content as promised by the supplier
7	I received a different/older version of the content than the one promised by the supplier
8	Other quality problems – please specify **FIX POSITION WITHIN BLOCK**
HEADING	**Access**
9	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
10	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
11	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
12	After ending the contract, I was not able to access or get my data (e.g. photos) back
13	I had more limited access to a service or content than I had expected given the information I had received from the supplier
14	I could not download or access the digital content because my internet connection didn't work/was bad
15	Other access problems – please specify **FIX POSITION WITHIN BLOCK**
HEADING	**Terms and conditions**
16	The T&Cs were too long and I did not read these
17	I did not understand what my rights were because the T&C were unclear

18	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
19	The T&C gave the provider the right to remove or amend services or content without providing me with notice
20	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
21	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
22	Other terms and conditions problems – please specify **FIX POSITION WITHIN BLOCK**
23	None. I have not experienced any of the above problems over the past 12 months **FIX POSITION LAST IN LIST**

IF NOT CODED 1-22 TO ANY ITEM AT Q6 THEN CLOSE (AND DO COUNT AS COMPLETED SURVEY)

RANDOMISE ORDER OF QUESTIONS Q7a/b/c/d

ASK ALL CODING 1-22 AT ANY OF Q6 ITEMS ITEMS 1-4 [MUSIC]

Q7a

Which ONE of these problems was the most recent that you personally had for MUSIC?

ONLY SHOW ITEMS CODED AT Q6

(IF ONLY ONE OPTION POSSIBLE THEN AUTO-CODE WITHOUT ASKING)

SINGLE CODE

HEADING	**I have PAID to download music** from a digital store such as iTunes, Google Play Music, AmazonMP3 or HMV digital
101	The digital content caused damage to my computer, mobile phone or other device
102	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
103	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
104	The quality of the digital content was poor compared to what one would normally expect from similar digital content

105	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
106	I did not receive updates for the content as promised by the supplier
107	I received a different/older version of the content than the one promised by the supplier
108	Other quality problems – please specify
109	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
110	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
111	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
112	After ending the contract, I was not able to access or get my data (e.g. photos) back
113	I had more limited access to a service or content than I had expected given the information I had received from the supplier
114	I could not download or access the digital content because my internet connection didn't work/was bad
115	Other access problems – please specify
116	The T&Cs were too long and I did not read these
117	I did not understand what my rights were because the T&C were unclear
118	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
119	The T&C gave the provider the right to remove or amend services or content without providing me with notice
120	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
121	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
122	Other terms and conditions problems – please specify
HEADING	**I have streamed music (or music videos) for FREE** using digital music services / internet radio services such as the FREE versions of Spotify, Deezer, Rdio, Soundcloud or LastFM, or using FREE online video services such as YouTube

201	The digital content caused damage to my computer, mobile phone or other device
202	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
203	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
204	The quality of the digital content was poor compared to what one would normally expect from similar digital content
205	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
206	I did not receive updates for the content as promised by the supplier
207	I received a different/older version of the content than the one promised by the supplier
208	Other quality problems – please specify
209	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
210	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
211	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
212	After ending the contract, I was not able to access or get my data (e.g. photos) back
213	I had more limited access to a service or content than I had expected given the information I had received from the supplier
214	I could not download or access the digital content because my internet connection didn’t work/was bad
215	Other access problems – please specify
216	The T&Cs were too long and I did not read these
217	I did not understand what my rights were because the T&C were unclear
218	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
219	The T&C gave the provider the right to remove or amend services or content without providing me with notice

220	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
221	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
222	Other terms and conditions problems – please specify
HEADING	**I have PAID a subscription fee to stream music (or music videos)** using digital music services such as the PAID versions of Spotify, Deezer, Rdio, Google Play Music All Access, or using YouTube Music Key (YouTube's ad free music subscription service)
301	The digital content caused damage to my computer, mobile phone or other device
302	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
303	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
304	The quality of the digital content was poor compared to what one would normally expect from similar digital content
305	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
306	I did not receive updates for the content as promised by the supplier
307	I received a different/older version of the content than the one promised by the supplier
308	Other quality problems – please specify
309	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
310	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
311	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
312	After ending the contract, I was not able to access or get my data (e.g. photos) back
313	I had more limited access to a service or content than I had expected given the information I had received from the supplier
314	I could not download or access the digital content because my internet connection didn't work/was bad

315	Other access problems – please specify
316	The T&Cs were too long and I did not read these
317	I did not understand what my rights were because the T&C were unclear
318	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
319	The T&C gave the provider the right to remove or amend services or content without providing me with notice
320	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
321	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
322	Other terms and conditions problems – please specify
	I have bought music on CD
401	The digital content caused damage to my computer, mobile phone or other device
402	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
403	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
404	The quality of the digital content was poor compared to what one would normally expect from similar digital content
405	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
406	I did not receive updates for the content as promised by the supplier
407	I received a different/older version of the content than the one promised by the supplier
408	Other quality problems – please specify
409	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
410	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
411	I could not access the content or digital service in one or more countries

	where the supplier had promised that I would have access
412	After ending the contract, I was not able to access or get my data (e.g. photos) back
413	I had more limited access to a service or content than I had expected given the information I had received from the supplier
414	I could not download or access the digital content because my internet connection didn't work/was bad
415	Other access problems – please specify
416	The T&Cs were too long and I did not read these
417	I did not understand what my rights were because the T&C were unclear
418	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
419	The T&C gave the provider the right to remove or amend services or content without providing me with notice
420	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
421	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
422	Other terms and conditions problems – please specify

ASK ALL CODING 1-22 AT ANY OF Q6 ITEMS ITEMS 5-9 [GAMES]

Q7b

Which ONE of these problems was the most recent that you personally had for GAMES?

ONLY SHOW ITEMS CODED AT Q6

(IF ONLY ONE OPTION POSSIBLE THEN AUTO-CODE WITHOUT ASKING)

SINGLE CODE

HEADING	**I have bought a game on DISC/CARTRIDGE** for a games console, handheld games device or computer

501	The digital content caused damage to my computer, mobile phone or other device
502	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
503	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
504	The quality of the digital content was poor compared to what one would normally expect from similar digital content
505	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
506	I did not receive updates for the content as promised by the supplier
507	I received a different/older version of the content than the one promised by the supplier
508	Other quality problems – please specify
509	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
510	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
511	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
512	After ending the contract, I was not able to access or get my data (e.g. photos) back
513	I had more limited access to a service or content than I had expected given the information I had received from the supplier
514	I could not download or access the digital content because my internet connection didn’t work/was bad
515	Other access problems – please specify
516	The T&Cs were too long and I did not read these
517	I did not understand what my rights were because the T&C were unclear
518	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
519	The T&C gave the provider the right to remove or amend services or content without providing me with notice

520	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
521	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
522	Other terms and conditions problems – please specify
HEADING	**I have downloaded a game over the internet** (paid or free) for a games console, handheld games device or computer
601	The digital content caused damage to my computer, mobile phone or other device
602	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
603	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
604	The quality of the digital content was poor compared to what one would normally expect from similar digital content
605	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
606	I did not receive updates for the content as promised by the supplier
607	I received a different/older version of the content than the one promised by the supplier
608	Other quality problems – please specify
609	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
610	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
611	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
612	After ending the contract, I was not able to access or get my data (e.g. photos) back
613	I had more limited access to a service or content than I had expected given the information I had received from the supplier
614	I could not download or access the digital content because my internet connection didn't work/was bad

615	Other access problems – please specify
616	The T&Cs were too long and I did not read these
617	I did not understand what my rights were because the T&C were unclear
618	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
619	The T&C gave the provider the right to remove or amend services or content without providing me with notice
620	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
621	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
622	Other terms and conditions problems – please specify
HEADING	**I have played FREE online games** (for example, free games on social network sites, free online multiplayer games or free browser-based games). These games might include options for paid extras, but it is possible to play for free
701	The digital content caused damage to my computer, mobile phone or other device
702	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
703	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
704	The quality of the digital content was poor compared to what one would normally expect from similar digital content
705	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
706	I did not receive updates for the content as promised by the supplier
707	I received a different/older version of the content than the one promised by the supplier
708	Other quality problems – please specify
709	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete

710	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
711	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
712	After ending the contract, I was not able to access or get my data (e.g. photos) back
713	I had more limited access to a service or content than I had expected given the information I had received from the supplier
714	I could not download or access the digital content because my internet connection didn't work/was bad
715	Other access problems – please specify
716	The T&Cs were too long and I did not read these
717	I did not understand what my rights were because the T&C were unclear
718	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
719	The T&C gave the provider the right to remove or amend services or content without providing me with notice
720	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
721	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
722	Other terms and conditions problems – please specify
	I have PAID a subscription fee to play a specific multiplayer online game (such as World of Warcraft or EVE online)
801	The digital content caused damage to my computer, mobile phone or other device
802	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
803	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
804	The quality of the digital content was poor compared to what one would normally expect from similar digital content

805	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
806	I did not receive updates for the content as promised by the supplier
807	I received a different/older version of the content than the one promised by the supplier
808	Other quality problems – please specify
809	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
810	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
811	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
812	After ending the contract, I was not able to access or get my data (e.g. photos) back
813	I had more limited access to a service or content than I had expected given the information I had received from the supplier
814	I could not download or access the digital content because my internet connection didn't work/was bad
815	Other access problems – please specify
816	The T&Cs were too long and I did not read these
817	I did not understand what my rights were because the T&C were unclear
818	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
819	The T&C gave the provider the right to remove or amend services or content without providing me with notice
820	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
821	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
822	Other terms and conditions problems – please specify
HEADING	**I have downloaded an APP game** (paid or free), **or made an in-app payment within a game,** on a smartphone or tablet

901	The digital content caused damage to my computer, mobile phone or other device
902	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
903	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
904	The quality of the digital content was poor compared to what one would normally expect from similar digital content
905	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
906	I did not receive updates for the content as promised by the supplier
907	I received a different/older version of the content than the one promised by the supplier
908	Other quality problems – please specify
909	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
910	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
911	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
912	After ending the contract, I was not able to access or get my data (e.g. photos) back
913	I had more limited access to a service or content than I had expected given the information I had received from the supplier
914	I could not download or access the digital content because my internet connection didn’t work/was bad
915	Other access problems – please specify
916	The T&Cs were too long and I did not read these
917	I did not understand what my rights were because the T&C were unclear
918	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
919	The T&C gave the provider the right to remove or amend services or content without providing me with notice

920	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
921	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
922	Other terms and conditions problems – please specify

ASK ALL CODING 1-22 AT ANY OF Q6 ITEMS ITEMS 10-13 [ANTI-VIRUS]

Q7c

Which ONE of these problems was the most recent that you personally had for ANTI-VIRUS SOFTWARE?

ONLY SHOW ITEMS CODED AT Q6

(IF ONLY ONE OPTION POSSIBLE THEN AUTO-CODE WITHOUT ASKING)

SINGLE CODE

HEADING	I have **obtained (paid or free) a disc containing anti-virus software** for a computer
1001	The digital content caused damage to my computer, mobile phone or other device
1002	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1003	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1004	The quality of the digital content was poor compared to what one would normally expect from similar digital content
1005	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1006	I did not receive updates for the content as promised by the supplier
1007	I received a different/older version of the content than the one promised by the supplier
1008	Other quality problems – please specify
1009	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete

1010	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1011	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1012	After ending the contract, I was not able to access or get my data (e.g. photos) back
1013	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1014	I could not download or access the digital content because my internet connection didn't work/was bad
1015	Other access problems – please specify
1016	The T&Cs were too long and I did not read these
1017	I did not understand what my rights were because the T&C were unclear
1018	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1019	The T&C gave the provider the right to remove or amend services or content without providing me with notice
1020	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1021	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1022	Other terms and conditions problems – please specify
HEADING	I have **PAID to download anti-virus software** for a computer or smartphone/tablet
1101	The digital content caused damage to my computer, mobile phone or other device
1102	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1103	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1104	The quality of the digital content was poor compared to what one would normally expect from similar digital content

1105	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1106	I did not receive updates for the content as promised by the supplier
1107	I received a different/older version of the content than the one promised by the supplier
1108	Other quality problems – please specify
1109	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
1110	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1111	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1112	After ending the contract, I was not able to access or get my data (e.g. photos) back
1113	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1114	I could not download or access the digital content because my internet connection didn't work/was bad
1115	Other access problems – please specify
1116	The T&Cs were too long and I did not read these
1117	I did not understand what my rights were because the T&C were unclear
1118	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1119	The T&C gave the provider the right to remove or amend services or content without providing me with notice
1120	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1121	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1122	Other terms and conditions problems – please specify
HEADING	I have PAID an annual subscription fee for anti-virus software for a computer or smartphone/tablet

1201	The digital content caused damage to my computer, mobile phone or other device
1202	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1203	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1204	The quality of the digital content was poor compared to what one would normally expect from similar digital content
1205	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1206	I did not receive updates for the content as promised by the supplier
1207	I received a different/older version of the content than the one promised by the supplier
1208	Other quality problems – please specify
1209	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
1210	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1211	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1212	After ending the contract, I was not able to access or get my data (e.g. photos) back
1213	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1214	I could not download or access the digital content because my internet connection didn’t work/was bad
1215	Other access problems – please specify
1216	The T&Cs were too long and I did not read these
1217	I did not understand what my rights were because the T&C were unclear
1218	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1219	The T&C gave the provider the right to remove or amend services or content without providing me with notice

1220	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1221	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1222	Other terms and conditions problems – please specify
HEADING	I **downloaded FREE anti-virus software** for a computer or smartphone/tablet (this could include free trials)
1301	The digital content caused damage to my computer, mobile phone or other device
1302	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1303	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1304	The quality of the digital content was poor compared to what one would normally expect from similar digital content
1305	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1306	I did not receive updates for the content as promised by the supplier
1307	I received a different/older version of the content than the one promised by the supplier
1308	Other quality problems – please specify
1309	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
1310	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1311	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1312	After ending the contract, I was not able to access or get my data (e.g. photos) back
1313	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1314	I could not download or access the digital content because my internet connection didn't work/was bad

1315	Other access problems – please specify
1316	The T&Cs were too long and I did not read these
1317	I did not understand what my rights were because the T&C were unclear
1318	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1319	The T&C gave the provider the right to remove or amend services or content without providing me with notice
1320	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1321	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1322	Other terms and conditions problems – please specify

ASK ALL CODING 1-22 AT ANY OF Q6 ITEMS ITEMS 14-16 [CLOUD STORAGE]

Q7d

Which ONE of these problems was the most recent that you personally had for ONLINE 'CLOUD' STORAGE SERVICES?

ONLY SHOW ITEMS CODED AT Q6

(IF ONLY ONE OPTION POSSIBLE THEN AUTO-CODE WITHOUT ASKING)

SINGLE CODE

HEADING	I have used an **online 'cloud' storage service provided as part of my home internet service subscription package**, to back up / store files (e.g. photos, video, music or documents)
1401	The digital content caused damage to my computer, mobile phone or other device
1402	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1403	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1404	The quality of the digital content was poor compared to what one would normally expect from similar digital content

1405	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1406	I did not receive updates for the content as promised by the supplier
1407	I received a different/older version of the content than the one promised by the supplier
1408	Other quality problems – please specify
1409	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
1410	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1411	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1412	After ending the contract, I was not able to access or get my data (e.g. photos) back
1413	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1414	I could not download or access the digital content because my internet connection didn't work/was bad
1415	Other access problems – please specify
1416	The T&Cs were too long and I did not read these
1417	I did not understand what my rights were because the T&C were unclear
1418	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1419	The T&C gave the provider the right to remove or amend services or content without providing me with notice
1420	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1421	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1422	Other terms and conditions problems – please specify

HEADING	**I have used a FREE online 'cloud' storage service** such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox to back up / store files (e.g. photos, video, music or documents)
1501	The digital content caused damage to my computer, mobile phone or other device
1502	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1503	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1504	The quality of the digital content was poor compared to what one would normally expect from similar digital content
1505	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1506	I did not receive updates for the content as promised by the supplier
1507	I received a different/older version of the content than the one promised by the supplier
1508	Other quality problems – please specify
1509	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
1510	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1511	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1512	After ending the contract, I was not able to access or get my data (e.g. photos) back
1513	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1514	I could not download or access the digital content because my internet connection didn't work/was bad
1515	Other access problems – please specify
1516	The T&Cs were too long and I did not read these
1517	I did not understand what my rights were because the T&C were unclear

1518	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1519	The T&C gave the provider the right to remove or amend services or content without providing me with notice
1520	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1521	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1522	Other terms and conditions problems – please specify
HEADING	**I have used a PAID online 'cloud' storage service** such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox to back up / store files (e.g. photos, video, music or documents)
1601	The digital content caused damage to my computer, mobile phone or other device
1602	The digital content did not work properly and/or was of poor visual or audio quality compared to what was promised by the supplier
1603	The digital content was incompatible with my hardware/software, although the information provided suggested it would be compatible
1604	The quality of the digital content was poor compared to what one would normally expect from similar digital content
1605	The video/ audio/ software CD or DVD (or other physical format) that I bought was visibly damaged (scratched etc.) and therefore did not work properly
1606	I did not receive updates for the content as promised by the supplier
1607	I received a different/older version of the content than the one promised by the supplier
1608	Other quality problems – please specify
1609	It was difficult/impossible to download or access the digital content because the supplier's instructions were unclear or incomplete
1610	Unexpected interruptions (e.g. crashes, unannounced maintenance) prevented me from fully using / accessing the digital content or service
1611	I could not access the content or digital service in one or more countries where the supplier had promised that I would have access
1612	After ending the contract, I was not able to access or get my data

	(e.g. photos) back
1613	I had more limited access to a service or content than I had expected given the information I had received from the supplier
1614	I could not download or access the digital content because my internet connection didn't work/was bad
1615	Other access problems – please specify
1616	The T&Cs were too long and I did not read these
1617	I did not understand what my rights were because the T&C were unclear
1618	The T&C excluded the supplier from most or all of any responsibility for problems arising with the digital service or content
1619	The T&C gave the provider the right to remove or amend services or content without providing me with notice
1620	The T&C entitled the supplier to close my account without giving me the opportunity to retrieve my data
1621	I am bound by a long term subscription to digital content or services (of more than one year) and I cannot terminate it before the expiration of this term
1621	Other terms and conditions problems – please specify

SELECT UP TO TWO PROBLEMS FROM Q7a/b/c/d

IF MORE THAN TWO PROBLEMS AT Q7a/b/c/d THEN PRIORITISE IN FOLLOWING ORDER:

CLOUD STORAGE

ANTI-VIRUS

MUSIC / GAMES (RANDOM)

RANDOMISE ORDER OF TWO SELECTED PROBLEMS

ASK QUESTIONS 8-23 FOR FIRST PROBLEM, THEN REPEAT FOR SECOND PROBLEM

INTRODUCTION FOR SELECTED PROBLEM

For the following questions, please think specifically about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

ASK FOR SELECTED PROBLEM (IF ASKING FOR Q7a/b/c/d ITEMS INDICATED IN TABLE BELOW)

Q8

Thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

Which specific type of product/service was this? Please select all aspects that apply.

MULTI-CODE

2_1	I had registered to obtain access for free	**SHOW IF SELECTED PROBLEM Q7a 201-222**
2_2	I receive advertising content to obtain access for free	**SHOW IF SELECTED PROBLEM Q7a 201-222**
6_1	I paid money to download the game	**SHOW IF SELECTED ITEM PROBLEM Q7b 601-622**
6_2	I have made an in-game purchase	**SHOW IF SELECTED ITEM PROBLEM Q7b 601-622**
6_3	I registered to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7b 601-622**
6_4	I receive advertising content to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7b 601-622**
7_1	I have made an in-game purchase	**SHOW IF SELECTED ITEM PROBLEM Q7b 701-722**
7_2	I registered to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7b 701-722**

7_3	I receive advertising content to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7b 701-722**
9_1	I paid money to download the app game	**SHOW IF SELECTED ITEM PROBLEM Q7b 901-922**
9_2	I have made an in-app purchase	**SHOW IF SELECTED ITEM PROBLEM Q7b 901-922**
9_3	I registered to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7b 901-922**
9_4	I receive advertising content to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7b 901-922**
10_1	I paid money to obtain the disc	**SHOW IF SELECTED ITEM PROBLEM Q7c 1001-1022**
10_2	I obtained the disc for free, <u>without</u> purchasing another product	**SHOW IF SELECTED ITEM PROBLEM Q7c 1001-1022**
10_3	I obtained the disc for free, when purchasing another product	**SHOW IF SELECTED ITEM PROBLEM Q7c 1001-1022**
13_1	I made an in-software purchase (e.g. upgrading from free to paid version)	**SHOW IF SELECTED ITEM PROBLEM Q7c 1301-1322**
13_2	I registered to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7c 1301-1322**
13_3	I received advertising content to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7c 1301-1322**
15_1	I made an in-software purchase (e.g. upgrading from free to paid version)	**SHOW IF SELECTED ITEM PROBLEM Q7c 1501-1522**
15_2	I registered to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7c 1501-1522**
15_3	I received advertising content to obtain access for free	**SHOW IF SELECTED ITEM PROBLEM Q7c**

		1501-1522
None	None of these	
DK	Don't know	

ASK FOR SELECTED PROBLEM

Q9

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

When did this specific problem first occur?

SINGLE CODE

In the past month

1 to 2 months ago

3 to 4 months ago

5 to 6 months ago

7 to 9 months ago

10 to 12 months ago

More than 12 months ago

Don't know

ASK FOR SELECTED PROBLEM

Q10

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

What length of time passed, from time that the most recent problem first occurred until the time that the product or service worked again?

SINGLE CODE

No more than 1 hour

No more than 5 hours

No more than 24 hours

No more than 1 week

No more than 1 month

No more than 3 months

No more than 6 months

More than 6 months

Problem still exists

Don't know

ASK FOR SELECTED PROBLEM

Q11

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

Have you taken any action relating to this problem (such as trying to get it resolved, complaining or posting online comments)?

SINGLE CODE

Yes

No

Don't know

ASK FOR SELECTED PROBLEM (IF CODED YES AT Q11)

Q12

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

What actions did you take relating to problem? Please select all that apply

MULTI CODE

Made a complaint

Requested assistance (e.g. online helpdesk, email, phoned)

Asked for a replacement

Asked for a repair

Asked for a refund

Asked for compensation

Made use of a commercial guarantee / warranty / insurance policy

Withheld payment

Requested/declared that an unfair term/condition should not be applied

Posted negative feedback (e.g. via online reviews, website of provider or social media)

Tried to fix it myself

Other: please specify

ASK FOR SELECTED PROBLEM (IF CODED 1 AT Q12)

Q13

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

2. To whom did you make the complaint? Please select all that apply
3.

MULTI CODE

Retailer/seller or service provider

Manufacturer

Public / consumer organisation

Brought the matter to an out-of-court dispute resolution body such as an ombudsman, arbitration, mediation or conciliation body

Took the business concerned to court

Other: please specify

Don't know

4.

ASK FOR SELECTED PROBLEM (IF CODED 3-6 AT Q12)

Q14

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

5. Whom did you ask for a replacement / repair / refund / compensation?
6.

SINGLE CODE

Retailer/seller or service provider

Manufacturer

Public / consumer organisation

An out-of-court dispute resolution body such as an ombudsman, arbitration, mediation or conciliation body

A court

Other: please specify

Don’t know

ASK FOR SELECTED PROBLEM (IF CODED 7 AT Q12)

SUPPRESS QUESTION

Q15

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

7. How did you obtain the commercial guarantee / warranty / insurance policy?
8.

SINGLE CODE

Purchased from the seller or service provider

Purchased from a third party

Given to me for free by the seller or service provider

Given to me by consumer protection laws in force

Other: please specify

Don’t know

ASK FOR SELECTED PROBLEM (IF CODED 10 AT Q12)

SUPPRESS QUESTION

Q16

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

9. Where did you provide negative feedback? Please select all that apply
10.

MULTI-CODE

Online reviews

On website of provider

Social media

Other: please specify

Don’t know

ASK FOR SELECTED PROBLEM

Q17a

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

11. Which, if any, of the following costs did you incur as a result of this particular problem? Please select all that apply
12.

MULTI CODE

Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement/substitute

Cost to you of any telephone calls, postage or stationery

Any travel costs you have incurred

Costs to you of any legal matters or for legal advice

Costs to you of getting any other type of expert advice or assistance

Cost incurred as a result of over-payment that has not as yet been reimbursed

Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs.

Resolving the problem by buying a replacement/substitute product or alternative service at your own expense

Costs of any knock-on /consequential damage or inconvenience caused to you or any of your possessions as a result of the problem (e.g. bad quality of the anti-virus software led to damage to your computer's hard disk, which you had to then replace; lack of access to cloud storage services prevented you from consulting your study materials on time, which led to you failing an exam)

Reduction in usefulness of the goods concerned as a result of the problem

Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem

Any other ways not already covered in which you have spent money as a result of the problem

None / I did not incur any costs **SINGLE CODE**

ASK FOR SELECTED PROBLEM (IF CODED AT OF ITEMS 1-12 AT QUESTION Q17a)

Q17b

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

13. Please estimate the costs you incurred as a result of this particular problem? Please select one response per row. Your best estimate is fine
14.

SIDE OF GRID – ONLY SHOW ITEMS CODED AT Q17a

Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement/substitute

Cost to you of any telephone calls, postage or stationery

Any travel costs you have incurred

Costs to you of any legal matters or for legal advice

Costs to you of getting any other type of expert advice or assistance

Cost incurred as a result of over-payment that has not as yet been reimbursed

Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs.

Resolving the problem by buying a replacement/substitute product or alternative service at your own expense

Costs of any knock-on /consequential damage or inconvenience caused to you or any of your possessions as a result of the problem (e.g. bad quality of the anti-virus software led to damage to your computer's hard disk, which you had to then replace; lack of access to cloud storage services prevented you from consulting your study materials on time, which led to you failing an exam)

Reduction in usefulness of the goods concerned as a result of the problem

Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem

Any other ways not already covered in which you have spent money as a result of the problem

TOP OF GRID

Less than €5

€5 to €9

€10 to €24

€25 to €49

€50 to €99

€100 to €199

€200 to €499

€500 or more

Don't know

ASK FOR SELECTED PROBLEM

Q18

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

15. How much time did you spend trying to resolve the problem?
16.

SINGLE CODE

17. No time
18. Less than 1 hour
19. 1 to 2 hours
20. 3 to 4 hours
21. 5 to 9 hours
22. 10 to 19 hours
23. 20 hours or more

Don't know

ASK FOR SELECTED PROBLEM

Q19

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

24. Which of these, if any, has the supplier done? Please select all that apply
25.

MULTI-CODE

26. Nothing **SINGLE CODE**

Acknowledged the problem

Investigated/is investigating the problem

Offered / provided a replacement product or service

Offered / provided an alternative product or service

Offered / provided a full refund

Offered / provided a partial refund

Offered / provided compensation in money

Offered / provided compensation in credit note or in vouchers

Given you a satisfactory explanation for the problem

Given you an unsatisfactory explanation for the problem

Apologised

Referred/is referring the problem elsewhere (e.g. to another company or organisation)

Solved/is solving the problem

Did not apply the unfair terms

Any other actions taken by the company/organisation (please specify)

Don't Know **SINGLE CODE**

ASK FOR SELECTED PROBLEM (IF CODED 4-9 AT Q19)

Q20

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

27. What was the total value of refund / compensation / credit note / vouchers offered/provided?
28.

SINGLE CODE

Less than €5

€5 to €9

€10 to €24

€25 to €49

€50 to €99

€100 to €199

€200 to €499

€500 or more

The value is not yet confirmed/known

Don't know

ASK FOR SELECTED PROBLEM (IF CODED 'YES' AT Q11)

Q20b

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

29. Which of these, if any, did the supplier state in relation to your problem? Please select all that apply
30.

MULTI-CODE (RANDOMISE ORDER OF CODES 1-5)

They indicated that they did NOT intend to take any action to resolve my problem

They said that the problem was caused by me

They said that according to the contract/terms and conditions they were not responsible for this kind of problem

They said that I did not provide sufficient proof that there was a problem/defect

They said that they were not obliged by law to satisfy my request

Other: Please specify

None of these **SINGLE CODE**

Don't know **SINGLE CODE**

ASK FOR SELECTED PROBLEM

Q21

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

31. During the period of the problem taking place, to what extent have you felt...?
32.
33. **SIDE OF GRID – RANDOMISE ORDER**
34.
35. Under stress
36. Angry
37. Worried
38. Frustrated
39.

SINGLE CODE PER ROW

A great deal

A fair amount

A little

Not at all

Don’t know

ASK FOR SELECTED PROBLEM

Q22

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

40. From your point of view is the matter closed, or are you expecting further communications/actions?
41.

SINGLE CODE

The matter is closed

I am expecting further communications/actions

Don't know

ASK FOR SELECTED PROBLEM

Q23

Still thinking about the most recent problem that you personally had with the following:

INSERT SELECTED FORMAT FROM Q7a/b/c/d

INSERT SELECTED PROBLEM FROM Q7a/b/c/d

42. How satisfied are you with the outcome **[IF CODED 2-3 AT Q22 INSERT WORDS:** so far**]**?
43.

SINGLE CODE

Very satisfied

Somewhat satisfied

Neither satisfied nor dissatisfied

Somewhat dissatisfied

Very dissatisfied

Don't know

Annex 3 Detailed Results of Consumer Survey

29 September 2015

Document Control

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Contents

1 Introduction 200
1.1 Methodology 200
2 Usage of digital content products 202
2.1 Usage of digital content products 202
2.2 Expenditure on digital content products 208
3 Problems 213
3.1 Incidence of problems 213
3.1.1 Paid versus free – combined products 213
3.1.2 Different formats 215
3.1.3 Incidence of different types of problem (quality, access, terms & conditions) 222
3.2 Time taken for problems to be resolved 244
3.2.1 Time taken for problems to be resolved: paid and free products 244
3.2.2 Time taken for problems to be resolved: tangible and intangible products 249
3.2.3 Time taken for different types of problem to be resolved 253
4 Action to resolve problems 258
4.1 Type of action taken to resolve problems 258
4.2 Target of action taken to resolve problem 266
4.3 Incidence of consumers taking action in response to problems 267
4.4 Incidence of consumers incurring costs 271
4.5 Estimates of costs incurred 283
4.5.1 All intangible digital content products 283
4.5.2 'Free' intangible digital content products 310
4.6 Time spent resolving problems 322
4.6.1 Time spent resolving problems with 'paid' and 'free' products 322
4.6.2 Time spent resolving problems with 'tangible' and 'intangible' products 325
4.6.3 Time spent resolving different types of problem 328
4.7 Psychological effects on consumers 331
4.7.1 All problems 331
4.7.2 Different types of problem 333
5 Remedies and resolution 344
5.1 Remedies offered by suppliers 344
5.2 Value of remedies offered 348
5.2.1 Value of remedies offered for 'paid' and 'free' products 348
5.2.2 Value of remedies offered for 'tangible' and 'intangible' products 351
5.2.3 Value of remedies offered for different types of problem 355
5.3 Supplier reactions to problems 358
5.4 Consumer satisfaction with outcomes 361

1 Introduction

This document provides a detailed analysis of the results of the consumer survey undertaken to inform the "Economic Study on Consumer Digital Content Products" which was launched by the Directorate-General for Justice and Consumers in March 2015.

1.1 Methodology

This section provides a summary of the overall approach to the survey, which was undertaken by Ipsos MediaCT in June and July 2015. The survey was conducted online with respondents in 15 sample countries. It collected data on:

- *Usage and spending patterns of consumers*– types of digital content accessed (on tangible/ intangible medium, online/ offline, paid/ free content) and average spend per product category;
- *Prevalence of problems* - the extent to which consumers had encountered specific problems relating to "quality", "access" and "terms and conditions" (measured in terms of the percentage of consumers experiencing a particular problem).
- For the two most recent problems reported by consumers, the survey included questions on:
  - *Action taken by the respondent to resolve the problem(s)* e.g. whether the respondent had exercised right of withdrawal, sought replacement, sought compensation for harm caused, made a complaint etc.;
  - *Result of the action taken* - whether or not they have received any remedies from the supplier of the digital service; the type of remedies received (i.e. financial or non-financial); and the value of remedies (i.e. where financial remedies were received).
  - *Impact of the problem(s)* - financial and non-financial detriment resulting from recent problem(s), as reported by consumers. The survey did not include questions exploring the impact of problems on consumer confidence, behaviour or future usage patterns (e.g. changes in the choices made by consumers between different suppliers and products).

The survey was carried out using Ipsos panels, or where appropriate using approved panel partners. The sample comprised online panel members who access the internet at least weekly.

Survey results were weighted for interlocked age and gender to be representative of the online population of adults aged 18 – 65 in each sample country. The unweighted and weighted sample sizes are shown in Table 57 below. An unweighted sample size of 1,000 was used in each country and a total of 15,001 interviews were completed across the 15 Member States. For each country, sample quotas were applied in terms of age within gender and region to provide the correct composition of completed interviews.

Table 57 Survey sample

• Member State		Sample size (number)		Gender (%)		Age (%)				
		Unweighted base	Weighted base	Male	Female	18-24	25-34	35-44	45-54	55-65
Austria	AT	1,000	4,421	52%	48%	16%	23%	23%	24%	14%
Bulgaria	BG	1,000	2,557	50%	50%	20%	30%	29%	20%	1%
Czech Republic	CZ	999	5,469	51%	49%	17%	29%	31%	22%	1%
Germany	DE	1,000	43,774	52%	48%	12%	19%	20%	26%	22%
Denmark	DK	1,002	3,286	51%	49%	15%	19%	23%	23%	20%
Spain	ES	1,000	22,589	52%	48%	14%	26%	28%	21%	11%
France	FR	1,000	33,060	50%	50%	16%	22%	23%	21%	17%
Ireland	IE	1,000	2,267	50%	50%	15%	29%	26%	18%	12%
Italy	IT	1,000	23,318	53%	47%	15%	23%	27%	22%	13%
Latvia	LV	1,000	968	47%	53%	19%	30%	26%	24%	1%
Netherlands	NL	1,000	9,735	51%	49%	15%	19%	23%	23%	20%
Poland	PL	1,000	17,034	50%	50%	20%	33%	25%	16%	5%
Sweden	SE	1,000	5,413	51%	49%	15%	21%	22%	22%	20%
Slovenia	SI	1,000	967	53%	47%	17%	31%	28%	23%	-
United Kingdom	UK	1,000	36,270	50%	50%	16%	23%	23%	21%	17%

Source: Q1 – Gender, Q2 – Age

Base: Total survey sample

The analysis throughout this annex is based on the weighted results, unless stated otherwise.

2 Usage of digital content products

This section presents the survey findings relating to the usage of digital content products amongst consumers. The survey focused on usage of four different categories of digital content products: music, gaming, anti-virus software and cloud storage. Respondents were asked about the products they had obtained or accessed for personal use during the last 12 months.

2.1 Usage of digital content products

Table 58 Consumer usage of digital content products (% of consumers in each Member State) shows the levels of usage of different digital content products as a percentage of the total sample in each Member State and for the EU15 sample as a whole. The highlighted cells identify the Member States with an above average usage of each type of product.

Table 58 Consumer usage of digital content products (% of consumers in each Member State)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have PAID to download music from a digital store such as iTunes	25%	9%	8%	28%	19%	14%	12%	29%	21%	10%	11%	11%	12%	7%	39%	17%
	I have streamed music (or music videos) for FREE	61%	78%	54%	44%	59%	73%	65%	71%	80%	68%	46%	76%	63%	70%	54%	64%
	I have PAID a subscription fee to stream music (or music videos)	7%	7%	5%	9%	15%	10%	6%	12%	12%	6%	9%	10%	34%	4%	10%	10%
	I have bought music on CD	48%	35%	39%	51%	31%	42%	45%	49%	47%	27%	33%	45%	30%	36%	55%	41%
	NET TANGIBLE[201]	**48 %**	**35 %**	**39 %**	**51 %**	**31 %**	**42 %**	**45 %**	**49 %**	**47 %**	**27 %**	**33 %**	**45 %**	**30 %**	**36 %**	**55 %**	**41%**
	NET INTANGIBLE	**70 %**	**81 %**	**57 %**	**56 %**	**67 %**	**76 %**	**68 %**	**78 %**	**83 %**	**71 %**	**53 %**	**79 %**	**76 %**	**73 %**	**69 %**	**70%**
	PAID (AS % OF NET INTANGIBLE)[202]	**39 %**	**16 %**	**18 %**	**55 %**	**43 %**	**24 %**	**22 %**	**44 %**	**30 %**	**19 %**	**32 %**	**20 %**	**52 %**	**13 %**	**61 %**	**33%**
	FREE (AS % OF NET INTANGIBLE)	**61 %**	**84 %**	**82 %**	**45 %**	**57 %**	**76 %**	**78 %**	**56 %**	**70 %**	**81 %**	**68 %**	**80 %**	**48 %**	**87 %**	**39 %**	**67%**
Games	I have bought a game on DISC/CARTRIDGE	26%	21%	14%	23%	19%	32%	24%	34%	29%	12%	18%	28%	20%	16%	33%	23%

[201] The term 'NET' refers to the total number (or proportion) of respondents that have used one or more tangible / intangible products.

[202] Due to the aggregation of product types in the survey, it was not possible to disaggregate all products into either a 'free' or 'paid' category - therefore these percentages do not always sum to 100%.

Category	**Content format**	**AT**	**BG**	**CZ**	**DE**	**DK**	**ES**	**FR**	**IE**	**IT**	**LV**	**NL**	**PL**	**SE**	**SI**	**UK**	**AVERAGE**
	I have downloaded a game over the internet (paid or free)	37%	63%	49%	26%	31%	42%	26%	45%	46%	51%	23%	45%	28%	54%	34%	40%
	I have played FREE online games (e.g., free games on social network sites)	61%	85%	76%	51%	51%	67%	57%	62%	70%	78%	53%	72%	49%	76%	56%	64%
	I have PAID a subscription fee to play a specific multiplayer online game	6%	11%	6%	6%	7%	8%	5%	8%	7%	5%	5%	7%	5%	6%	7%	7%
	I have downloaded an APP game (paid or free)	50%	36%	35%	43%	57%	50%	25%	60%	56%	29%	47%	42%	43%	52%	50%	45%
	NET TANGIBLE	**26 %**	**21 %**	**14 %**	**23 %**	**19 %**	**32 %**	**24 %**	**34 %**	**29 %**	**12 %**	**18 %**	**28 %**	**20 %**	**16 %**	**33 %**	**23%**
	NET INTANGIBLE	**80 %**	**89 %**	**85 %**	**70 %**	**75 %**	**79 %**	**69 %**	**80 %**	**84 %**	**86 %**	**72 %**	**81 %**	**68 %**	**87 %**	**73 %**	**79%**
	PAID (AS % OF NET INTANGIBLE)	**38 %**	**35 %**	**32 %**	**38 %**	**47 %**	**29 %**	**27 %**	**45 %**	**38 %**	**25 %**	**29 %**	**39 %**	**47 %**	**28 %**	**45 %**	**36%**
	FREE (AS % OF NET INTANGIBLE)	**60 %**	**63 %**	**66 %**	**60 %**	**51 %**	**69 %**	**70 %**	**53 %**	**60 %**	**72 %**	**69 %**	**58 %**	**50 %**	**71 %**	**53 %**	**62%**
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	21%	30%	26%	19%	14%	22%	13%	32%	28%	32%	11%	28%	12%	37%	21%	23%
	I have PAID to download anti-virus software for a computer or smartphone/tablet	20%	14%	13%	19%	17%	13%	11%	25%	19%	14%	21%	22%	16%	14%	18%	17%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	I have PAID an annual subscription fee for anti-virus software	24%	11%	15%	25%	22%	16%	14%	23%	15%	10%	20%	17%	21%	12%	20%	18%
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	62%	80%	70%	52%	45%	65%	55%	60%	66%	65%	47%	70%	44%	74%	51%	60%
	NET TANGIBLE	**21%**	**30%**	**26%**	**19%**	**14%**	**22%**	**13%**	**32%**	**28%**	**32%**	**11%**	**28%**	**12%**	**37%**	**21%**	**23%**
	NET INTANGIBLE	**77%**	**84%**	**78%**	**72%**	**63%**	**75%**	**69%**	**77%**	**74%**	**72%**	**69%**	**81%**	**63%**	**83%**	**69%**	**74%**
	PAID (AS % OF NET INTANGIBLE)	**42%**	**23%**	**27%**	**46%**	**42%**	**32%**	**31%**	**45%**	**38%**	**25%**	**47%**	**36%**	**43%**	**26%**	**42%**	**36%**
	FREE (AS % OF NET INTANGIBLE)	**56%**	**75%**	**71%**	**53%**	**57%**	**66%**	**66%**	**53%**	**60%**	**71%**	**52%**	**61%**	**55%**	**73%**	**56%**	**62%**
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	27%	43%	20%	18%	27%	35%	15%	30%	20%	24%	13%	24%	19%	32%	24%	25%
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	46%	50%	40%	33%	54%	59%	28%	55%	51%	42%	42%	39%	47%	60%	50%	46%
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive,	6%	7%	4%	6%	11%	7%	4%	10%	9%	6%	5%	10%	11%	8%	7%	7%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox																
	NET TANGIBLE	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	NET INTANGIBLE	50 %	55 %	44 %	39 %	60 %	64 %	34 %	63 %	55 %	47 %	45 %	45 %	54 %	66 %	57 %	52%
	PAID (AS % OF NET INTANGIBLE)	58 %	81 %	50 %	51 %	54 %	57 %	49 %	54 %	40 %	54 %	33 %	58 %	45 %	52 %	47 %	52%
	FREE (AS % OF NET INTANGIBLE)	42 %	19 %	50 %	49 %	46 %	43 %	51 %	46 %	60 %	45 %	67 %	42 %	55 %	47 %	53 %	48%

Source: Q3 – Percentage of consumers using digital content products

Base: Total survey sample (except paid and free categories, for which base is intangible)

Looking across the four products:

- The use of intangible formats was significantly higher than tangible formats, for each product category and for each Member State.
- About half of the sample used cloud storage (52 per cent) and most used intangible formats of music, anti-virus software and games (70 per cent, 74 per cent and 79 per cent respectively).
- Use of tangible products was highest for music (used by 41 per cent of the sample) but was significantly lower for games and anti-virus software (both used by 23 per cent of the sample).
- Those using intangible formats of music, games and anti-virus software were more likely to access 'free' services rather than pay for services and downloads (67 per cent of those using intangible music products and 62 per cent of those using intangible games and anti-virus software were using 'free' products, compared to 33 per cent and 36 per cent using 'paid' products respectively). Use of cloud storage was slightly different as users were split evenly between those using free and paid services (48 per cent and 52 per cent respectively).

For music:

- Most of the sample (64 per cent) used free music streaming services - this was particularly common in Italy, Bulgaria and Poland.
- There was significant variation between MS in the use of 'paid' music streaming services and downloads. The use of 'paid' services was lowest in Slovenia where 4 per cent paid for music streaming and 7 per cent paid for music downloads. In contrast, 34 per cent paid for music streaming services in Sweden and 39 per cent paid for music downloads in the UK.
- Tangible music purchases on CD were highest in the UK (55 per cent of the sample) and Germany (51 per cent). Less than half of the sample had purchased music CDs in all other Member States.

For games:

- Most of the sample (64 per cent) played free online games - this was particularly common in Eastern Europe (i.e. 85 per cent in Bulgaria, 78 per cent in Latvia, 76 per cent in Slovenia and the Czech Republic and 72 per cent in Poland).
- A large proportion of the sample downloaded an APP game (45 per cent) and/or other game over the internet (40 per cent). In contrast, payment of subscriptions to play online games was considerably lower, with only 7 per cent using these services.
- Purchases of tangible products were relatively low compared to music, with 23 per cent of the sample purchasing tangible gaming products (compared to 41 per cent for music). Purchases of tangible gaming products were highest in Ireland, the UK and Spain where around one in three respondents had made such a purchase.

For anti-virus software:

- The most commonly used products were free software downloads, which were used by 60 per cent of respondents. Use of free downloads was particularly common in Eastern Europe (i.e. 80 per cent in Bulgaria, 74 per cent in Slovenia and 70 per cent in Poland and the Czech Republic).

- Paying for software downloads or paying an annual subscription was significantly lower - used by 17 and 18 per cent of the sample respectively.
- Just under one in four of the sample (23 per cent) purchased tangible anti-virus software. This was particularly high in Slovenia (used by 37 per cent of the sample) and was lowest in the Netherlands (used by only 11 per cent of the sample).

For cloud storage:

- Usage was highest in Slovenia (66 per cent), Spain (64 per cent) and Ireland (63 per cent), and was lowest in France (34 per cent) and Germany (39 per cent).
- Most of these users were using free online cloud storage services (46 per cent of the sample), while only 7 per cent of the sample paid for online cloud storage services.
- One in four respondents (approximately half of those using cloud services) were using services provided as part of their home internet package.

2.2 Expenditure on digital content products

Respondents were also asked how much they had spent personally on each type of product in the last 12 months. Table 59 shows average annual expenditures on each of the different digital content products by consumers in each Member State and an average across the EU15 sample as a whole. The highlighted cells identify the Member States with above average expenditures for each type of product.

Table 59 Consumer spend on digital content products (average annual spend per consumer in each Member State – all figures in €)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have PAID to download music from a digital store such as iTunes	20.79	11.81	9.37	24.80	22.33	18.87	17.76	23.74	23.23	8.35	27.81	15.86	23.89	21.50	29.79	19.99
	I have streamed music (or music videos) for FREE																
	I have PAID a subscription fee to stream music (or music videos)	47.09	15.27	5.61	44.99	79.78	24.94	20.73	26.63	28.84	10.21	40.98	14.97	78.14	13.70	57.31	33.95
	I have bought music on CD	34.16	14.38	12.71	43.20	48.13	33.96	38.10	35.59	29.18	16.13	44.95	19.09	48.66	19.62	49.45	32.49
	NET TANGIBLE	**34.16**	**14.38**	**12.71**	**43.20**	**48.13**	**33.96**	**38.10**	**35.59**	**29.18**	**16.13**	**44.95**	**19.09**	**48.66**	**19.62**	**49.45**	**32.49**
	NET INTANGIBLE	**33.94**	**13.54**	**7.49**	**34.90**	**51.06**	**21.91**	**19.25**	**25.19**	**26.04**	**9.28**	**34.40**	**15.41**	**51.02**	**17.60**	**43.55**	**26.97**
Games	I have bought a game on DISC/CARTRIDGE	62.73	38.31	22.88	57.30	64.98	51.13	58.06	60.92	42.58	24.13	54.27	29.11	83.04	44.71	87.87	52.14
	I have downloaded a game over the internet (paid or free)	21.45	5.57	4.69	26.33	37.93	10.16	10.79	14.37	9.86	3.57	21.36	6.96	30.32	7.20	24.41	15.66
	I have played FREE online games (e.g., free games on social network sites)[203]	7.14	4.27	3.00	4.41	5.98	2.88	2.34	6.13	5.25	1.95	5.20	3.81	6.13	3.55	6.24	4.55
	I have PAID a subscription fee to play a specific multiplayer online game	42.03	26.85	5.19	53.18	83.11	28.83	34.07	35.69	36.56	11.81	30.41	13.70	54.41	27.30	64.06	37.81

[203] These numbers are non-zero since consumers may have paid for optional extras / add-ons having initially accessed the games for free.

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	I have downloaded an APP game (paid or free)	3.81	3.97	1.44	3.78	9.07	3.43	3.97	4.88	5.28	4.04	6.80	3.52	5.42	3.01	6.85	4.62
	NET TANGIBLE	**62.73**	**38.31**	**22.88**	**57.30**	**64.98**	**51.13**	**58.06**	**60.92**	**42.58**	**24.13**	**54.27**	**29.11**	**83.04**	**44.71**	**87.87**	**52.14**
	NET INTANGIBLE	**18.61**	**10.16**	**8.58**	**21.93**	**34.02**	**11.33**	**12.79**	**15.27**	**14.24**	**5.34**	**15.94**	**7.00**	**24.07**	**10.27**	**25.39**	**15.66**
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	16.52	8.31	4.75	19.80	17.87	14.08	22.16	18.54	18.03	7.47	15.72	8.84	16.92	8.62	23.38	14.73
	I have PAID to download anti-virus software for a computer or smartphone/tablet	30.78	26.33	24.08	31.12	49.60	35.18	42.29	37.15	39.94	27.14	37.01	26.51	43.85	32.85	43.88	35.18
	I have PAID an annual subscription fee for anti-virus software	34.71	41.53	25.35	34.53	53.17	36.67	52.55	42.45	42.32	27.11	40.45	29.00	49.97	40.76	53.49	40.27
	I downloaded FREE anti-virus software for a computer or smartphone/tablet [204]	2.49	3.21	1.40	2.85	4.01	5.22	1.91	4.52	5.15	1.52	2.76	2.51	1.90	2.60	3.81	3.06
	NET TANGIBLE	**16.52**	**8.31**	**4.75**	**19.80**	**17.87**	**14.08**	**22.16**	**18.54**	**18.03**	**7.47**	**15.72**	**8.84**	**16.92**	**8.62**	**23.38**	**14.73**
	NET INTANGIBLE	**22.66**	**23.69**	**16.94**	**22.83**	**35.59**	**25.69**	**32.25**	**28.04**	**29.14**	**18.59**	**26.74**	**19.34**	**31.91**	**25.40**	**33.72**	**26.17**
Cloud storage	I have used an online 'cloud' storage service provided as part of my home																

[204] These numbers are non-zero since consumers may have paid for upgrades having initially accessed the software for free.

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	internet service subscription package[205]																
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox																
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	22.03	31.32	7.55	24.81	32.48	27.02	18.39	29.70	40.71	19.85	43.21	14.03	29.11	17.59	33.34	26.08
	NET TANGIBLE																
	NET INTANGIBLE	**22.03**	**31.32**	**7.55**	**24.81**	**32.48**	**27.02**	**18.39**	**29.70**	**40.71**	**19.85**	**43.21**	**14.03**	**29.11**	**17.59**	**33.34**	**26.08**

Source: Q5 – Average annual spend per consumer

Base: Those who had purchased each digital content product

[205] I.e. the cloud storage service is part of a paid bundle of services. We have not attempted to estimate a separate cost for cloud storage in this case.

- Average annual spend varied significantly by product, country and by medium (tangible / intangible).

For games:

- The average annual spend on tangible formats was €50.67 per consumer, compared to €15.11 for intangible formats.
- There was also considerable variation in average expenditures on different types of intangible format - ranging from less than €5 to download APP games and play online games, to €15.36 to download games from the internet, and subscription fees of €36.20 to play specific multiplayer online games.
- Expenditures on gaming products varied significant between Member States. Average annual expenditures were lowest in Czech Republic where the sample spent an average of less than €22.88 on tangible and €8.58 on intangible products. In contrast, the highest average expenditures on tangible gaming products were spent in the UK (€49.45) and the Netherlands (€44.95).

For music:

- The variation in annual expenditures was lower (as compared to for games), ranging from an average of €26.49 for intangible formats to €31.67 for tangible formats.
- There was also less variation between the different types of intangible format, with the sample spending an average of €19.39 per year to download music and €33.59 to subscribe to music streaming services.
- As with gaming products, expenditure on music products varied significantly between Member States. Average annual expenditures were again lowest in Czech Republic where the sample spent an average of €7.49 on intangible products and €12.71 on tangible music content. Similarly, the highest average expenditures on tangible music products were in the UK (€49.45), while the highest average expenditures on intangible gaming products were spent in Denmark and Sweden (€51.06 and €51.02 respectively). Further, Denmark and Sweden were the only two countries where average expenditures on intangible music products were higher than for tangible music products.

For anti-virus software:

- Average expenditures were higher for intangible products (€25.08 per year) than for tangible products (€14.43 per year). This was the case in all 15 Member States.
- Expenditures on intangible anti-virus products were particularly high for those paying an annual subscription for software (€38.64 per year) and paying to download software (€33.63 per year).
- The Czech Republic again had the lowest annual expenditures of less than €4.75 for tangible and €16.94 for intangible products, while the UK sample spent the most on tangible products (€23.38 per year) and respondents in Denmark spent the most on intangible products (€35.59 per year).

For cloud storage:

- Consumers spent an average of €25.59 per year on these services. As above, there was significant variation between Member States, with expenditures ranging from €7.55 per year in the Czech Republic to €43.21 in the Netherlands.

3 Problems

This section presents the survey findings relating to problems experienced by consumers of different digital products. The survey focused on specific problems relating to quality, access and terms and conditions. Respondents were asked to indicate if they had encountered any of these problems during the last 12 months, and the time taken for the most recent problem (for up to 2 products) to be resolved.

3.1 Incidence of problems

3.1.1 Paid versus free – combined products

Table 60 shows the proportion of consumers that experienced problems with 'paid' and 'free' products. This table includes all types of product (i.e. music and gaming products, anti-virus software and cloud storage) and all types of problems including those relating to quality, access and terms and conditions of each product. The highlighted cells in the table identify the Member States with an above average incidence of problems.

Table 60 Consumers experiencing any problems with 'paid' and 'free' digital content products (% of consumers who had accessed digital content products in each Member State)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Combined	**PAID**	58%	72%	60%	39%	49%	63%	46%	66%	62%	71%	36%	59%	48%	63%	42%	49%
	FREE	46%	58%	46%	27%	39%	42%	36%	48%	47%	56%	31%	39%	24%	51%	22%	36%

Source: Q6 – Percentage of consumers having problems with digital content products

Base: Those who had used digital content products

Table 61 Consumers experiencing any problems with 'paid' and 'free' digital content products, as above, weighted and unweighted bases

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Combined	**PAID – WEIGHTED** **– UNWEIGHTED**	837 3,711	723 1,851	685 3,761	846 36,840	812 32,286	751 16,972	742 24,488	865 1,964	735 17,169	622 601	726 7,067	731 12,473	825 4,469	719 697	889 32,286	11,508 167,018
	FREE – WEIGHTED **– UNWEIGHTED**	161 700	273 696	311 1691	152 6,839	189 614	247 5,569	255 8,472	135 303	261 6,060	371 360	270 2,629	264 4,476	173 934	280 269	108 3,880	3,450 43,493

- The survey found that consumers were more likely to experience problems with 'paid', compared to 'free' content. On average, almost half of consumers (49 per cent) stated that they had experienced problems with 'paid' content, compared to around one in three (36 per cent) that said they had experienced problems with 'free' content. This difference could be due, at least in part, to consumers having higher expectations for products that they are paying for and may feel greater detriment if these expectations are not met. Still, it is notable that the proportion of consumers experiencing problems with 'free' digital content is quite high.
- The incidence of problems with 'paid' products was lowest in the Netherlands (reported by 36 per cent of users of 'paid' products) and was highest in Latvia and Bulgaria (where problems were reported by 71 and 72 per cent of users respectively).
- For 'free' products, the incidence of problems was lowest in the UK (reported by 22 per cent of users of 'free' products) and was also highest in Bulgaria and Latvia (where problems with 'free' products were reported by 56 and 58 per cent of users respectively).

3.1.2 Different formats

Table 62 shows the proportion of consumers of each product that experienced problems. This table includes all types of problems including those relating to quality, access and terms & conditions of each product. As above, the highlighted cells identify the Member States with an above average incidence of problems.

Table 62 Consumers experiencing any problems with digital content products (% of consumers who had accessed digital content products in each Member State)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have PAID to download music from a digital store such as iTunes	33%	59%	44%	25%	34%	50%	35%	38%	50%	51%	28%	57%	31%	23%	29%	39%
	I have streamed music (or music videos) for FREE	35%	41%	39%	32%	33%	41%	34%	43%	39%	45%	23%	36%	29%	33%	28%	35%
	I have PAID a subscription fee to stream music (or music videos)	35%	55%	43%	36%	33%	47%	41%	41%	52%	48%	29%	55%	33%	47%	35%	42%
	I have bought music on CD	10%	28%	14%	12%	9%	19%	10%	14%	17%	17%	11%	22%	11%	14%	8%	14%
	NET TANGIBLE	10%	28%	14%	12%	9%	19%	10%	14%	17%	17%	11%	22%	11%	14%	8%	14%
	NET INTANGIBLE	39%	45%	40%	31%	36%	45%	35%	46%	43%	47%	25%	39%	33%	34%	30%	38%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	41%	65%	54%	34%	45%	60%	48%	50%	57%	62%	32%	64%	39%	42%	35%	49%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	37%	41%	37%	28%	30%	40%	31%	43%	36%	44%	22%	33%	26%	33%	22%	34%
Games	I have bought a game on DISC/CARTRIDGE	25%	37%	31%	26%	21%	35%	24%	35%	37%	45%	21%	36%	27%	21%	20%	29%
	I have downloaded a game over the internet (paid or free)	39%	40%	40%	29%	31%	44%	30%	42%	39%	49%	23%	37%	31%	37%	29%	36%
	I have played FREE online games (e.g., free games on social network sites)	38%	41%	37%	27%	26%	42%	31%	42%	41%	42%	24%	36%	26%	36%	27%	34%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	I have PAID a subscription fee to play a specific multiplayer online game	42%	34%	41%	49%	34%	56%	42%	57%	58%	54%	30%	58%	44%	27%	35%	44%
	I have downloaded an APP game (paid or free)	33%	41%	39%	27%	30%	42%	33%	43%	38%	46%	26%	37%	27%	34%	29%	35%
	NET TANGIBLE	25%	37%	31%	26%	21%	35%	24%	35%	37%	45%	21%	36%	27%	21%	20%	29%
	NET INTANGIBLE	43%	51%	45%	32%	36%	48%	36%	52%	47%	53%	28%	42%	33%	45%	33%	42%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	50%	58%	52%	42%	42%	64%	47%	63%	63%	63%	36%	52%	42%	51%	40%	51%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	38%	48%	42%	26%	31%	42%	32%	42%	37%	50%	25%	35%	26%	44%	27%	36%
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	28%	44%	31%	27%	17%	45%	30%	43%	40%	42%	29%	41%	27%	25%	30%	33%
	I have PAID to download anti-virus software for a computer or smartphone/tablet	26%	48%	31%	26%	20%	48%	35%	38%	44%	39%	23%	42%	28%	31%	27%	34%
	I have PAID an annual subscription fee for anti-virus software	23%	50%	27%	20%	19%	39%	27%	37%	40%	39%	20%	40%	27%	31%	27%	31%
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	31%	41%	30%	24%	27%	36%	23%	37%	34%	39%	23%	32%	26%	30%	20%	30%
	NET TANGIBLE	28%	44%	31%	27%	17%	45%	30%	43%	40%	42%	29%	41%	27%	25%	30%	33%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	NET INTANGIBLE	32%	44%	31%	23%	25%	38%	24%	40%	36%	40%	23%	35%	26%	31%	23%	31%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	35%	57%	34%	27%	22%	50%	31%	46%	48%	50%	25%	51%	32%	42%	30%	39%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	29%	40%	30%	19%	28%	32%	20%	34%	28%	36%	21%	26%	22%	27%	17%	27%
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	30%	35%	37%	29%	22%	45%	35%	42%	53%	41%	30%	45%	26%	31%	32%	36%
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	32%	38%	33%	26%	25%	39%	34%	37%	33%	41%	21%	36%	29%	32%	23%	32%
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	33%	61%	38%	38%	25%	64%	58%	52%	68%	51%	28%	57%	29%	43%	51%	46%
	NET TANGIBLE																
	NET INTANGIBLE	36%	44%	38%	29%	28%	45%	36%	44%	38%	45%	23%	41%	30%	35%	27%	36%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	36%	72%	40%	44%	30%	76%	61%	57%	76%	66%	30%	70%	38%	45%	57%	53%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	32%	41%	34%	23%	30%	35%	31%	37%	27%	38%	19%	30%	28%	27%	21%	30%

Source: Q6 – Percentage of consumers having problems with digital content products

Base: Those who had used digital content products (except for paid and free categories, where the base is those who had used paid intangible and those who had used free intangible, respectively).

Table 63 Consumers experiencing any problems with digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Music	I have PAID to download music from a digital store such as iTunes	353	142	192	3072	215	1550	1351	252	2480	50	292	1060	206	17	4036
	I have streamed music (or music videos) for FREE	953	819	1161	6182	639	6777	7181	691	7207	297	1044	4709	971	227	5557
	I have PAID a subscription fee to stream music (or music videos)	110	106	110	1351	167	1084	825	113	1404	30	268	913	610	19	1326
	I have bought music on CD	213	248	297	2714	94	1748	1409	157	1860	46	352	1660	173	48	1580
	NET	1190	924	1266	7760	807	7710	7900	820	8226	322	1299	5273	1367	241	7575
	NET TANGIBLE	488	221	307	4652	430	2535	2365	390	3334	82	522	1699	852	40	5395
	NET INTANGIBLE	702	703	959	3108	377	5175	5535	430	4892	240	776	3574	516	201	2180
Games	I have bought a game on DISC/CARTRIDGE	290	199	233	2582	132	2571	1940	271	2475	53	372	1711	288	31	2395
	I have downloaded a game over the internet (paid or free)	639	634	1077	3260	316	4143	2634	431	4112	240	535	2790	457	192	3565
	I have played FREE online games	1017	894	1534	6052	444	6404	5831	588	6649	320	1206	4439	698	266	5367

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
	(e.g., free games on social network sites)															
	I have PAID a subscription fee to play a specific multiplayer online game	117	93	136	1311	72	1027	692	109	966	26	148	732	125	16	855
	I have downloaded an APP game (paid or free)	719	371	742	5053	559	4691	2717	588	4984	129	1182	2640	642	171	5293
	NET	1508	1171	2070	9797	894	8653	8274	938	9201	443	1987	5824	1218	381	8768
	NET TANGIBLE	683	454	765	4793	493	3397	2986	511	4632	130	748	2844	726	118	4833
	NET INTANGIBLE	811	692	1271	4760	398	5161	5120	405	4402	304	1219	2810	476	259	3824
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	262	337	447	2263	78	2224	1293	317	2608	129	303	2000	179	90	2243
	I have PAID to download anti-virus software for a computer or smartphone/tablet	235	169	214	2141	112	1466	1290	218	1939	51	469	1556	236	42	1770
	I have PAID an annual subscription fee for anti-virus software	242	137	230	2173	133	1413	1225	190	1390	35	388	1155	305	37	1980
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	850	853	1142	5412	407	5277	4198	513	5150	244	1075	3851	613	217	3736
	NET	1087	939	1322	7168	529	6364	5415	699	6231	275	1533	4875	885	252	5635
	NET TANGIBLE	502	277	390	3877	191	2733	2180	366	3134	88	785	2528	470	85	3097

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
	NET INTANGIBLE	559	646	911	3177	328	3516	3067	320	2881	176	729	2153	403	159	2426
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	351	384	418	2276	189	3632	1798	290	2491	97	374	1845	272	96	2784
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	647	488	727	3758	456	5242	3174	462	3944	168	866	2384	738	186	4179
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	94	114	88	949	93	939	692	121	1413	28	130	953	168	34	1359
	NET	796	621	908	4945	551	6456	4048	621	4961	208	1013	3205	874	221	5551
	NET TANGIBLE	103	136	94	1100	109	1118	725	132	1586	36	141	1166	220	36	1512
	NET INTANGIBLE	301	112	405	1892	276	2153	1757	240	2053	78	548	986	454	82	2287

- The survey also found that problems were more likely with 'paid' intangible products, compared to 'free' intangible products. For each category of product, the proportion of consumers saying that they experienced problems with 'paid' intangible products was higher than the proportion stating problems with 'free' intangible products. This difference was particularly significant for cloud storage services, for which 30 per cent of consumers had experienced problems with 'free' services and 53 per cent had experienced problems with 'paid' services. As stated above, this could be due, at least in part, to consumers having higher expectations for products that they are paying for and the fact that they may feel greater detriment if these expectations are not met. Still, it is notable that the proportion of consumers experiencing problems with 'free' digital content is quite high.
- The incidence of problems was highest for 'paid' online cloud storage services and 'paid' subscription services to play online multiplayer games (46 and 44 per cent of consumers reported having a problem with these services).
- In contrast, the incidence of problems was lowest for purchases of tangible music products on CD, for which 14 per cent of consumers reported a problem.
- For music and gaming products, responses suggested that problems were more common for intangible formats than for tangible. Problems with tangible formats were reported by 14 per cent and 29 per cent of consumers respectively - significantly lower than the 38 per cent and 42 per cent of consumers who reported problems with intangible music and gaming products respectively.
- For anti-virus software, responses suggested that there was little difference between the incidence of problems for tangible and intangible products (31 per cent of consumers stated having problems with intangible anti-virus software, compared to 33 per cent of consumers of tangible products). The proportion of consumers reporting problems with cloud storage services was slightly higher at 36 per cent.
- The incidence of problems varied between Member States and tended to be highest amongst consumers in Latvia and Bulgaria and was relatively low amongst consumers in the Netherlands and Denmark. This was true across most of the different product categories.

3.1.3 Incidence of different types of problem (quality, access, terms & conditions)

Table 64 focuses on issues relating to the quality of digital content products and services. These issues included:

- damage to computers, mobile phones or other devices caused by the digital content;
- digital content not working properly and/or of poor quality compared to what was promised by the supplier;
- the digital content being incompatible with hardware/software, when information suggested it would be compatible;
- poor levels of quality compared to what one would normally expect from similar digital content;
- physical products being visibly damaged (scratched etc.) and not working properly;
- not receiving updates for the content as promised by the supplier; and

- receiving different/older versions of the content, rather than the one promised by the supplier.

The highlighted cells in the table identify the Member States with an above average incidence of problems relating to quality.

Table 64 Consumers experiencing problems with the quality of digital content products (% of consumers who had accessed digital content products in each Member State)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have PAID to download music from a digital store such as iTunes	15%	52%	28%	14%	11%	34%	18%	24%	38%	33%	18%	49%	14%	18%	13%	25%
	I have streamed music (or music videos) for FREE	20%	31%	26%	17%	13%	26%	18%	26%	24%	31%	11%	27%	12%	24%	12%	21%
	I have PAID a subscription fee to stream music (or music videos)	23%	45%	35%	25%	10%	29%	25%	33%	35%	37%	17%	44%	9%	42%	17%	28%
	I have bought music on CD	10%	28%	14%	12%	9%	19%	10%	14%	17%	17%	11%	22%	11%	14%	8%	14%
	NET TANGIBLE	10%	28%	14%	12%	9%	19%	10%	14%	17%	17%	11%	22%	11%	14%	8%	14%
	NET INTANGIBLE	21%	35%	27%	17%	13%	29%	19%	29%	28%	33%	13%	29%	13%	25%	13%	23%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	23%	57%	39%	19%	15%	41%	28%	32%	42%	47%	20%	54%	15%	34%	16%	32%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	20%	30%	25%	15%	12%	25%	17%	26%	22%	30%	9%	23%	10%	24%	7%	20%
Games	I have bought a game on DISC/CARTRIDGE	16%	34%	18%	18%	13%	25%	18%	27%	28%	37%	15%	30%	13%	17%	14%	22%
	I have downloaded a game over the internet (paid or free)	20%	34%	26%	16%	15%	29%	18%	27%	26%	38%	15%	28%	14%	27%	16%	23%
	I have played FREE online games (e.g., free games on social network sites)	20%	32%	23%	14%	11%	27%	17%	26%	26%	31%	11%	27%	12%	25%	12%	21%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	I have PAID a subscription fee to play a specific multiplayer online game	16%	27%	31%	30%	15%	41%	26%	44%	40%	42%	21%	46%	27%	23%	23%	30%
	I have downloaded an APP game (paid or free)	20%	31%	24%	14%	10%	29%	16%	25%	25%	38%	12%	29%	12%	24%	14%	22%
	NET TANGIBLE	16%	34%	18%	18%	13%	25%	18%	27%	28%	37%	15%	30%	13%	17%	14%	22%
	NET INTANGIBLE	25%	42%	31%	17%	15%	34%	20%	33%	33%	41%	14%	33%	16%	34%	16%	27%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	29%	50%	38%	24%	18%	50%	32%	42%	44%	50%	23%	42%	20%	39%	21%	35%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	23%	38%	29%	12%	12%	28%	16%	24%	25%	38%	10%	26%	13%	32%	11%	22%
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	21%	36%	23%	18%	14%	35%	24%	33%	29%	33%	18%	33%	19%	18%	20%	25%
	I have PAID to download anti-virus software for a computer or smartphone/tablet	17%	41%	16%	16%	8%	34%	19%	24%	33%	31%	10%	26%	17%	22%	14%	22%
	I have PAID an annual subscription fee for anti-virus software	12%	39%	14%	12%	8%	25%	15%	24%	31%	33%	5%	27%	11%	22%	15%	20%
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	16%	34%	16%	14%	10%	22%	12%	23%	24%	29%	11%	23%	13%	21%	7%	18%
	NET TANGIBLE	21%	36%	23%	18%	14%	35%	24%	33%	29%	33%	18%	33%	19%	18%	20%	25%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	NET INTANGIBLE	17%	36%	17%	13%	10%	24%	13%	26%	27%	30%	10%	24%	13%	21%	9%	19%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	21%	46%	23%	16%	10%	35%	18%	34%	37%	42%	12%	36%	17%	28%	16%	26%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	13%	33%	15%	10%	9%	18%	10%	19%	20%	25%	8%	17%	10%	19%	4%	15%
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	15%	25%	25%	20%	7%	28%	20%	27%	40%	32%	16%	38%	15%	20%	17%	23%
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	13%	27%	16%	14%	6%	21%	12%	18%	19%	28%	8%	24%	9%	18%	9%	16%
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	16%	57%	24%	30%	8%	49%	36%	38%	50%	42%	17%	47%	16%	34%	27%	33%
	NET TANGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET INTANGIBLE	16%	33%	21%	17%	7%	26%	17%	24%	25%	33%	9%	30%	11%	22%	12%	20%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	17%	68%	31%	34%	12%	54%	39%	43%	61%	58%	23%	59%	20%	37%	34%	39%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	9%	34%	15%	10%	6%	16%	10%	15%	12%	24%	5%	16%	6%	14%	6%	13%

Source: Q6 – Percentage of consumers having problems with digital content products

Base: Those who had used digital content products (except for paid and free categories, where the base is those who had used paid intangible and those who had used free intangible, respectively).

Table 65 Consumers experiencing problems with the quality of digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Music	I have PAID to download music from a digital store such as iTunes	160	125	121	1664	68	1070	691	159	1872	33	186	920	92	13	1837
	I have streamed music (or music videos) for FREE	535	616	771	3270	251	4275	3866	419	4510	207	487	3475	394	163	2303
	I have PAID a subscription fee to stream music (or music videos)	74	86	89	930	50	668	495	89	950	23	157	730	173	17	629
	I have bought music on CD	213	248	297	2714	94	1748	1409	157	1860	46	352	1660	173	48	1580
	NET	653	714	854	4235	297	4996	4355	508	5362	225	666	3971	522	175	3236
	NET TANGIBLE	279	194	225	2540	140	1734	1379	246	2469	63	337	1446	320	32	2508
	NET INTANGIBLE	374	520	629	1695	157	3261	2977	262	2893	162	329	2525	202	143	729
Games	I have bought a game on DISC/CARTRIDGE	180	185	138	1753	80	1830	1409	207	1859	44	263	1415	141	27	1627
	I have downloaded a game over the internet (paid or free)	332	538	699	1790	154	2722	1577	272	2813	189	336	2160	210	141	1968
	I have played FREE online games (e.g., free games on social network sites)	537	702	965	3086	177	4073	3191	370	4308	231	543	3264	317	181	2513

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
	I have PAID a subscription fee to play a specific multiplayer online game	45	74	103	790	32	740	426	84	660	20	106	591	76	14	564
	I have downloaded an APP game (paid or free)	431	284	460	2564	196	3251	1353	343	3257	107	568	2080	275	122	2519
	NET	893	960	1455	5079	378	6085	4639	597	6414	344	965	4530	596	282	4266
	NET TANGIBLE	392	396	553	2742	216	2625	1992	340	3234	104	476	2274	353	91	2563
	NET INTANGIBLE	492	542	880	2257	159	3388	2512	237	3012	232	489	2104	233	187	1627
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	196	275	328	1535	62	1697	1024	244	1885	102	193	1620	126	66	1539
	I have PAID to download anti-virus software for a computer or smartphone/tablet	152	147	111	1323	47	1023	725	135	1453	41	202	977	145	29	919
	I have PAID an annual subscription fee for anti-virus software	121	106	120	1279	59	909	668	126	1080	31	105	773	126	26	1095
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	449	710	616	3166	154	3172	2211	321	3674	181	482	2709	307	146	1386
	NET	579	780	730	4157	204	3964	2873	456	4685	207	664	3352	446	169	2362
	NET TANGIBLE	303	227	260	2379	90	1906	1258	265	2396	74	374	1774	253	57	1701
	NET INTANGIBLE	254	536	455	1664	107	1965	1447	181	2072	123	272	1419	182	108	618

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	183	272	273	1598	63	2281	1027	187	1854	75	194	1524	154	62	1496
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	265	344	348	1979	110	2738	1161	222	2297	116	323	1567	225	107	1630
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	45	107	56	738	30	726	429	89	1051	23	78	775	93	27	710
	NET	359	467	497	2954	141	3749	1894	339	3222	149	411	2337	309	137	2426
	NET TANGIBLE	49	128	72	851	42	797	461	100	1263	31	109	988	114	29	896
	NET INTANGIBLE	85	94	183	809	59	1004	568	101	938	51	146	510	94	42	699

- The incidence of problems relating to quality is lower compared to problems relating to access and terms & conditions (the average incidence of problems relating to quality of different products ranged from 13 to 39 per cent of users, compared to 16 to 43 per cent for access problems and 23 to 45 per cent for problems with terms and conditions – as shown in Table 66 and Table 68 respectively).
- The incidence of problems with 'quality' share similar characteristics to the overall problems described above:
  - Problems relating to quality were most common for 'paid' online cloud storage services and 'paid' subscription services to play online multiplayer games (33 and 30 per cent of consumers reported having a problem with the quality of these services respectively) and was lowest for tangible music products (only 14 per cent of consumers reported a problem with the quality of music CDs).
  - Problems relating to quality were more likely with 'paid' intangible products, compared to 'free' intangible products.
  - The incidence of problems relating to quality tended to be highest amongst consumers in Latvia and Bulgaria and was relatively low amongst consumers in the Netherlands and Denmark.
- Problems with quality were also more common with intangible formats of music and gaming, compared to tangible formats, although the differences between the two were less marked than for 'all problems'. In contrast, respondents suggested that problems relating to quality were more common for tangible anti-virus products (25 per cent of consumers) compared to intangible anti-virus software (19 per cent of consumers).

Table 66 focuses on issues relating to access to digital content products and services. These issues included:

- difficulties downloading or accessing the digital content because the supplier's instructions were unclear or incomplete;
- unexpected interruptions (e.g. crashes, unannounced maintenance) which prevented full use / access;
- an inability to access the content or digital service in one or more countries where the supplier had promised that access would be available;
- not being able to access or retrieve data (e.g. photos) after ending contracts;
- more limited access to a service or content than had been expected given the information received from the supplier; and
- not being able to download or access the digital content because of poor internet connections.

The highlighted cells in the table identify the Member States with an above average incidence of problems relating to access.

Table 66 Consumers experiencing problems with access to digital content products (% of consumers who had accessed digital content products in each Member State)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have PAID to download music from a digital store such as iTunes	17%	55%	28%	14%	15%	35%	22%	28%	39%	37%	17%	48%	16%	21%	17%	27%
	I have streamed music (or music videos) for FREE	24%	35%	29%	23%	21%	26%	24%	31%	30%	37%	14%	30%	17%	25%	19%	26%
	I have PAID a subscription fee to stream music (or music videos)	32%	50%	41%	23%	19%	34%	26%	32%	36%	39%	20%	49%	18%	39%	22%	32%
	I have bought music on CD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET TANGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET INTANGIBLE	26%	39%	30%	22%	23%	30%	25%	34%	34%	39%	15%	33%	20%	26%	20%	28%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	25%	63%	40%	23%	28%	43%	36%	37%	44%	49%	20%	55%	24%	38%	24%	37%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	27%	34%	27%	21%	19%	25%	22%	32%	29%	37%	13%	27%	16%	24%	15%	25%
Games	I have bought a game on DISC/CARTRIDGE	15%	33%	20%	16%	9%	24%	16%	27%	27%	36%	13%	30%	14%	16%	13%	21%
	I have downloaded a game over the internet (paid or free)	27%	35%	28%	19%	16%	30%	20%	32%	27%	41%	15%	30%	15%	30%	20%	26%
	I have played FREE online games (e.g., free games on social network sites)	26%	36%	29%	18%	17%	30%	23%	33%	31%	36%	15%	29%	18%	30%	17%	26%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	I have PAID a subscription fee to play a specific multiplayer online game	29%	32%	28%	40%	24%	41%	34%	50%	48%	46%	26%	48%	33%	23%	28%	35%
	I have downloaded an APP game (paid or free)	21%	34%	25%	14%	18%	27%	19%	31%	28%	39%	15%	29%	15%	25%	18%	24%
	NET TANGIBLE	15%	33%	20%	16%	9%	24%	16%	27%	27%	36%	13%	30%	14%	16%	13%	21%
	NET INTANGIBLE	32%	46%	34%	21%	23%	35%	26%	41%	35%	45%	18%	35%	21%	38%	22%	31%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	36%	49%	42%	30%	26%	51%	35%	51%	47%	54%	28%	45%	27%	41%	27%	39%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	29%	44%	30%	16%	20%	28%	22%	32%	28%	43%	15%	28%	17%	37%	19%	27%
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	19%	40%	23%	21%	13%	36%	23%	34%	28%	31%	18%	35%	16%	20%	17%	25%
	I have PAID to download anti-virus software for a computer or smartphone/tablet	17%	42%	22%	18%	12%	37%	20%	27%	32%	33%	13%	31%	16%	21%	16%	24%
	I have PAID an annual subscription fee for anti-virus software	12%	45%	17%	12%	10%	25%	14%	25%	32%	33%	10%	30%	13%	23%	19%	21%
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	18%	36%	19%	16%	11%	22%	12%	25%	24%	29%	12%	23%	13%	22%	10%	19%
	NET TANGIBLE	19%	40%	23%	21%	13%	36%	23%	34%	28%	31%	18%	35%	16%	20%	17%	25%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	NET INTANGIBLE	18%	38%	20%	15%	11%	24%	13%	27%	26%	31%	12%	25%	13%	22%	12%	20%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	23%	50%	24%	19%	12%	37%	20%	35%	36%	42%	14%	39%	18%	29%	20%	28%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	15%	35%	19%	11%	11%	17%	9%	21%	19%	26%	10%	16%	10%	19%	6%	16%
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	21%	29%	26%	20%	11%	33%	23%	32%	40%	32%	17%	38%	15%	23%	20%	25%
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	20%	33%	21%	16%	13%	27%	16%	24%	22%	34%	11%	28%	13%	22%	11%	21%
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	17%	58%	26%	29%	12%	46%	36%	42%	58%	40%	21%	47%	21%	36%	38%	35%
	NET TANGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET INTANGIBLE	23%	37%	25%	19%	15%	31%	20%	31%	28%	37%	13%	35%	15%	26%	15%	25%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	25%	67%	35%	35%	15%	60%	42%	48%	65%	58%	28%	61%	29%	38%	42%	43%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	20%	37%	19%	11%	16%	19%	12%	22%	16%	31%	9%	23%	9%	19%	9%	18%

Source: Q6 – Percentage of consumers having problems with digital content products

Base: Those who had used digital content products (except for paid and free categories, where the base is those who had used paid intangible and those who had used free intangible, respectively).

Table 67 Consumers experiencing problems with access to digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Music	I have PAID to download music from a digital store such as iTunes	186	132	120	1750	92	1093	858	182	1944	37	177	894	108	15	2437
	I have streamed music (or music videos) for FREE	659	703	861	4475	414	4337	5158	509	5647	247	648	3892	580	170	3787
	I have PAID a subscription fee to stream music (or music videos)	101	96	104	866	93	782	528	86	975	24	180	817	331	16	813
	I have bought music on CD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET	812	804	932	5420	510	5108	5645	605	6504	267	788	4438	827	183	5045
	NET TANGIBLE	303	214	229	3123	267	1829	1772	288	2588	65	338	1481	515	36	3612
	NET INTANGIBLE	509	589	703	2297	243	3278	3874	317	3916	202	450	2957	312	147	1433
Games	I have bought a game on DISC/CARTRIDGE	172	180	150	1624	58	1724	1246	205	1836	43	235	1389	151	25	1581
	I have downloaded a game over the internet (paid or free)	434	562	741	2167	167	2821	1767	326	2866	200	336	2258	226	155	2473
	I have played FREE online games (e.g., free games on social network sites)	710	784	1184	4079	287	4522	4256	466	4973	271	744	3602	485	221	3470

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
	I have PAID a subscription fee to play a specific multiplayer online game	82	86	93	1062	52	753	561	95	794	22	127	611	93	13	665
	I have downloaded an APP game (paid or free)	453	308	485	2690	336	3001	1586	420	3625	111	706	2090	355	128	3254
	NET	1116	1041	1556	6451	573	6228	5896	746	6967	378	1287	4834	787	317	5898
	NET TANGIBLE	493	388	612	3406	309	2700	2203	414	3500	112	581	2422	475	96	3190
	NET INTANGIBLE	609	628	928	2925	260	3432	3558	312	3323	257	695	2261	307	217	2631
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	178	307	332	1807	57	1763	998	247	1851	96	194	1678	105	70	1295
	I have PAID to download anti-virus software for a computer or smartphone/tablet	151	150	148	1494	71	1115	729	153	1394	44	263	1141	135	28	1061
	I have PAID an annual subscription fee for anti-virus software	125	125	141	1332	69	903	635	128	1140	31	194	877	151	27	1357
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	494	741	723	3582	168	3208	2278	338	3602	185	528	2697	303	154	1774
	NET	627	818	859	4717	235	4017	2909	478	4510	215	798	3454	454	178	3082
	NET TANGIBLE	323	243	279	2769	106	1995	1397	276	2336	75	442	1923	264	60	2105
	NET INTANGIBLE	285	558	564	1834	126	1929	1344	193	1958	130	337	1338	178	112	865

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	249	319	285	1575	93	2604	1163	218	1866	76	216	1553	158	70	1732
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	394	418	465	2277	236	3557	1529	300	2611	139	454	1881	325	132	1923
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	49	109	61	715	44	679	429	98	1198	22	100	785	124	28	997
	NET	511	527	590	3199	289	4426	2230	442	3592	171	554	2668	435	164	3113
	NET TANGIBLE	71	126	83	870	55	884	494	112	1345	31	132	1007	166	30	1111
	NET INTANGIBLE	183	100	227	949	143	1195	673	144	1213	64	255	758	144	57	970

- The incidence of problems relating to access was higher than for problems relating to quality but lower than problems relating to terms and conditions.
- The incidence of problems with 'access' again shares similar characteristics to the incidence of overall problems described above:
  - Problems relating to access were most common for 'paid' online cloud storage services and 'paid' subscription services to play online multiplayer games (35 per cent of consumers reported having a problem with the accessibility of each of these services).
  - Problems relating to access were more likely with 'paid' intangible products, compared to 'free' intangible products.
  - Access was a more common problem for intangible formats of gaming and for tangible anti-virus software (in comparison to their tangible/intangible alternatives).
  - The incidence of problems relating to access was highest amongst consumers in Latvia and Bulgaria and was relatively low amongst consumers in the Netherlands and Denmark.
- However, some characteristics differed slightly from the overall problems described above. The incidence of access problems was lowest for 'free' downloads of anti-virus software (only 19 per cent of consumers reported a problem with the accessibility of these products), while there were no reported problems with the access to tangible music products.

Table 68 focuses on problems relating to the terms & conditions of digital content products and services. These issues included:

- terms and conditions being too long and not being read;
- consumers not understanding their rights were because the terms and conditions were unclear;
- terms and conditions excluding the supplier from most or all of any responsibility for problems arising with the digital service or content;
- terms and conditions giving the provider the right to remove or amend services or content without providing notice;
- terms and conditions entitling the supplier to close accounts without giving consumers the opportunity to retrieve their data; and
- long term subscriptions that bind consumers to digital content or services (of more than one year) and cannot be terminated before the expiration of the term.

The highlighted cells in the table identify the Member States with an above average incidence of problems relating to terms and conditions.

Table 68 Consumers experiencing problems with the terms & conditions of digital content products (% of consumers who had accessed digital content products in each Member State)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have PAID to download music from a digital store such as iTunes	28%	53%	40%	22%	31%	41%	27%	34%	41%	43%	23%	48%	25%	22%	22%	33%
	I have streamed music (or music videos) for FREE	26%	31%	29%	20%	22%	32%	21%	32%	28%	35%	16%	28%	19%	24%	16%	25%
	I have PAID a subscription fee to stream music (or music videos)	25%	51%	35%	29%	26%	39%	31%	38%	45%	47%	24%	41%	26%	47%	25%	35%
	I have bought music on CD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET TANGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET INTANGIBLE	29%	35%	31%	21%	26%	35%	24%	35%	32%	37%	18%	30%	24%	26%	20%	28%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	32%	59%	43%	24%	33%	49%	34%	40%	48%	51%	24%	54%	32%	37%	24%	39%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	28%	30%	28%	17%	21%	31%	21%	32%	25%	34%	15%	25%	16%	24%	14%	24%
Games	I have bought a game on DISC/CARTRIDGE	20%	34%	21%	21%	14%	30%	18%	29%	30%	37%	13%	32%	19%	18%	14%	23%
	I have downloaded a game over the internet (paid or free)	31%	32%	30%	25%	23%	38%	21%	33%	30%	41%	15%	31%	22%	26%	20%	28%
	I have played FREE online games (e.g., free games on social network sites)	28%	31%	25%	21%	18%	34%	22%	31%	31%	33%	15%	27%	17%	27%	15%	25%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	I have PAID a subscription fee to play a specific multiplayer online game	35%	28%	30%	35%	31%	45%	32%	50%	52%	48%	19%	53%	31%	21%	26%	36%
	I have downloaded an APP game (paid or free)	25%	31%	31%	21%	20%	35%	22%	33%	28%	38%	19%	30%	20%	26%	18%	26%
	NET TANGIBLE	20%	34%	21%	21%	14%	30%	18%	29%	30%	37%	13%	32%	19%	18%	14%	23%
	NET INTANGIBLE	32%	40%	33%	25%	25%	40%	25%	39%	36%	43%	20%	33%	24%	33%	20%	31%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	39%	45%	41%	33%	30%	56%	31%	50%	51%	54%	24%	41%	30%	37%	26%	39%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	28%	37%	30%	20%	21%	34%	23%	29%	26%	40%	18%	26%	18%	32%	17%	27%
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	24%	39%	26%	21%	14%	38%	23%	39%	36%	36%	23%	34%	22%	22%	25%	28%
	I have PAID to download anti-virus software for a computer or smartphone/tablet	23%	43%	26%	20%	16%	39%	26%	32%	38%	36%	19%	37%	21%	29%	22%	28%
	I have PAID an annual subscription fee for anti-virus software	21%	48%	25%	15%	17%	35%	23%	34%	33%	36%	14%	33%	23%	28%	21%	27%
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	26%	37%	27%	19%	23%	29%	20%	32%	27%	35%	19%	28%	21%	27%	15%	26%
	NET TANGIBLE	24%	39%	26%	21%	14%	38%	23%	39%	36%	36%	23%	34%	22%	22%	25%	28%

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	NET INTANGIBLE	27%	39%	28%	17%	22%	32%	20%	35%	31%	36%	18%	31%	22%	28%	18%	27%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	29%	52%	29%	19%	19%	42%	26%	41%	42%	48%	20%	44%	27%	38%	23%	33%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	25%	36%	28%	15%	24%	27%	18%	30%	23%	31%	17%	23%	18%	24%	14%	24%
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	25%	31%	33%	25%	18%	41%	29%	37%	48%	38%	26%	42%	22%	27%	24%	31%
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	27%	34%	28%	22%	21%	33%	30%	31%	27%	36%	18%	30%	23%	26%	17%	27%
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	25%	55%	33%	26%	20%	56%	31%	46%	57%	49%	26%	51%	19%	39%	40%	38%
	NET TANGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET INTANGIBLE	30%	39%	32%	24%	23%	39%	30%	37%	33%	41%	19%	37%	24%	29%	20%	30%
	PAID (AS % OF THOSE USING PAID INTANGIBLE)	25%	67%	38%	34%	23%	64%	44%	50%	66%	65%	28%	66%	25%	43%	44%	45%
	FREE (AS % OF THOSE USING FREE INTANGIBLE)	28%	38%	28%	19%	25%	30%	27%	32%	22%	33%	15%	24%	23%	21%	16%	25%

Source: Q6 – Percentage of consumers having problems with digital content products

Base: Those who had used digital content products (except for paid and free categories, where the base is those who had used paid intangible and those who had used free intangible, respectively).

Table 69 Consumers experiencing problems with the terms & conditions of digital content products (number of consumers who had accessed digital content products in each Member State), thousands ('000)

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Music	I have PAID to download music from a digital store such as iTunes	310	127	176	2611	192	1280	1049	223	2045	43	233	894	168	16	3130
	I have streamed music (or music videos) for FREE	704	610	865	3906	429	5279	4464	510	5200	231	731	3630	657	164	3144
	I have PAID a subscription fee to stream music (or music videos)	80	99	88	1070	129	897	627	104	1222	29	216	681	479	19	960
	I have bought music on CD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	NET	906	717	965	5187	578	6098	5319	628	6158	253	936	4099	1005	180	5032
	NET TANGIBLE	382	199	247	3328	320	2055	1679	309	2780	68	403	1434	683	35	3687
	NET INTANGIBLE	524	518	717	1860	258	4043	3640	319	3378	185	533	2665	322	145	1344
Games	I have bought a game on DISC/CARTRIDGE	231	185	156	2059	88	2190	1411	228	2022	44	234	1506	200	28	1737
	I have downloaded a game over the internet (paid or free)	506	511	812	2778	240	3594	1806	336	3184	202	354	2363	334	136	2482
	I have played FREE online games (e.g., free games on social network sites)	750	672	1049	4642	301	5206	4081	430	5039	247	779	3339	465	196	2947

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
	I have PAID a subscription fee to play a specific multiplayer online game	98	77	99	922	66	824	527	95	857	23	96	677	88	13	622
	I have downloaded an APP game (paid or free)	548	282	595	4014	377	3976	1791	441	3672	107	860	2161	467	132	3262
	NET	1143	915	1534	7634	617	7146	5771	709	7052	362	1364	4514	875	279	5462
	NET TANGIBLE	530	356	600	3733	353	2940	1966	408	3757	112	500	2241	526	85	3062
	NET INTANGIBLE	600	538	906	3656	264	4133	3669	280	3128	242	854	2104	334	190	2357
Anti-virus software	I have obtained (paid or free) a disc containing anti-virus software for a computer	223	296	370	1755	62	1881	990	283	2349	113	242	1648	143	79	1878
	I have PAID to download anti-virus software for a computer or smartphone/tablet	204	152	181	1627	90	1188	952	185	1655	48	400	1366	182	39	1430
	I have PAID an annual subscription fee for anti-virus software	214	130	209	1659	118	1248	1020	177	1174	34	282	952	265	33	1551
	I downloaded FREE anti-virus software for a computer or smartphone/tablet	713	768	1022	4229	348	4288	3565	440	4195	219	858	3332	508	190	2867
	NET	913	848	1190	5439	461	5346	4614	613	5265	249	1241	4262	753	224	4473
	NET TANGIBLE	421	253	334	2747	165	2299	1842	323	2740	85	612	2172	399	77	2399
	NET INTANGIBLE	465	577	834	2579	286	2955	2638	280	2332	153	610	1913	342	140	1996

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK
Cloud storage	I have used an online 'cloud' storage service provided as part of my home internet service subscription package	298	337	363	1960	161	3269	1487	255	2264	89	324	1699	229	85	2060
	I have used a FREE online 'cloud' storage service such as the FREE versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	536	428	609	3242	382	4437	2773	393	3247	146	725	2001	592	151	3157
	I have used a PAID online 'cloud' storage service such as the PAID versions of Google Drive, OneDrive, Amazon Cloud Drive, Apple iCloud, Dropbox	72	104	78	642	72	827	363	107	1179	27	120	841	111	31	1062
	NET	658	547	769	4093	456	5698	3408	532	4284	188	853	2830	694	186	4189
	NET TANGIBLE	72	126	89	843	83	936	525	116	1369	35	131	1094	147	34	1178
	NET INTANGIBLE	266	102	332	1570	228	1891	1523	208	1682	68	449	792	373	64	1766

- Problems relating to terms & conditions were found to be more common than those relating to quality or access.
  - Problems relating to terms & conditions were most common for 'paid' online cloud storage services and 'paid' subscription services to play online multiplayer games (38 and 36 per cent of consumers reported having a problem with the terms & conditions of these services respectively).
  - Problems with terms & conditions were least common for tangible purchases of games (only 23 per cent of consumers reported such a problem), while there were no reported problems with the terms & conditions of tangible music products.
  - Problems relating to terms & conditions were more likely with 'paid' intangible products, compared to 'free' intangible products. The responses also suggested that terms & conditions were a more common problem for intangible gaming products, compared to tangible gaming products - while there was little difference in the incidence of problems for tangible and intangible anti-virus software.
- As with other problems described above, the incidence of problems relating to terms & conditions were found to be highest amongst consumers in Latvia and Bulgaria. In contrast, problems with terms & conditions were relatively low amongst consumers in the Netherlands, UK, Germany, Denmark and Sweden.

3.2 Time taken for problems to be resolved

3.2.1 Time taken for problems to be resolved: paid and free products

Table 70 shows the time taken for each of the 3 types of problem described above to be resolved, for different digital content products.

Table 70 Time taken for problems to be resolved, for different digital content products (% of consumers who had experienced a problem with paid and free products)

Time taken to resolve problems	Music			Games			Anti-virus software			Cloud storage		
	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)
No more than 1 hour	24%	18%	27%	22%	21%	25%	17%	17%	20%	15%	16%	16%
No more than 5 hours	9%	9%	10%	11%	14%	11%	9%	9%	9%	11%	14%	9%
No more than 24 hours	9%	10%	8%	10%	11%	11%	10%	14%	9%	10%	14%	8%
No more than 1 week	8%	10%	7%	8%	11%	9%	9%	12%	9%	10%	13%	9%
No more than 1 month	5%	6%	5%	5%	7%	5%	5%	5%	6%	7%	10%	6%
No more than 3 months	4%	6%	3%	3%	3%	4%	4%	4%	5%	3%	5%	3%
No more than 6 months	2%	3%	1%	2%	2%	2%	3%	3%	3%	3%	4%	3%
More than 6 months	2%	2%	2%	3%	3%	3%	4%	4%	4%	2%	3%	1%

Problem still exists	17%	20%	16%	16%	15%	15%	16%	14%	18%	17%	12%	20%
Don't know	20%	16%	21%	19%	12%	16%	23%	17%	18%	21%	10%	25%
Net Up to 24 hours	**42%**	**37%**	**45%**	**43%**	**46%**	**47%**	**36%**	**41%**	**38%**	**37%**	**44%**	**33%**
Net Up to 1 month	**56%**	**53%**	**57%**	**56%**	**64%**	**60%**	**50%**	**58%**	**54%**	**54%**	**67%**	**49%**
Net Up to 6 months	**61%**	**62%**	**61%**	**61%**	**69%**	**66%**	**57%**	**65%**	**61%**	**60%**	**75%**	**54%**

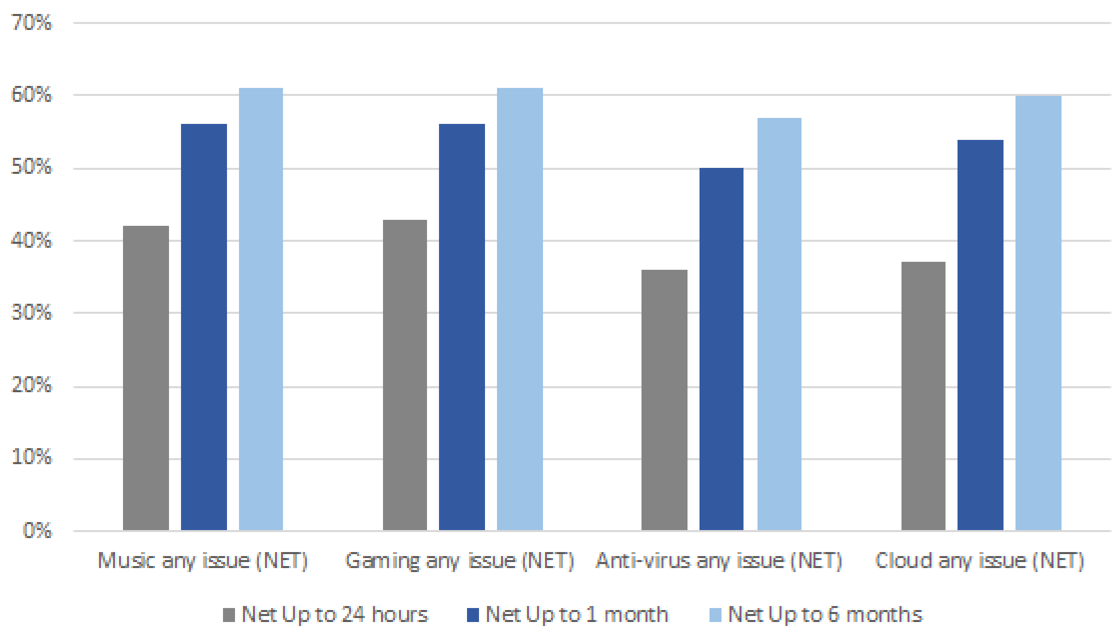
Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- The responses suggest a large variation in length of time taken for problems to be resolved - from less than an hour to more than six months.
  - Problems with music tended to be resolved most quickly (24 per cent of the respondents who reported problems with music stated that the problem was resolved within an hour compared to 15 per cent for cloud storage).
  - Problems remained unresolved in 16-17 per cent of cases and this was consistent across all four product categories.
- Overall, problems with music and gaming products were reported to be resolved slightly faster than those with anti-virus software and cloud storage (42 per cent of problems with music products and 43 per cent of problems with gaming products were resolved within 24 hours compared to 36 per cent of problems with anti-virus software and 37 per cent of problems with cloud storage).
- Problems with 'free' products were more likely to have been resolved within an hour, compared to 'paid' products.

Figure 13 shows the time taken for problems to be resolved, for different digital content products.

Figure 13 Time taken for problems to be resolved with all digital content products (paid and free)



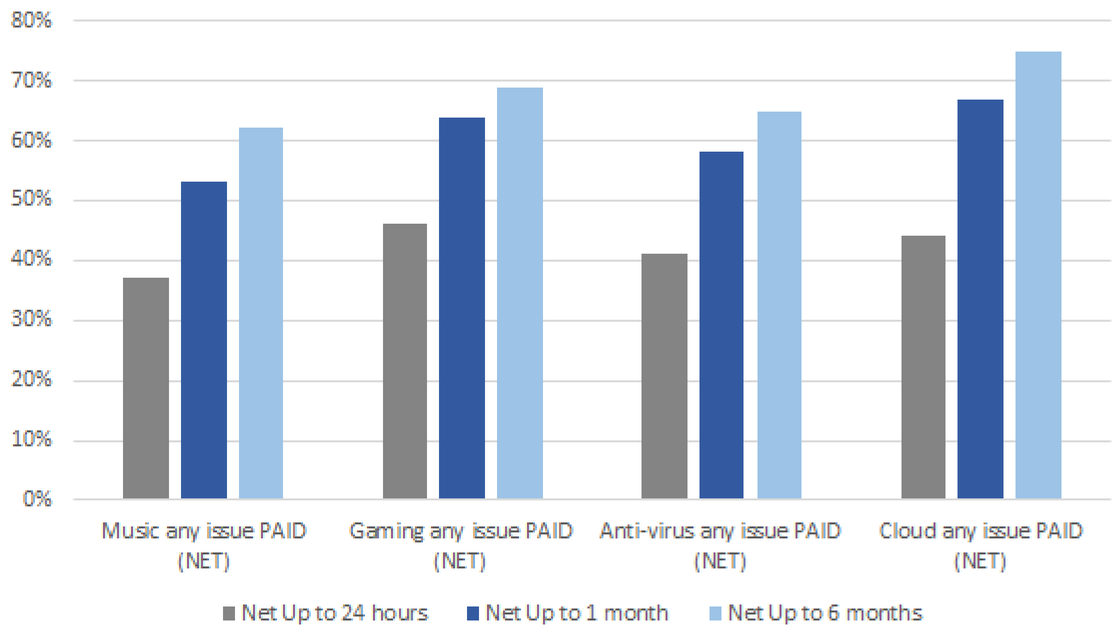
Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- As stated above, problems with music and gaming products were more likely to be resolved quickly than problems with anti-virus software and cloud storage.
- The majority of 'resolved' problems had been addressed within 24 hours across all product categories.

- Figure 14 shows the time taken for problems to be resolved, for 'paid' digital content products.

Figure 14 Time taken for problems to be resolved with all digital content products (paid products only)

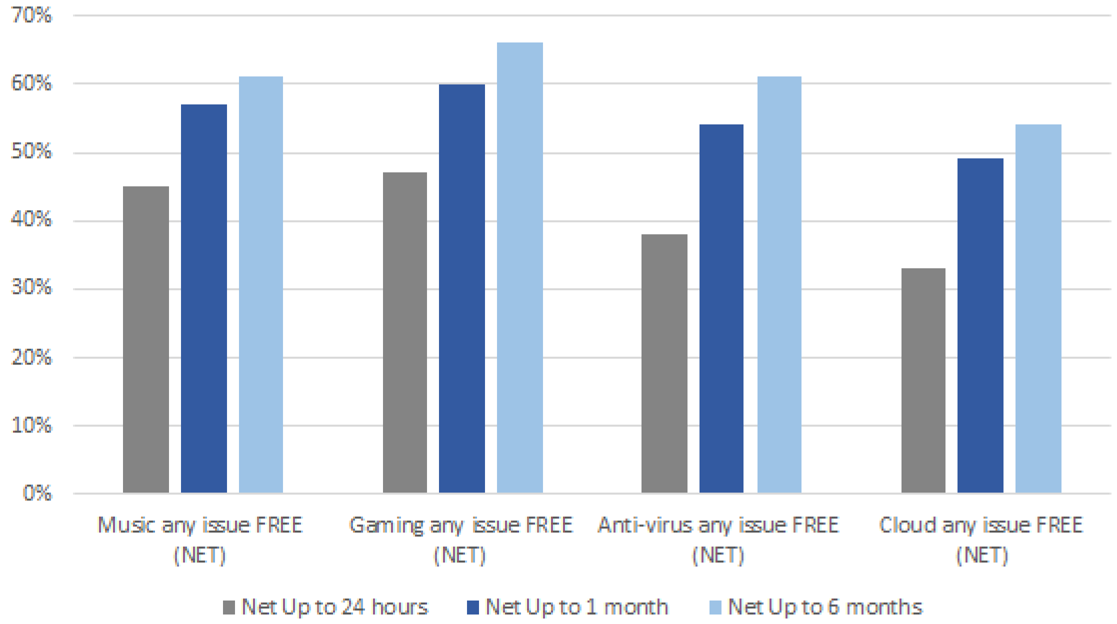


Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- As stated above, problems with 'paid' products tended to be resolved more quickly (than problems with 'free' products) for games, anti-virus software and cloud storage.
- In contrast, problems with 'paid' music products tended to take longer to resolve than problems with 'free' music products.
- Figure 15 shows the time taken for problems to be resolved, for free digital content products.

Figure 15 Time taken for problems to be resolved with all digital content products (free products only)



Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- Problems with 'free' music and gaming products were more likely to be resolved and more likely to be resolved quickly, compared to problems with anti-virus software and cloud storage.
- For cloud storage, problems with 'free' services are significantly less likely to be resolved in comparison to 'paid' products (54 per cent of problems with 'free' cloud storage were reported to be resolved within six months compared to 75 per cent of 'paid' cloud storage).
- As stated above, problems with 'free' music products tended to be resolved more quickly than problems with 'paid' music products.

3.2.2 Time taken for problems to be resolved: tangible and intangible products

Table 71 compares the time taken for problems to be resolved for tangible and intangible products.

Table 71 Time taken for problems to be resolved with different digital content products (% of consumers who had experienced a problem with paid and free products)

Time taken to resolve problems	**Tangible**			**Intangible**		
	Music	**Games**	**Anti-virus software**	**Music**	**Games**	**Anti-virus software**
No more than 1 hour	16%	17%	13%	25%	23%	17%
No more than 5 hours	11%	11%	12%	9%	11%	9%
No more than 24 hours	12%	10%	13%	8%	10%	14%
No more than 1 week	7%	15%	17%	8%	7%	11%
No more than 1 month	8%	8%	6%	5%	5%	6%
No more than 3 months	5%	4%	8%	4%	3%	3%
No more than 6 months	2%	2%	2%	2%	2%	4%
More than 6 months	2%	5%	2%	2%	3%	5%
Problem still exists	23%	15%	11%	17%	17%	14%
Don’t know	14%	14%	16%	20%	20%	18%

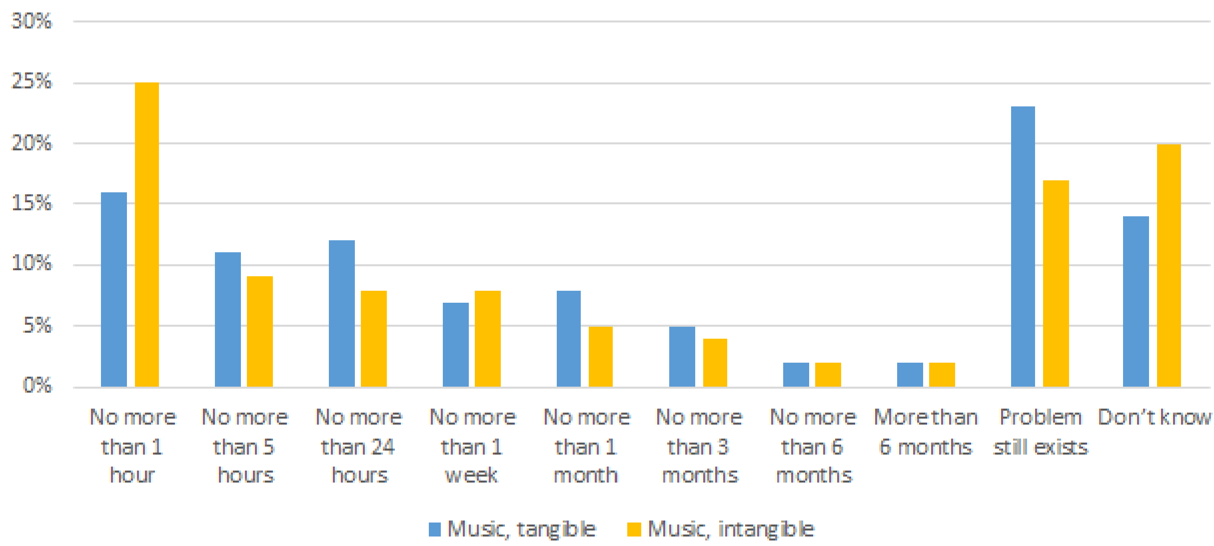
Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- Problems with intangible products took significantly less time to resolve than those with tangible products (for all product types).
- Problems were most likely to remain unresolved for tangible music products. In contrast, problems with gaming and anti-virus software products were more likely to remain unresolved for intangible formats.

Figure 16 shows the time taken for problems to be resolved, for tangible and intangible music products.

Figure 16 Time taken for problems to be resolved with music products (tangible and intangible products)



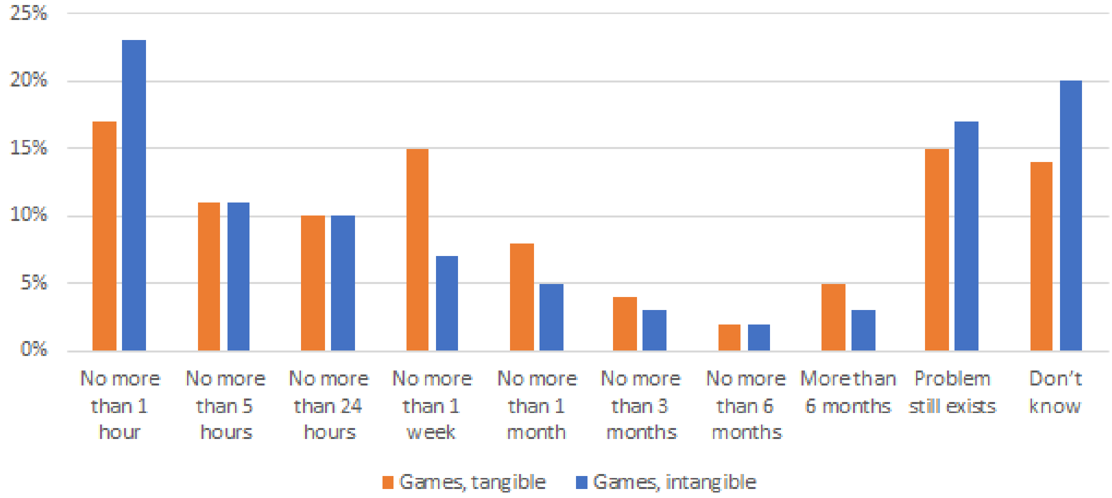
Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- Problems with intangible music products were significantly more likely than problems with tangible products to be resolved immediately. It was reported that one in four problems with intangible music products were resolved within an hour compared to 16 per cent of problems with tangible products.
- As stated above, problems with tangible music formats were relatively more likely to remain unresolved (23 per cent compared to 17 per cent for intangible music formats).

Figure 17 shows the time taken for problems to be resolved, for tangible and intangible gaming products.

Figure 17 Time taken for problems to be resolved with games products (tangible and intangible products)



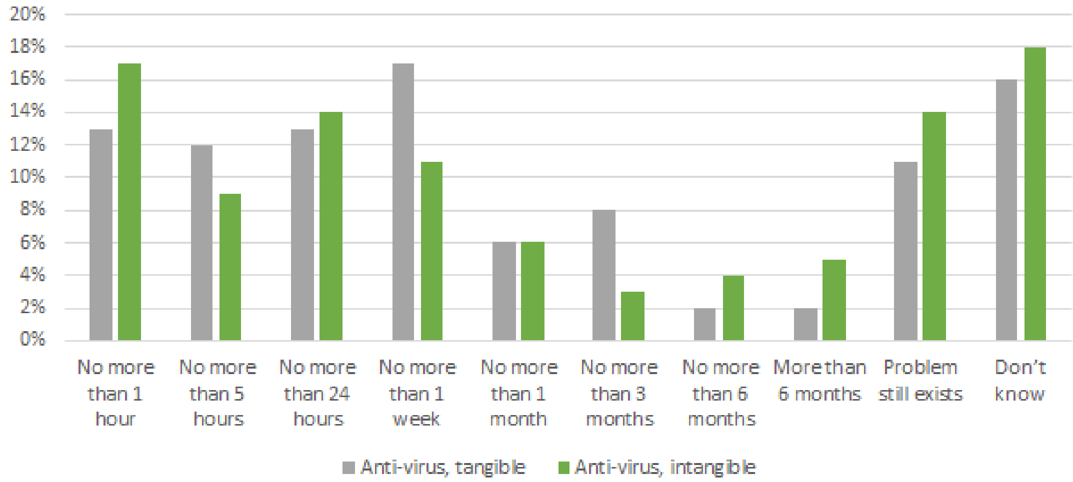
Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- Problems with intangible gaming formats were also significantly more likely than problems with tangible products to be resolved immediately. However, problems with tangible products were more likely to have been resolved after a week and were more likely to have been resolved overall.
- Problems with intangible gaming formats were relatively likely to remain unresolved (17 per cent compared to 15 per cent for tangible formats).

Figure 18 shows the time taken for problems to be resolved for tangible and intangible anti-virus software.

Figure 18 Time taken for problems to be resolved with anti-virus software (tangible and intangible products)



Source: Q10 – Length of time of problem

Base: Those who had experienced a problem

- Problems with anti-virus software tended to take longer to resolve, and fewer problems were resolved immediately, in comparison to music and gaming products.
    - As with gaming products, problems with intangible anti-virus software were more likely to be resolved immediately (within an hour), although problems with tangible formats were more likely to have been resolved after a week and were more likely to have been resolved overall.

3.2.3 Time taken for different types of problem to be resolved

Table 72 shows the time taken to resolve different types of problem.

Table 72 Time taken to for different types of problem to be resolved (% of consumers who had experienced a problem with digital content products)

Time taken to resolve problems	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
No more than 1 hour	22%	30%	19%	19%	28%	19%	14%	18%	18%	9%	17%	17%
No more than 5 hours	11%	12%	4%	10%	15%	6%	10%	11%	6%	17%	16%	6%
No more than 24 hours	11%	12%	4%	10%	13%	6%	12%	15%	6%	16%	15%	4%
No more than 1 week	9%	8%	7%	9%	10%	6%	12%	14%	5%	11%	17%	5%
No more than 1 month	8%	5%	3%	5%	6%	3%	7%	7%	3%	11%	8%	5%
No more than 3 months	4%	4%	3%	3%	3%	3%	4%	7%	2%	4%	2%	4%
No more than 6 months	2%	1%	2%	2%	2%	2%	4%	2%	2%	4%	2%	3%
More than 6 months	2%	1%	3%	4%	2%	4%	4%	4%	4%	3%	1%	2%
Problem still exists	18%	13%	22%	23%	11%	18%	16%	9%	21%	14%	12%	21%
Don’t know	14%	13%	33%	15%	11%	32%	16%	13%	31%	11%	11%	32%

Time taken to resolve problems	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
Net Up to 24 hours	44%	54%	27%	39%	56%	32%	36%	44%	31%	42%	48%	27%
Net Up to 1 month	60%	67%	37%	53%	72%	41%	56%	65%	39%	64%	73%	37%
Net Up to 6 months	66%	73%	42%	58%	77%	46%	64%	74%	44%	72%	77%	44%

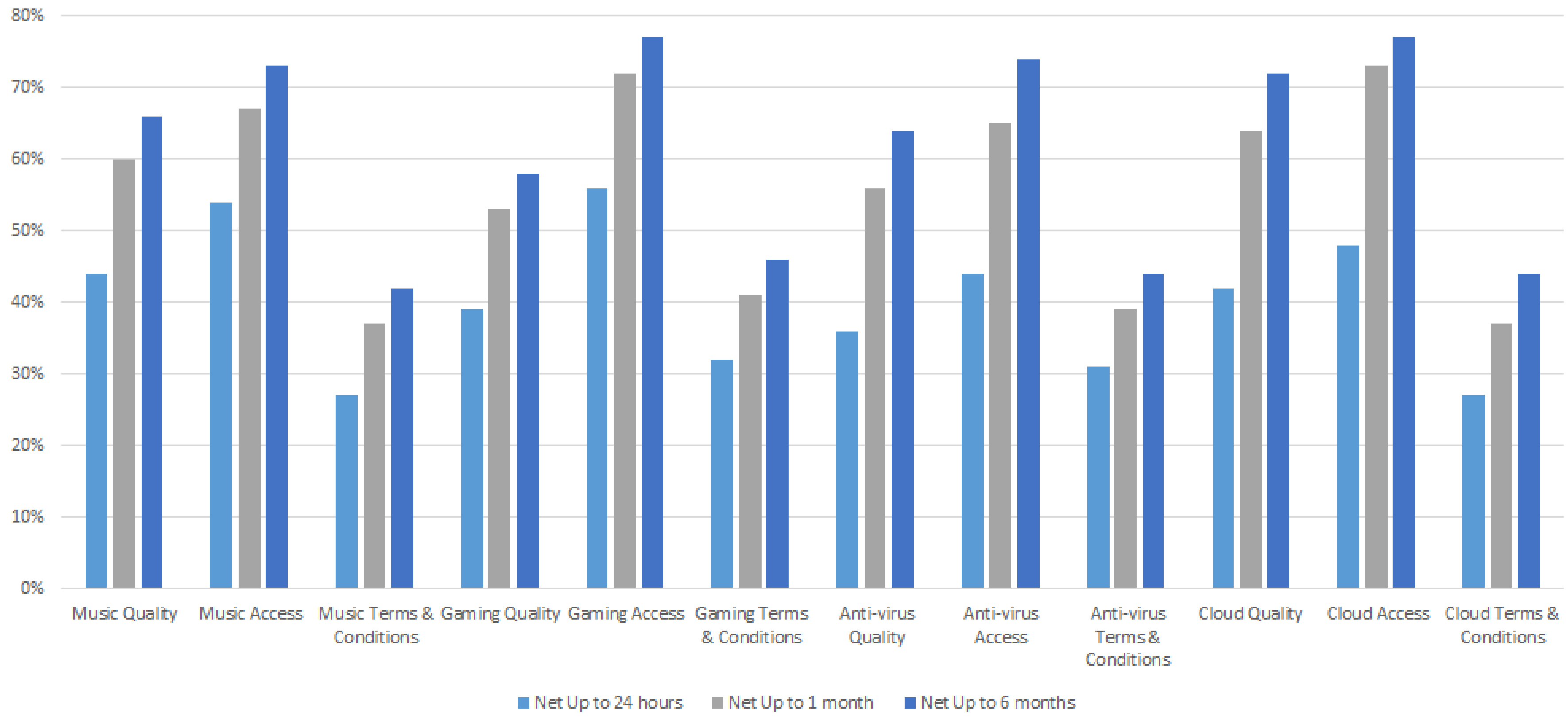
Source: Q12 – What action was taken user to get problem resolved?

Base: Those who had experienced a problem

- Respondents reported that problems with access were most likely to have been resolved and were also most likely to have been resolved quickly. This was particularly the case for music and gaming products as 54 and 56 per cent of respondents with access problems with music and gaming products respectively said the problems had been resolved within 24 hours - compared to 39 and 44 per cent of those with quality problems, and 27 and 32 per cent of those with problems with terms & conditions.
- The survey found considerable uncertainty about whether problems with terms & conditions had been resolved. Around one in three respondents said they did not know whether their problems with terms and conditions had been resolved or not, compared to 11 to 13 per cent of those experiencing access problems and 11 to 16 per cent of those experiencing quality problems.
- Problems with terms & conditions were also the most likely to remain unresolved as respondents reported that around one in five problems with terms and conditions still existed. Quality and access problems were more likely to have been resolved, with the exception of problems with the quality of gaming products (for which 23 per cent of respondents reported that the problem still exists).

Figure 19 provides an illustration of time taken for different problem types to be resolved.

Figure 19 Time taken for different types of problem to be resolved



Source: Q12 – What action was taken user to get problem resolved?

Base: Those who had experienced a problem

4 Action to resolve problems

This section presents the survey findings relating to the action taken to resolve problems. It explores the different types of action taken, the costs incurred by consumers, the time spent trying to resolve problems and the psychological effects on consumers.

As above, the survey focused on the problems reported with products obtained or accessed for personal use during the last 12 months. Respondents were asked to consider their most recent problem encountered (for up to 2 products).

4.1 Type of action taken to resolve problems

Table 73 shows the type of action taken to resolve problems with products, presenting data for ‘paid’ and ‘free’ products.

Table 73 Type of action taken to resolve problems (% of consumers who had experienced a problem with paid and free products)

Type of action taken	Music			Games			Anti-virus software			Cloud storage		
	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)
Made a complaint	24%	26%	21%	24%	25%	24%	29%	34%	27%	26%	29%	22%
Requested assistance (e.g. online helpdesk, email, phoned)	33%	30%	35%	36%	32%	39%	40%	48%	33%	31%	33%	27%
Asked for a replacement	15%	20%	10%	9%	13%	7%	13%	17%	10%	14%	18%	11%
Asked for a repair	13%	15%	11%	11%	14%	8%	14%	16%	12%	13%	16%	9%
Asked for a refund	12%	20%	5%	12%	18%	9%	8%	11%	6%	11%	13%	9%
Asked for compensation	7%	11%	3%	3%	3%	4%	4%	6%	3%	6%	10%	1%
Made use of a commercial guarantee / warranty / insurance policy	3%	4%	2%	3%	4%	2%	3%	3%	2%	4%	3%	6%
Withheld payment	4%	4%	4%	3%	4%	2%	4%	4%	5%	2%	3%	2%
Requested/declared that	2%	3%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%

Type of action taken	Music			Games			Anti-virus software			Cloud storage		
	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)	Any issue (NET)	Any issue PAID (NET)	Any issue FREE (NET)
an unfair term/condition should not be applied												
Posted negative feedback (e.g. via online reviews, website of provider or social media)	9%	10%	8%	14%	17%	10%	7%	5%	11%	5%	4%	8%
Tried to fix it myself	19%	10%	27%	21%	21%	19%	25%	20%	27%	17%	14%	22%
Stopped using it	12%	6%	17%	19%	10%	27%	15%	8%	20%	11%	5%	19%
Other	3%	2%	3%	3%	2%	3%	4%	2%	4%	1%	-	2%

Source: Q12 – What action was taken by the user to get problem resolved?

Base: Those who had experienced a problem

- The most common action taken to resolve problems was to request assistance (e.g. from an online helpdesk, email or telephone), followed by a complaint. This was the case across all types of product and was most common for problems with anti-virus software, for which 40 per cent of consumers experiencing a problem had requested assistance and 29 per cent had made a complaint.
    - Consumers were more likely to make a complaint for 'paid' products. In contrast, requests for assistance were more likely for 'free' music and gaming products.
- Significant proportions of consumers experiencing problems had also asked for a replacement, repair, refund or compensation, or had posted negative feedback. These actions were more likely for consumers who had 'paid' for products.
- A smaller proportion of consumers had made use of guarantees, warranties or insurance policies, withheld payment or requested that an unfair term or condition should not be applied. There was little difference between 'paid' and 'free' products.
- A significant proportion of consumers experiencing problems had also tried fixing the problem themselves (particularly for problems with anti-virus software, where 25 per cent of consumers had tried to fix problems), while a large proportion had simply stopped using the product (particularly for problems relating to gaming products, where 19 per cent had stopped using the product). Consumers were also more likely to try to fix products, or just stop using products, when the products were 'free'.

Table 74 shows the type of action taken to resolve different types of problem.

Table 74 Type of action taken to resolve different types of problem (% of consumers who had experienced a problem with digital content products)

Action taken to resolve problems	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
Made a complaint	24%	20%	30%	22%	25%	26%	34%	26%	28%	22%	25%	34%
Requested assistance (e.g. online helpdesk, email, phoned)	29%	40%	25%	34%	40%	30%	40%	43%	34%	18%	41%	33%
Asked for a replacement	22%	11%	9%	12%	8%	8%	16%	12%	11%	17%	13%	11%
Asked for a repair	14%	9%	21%	9%	12%	10%	15%	15%	10%	16%	15%	6%
Asked for a refund	16%	9%	13%	13%	8%	23%	8%	8%	10%	17%	7%	8%
Asked for compensation	10%	4%	8%	2%	3%	4%	4%	6%	3%	7%	7%	4%
Made use of a commercial guarantee / warranty / insurance policy	5%	2%	2%	2%	3%	3%	2%	2%	3%	7%	3%	3%
Withheld payment	2%	3%	12%	3%	1%	7%	2%	7%	2%	2%	3%	2%

Action taken to resolve problems	**Music**			**Games**			**Anti-virus software**			**Cloud storage**		
	Quality	**Access**	**Terms & conditions**	**Quality**	**Access**	**Terms & conditions**	**Quality**	**Access**	**Terms & conditions**	**Quality**	**Access**	**Terms & conditions**
Requested/declared that an unfair term/condition should not be applied	3%	1%	-	-	2%	2%	2%	4%	1%	3%	1%	2%
Posted negative feedback (e.g. via online reviews, website of provider or social media)	11%	6%	10%	14%	15%	11%	8%	6%	7%	1%	5%	11%
Tried to fix it myself	14%	24%	20%	17%	25%	18%	26%	21%	29%	18%	20%	13%
Stopped using it	9%	12%	18%	27%	14%	16%	17%	10%	20%	9%	11%	12%
Other	2%	4%	1%	2%	4%	1%	2%	3%	7%	2%	1%	-

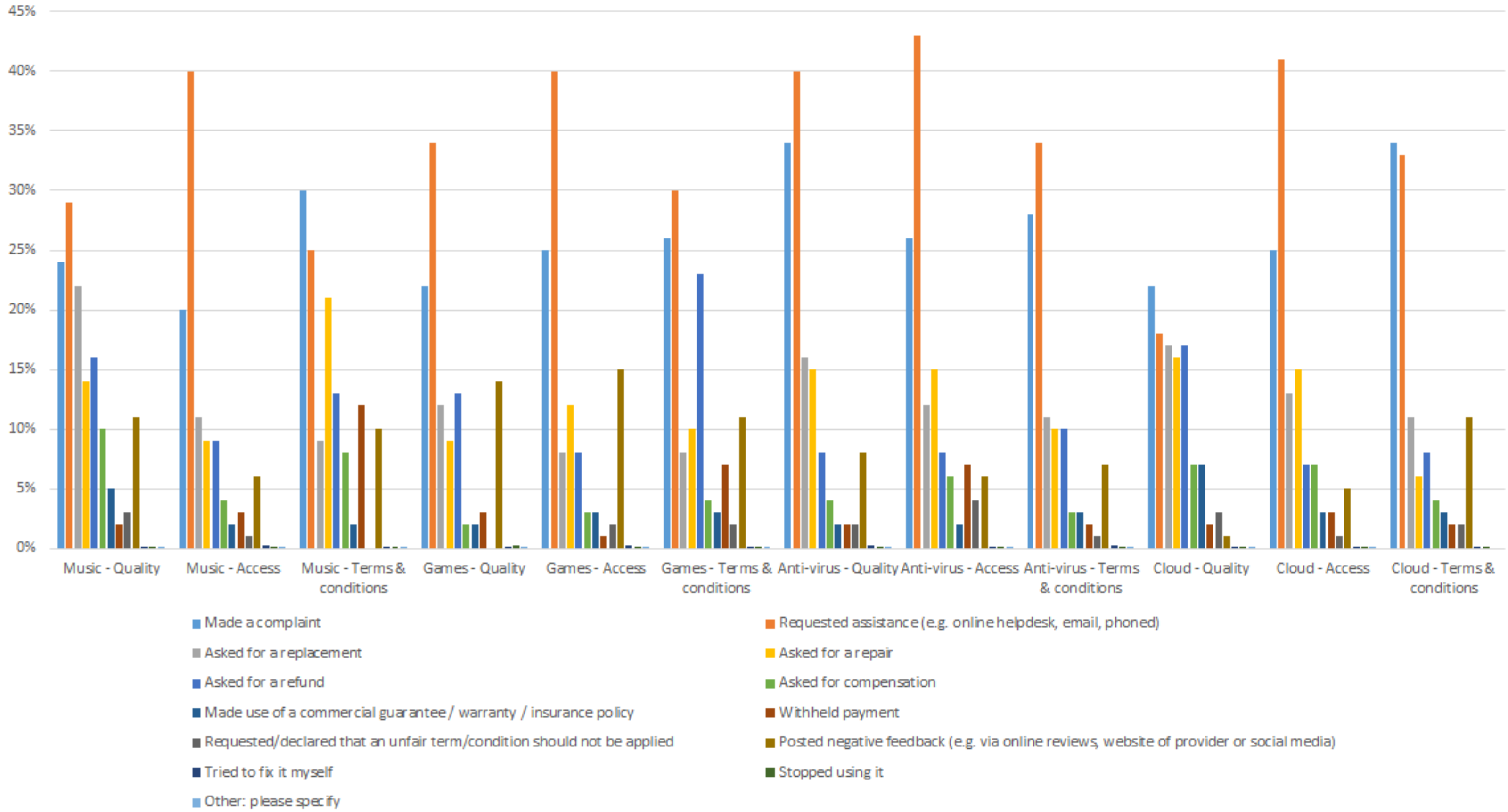
Source: Q12 – What action was taken user to get problem resolved?

Base: Those who had experienced a problem

- The responses suggest:
    - Consumers experiencing issues relating to quality were most likely to request assistance or make a complaint but were also relatively likely to ask for a replacement, refund or compensation.
    - Consumers experiencing access issues were most likely to request assistance (more than 40 per cent of consumers experiencing problems with each type of product stated that they had requested assistance). These consumers were also relatively likely to try to fix problems themselves.
    - Consumers experiencing problems with terms & conditions were also most likely to request assistance or make a complaint - but were relatively likely to have withheld payment (particularly for music and gaming products) or stop using products.

Figure 20 illustrates the type of action taken to resolve different types of problem.

Figure 20 Type of action taken to resolve different types of problem (% of consumers who had experienced a problem with digital content products)



Source: Q12 – What action was taken user to get problem resolved?

Base: Those who had experienced a problem

4.2 Target of action taken to resolve problem

Table 75 shows the recipient of complaints made by respondents to the survey.

Table 75 Recipient of complaint (% of consumers who had made a complaint)

Recipient of complaint	Music	Games	Anti-virus software	Cloud storage
Retailer / seller or service provider	73%	68%	60%	74%
Manufacturer	27%	38%	41%	35%
Public / consumer organisation	11%	9%	10%	10%
Brought the matter to an out-of-court dispute resolution body such as an ombudsman, arbitration, mediation or conciliation body	3%	3%	4%	3%
Took the business concerned to court	-	-	-	1%
Other	8%	2%	4%	1%
Don't know	-	2%	3%	-

Source: Q13 – To whom was the complaint made?

Base: Those who had made a complaint

- Those consumers making complaints to resolve problems were most likely to have made complaints to the relevant retailer, seller or service provider. This was the case across all product types and was particularly high for music products and cloud storage.
- A relatively large proportion of consumers also made complaints to the manufacturer. This was particularly the case for games and anti-virus software.
- Further, around 10 per cent of those making complaints had made them to a public or consumer organisation, while only 3-4 per cent had used an ombudsman or other dispute resolution body. Very few respondents had taken the business to court.

Table 76 shows the recipient of request for a replacement, repair, refund or compensation, made by respondents to the survey.

Table 76 Recipient of request for a replacement, repair, refund or compensation (% of consumers who had requested a replacement, repair, refund or compensation)

Recipient of complaint	Music	Games	Anti-virus software	Cloud storage
Retailer / seller or service provider	57%	55%	43%	47%
Manufacturer	29%	31%	49%	35%

Recipient of complaint	Music	Games	Anti-virus software	Cloud storage
Public / consumer organisation	21%	18%	16%	13%
Brought the matter to an out-of-court dispute resolution body such as an ombudsman, arbitration, mediation or conciliation body	5%	6%	4%	12%
Took the business concerned to court	-	1%	-	1%
Other	1%	-	1%	-
Don't know	2%	1%	4%	2%

Source: Q14 – Who did you ask for a replacement/repair/refund/compensation?

Base: Those who had requested a replacement/repair/refund/compensation

- As with complaints, requests for replacements, repair, refunds or compensation were most likely to be addressed to the retailer, seller, service provider or manufacturer.
  - In comparison to complaints, requests for replacements, repair, refunds or compensation were relatively more likely to be made to the manufacturer. This was particularly the case for anti-virus software, where around half (49 per cent) of these consumers had made requests for replacements, repairs, refunds or compensation to the manufacturer, while 43 per cent had addressed these requests to the retailer, seller or service provider.
- These requests were also more likely than complaints to be made to a public or consumer organisation or a dispute resolution body.

4.3 Incidence of consumers taking action in response to problems

Table 77 shows whether respondents experiencing problems with products had taken action to resolve those problems.

Table 77 Whether action has been taken to resolve problems (% of consumers who had experienced a problem with paid and free products)

Action taken to resolve problems	**Music**			**Games**			**Anti-virus software**			**Cloud storage**		
	Any issue (NET)	**Any issue PAID (NET)**	**Any issue FREE (NET)**	**Any issue (NET)**	**Any issue PAID (NET)**	**Any issue FREE (NET)**	**Any issue (NET)**	**Any issue PAID (NET)**	**Any issue FREE (NET)**	**Any issue (NET)**	**Any issue PAID (NET)**	**Any issue FREE (NET)**
Yes	21%	31%	16%	24%	37%	22%	25%	37%	23%	25%	38%	18%
No	70%	59%	75%	67%	57%	72%	66%	56%	72%	64%	50%	74%
Don’t know	9%	10%	9%	9%	6%	6%	9%	7%	5%	11%	12%	8%

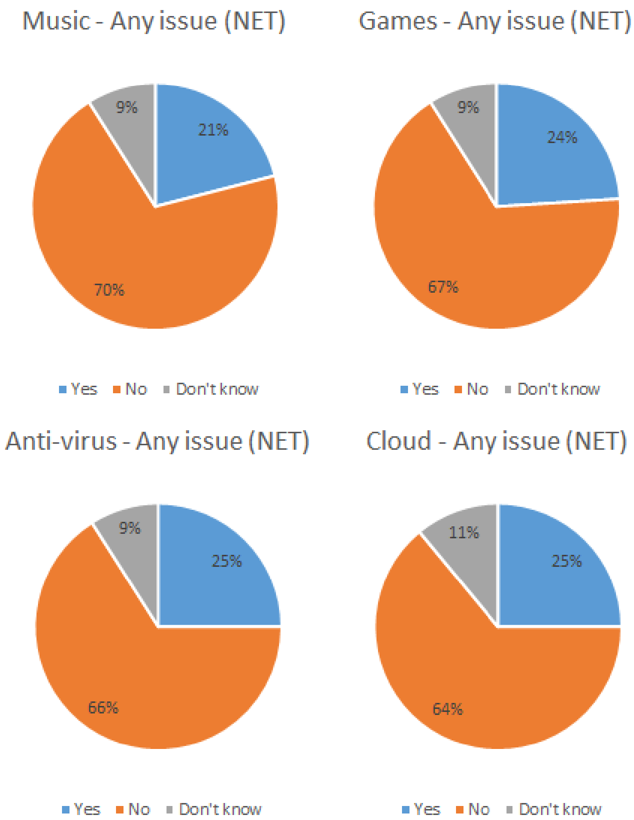
Source: Q11 – Has action been taken by user to get problem resolved?

Base: Those who had experienced a problem

- The responses suggest that in the majority of cases, consumers experiencing problems had not taken action to resolve those problems.
- Consumers who experienced problems with music products were the least likely to seek resolution (21 per cent of consumers experiencing problems with music products, compared to 24 per cent of those experiencing problems with gaming products and 25 per cent of those experiencing problems with anti-virus software and cloud storage).
- Consumers were significantly more likely to seek resolution for 'paid' products than for 'free' products. This difference was most significant for cloud storage, where 38 per cent of consumers experiencing problems had taken action to resolve these issues compared to 18 per cent of those experiencing problems with 'free' products.

Figure 21 provides an illustration of whether action was taken to resolve problems for different types of product.

Figure 21 Comparison of whether action was taken to resolve problems, by type of digital content product



Source: Q11 – Has action been taken by user to get problem resolved?

Base: Those who had experienced a problem

Table 78 shows whether action was taken to resolve different types of problem.

Table 78 Whether action has been taken to resolve different types of problem (% of consumers who had experienced a problem with digital content products)

Action taken to resolve problems	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
Yes	28%	23%	11%	35%	27%	13%	35%	38%	14%	44%	32%	13%
No	62%	71%	77%	56%	66%	76%	56%	54%	77%	45%	60%	75%
Don’t know	10%	6%	12%	9%	7%	11%	9%	8%	9%	11%	8%	12%

Source: Q11 – Has action been taken by user to get problem resolved?

Base: Those who had experienced a problem

- Consumers were significantly more likely to seek resolution for issues relating to access and particularly relating to quality, than for issues relating to terms and conditions.
- This was particularly the case for consumers experiencing problems with cloud storage: 44 per cent of these consumers took action to resolve problems with quality, 32 per cent took action to resolve problems with access, and only 13 per cent took action to resolve problems with terms and conditions.

4.4 Incidence of consumers incurring costs

Table 79 shows the costs incurred by consumers who experienced problems with music products. The highlighted cells identify the Member States reporting an above average incidence of costs incurred in resolving problems with music products.

Table 79 Costs incurred by consumers who experienced problems with music products

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	None / I did not incur any costs	79%	64%	71%	75%	81%	63%	78%	70%	74%	68%	81%	61%	79%	73%	76%	73%
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	5%	10%	8%	7%	3%	7%	3%	6%	5%	7%	5%	7%	6%	6%	2%	6%
	Cost to you of any telephone calls, postage or stationery	4%	9%	6%	4%	2%	7%	6%	7%	5%	8%	8%	10%	4%	9%	6%	6%
	Any travel costs you have incurred	4%	4%	7%	3%	1%	7%	5%	5%	4%	9%	2%	5%	1%	8%	2%	4%
	Costs to you of any legal matters or for legal advice	1%	2%	1%	2%	1%	4%	2%	3%	3%	2%	3%	5%	1%	n.a.	4%	2%
	Costs to you of getting any other type of expert advice or assistance	2%	4%	2%	2%	1%	4%	2%	2%	4%	3%	2%	8%	1%	2%	3%	3%
	Cost incurred as a result of over-payment that has not as yet been reimbursed	2%	3%	2%	4%	1%	5%	1%	1%	3%	2%	1%	4%	n.a.	1%	1%	2%
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	4%	5%	2%	3%	1%	3%	1%	5%	2%	4%	1%	3%	3%	n.a.	4%	3%
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	3%	3%	2%	4%	1%	2%	4%	2%	3%	4%	2%	3%	3%	1%	1%	3%
	Costs of any knock-on / consequential damage or	1%	2%	1%	2%	1%	3%	1%	2%	1%	2%	1%	2%	2%	1%	1%	2%

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	5%	8%	11%	3%	10%	7%	4%	3%	2%	5%	1%	6%	6%	4%	3%	5%
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	2%	4%	4%	1%	1%	2%	n.a.	2%	1%	2%	1%	3%	1%	n.a.	3%	2%
	Any other ways not already covered in which you have spent money as a result of the problem	4%	3%	3%	3%	1%	3%	1%	1%	1%	3%	1%	1%	1%	2%	2%	2%
	Average across all formats	**3%**	**5%**	**4%**	**3%**	**2%**	**5%**	**3%**	**3%**	**3%**	**4%**	**2%**	**5%**	**3%**	**4%**	**3%**	**3%**

Source: Q17a – Which costs did you incur?

Base: Those who had experienced a problem

- Most consumers experiencing problems with music products did not incur any costs (73 per cent).
- Costs were most likely to have been incurred by consumers experiencing problems with music products in Poland, Spain and Bulgaria, and were least likely to have incurred costs in Denmark and the Netherlands.
- The most common cost related to the cost of the original product or service that had become unusable, or less usable, as a result of the problem. This was a particular issue in Bulgaria and the Czech Republic, where it was mentioned by 18-19 per cent of respondents who had experienced a problem.
- The next most common cost related to the cost of telephone calls, postage or stationary in pursuing resolution. This was most commonly mentioned by respondents in Poland, Slovenia and Bulgaria.
- Travel costs were commonly mentioned by respondents in some Member States, such as Latvia and Slovenia, but were much less common in Sweden and Denmark.

Table 80 shows the costs incurred by consumers who experienced problems with gaming products. The highlighted cells identify the Member States reporting an above average incidence of costs incurred in resolving problems with gaming products.

Table 80 Costs incurred by consumers who experienced problems with games products

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Games	None / I did not incur any costs	84%	66%	77%	73%	78%	65%	79%	67%	74%	71%	84%	57%	76%	80%	75%	74%
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	3%	9%	5%	6%	6%	6%	5%	10%	5%	7%	4%	6%	5%	5%	9%	6%
	Cost to you of any telephone calls, postage or stationery	5%	8%	3%	5%	2%	7%	4%	7%	7%	5%	3%	9%	5%	4%	3%	5%
	Any travel costs you have incurred	2%	4%	2%	3%	2%	6%	4%	5%	4%	4%	2%	6%	5%	1%	3%	4%
	Costs to you of any legal matters or for legal advice	n.a.	2%	1%	1%	1%	4%	4%	3%	2%	2%	2%	4%	1%	1%	4%	2%
	Costs to you of getting any other type of expert advice or assistance	1%	4%	2%	5%	1%	4%	2%	5%	3%	2%	2%	7%	2%	1%	2%	3%
	Cost incurred as a result of over-payment that has not as yet been reimbursed	2%	2%	1%	2%	2%	2%	1%	2%	2%	4%	1%	4%	1%	1%	2%	2%
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1%	3%	2%	3%	1%	4%	n.a.	2%	1%	3%	1%	5%	2%	1%	2%	2%
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1%	4%	1%	3%	2%	3%	1%	2%	3%	4%	1%	5%	4%	n.a.	3%	3%
	Costs of any knock-on / consequential damage or	1%	3%	1%	2%	1%	3%	2%	1%	1%	2%	1%	3%	1%	2%	2%	2%

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	4%	7%	7%	3%	8%	7%	2%	2%	2%	2%	1%	4%	8%	7%	6%	5%
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	1%	6%	2%	2%	1%	n.a.	n.a.	2%	1%	3%	n.a.	2%	n.a.	2%	n.a.	2%
	Any other ways not already covered in which you have spent money as a result of the problem	1%	1%	2%	3%	2%	2%	1%	2%	2%	4%	2%	2%	1%	1%	1%	2%
	Average across all formats	**2%**	**4%**	**2%**	**3%**	**2%**	**4%**	**3%**	**4%**	**3%**	**4%**	**2%**	**5%**	**3%**	**2%**	**3%**	**3%**

Source: Q17a – Which costs did you incur?

Base: Those who had experienced a problem

- As above, most consumers experiencing problems with digital gaming products did not incur any costs (74 per cent).
- Costs were most likely to have been incurred by consumers experiencing problems with digital music products in Poland, Spain and Bulgaria, and were least likely to have incurred costs in Denmark and the Netherlands.
- The most common costs again related to the cost of the original product or service that had become unusable, or less usable, as a result of the problem, followed by the cost of telephone calls, postage or stationary.

0 shows the costs incurred by consumers who experienced problems with anti-virus software. The highlighted cells identify the Member States reporting an above average incidence of costs incurred in resolving problems with anti-virus software.

Table 81 Costs incurred by consumers who experienced problems with anti-virus software

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Anti-virus software	None / I did not incur any costs	75%	56%	70%	73%	79%	58%	74%	63%	62%	64%	76%	59%	67%	71%	57%	67%
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	5%	9%	6%	5%	2%	5%	4%	9%	7%	7%	8%	4%	8%	6%	9%	6%
	Cost to you of any telephone calls, postage or stationery	6%	9%	7%	12%	4%	7%	2%	8%	12%	9%	5%	11%	4%	8%	11%	8%
	Any travel costs you have incurred	1%	3%	3%	3%	4%	6%	3%	5%	8%	4%	1%	10%	3%	6%	10%	5%
	Costs to you of any legal matters or for legal advice	2%	3%	2%	2%	1%	6%	1%	3%	3%	3%	n.a.	3%	3%	1%	6%	3%
	Costs to you of getting any other type of expert advice or assistance	1%	5%	3%	8%	2%	6%	4%	6%	4%	3%	4%	6%	3%	3%	9%	4%
	Cost incurred as a result of over-payment that has not as yet been reimbursed	1%	3%	2%	2%	1%	4%	1%	2%	2%	2%	2%	4%	1%	n.a.	5%	2%
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	2%	5%	3%	5%	1%	9%	4%	4%	3%	4%	3%	5%	3%	1%	5%	4%
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	4%	4%	4%	5%	3%	5%	1%	4%	4%	4%	5%	5%	6%	2%	5%	4%
	Costs of any knock-on / consequential damage or	2%	4%	1%	2%	2%	3%	3%	2%	2%	2%	1%	1%	2%	3%	6%	2%

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	5%	12%	9%	7%	3%	7%	5%	4%	3%	5%	4%	6%	10%	3%	4%	6%
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	2%	6%	2%	1%	1%	2%	1%	2%	n.a.	4%	n.a.	3%	4%	3%	1%	2%
	Any other ways not already covered in which you have spent money as a result of the problem	1%	3%	2%	2%	2%	3%	2%	1%	3%	4%	1%	1%	5%	3%	1%	2%
	Average across all formats	**3%**	**6%**	**4%**	**5%**	**2%**	**5%**	**3%**	**4%**	**5%**	**4%**	**3%**	**5%**	**4%**	**4%**	**6%**	**4%**

Source: Q17a – Which costs did you incur?

Base: Those who had experienced a problem

- Most consumers experiencing problems with anti-virus software did not incur any costs (67 per cent). However, these consumers were more likely to incur costs than consumers experiencing problems with music or gaming products.
- Costs were most likely to have been incurred by consumers in Bulgaria, the UK, Spain and Poland.
- The most common cost related to telephone calls, postage and stationary, followed by the cost of the original product or service that had become unusable, or less usable, as a result of the problem.
- Travel costs were also commonly cited by consumers in some Member States including the UK, Poland and Italy.

Table 82 shows the costs incurred by consumers who experienced problems with cloud storage. The highlighted cells identify the Member States reporting an above average incidence of costs incurred in resolving problems with cloud storage.

Table 82 Costs incurred by consumers who experienced problems with cloud storage

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Cloud storage	None / I did not incur any costs	78%	56%	70%	66%	87%	59%	73%	59%	58%	64%	79%	49%	75%	75%	57%	67%
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	5%	11%	3%	8%	n.a.	7%	5%	11%	7%	8%	8%	7%	3%	4%	6%	7%
	Cost to you of any telephone calls, postage or stationery	6%	14%	4%	13%	1%	7%	6%	11%	11%	11%	3%	16%	5%	7%	8%	8%
	Any travel costs you have incurred	n.a.	3%	2%	5%	4%	11%	3%	6%	8%	5%	4%	13%	5%	3%	11%	6%
	Costs to you of any legal matters or for legal advice	1%	4%	3%	2%	1%	5%	5%	5%	4%	2%	3%	5%	4%	1%	9%	4%
	Costs to you of getting any other type of expert advice or assistance	1%	5%	3%	6%	2%	6%	5%	5%	5%	5%	3%	5%	3%	1%	7%	4%
	Cost incurred as a result of over-payment that has not as yet been reimbursed	1%	3%	2%	5%	2%	3%	n.a.	3%	6%	4%	1%	9%	1%	2%	4%	3%
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	3%	3%	3%	4%	n.a.	2%	n.a.	4%	4%	6%	n.a.	5%	3%	4%	3%	4%
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	3%	3%	3%	2%	1%	4%	2%	4%	3%	6%	1%	3%	5%	4%	3%	3%
	Costs of any knock-on / consequential damage or	1%	4%	2%	3%	1%	3%	4%	3%	1%	4%	4%	1%	1%	2%	3%	2%

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	4%	10%	9%	5%	4%	5%	3%	6%	3%	2%	n.a.	6%	8%	6%	7%	6%
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	3%	5%	6%	1%	3%	2%	n.a.	3%	1%	3%	n.a.	2%	2%	3%	4%	3%
	Any other ways not already covered in which you have spent money as a result of the problem	2%	4%	5%	1%	1%	2%	2%	1%	3%	6%	n.a.	3%	2%	1%	n.a.	3%
	Average across all formats	**3%**	**6%**	**4%**	**5%**	**2%**	**5%**	**4%**	**5%**	**5%**	**5%**	**3%**	**6%**	**4%**	**3%**	**6%**	**4%**

Source: Q17a – Which costs did you incur?

Base: Those who had experienced a problem

- The survey findings suggest that the incidence of costs relating to problems with cloud storage is similar to costs associated with anti-virus software:
    - Most consumers experiencing problems with cloud storage did not incur any costs (67 per cent)
    - Costs were most likely to have been incurred by consumers in Poland (where 51 per cent of those experiencing a problem had incurred costs).
    - The most common cost related to telephone calls, postage and stationary, followed by the cost of the original product or service that had become unusable, or less usable, as a result of the problem.
    - Travel costs were also commonly cited by consumers in Poland, the UK and Spain.

4.5 Estimates of costs incurred

4.5.1 All intangible digital content products

Table 83 provides estimates of the average costs incurred by consumers who experienced problems with all intangible music products. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with intangible music products.

Table 83 Estimates of costs incurred by consumers who experienced problems with all intangible music products (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.87	0.74	0.73	0.72	0.22	0.42	0.13	0.86	0.30	1.29	0.19	1.60	0.79	0.03	0.54	0.63
	Cost to you of any telephone calls, postage or stationery	0.16	0.81	0.26	0.80	0.53	0.80	0.72	0.63	0.85	0.86	1.85	1.33	0.31	1.19	1.22	0.82
	Any travel costs you have incurred	0.51	0.66	0.94	0.59	0.23	0.80	0.77	0.66	0.26	1.87	0.17	0.14	0.43	0.85	0.55	0.63
	Costs to you of any legal matters or for legal advice	0.83	0.91	0.09	0.15	0.20	0.60	0.44	1.01	0.67	1.83	0.18	0.43	0.19	0.00	0.94	0.56
	Costs to you of getting any other type of expert advice or assistance	1.44	1.08	0.10	0.49	0.33	0.51	0.13	0.35	2.20	1.08	0.07	2.08	0.72	0.09	0.51	0.75
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.36	0.68	0.48	1.07	0.18	0.87	0.01	0.33	0.86	0.35	0.74	0.58	0.03	0.47	0.52	0.50
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1.46	0.65	0.12	0.49	0.12	0.70	0.19	1.78	2.99	2.24	0.07	0.88	0.83	0.21	0.70	0.90
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	0.29	0.71	0.03	3.30	0.42	0.63	0.28	0.18	0.82	0.48	0.33	1.15	1.04	0.62	0.12	0.69
	Costs of any knock-on / consequential damage or	0.10	0.35	0.11	0.51	0.09	0.18	0.18	0.40	0.03	0.58	0.17	0.41	1.66	0.01	0.00	0.32

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.64	0.15	0.28	0.27	0.89	0.19	0.14	0.21	0.11	0.51	0.07	0.49	0.47	0.27	0.06	0.32
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	1.53	0.40	2.13	0.00	0.33	0.61	0.03	0.93	0.00	0.33	0.07	0.26	0.71	0.00	2.11	0.63
	Any other ways not already covered in which you have spent money as a result of the problem	0.36	0.08	0.15	0.27	0.17	0.63	0.05	0.44	0.00	0.20	5.31	0.09	0.00	0.12	0.02	0.53
	NET music costs (excl. tangibles)	**8.54**	**7.22**	**5.42**	**8.66**	**3.68**	**6.96**	**3.07**	**7.78**	**9.10**	**11.60**	**9.21**	**9.43**	**7.19**	**3.86**	**7.29**	**7.27**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average cost incurred by consumers of intangible music products was €7.27.
- There was significant variation between Member States, with costs ranging from just €3.07 in France and €3.68 in Denmark, to €11.60 in Latvia and €9.43 in Poland.

Table 84 provides estimates of the average costs incurred by consumers who experienced problems with all intangible gaming products. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with intangible gaming products.

Table 84 Estimates of costs incurred by consumers who experienced problems with all intangible digital games products (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Games	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.34	1.13	0.26	0.54	1.21	0.64	0.43	0.93	0.43	1.80	0.39	1.48	0.30	0.81	0.86	0.77
	Cost to you of any telephone calls, postage or stationery	0.26	0.84	0.19	0.70	0.37	0.92	0.41	0.92	0.80	0.26	0.78	1.02	0.26	0.37	0.39	0.57
	Any travel costs you have incurred	0.36	1.28	0.08	1.21	0.63	0.54	0.88	0.58	0.59	1.01	0.14	0.91	0.72	0.06	0.64	0.64
	Costs to you of any legal matters or for legal advice	0.16	0.30	0.02	0.03	0.04	1.30	0.73	1.47	0.81	1.14	0.01	1.32	0.57	0.03	0.73	0.58
	Costs to you of getting any other type of expert advice or assistance	0.08	0.45	0.21	0.62	0.11	0.46	0.73	0.59	1.21	1.05	1.30	1.21	2.01	0.17	0.08	0.69
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.16	0.44	0.05	1.06	0.36	1.19	0.17	0.20	0.16	0.78	1.80	0.39	0.86	0.04	0.12	0.52
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	0.15	1.26	0.19	2.27	0.01	0.65	0.00	0.55	0.12	1.09	0.00	0.86	0.21	1.19	1.96	0.70
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	0.35	1.31	0.38	1.49	0.16	0.13	0.23	0.03	0.23	1.40	0.04	0.94	0.58	0.24	0.36	0.53
	Costs of any knock-on /	1.35	0.60	0.24	0.08	0.03	0.90	2.98	0.32	0.08	0.33	0.02	1.65	0.23	0.32	1.80	0.73

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.27	0.82	0.76	0.51	1.94	0.48	0.19	0.14	0.15	0.30	0.04	0.13	0.52	0.46	0.98	0.51
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	0.35	2.04	2.19	0.94	0.01	0.01	0.00	0.31	0.03	1.20	0.00	0.23	0.00	0.15	0.00	0.50
	Any other ways not already covered in which you have spent money as a result of the problem	0.01	1.74	0.06	2.28	0.04	0.07	1.75	0.29	0.13	0.53	0.60	0.18	0.03	0.07	1.73	0.63
	NET games costs (excl. tangibles)	**3.84**	**12.22**	**4.64**	**11.74**	**4.90**	**7.30**	**8.51**	**6.35**	**4.75**	**10.91**	**5.13**	**10.33**	**6.28**	**3.90**	**9.65**	**7.37**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of intangible gaming products was similar to music products and averaged €7.37.
- There was also significant variation between Member States, with costs ranging from just €3.90 in Slovenia and €3.84 in Austria, to €12.22 in Bulgaria and €10.91 in Latvia.

Table 85 provides estimates of the average costs incurred by consumers who experienced problems with all intangible anti-virus software. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with intangible anti-virus software.

Table 85 Estimates of costs incurred by consumers who experienced problems with all intangible anti-virus software (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Anti-virus software	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	1.57	0.96	1.36	1.09	0.54	1.44	0.64	1.66	1.04	2.12	2.00	0.79	1.13	1.12	0.72	1.21
	Cost to you of any telephone calls, postage or stationery	0.91	0.77	0.54	1.55	0.61	1.16	0.06	1.59	1.01	0.45	0.48	1.12	0.53	0.72	1.20	0.85
	Any travel costs you have incurred	0.01	0.38	0.20	0.47	0.12	0.99	0.91	1.09	2.13	0.30	0.14	0.72	0.99	0.41	1.83	0.71
	Costs to you of any legal matters or for legal advice	0.53	0.16	0.40	0.79	0.26	0.87	0.00	0.76	0.57	0.26	0.00	0.84	3.05	0.10	1.41	0.67
	Costs to you of getting any other type of expert advice or assistance	0.08	0.70	0.73	1.39	0.57	2.09	0.22	1.24	2.74	0.12	1.77	1.61	1.15	0.31	2.61	1.15
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.44	0.15	0.32	0.48	0.00	1.73	0.02	1.31	0.83	0.27	0.28	0.63	1.10	0.00	1.06	0.57
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1.70	1.23	0.43	2.45	0.00	2.77	1.47	1.53	0.69	1.25	1.27	0.95	0.10	0.23	2.65	1.25
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1.08	0.84	1.05	1.54	0.44	2.18	0.61	1.46	0.82	3.45	0.73	0.36	1.45	0.00	1.22	1.15
	Costs of any knock-on /	1.55	1.65	0.00	8.02	0.17	2.26	0.18	0.10	0.64	2.08	1.13	0.05	0.00	0.59	3.93	1.49

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.72	0.44	0.33	1.34	0.54	0.85	0.67	2.94	1.32	0.79	0.60	0.47	0.79	0.41	0.39	0.84
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	2.68	1.32	1.20	0.05	0.00	0.13	0.00	0.35	0.00	3.48	0.00	0.77	7.92	0.48	0.00	1.23
	Any other ways not already covered in which you have spent money as a result of the problem	0.94	0.45	0.03	0.07	0.00	0.45	0.74	0.17	0.22	0.90	0.31	0.06	5.54	0.63	0.14	0.71
	NET anti-virus costs (excl. tangibles)	**12.22**	**9.04**	**6.58**	**19.25**	**3.24**	**16.92**	**5.51**	**14.19**	**12.00**	**15.46**	**8.70**	**8.36**	**23.74**	**5.00**	**17.15**	**11.83**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average cost incurred by consumers of intangible music products was €7.27.
- There was significant variation between Member States, with costs ranging from just €3.07 in France and €3.68 in Denmark, to €11.60 in Latvia and €9.43 in Poland.

0 provides estimates of the average costs incurred by consumers who experienced problems with all intangible gaming products. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with intangible gaming products.

Table 86 Estimates of costs incurred by consumers who experienced problems with all intangible digital games products (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Games	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.34	1.13	0.26	0.54	1.21	0.64	0.43	0.93	0.43	1.80	0.39	1.48	0.30	0.81	0.86	0.77
	Cost to you of any telephone calls, postage or stationery	0.26	0.84	0.19	0.70	0.37	0.92	0.41	0.92	0.80	0.26	0.78	1.02	0.26	0.37	0.39	0.57
	Any travel costs you have incurred	0.36	1.28	0.08	1.21	0.63	0.54	0.88	0.58	0.59	1.01	0.14	0.91	0.72	0.06	0.64	0.64
	Costs to you of any legal matters or for legal advice	0.16	0.30	0.02	0.03	0.04	1.30	0.73	1.47	0.81	1.14	0.01	1.32	0.57	0.03	0.73	0.58
	Costs to you of getting any other type of expert advice or assistance	0.08	0.45	0.21	0.62	0.11	0.46	0.73	0.59	1.21	1.05	1.30	1.21	2.01	0.17	0.08	0.69
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.16	0.44	0.05	1.06	0.36	1.19	0.17	0.20	0.16	0.78	1.80	0.39	0.86	0.04	0.12	0.52
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	0.15	1.26	0.19	2.27	0.01	0.65	0.00	0.55	0.12	1.09	0.00	0.86	0.21	1.19	1.96	0.70
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	0.35	1.31	0.38	1.49	0.16	0.13	0.23	0.03	0.23	1.40	0.04	0.94	0.58	0.24	0.36	0.53
	Costs of any knock-on /	1.35	0.60	0.24	0.08	0.03	0.90	2.98	0.32	0.08	0.33	0.02	1.65	0.23	0.32	1.80	0.73

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.27	0.82	0.76	0.51	1.94	0.48	0.19	0.14	0.15	0.30	0.04	0.13	0.52	0.46	0.98	0.51
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	0.35	2.04	2.19	0.94	0.01	0.01	0.00	0.31	0.03	1.20	0.00	0.23	0.00	0.15	0.00	0.50
	Any other ways not already covered in which you have spent money as a result of the problem	0.01	1.74	0.06	2.28	0.04	0.07	1.75	0.29	0.13	0.53	0.60	0.18	0.03	0.07	1.73	0.63
	NET games costs (excl. tangibles)	**3.84**	**12.22**	**4.64**	**11.74**	**4.90**	**7.30**	**8.51**	**6.35**	**4.75**	**10.91**	**5.13**	**10.33**	**6.28**	**3.90**	**9.65**	**7.37**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of intangible gaming products was similar to music products and averaged €7.37.
- There was also significant variation between Member States, with costs ranging from just €3.90 in Slovenia and €3.84 in Austria, to €12.22 in Bulgaria and €10.91 in Latvia.

Table 87 provides estimates of the average costs incurred by consumers who experienced problems with all intangible anti-virus software. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with intangible anti-virus software.

Table 87 Estimates of costs incurred by consumers who experienced problems with all intangible anti-virus software (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Anti-virus software	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	1.57	0.96	1.36	1.09	0.54	1.44	0.64	1.66	1.04	2.12	2.00	0.79	1.13	1.12	0.72	1.21
	Cost to you of any telephone calls, postage or stationery	0.91	0.77	0.54	1.55	0.61	1.16	0.06	1.59	1.01	0.45	0.48	1.12	0.53	0.72	1.20	0.85
	Any travel costs you have incurred	0.01	0.38	0.20	0.47	0.12	0.99	0.91	1.09	2.13	0.30	0.14	0.72	0.99	0.41	1.83	0.71
	Costs to you of any legal matters or for legal advice	0.53	0.16	0.40	0.79	0.26	0.87	0.00	0.76	0.57	0.26	0.00	0.84	3.05	0.10	1.41	0.67
	Costs to you of getting any other type of expert advice or assistance	0.08	0.70	0.73	1.39	0.57	2.09	0.22	1.24	2.74	0.12	1.77	1.61	1.15	0.31	2.61	1.15
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.44	0.15	0.32	0.48	0.00	1.73	0.02	1.31	0.83	0.27	0.28	0.63	1.10	0.00	1.06	0.57
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1.70	1.23	0.43	2.45	0.00	2.77	1.47	1.53	0.69	1.25	1.27	0.95	0.10	0.23	2.65	1.25
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1.08	0.84	1.05	1.54	0.44	2.18	0.61	1.46	0.82	3.45	0.73	0.36	1.45	0.00	1.22	1.15
	Costs of any knock-on /	1.55	1.65	0.00	8.02	0.17	2.26	0.18	0.10	0.64	2.08	1.13	0.05	0.00	0.59	3.93	1.49

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.72	0.44	0.33	1.34	0.54	0.85	0.67	2.94	1.32	0.79	0.60	0.47	0.79	0.41	0.39	0.84
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	2.68	1.32	1.20	0.05	0.00	0.13	0.00	0.35	0.00	3.48	0.00	0.77	7.92	0.48	0.00	1.23
	Any other ways not already covered in which you have spent money as a result of the problem	0.94	0.45	0.03	0.07	0.00	0.45	0.74	0.17	0.22	0.90	0.31	0.06	5.54	0.63	0.14	0.71
	NET anti-virus costs (excl. tangibles)	**12.22**	**9.04**	**6.58**	**19.25**	**3.24**	**16.92**	**5.51**	**14.19**	**12.00**	**15.46**	**8.70**	**8.36**	**23.74**	**5.00**	**17.15**	**11.83**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of intangible anti-virus software was higher than music and gaming products and averaged €11.83.
- The variation between Member States was even more significant, with average costs ranging from just €5.00 in Slovenia and €3.24 in Denmark, to €17.15 in the UK.

Table 88 provides estimates of the average costs incurred by consumers who experienced problems with cloud storage. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with cloud storage.

Table 88 Estimates of costs incurred by consumers who experienced problems with all cloud storage (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Cloud storage	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.43	1.97	2.42	6.35	0.00	1.13	1.36	3.87	2.45	0.67	2.01	1.26	0.60	0.34	0.91	1.72
	Cost to you of any telephone calls, postage or stationery	2.07	1.45	0.36	3.50	0.55	0.68	0.46	1.96	1.48	0.64	0.32	3.60	0.30	1.02	1.69	1.34
	Any travel costs you have incurred	0.00	0.18	0.08	1.28	0.84	1.76	0.50	2.19	1.79	0.62	0.68	4.96	1.54	0.13	2.48	1.27
	Costs to you of any legal matters or for legal advice	0.07	0.48	0.11	0.91	0.13	2.60	0.73	3.96	1.17	0.41	0.12	1.59	1.99	0.04	2.39	1.11
	Costs to you of getting any other type of expert advice or assistance	0.25	1.27	0.10	3.70	0.42	2.18	0.93	3.43	3.17	1.79	0.67	2.47	1.43	0.11	3.12	1.67
	Cost incurred as a result of over-payment that has not as yet been reimbursed	1.08	0.70	0.18	1.06	0.57	1.46	0.00	0.61	3.16	2.90	0.49	3.43	0.05	0.35	1.17	1.15
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1.17	0.63	0.14	6.33	0.00	0.31	0.00	1.50	1.89	2.20	0.00	1.78	0.56	0.30	2.70	1.30
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1.54	0.75	0.04	2.77	0.00	1.18	1.67	2.05	1.60	0.76	0.03	2.92	1.55	2.02	1.04	1.33
	Costs of any knock-on / consequential damage or	0.04	4.83	0.35	3.03	0.02	0.42	7.38	1.48	0.64	1.15	2.68	0.00	0.26	2.83	0.76	1.72

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	1.18	0.23	0.36	11.64	0.66	0.31	2.25	0.39	0.40	0.13	0.00	1.61	1.67	4.55	0.73	1.74
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	2.35	2.91	1.19	0.47	1.51	0.36	0.00	5.83	2.12	0.23	0.00	0.23	1.55	3.98	1.46	1.61
	Any other ways not already covered in which you have spent money as a result of the problem	0.36	1.07	1.51	0.21	0.00	0.18	0.08	0.09	2.11	1.27	0.00	0.50	0.17	0.04	0.00	0.51
	NET cloud costs	**10.55**	**16.47**	**6.85**	**41.23**	**4.70**	**12.57**	**15.35**	**27.37**	**21.98**	**12.77**	**7.01**	**24.35**	**11.65**	**15.72**	**18.44**	**16.47**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'paid' intangible music products was significantly higher than 'free' alternatives and averaged €12.19 across the sample.
- There was also significant variation in average costs between Member States and between different types of cost.

Table 89 provides estimates of the average costs incurred by consumers who experienced problems with 'paid' intangible gaming products. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'paid' intangible gaming products.

Table 89 Estimates of costs incurred by consumers who experienced problems with 'paid' intangible games products (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Games	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	1.08	1.67	0.79	2.03	3.21	1.65	1.50	2.18	0.69	5.88	0.87	2.78	0.80	3.88	2.28	2.09
	Cost to you of any telephone calls, postage or stationery	0.26	1.68	0.52	2.28	0.20	2.48	0.17	2.53	2.47	0.40	1.38	2.88	0.53	0.89	0.73	1.29
	Any travel costs you have incurred	0.65	1.26	0.60	4.75	1.17	1.17	4.08	1.10	0.90	0.23	0.64	0.17	0.68	0.00	0.05	1.16
	Costs to you of any legal matters or for legal advice	0.65	0.69	0.00	0.13	0.04	1.57	2.38	4.60	4.80	1.23	0.00	3.90	0.00	0.18	2.20	1.49
	Costs to you of getting any other type of expert advice or assistance	0.04	2.35	1.11	0.75	0.08	1.35	0.06	0.33	2.73	0.04	2.22	1.50	0.00	0.05	0.00	0.84
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.42	0.04	0.00	1.65	0.12	0.69	0.41	0.00	0.52	0.48	8.88	0.32	0.00	0.23	0.38	0.94
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	0.52	0.31	0.99	4.84	0.00	0.95	0.00	0.26	0.00	0.12	0.00	1.34	0.54	0.00	5.90	1.05
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	0.00	4.83	0.06	5.52	0.00	0.13	0.22	0.00	0.00	6.67	0.00	2.69	0.75	0.00	0.81	1.45
	Costs of any knock-on /	5.40	1.22	0.14	0.00	0.00	0.78	0.06	0.24	0.29	1.60	0.08	4.41	0.10	0.33	5.95	1.37

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.73	0.44	0.45	0.39	5.12	1.47	0.89	0.17	0.05	1.62	0.21	0.24	0.78	1.13	0.15	0.92
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	0.04	0.37	0.00	3.73	0.00	0.00	0.00	0.46	0.00	0.62	0.00	0.24	0.00	0.14	0.00	0.37
	Any other ways not already covered in which you have spent money as a result of the problem	0.00	0.40	0.14	7.50	0.08	0.28	0.00	0.76	0.00	2.87	0.45	0.57	0.07	0.38	5.90	1.29
	NET PAID games costs (excl. tangibles)	**9.79**	**15.26**	**4.79**	**33.57**	**10.02**	**12.52**	**9.77**	**12.63**	**12.45**	**21.76**	**14.72**	**21.05**	**4.23**	**7.21**	**24.35**	**14.28**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'paid' intangible gaming products was also significantly higher than 'free' alternatives and averaged €14.28 across the sample.
- The most significant costs were reported by consumers in Germany and averaged €33.57. This was due to particularly high costs of 'knock-on / consequential damage or inconvenience caused to you or any of your possessions' and 'repairing or resolving the problem (at the consumer's expense)'.

Table 90 provides estimates of the average costs incurred by consumers who experienced problems with 'paid' intangible anti-virus software. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'paid' intangible anti-virus software.

Table 90 Estimates of costs incurred by consumers who experienced problems with 'paid' intangible anti-virus software (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Anti-virus software	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	3.08	4.36	3.23	2.85	1.55	2.60	0.00	3.94	2.64	4.24	5.29	1.70	1.91	1.27	1.44	2.67
	Cost to you of any telephone calls, postage or stationery	1.74	2.00	1.01	3.13	1.34	4.26	0.00	3.20	1.89	0.95	1.15	0.77	1.19	0.45	2.56	1.71
	Any travel costs you have incurred	0.04	1.20	0.50	1.19	0.00	4.15	2.14	2.51	4.49	0.43	0.00	1.09	1.36	0.33	3.11	1.50
	Costs to you of any legal matters or for legal advice	0.24	0.65	1.89	0.00	0.77	0.95	0.00	1.83	1.65	0.79	0.00	0.18	3.75	0.00	3.08	1.05
	Costs to you of getting any other type of expert advice or assistance	0.24	3.02	2.61	1.22	0.77	2.57	0.00	2.67	2.06	0.45	4.74	1.56	0.00	0.06	5.22	1.81
	Cost incurred as a result of over-payment that has not as yet been reimbursed	1.27	0.00	1.16	1.32	0.00	5.06	0.07	0.00	2.40	0.44	0.42	1.00	2.54	0.00	1.61	1.15
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	0.00	4.06	1.11	2.27	0.00	4.54	0.71	2.90	1.11	2.73	3.39	1.94	0.16	0.00	5.73	2.04
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1.71	0.21	2.91	2.63	1.17	7.46	2.14	3.50	2.28	1.47	1.94	0.09	1.58	0.00	2.62	2.11
	Costs of any knock-on /	0.04	3.94	0.00	6.30	0.00	9.77	0.07	0.19	0.40	7.17	3.01	0.00	0.00	0.00	8.51	2.63

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	1.90	0.08	0.17	1.23	1.55	0.22	1.66	0.47	1.36	2.04	0.72	0.79	1.34	1.85	0.79	1.08
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	5.43	1.52	2.03	0.14	0.00	0.00	0.00	0.08	0.00	11.04	0.00	1.90	1.25	2.17	0.00	1.70
	Any other ways not already covered in which you have spent money as a result of the problem	0.00	0.00	0.07	0.20	0.00	1.79	0.48	0.00	0.03	0.98	0.00	0.03	11.25	0.17	0.31	1.02
	NET PAID anti-virus costs (excl. tangibles)	**15.68**	**21.04**	**16.69**	**22.48**	**7.14**	**43.37**	**7.28**	**21.29**	**20.33**	**32.71**	**20.65**	**11.04**	**26.33**	**6.30**	**34.99**	**20.49**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- As with intangible music and gaming products, the average net cost incurred by consumers of 'paid' intangible anti-virus software was also significantly higher than 'free' alternatives and averaged €20.49 across the sample.
- The most significant costs were again reported by consumers in Germany and averaged €43.37. This was due to particularly high costs of 'knock-on / consequential damage or inconvenience caused to you or any of your possessions', which averaged €9.77 per consumer.

Table 91 provides estimates of the average costs incurred by consumers who experienced problems with 'paid' cloud storage. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'paid' cloud storage.

Table 91 Estimates of costs incurred by consumers who experienced problems with 'paid' cloud storage (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Cloud storage	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	1.23	3.28	6.79	15.78	0.00	0.84	3.94	6.47	5.70	1.19	2.30	2.12	1.22	1.15	1.62	3.58
	Cost to you of any telephone calls, postage or stationery	2.46	1.78	0.74	6.49	1.72	1.31	0.23	3.85	2.79	1.23	0.96	6.40	1.05	2.57	2.71	2.42
	Any travel costs you have incurred	0.00	0.19	0.27	2.10	2.40	3.72	1.44	4.81	2.82	1.33	2.02	9.13	3.48	0.46	3.96	2.54
	Costs to you of any legal matters or for legal advice	0.05	0.81	0.27	0.08	0.39	0.76	2.03	9.12	2.13	0.69	0.52	1.81	7.41	0.15	4.60	2.05
	Costs to you of getting any other type of expert advice or assistance	0.73	2.53	0.13	9.20	0.85	5.00	1.54	7.16	7.48	4.16	0.96	4.59	5.28	0.36	6.44	3.76
	Cost incurred as a result of over-payment that has not as yet been reimbursed	1.43	1.31	0.17	2.63	1.72	1.28	0.00	1.31	6.77	5.57	2.09	6.35	0.18	0.41	2.42	2.24
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	2.05	1.27	0.44	14.59	0.00	0.78	0.00	3.48	3.23	3.08	0.00	3.27	1.40	0.41	0.61	2.31
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1.00	0.95	0.06	6.88	0.00	2.66	4.78	4.13	1.56	0.84	0.14	5.44	5.62	6.59	1.50	2.81
	Costs of any knock-on / consequential damage or	0.00	3.75	0.00	7.54	0.00	0.63	1.75	2.25	1.52	2.61	9.44	0.00	0.00	9.63	1.59	2.71

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	3.44	0.21	0.57	28.64	0.85	0.46	6.53	0.35	0.91	0.30	0.00	0.17	4.77	14.51	0.27	4.13
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	6.91	5.80	0.79	0.00	3.44	0.11	0.00	11.35	5.00	0.53	0.00	0.43	0.96	12.82	3.13	3.42
	Any other ways not already covered in which you have spent money as a result of the problem	1.08	2.24	4.52	0.53	0.00	0.45	0.00	0.00	2.60	2.76	0.00	0.82	0.18	0.00	0.00	1.01
	NET PAID cloud costs	**20.38**	**24.11**	**14.75**	**94.47**	**11.35**	**18.00**	**22.25**	**54.29**	**42.52**	**24.29**	**18.43**	**40.53**	**31.55**	**49.06**	**28.85**	**32.99**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'paid' cloud storage was significantly higher than those experiencing problems with 'free' alternatives and averaged €32.99 across the sample.
- The most significant costs were reported by consumers in Germany and averaged €94.47. This was due to particularly high costs associated with a 'reduction in the usefulness of the goods concerned as a result of the problem', which averaged €28.64 per consumer.

4.5.2 'Free' intangible digital content products

0 provides estimates of the average costs incurred by consumers who experienced problems with 'free' intangible music products. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'free' intangible music products.

Table 92 Estimates of costs incurred by consumers who experienced problems with 'free' intangible music products (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	1.10	0.62	0.66	0.25	0.33	0.19	0.13	0.64	0.04	0.58	0.15	0.96	0.15	0.02	0.00	0.39
	Cost to you of any telephone calls, postage or stationery	0.18	0.85	0.23	0.25	0.11	0.71	0.69	0.62	0.21	0.71	1.08	1.50	0.07	1.08	0.61	0.59
	Any travel costs you have incurred	0.40	0.76	0.95	0.53	0.00	0.47	0.45	0.41	0.14	1.47	0.22	0.12	0.15	0.82	0.42	0.49
	Costs to you of any legal matters or for legal advice	1.15	1.04	0.10	0.03	0.31	0.01	0.50	1.02	0.31	1.80	0.23	0.17	0.00	0.00	0.22	0.46
	Costs to you of getting any other type of expert advice or assistance	1.98	1.23	0.02	0.18	0.50	0.04	0.04	0.12	0.27	0.82	0.09	1.06	0.02	0.02	0.42	0.45
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.32	0.72	0.55	0.39	0.00	0.43	0.02	0.42	0.96	0.40	0.00	0.10	0.00	0.47	0.03	0.32
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1.65	0.57	0.14	0.00	0.06	0.67	0.00	1.85	0.00	2.09	0.00	1.04	0.78	0.23	0.52	0.64
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	0.34	0.79	0.03	4.45	0.13	0.48	0.11	0.22	0.91	0.53	0.22	1.17	0.15	0.69	0.00	0.68
	Costs of any knock-on /	0.13	0.08	0.00	0.61	0.02	0.10	0.21	0.40	0.00	0.25	0.00	0.23	0.00	0.00	0.00	0.13

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.66	0.08	0.25	0.15	1.09	0.13	0.12	0.12	0.01	0.60	0.00	0.57	0.12	0.29	0.06	0.28
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	2.11	0.44	2.39	0.00	0.00	0.33	0.04	0.87	0.00	0.31	0.09	0.31	0.00	0.00	3.47	0.69
	Any other ways not already covered in which you have spent money as a result of the problem	0.27	0.09	0.11	0.34	0.24	0.76	0.05	0.57	0.00	0.19	6.93	0.11	0.00	0.12	0.03	0.65
	NET FREE music costs **(excl. tangibles)**	**10.29**	**7.27**	**5.44**	**7.17**	**2.79**	**4.33**	**2.35**	**7.26**	**2.84**	**9.73**	**9.01**	**7.34**	**1.43**	**3.74**	**5.80**	**5.79**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'free' intangible music products averaged €5.79 per consumer and was significantly lower than the average for 'paid' products, of €12.19.
- As with the 'paid' products, there was significant variation in the average costs incurred by consumers between Member States and between different types of cost.
- The most significant costs were reported by consumers in Austria and averaged €10.29. This was due to relatively high costs associated with 'lost earnings' from not being able to work while taking time out to resolve the problem, which averaged €2.11.

Table 93 provides estimates of the average costs incurred by consumers who experienced problems with 'free' intangible gaming products. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'free' intangible gaming products.

Table 93 Estimates of costs incurred by consumers who experienced problems with 'free' intangible games products (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Games	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.19	1.39	0.32	0.06	0.27	0.60	0.03	0.36	0.04	0.95	0.48	1.66	0.00	0.31	0.19	0.46
	Cost to you of any telephone calls, postage or stationery	0.27	0.70	0.28	0.26	0.89	0.83	0.68	0.44	0.41	0.33	1.14	0.50	0.07	0.42	0.12	0.49
	Any travel costs you have incurred	0.39	1.60	0.03	0.00	0.67	0.33	0.00	0.30	0.76	1.37	0.03	1.37	0.78	0.11	1.12	0.59
	Costs to you of any legal matters or for legal advice	0.00	0.25	0.04	0.00	0.08	1.37	0.52	0.33	0.02	1.80	0.03	0.58	1.62	0.00	0.25	0.46
	Costs to you of getting any other type of expert advice or assistance	0.13	0.16	0.14	0.84	0.20	0.38	0.00	1.11	1.38	1.99	1.93	1.92	1.33	0.29	0.00	0.79
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.12	0.27	0.10	1.36	0.89	0.30	0.19	0.44	0.14	1.26	0.00	0.72	0.25	0.00	0.00	0.40
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	0.06	1.92	0.17	2.22	0.04	0.88	0.00	0.14	0.23	2.06	0.00	1.16	0.04	2.14	0.04	0.74
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	0.44	0.87	0.78	0.21	0.44	0.21	0.00	0.06	0.19	0.53	0.00	0.21	0.25	0.43	0.04	0.31
	Costs of any knock-on /	0.11	0.68	0.47	0.17	0.04	1.51	6.90	0.11	0.05	0.12	0.00	1.06	0.53	0.48	0.00	0.82

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.19	0.72	1.47	0.00	0.03	0.34	0.00	0.14	0.22	0.06	0.00	0.13	0.61	0.47	0.19	0.30
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	0.66	2.80	0.96	0.00	0.04	0.02	0.00	0.41	0.05	1.72	0.00	0.40	0.00	0.21	0.00	0.48
	Any other ways not already covered in which you have spent money as a result of the problem	0.00	2.74	0.09	0.20	0.04	0.03	4.07	0.12	0.12	0.05	1.14	0.07	0.00	0.00	0.00	0.58
	NET FREE games costs (excl. tangibles)	**2.56**	**14.12**	**4.84**	**5.32**	**3.63**	**6.81**	**12.40**	**3.95**	**3.59**	**12.25**	**4.76**	**9.77**	**5.48**	**4.87**	**1.95**	**6.42**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'free' intangible gaming products averaged €6.42 per consumer and was significantly lower than the average for 'paid' products, of €14.28.
- The most significant costs were reported by consumers in France and averaged €12.40. This was due to relatively high costs of 'knock-on / consequential damage or inconvenience caused to you or any of your possessions', which averaged €6.90 per consumer.

Table 94 provides estimates of the average costs incurred by consumers who experienced problems with 'free' intangible anti-virus software. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'free' intangible anti-virus software.

Table 94 Estimates of costs incurred by consumers who experienced problems with 'free' intangible anti-virus software (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Anti-virus software	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.97	0.11	1.28	0.17	0.04	1.38	0.96	0.17	0.26	2.03	0.06	0.27	0.50	1.37	0.16	0.65
	Cost to you of any telephone calls, postage or stationery	0.73	0.49	0.64	1.12	0.41	0.26	0.12	0.74	0.66	0.39	0.16	2.13	0.05	0.89	0.06	0.59
	Any travel costs you have incurred	0.00	0.29	0.18	0.12	0.30	0.06	0.58	0.15	1.24	0.40	0.00	0.49	1.11	0.43	1.01	0.42
	Costs to you of any legal matters or for legal advice	1.07	0.06	0.02	2.11	0.00	1.06	0.00	0.03	0.00	0.03	0.00	2.02	3.93	0.17	0.00	0.70
	Costs to you of getting any other type of expert advice or assistance	0.00	0.22	0.36	0.62	0.77	2.46	0.42	0.42	3.99	0.00	0.00	2.18	3.15	0.50	0.54	1.04
	Cost incurred as a result of over-payment that has not as yet been reimbursed	0.00	0.17	0.16	0.00	0.00	0.21	0.00	2.75	0.00	0.14	0.00	0.00	0.00	0.00	0.82	0.28
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	4.05	0.49	0.37	0.52	0.00	2.24	2.45	0.87	0.21	0.34	0.00	0.17	0.07	0.39	0.00	0.81
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	1.07	1.47	0.83	1.57	0.12	0.77	0.00	0.22	0.06	6.34	0.00	0.51	2.11	0.00	0.06	1.01
	Costs of any knock-on /	3.65	1.06	0.00	0.00	0.41	0.02	0.31	0.06	0.09	0.37	0.00	0.13	0.00	1.00	0.07	0.48

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	consequential damage or inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.06	0.77	0.54	2.36	0.04	1.31	0.39	0.42	1.84	0.49	0.98	0.36	0.21	0.02	0.06	0.66
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	1.91	1.29	1.43	0.00	0.00	0.16	0.00	0.66	0.00	0.97	0.00	0.00	19.49	0.02	0.00	1.73
	Any other ways not already covered in which you have spent money as a result of the problem	0.10	0.66	0.03	0.00	0.00	0.04	1.17	0.33	0.42	0.54	0.92	0.11	1.89	0.30	0.00	0.43
	NET FREE anti-virus costs (excl. tangibles)	**13.60**	**7.08**	**5.83**	**8.59**	**2.10**	**9.98**	**6.38**	**6.83**	**8.78**	**12.02**	**2.11**	**8.36**	**32.50**	**5.09**	**2.77**	**8.80**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'free' intangible anti-virus software averaged €8.80 per consumer. As with music and gaming products, this was significantly lower than the average cost associated with 'paid' products of €20.49.
- The most significant costs were reported by consumers in Austria and averaged €13.60. This was due to relatively high costs of 'repairing or resolving the problem (at the consumer's expense)', which averaged €4.05 per consumer.

Table 95 provides estimates of the average costs incurred by consumers who experienced problems with 'free' cloud storage. The highlighted cells identify the Member States reporting above average costs incurred in resolving problems with 'free' cloud storage.

Table 95 Estimates of costs incurred by consumers who experienced problems with 'free' cloud storage (average cost per consumer in €)

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Cloud storage	None / I did not incur any costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost of the original product or service, if it was unusable or was not delivered and you did not buy a replacement / substitute	0.03	0.89	0.00	0.00	0.00	0.89	0.00	1.29	0.12	0.00	2.48	0.45	0.04	0.00	0.42	0.44
	Cost to you of any telephone calls, postage or stationery	2.29	0.99	0.26	1.89	0.00	0.34	0.94	0.66	0.35	0.16	0.16	0.62	0.04	0.48	0.34	0.64
	Any travel costs you have incurred	0.00	0.22	0.00	0.92	0.16	0.69	0.00	0.26	0.87	0.09	0.35	0.22	0.77	0.00	1.58	0.41
	Costs to you of any legal matters or for legal advice	0.10	0.22	0.04	1.86	0.00	4.80	0.07	0.08	0.73	0.00	0.00	2.41	0.04	0.00	0.73	0.74
	Costs to you of getting any other type of expert advice or assistance	0.00	0.08	0.11	0.00	0.33	0.48	1.00	0.73	0.00	0.00	0.77	0.00	0.04	0.00	0.00	0.24
	Cost incurred as a result of over-payment that has not as yet been reimbursed	1.11	0.00	0.00	0.00	0.04	1.85	0.00	0.08	0.14	1.29	0.00	0.08	0.00	0.43	0.15	0.34
	Costs of repairing or resolving the problem at your own expense, e.g. the cost of repairs	1.11	0.03	0.00	0.99	0.00	0.03	0.00	0.00	0.00	0.97	0.00	0.08	0.41	0.34	6.24	0.68
	Resolving the problem by buying a replacement / substitute product or alternative service at your own expense	2.23	0.47	0.05	0.00	0.00	0.35	0.07	0.59	2.68	0.97	0.00	0.00	0.10	0.16	0.92	0.57
	Costs of any knock-on / consequential damage or	0.00	0.67	0.13	0.00	0.04	0.19	0.00	0.99	0.00	0.09	0.77	0.00	0.55	0.00	0.00	0.23

Category	Costs incurred	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	inconvenience caused to you or any of your possessions as a result of the problem																
	Reduction in usefulness of the goods concerned as a result of the problem	0.03	0.24	0.36	0.19	0.68	0.10	0.00	0.32	0.05	0.00	0.00	5.89	0.59	0.54	1.56	0.70
	Cost to you of lost earnings by your not being able to work while taking time out to resolve the problem	0.00	0.28	1.85	0.99	0.93	0.65	0.00	1.82	0.00	0.00	0.00	0.00	0.55	0.40	0.05	0.50
	Any other ways not already covered in which you have spent money as a result of the problem	0.00	0.00	0.17	0.00	0.00	0.03	0.00	0.21	0.36	0.16	0.00	0.22	0.25	0.08	0.00	0.10
	NET FREE cloud costs	**6.91**	**4.08**	**2.96**	**6.83**	**2.19**	**10.40**	**2.09**	**7.02**	**5.28**	**3.74**	**4.55**	**9.96**	**3.37**	**2.43**	**12.00**	**5.59**

Source: Q17b – Estimate of costs incurred?

Base: Those who had incurred costs

- The average net cost incurred by consumers of 'free' cloud storage averaged €5.59 per consumer. This is significantly lower than the equivalent average cost incurred by consumers experiencing problems with 'paid' cloud storage of €32.99. This difference in the costs associated with 'free' and 'paid' products is more significant than for the other types of product.
- The most significant costs were reported by consumers in the UK and averaged €12.00. This was due to relatively high costs of 'repairing or resolving the problem (at the consumer's expense)', which averaged €6.24 per consumer.

4.6 Time spent resolving problems

4.6.1 Time spent resolving problems with 'paid' and 'free' products

Table 96 shows the time that consumers spent resolving problems with 'free' and 'paid' products in each Member State. The highlighted cells identify the Member States reporting above average time spent resolving problems with different types of product.

Table 96 Time spent resolving problems with 'paid' and 'free' products by Member State (average time per consumer in hours)

Category	Time spent resolving problems	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	Mean time	1.4	2.0	1.5	1.6	1.3	2.6	1.4	1.7	1.5	1.7	1.4	2.6	1.4	1.9	1.0	1.7
	Mean time – PAID	*1.4*	*2.2*	*3.5*	*2.0*	*1.9*	*3.9*	*1.3*	*3.8*	*2.5*	*1.7*	*3.9*	*5.0*	*1.4*	*3.4*	*0.9*	*2.6*
	Mean time - FREE	*1.4*	*1.8*	*1.1*	*1.1*	*1.0*	*2.2*	*1.3*	*0.9*	*1.2*	*1.8*	*0.6*	*1.9*	*1.2*	*1.3*	*1.1*	*1.3*
Games	Mean time	1.9	3.2	1.3	1.8	1.5	2.6	1.6	2.0	1.7	2.2	1.5	2.3	1.3	2.2	1.4	1.9
	Mean time – PAID	*2.8*	*3.9*	*3.4*	*2.5*	*2.1*	*3.1*	*3.2*	*2.8*	*2.9*	*3.2*	*2.4*	*2.9*	*1.7*	*3.3*	*1.8*	*2.8*
	Mean time - FREE	*1.8*	*3.4*	*1.1*	*1.6*	*0.9*	*3.2*	*1.4*	*1.8*	*1.2*	*2.3*	*1.9*	*2.3*	*1.0*	*1.9*	*0.9*	*1.8*
Anti-virus software	Mean time	2.3	3.3	2.0	2.3	1.8	3.8	1.7	2.7	1.9	3.0	1.5	2.7	2.3	2.7	2.8	2.4
	Mean time – PAID	*2.9*	*4.5*	*3.5*	*2.1*	*3.4*	*5.3*	*2.7*	*3.0*	*3.3*	*2.7*	*2.7*	*3.9*	*2.2*	*3.2*	*3.9*	*3.3*
	Mean time - FREE	*2.0*	*3.5*	*2.2*	*1.7*	*1.2*	*2.9*	*1.4*	*2.3*	*1.1*	*2.6*	*0.9*	*2.0*	*2.5*	*2.1*	*1.4*	*2.0*
Cloud storage	Mean time	1.9	3.4	1.5	1.9	1.2	3.0	2.1	2.1	1.8	2.3	1.6	2.8	1.9	2.3	2.7	2.2
	Mean time – PAID	*2.6*	*4.2*	*1.9*	*3.5*	*1.4*	*4.2*	*3.1*	*2.8*	*2.7*	*2.2*	*4.2*	*3.6*	*3.4*	*3.2*	*3.8*	*3.1*
	Mean time - FREE	*1.7*	*3.1*	*1.5*	*0.9*	*1.4*	*2.3*	*1.5*	*1.7*	*1.0*	*1.3*	*1.0*	*2.5*	*1.7*	*1.9*	*1.3*	*1.7*

Category	Time spent resolving problems	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
All products	Mean time (Average across all products)	2.0	3.2	2.0	1.9	1.6	3.2	1.9	2.3	1.9	2.2	2.0	2.9	1.8	2.5	1.9	2.2

Source: Q18 – Time spent resolving problems?

Base: Those who had experienced a problem

- On average, consumers experiencing problems with digital products spent 2.2 hours trying to resolve the problem.
- The length of time spent resolving problems varied between Member States from an average of 1.6 hours in Denmark to 3.2 hours in Bulgaria and Spain.
- The time spent resolving problems also varied between different types of product, ranging from 1.7 hours for music products and 1.9 hours for gaming products, to 2.2 hours for cloud storage and 2.4 hours for anti-virus software.
- Consumers also spent significantly longer trying to resolve problems with 'paid' products, compared to 'free' products. The largest difference was associated with cloud storage, where consumers spent an average of 1.7 hours resolving problems with 'free' products and 3.1 hours resolving problems with 'paid' products.

4.6.2 Time spent resolving problems with 'tangible' and 'intangible' products

Table 97 shows the time that consumers spent resolving problems with tangible and intangible products in each Member State. As above, the highlighted cells identify the Member States reporting above average time spent resolving problems with different types of product.

Table 97 Time spent resolving problems with 'tangible' and 'intangible' products by Member State (average time per consumer in hours)

Category	Time spent resolving problems	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	Mean time	1.4	2.0	1.5	1.6	1.3	2.6	1.4	1.7	1.5	1.7	1.4	2.6	1.4	1.9	1.0	1.7
	Mean time – TANGIBLE	*1.9*	*3.7*	*2.0*	*2.8*	*1.7*	*4.2*	*1.9*	*3.1*	*2.7*	*1.2*	*1.5*	*4.0*	*2.7*	*3.6*	*1.4*	*2.5*
	Mean time - INTANGIBLE	*1.4*	*1.8*	*1.4*	*1.4*	*1.3*	*2.5*	*1.3*	*1.6*	*1.4*	*1.8*	*1.3*	*2.4*	*1.3*	*1.5*	*1.0*	*1.6*
Games	Mean time	1.9	3.2	1.3	1.8	1.5	2.6	1.6	2.0	1.7	2.2	1.5	2.3	1.3	2.2	1.4	1.9
	Mean time – TANGIBLE	*1.7*	*7.4*	*2.1*	*2.7*	*5.1*	*1.3*	*2.6*	*2.5*	*4.1*	*1.5*	*1.3*	*4.3*	*1.0*	*10.6*	*2.9*	*3.4*
	Mean time - INTANGIBLE	*2.0*	*3.0*	*1.2*	*1.7*	*1.3*	*2.7*	*1.5*	*1.9*	*1.5*	*2.2*	*1.5*	*2.2*	*1.3*	*2.0*	*1.3*	*1.8*
Anti-virus software	Mean time	2.3	3.3	2.0	2.3	1.8	3.8	1.7	2.7	1.9	3.0	1.5	2.7	2.3	2.7	2.8	2.4
	Mean time – TANGIBLE	*2.1*	*4.0*	*0.8*	*6.4*	*0.9*	*6.2*	*2.1*	*4.0*	*2.3*	*3.9*	*1.4*	*2.7*	*3.1*	*3.0*	*3.3*	*3.1*
	Mean time - INTANGIBLE	*2.3*	*3.2*	*2.1*	*1.9*	*1.8*	*3.5*	*1.6*	*2.5*	*1.9*	*2.8*	*1.5*	*2.7*	*2.3*	*2.6*	*2.7*	*2.4*
Cloud storage	Mean time	1.9	3.4	1.5	1.9	1.2	3.0	2.1	2.1	1.8	2.3	1.6	2.8	1.9	2.3	2.7	2.2
	Mean time – TANGIBLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mean time - INTANGIBLE	*1.9*	*3.4*	*1.5*	*1.9*	*1.2*	*3.0*	*2.1*	*2.1*	*1.8*	*2.3*	*1.6*	*2.8*	*1.9*	*2.3*	*2.7*	*2.2*
All	**Mean time**	**2.0**	**3.2**	**2.0**	**1.9**	**1.6**	**3.2**	**1.9**	**2.3**	**1.9**	**2.2**	**2.0**	**2.9**	**1.8**	**2.5**	**1.9**	**2.2**

Category	Time spent resolving problems	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
products	(Average across all products)																
	Mean time – TANGIBLE	1.9	5.0	1.6	4.0	2.6	3.9	2.2	3.2	3.0	2.2	1.4	3.7	2.2	5.7	2.5	3.0
	Mean time - INTANGIBLE	1.9	2.9	1.6	1.7	1.4	2.9	1.6	2.0	1.6	2.2	1.5	2.5	1.7	2.1	1.9	2.0

Source: Q18 – Time spent resolving problems?

Base: Those who had experienced a problem

- Consumers spent longer trying to resolve problems with 'tangible' products, compared to 'intangible' products. On average, consumers spent 2 hours resolving problems with intangible products and 3 hours resolving problems with tangible products.
- This difference was observed for all types of product but was most significant for gaming products. Consumers experiencing problems with gaming products spent 1.8 hours resolving problems with intangible products and 3.4 hours resolving problems with tangible gaming products.

4.6.3 Time spent resolving different types of problem

Table 98 shows the time that consumers spent resolving different types of problem in each Member State. The highlighted cells identify the Member States reporting above average time spent resolving different types of problem.

Table 98 Time spent resolving different types of problem, for different content categories, by Member State (average time per consumer in hours)

Category	Time spent resolving problems	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	Mean time	1.4	2.0	1.5	1.6	1.3	2.6	1.4	1.7	1.5	1.7	1.4	2.6	1.4	1.9	1.0	1.7
	Mean time – QUALITY	*1.2*	*1.7*	*2.2*	*0.8*	*3.0*	*1.9*	*1.1*	*1.7*	*1.5*	*2.7*	*3.2*	*2.2*	*1.8*	*1.2*	*1.4*	*1.8*
	Mean time – ACCESS	*1.8*	*1.7*	*1.1*	*1.4*	*1.8*	*3.5*	*1.6*	*2.4*	*1.7*	*1.8*	*1.6*	*2.3*	*1.7*	*2.0*	*1.3*	*1.8*
	Mean time – TERMS & CONDITIONS	*0.9*	*2.4*	*1.4*	*1.6*	*0.2*	*2.1*	*1.0*	*0.5*	*1.0*	*0.8*	*0.3*	*2.7*	*0.7*	*1.3*	*0.3*	*1.1*
Games	Mean time	1.9	3.2	1.3	1.8	1.5	2.6	1.6	2.0	1.7	2.2	1.5	2.3	1.3	2.2	1.4	1.9
	Mean time – QUALITY	*2.0*	*3.3*	*1.5*	*2.9*	*1.3*	*4.0*	*2.2*	*2.8*	*2.2*	*3.0*	*1.9*	*2.1*	*1.7*	*3.4*	*2.7*	*2.4*
	Mean time – ACCESS	*2.8*	*2.9*	*1.5*	*1.6*	*1.6*	*2.7*	*1.3*	*1.7*	*1.1*	*2.3*	*1.5*	*1.8*	*1.5*	*1.8*	*1.2*	*1.8*
	Mean time – TERMS & CONDITIONS	*0.9*	*2.9*	*0.7*	*1.3*	*0.9*	*1.8*	*1.4*	*1.6*	*1.3*	*1.4*	*1.2*	*3.1*	*0.8*	*1.0*	*0.5*	*1.4*
Anti-virus software	Mean time	2.3	3.3	2.0	2.3	1.8	3.8	1.7	2.7	1.9	3.0	1.5	2.7	2.3	2.7	2.8	2.4
	Mean time – QUALITY	*5.5*	*4.1*	*2.8*	*1.3*	*2.8*	*5.0*	*2.8*	*3.6*	*3.0*	*3.6*	*1.0*	*2.2*	*2.6*	*3.1*	*3.8*	*3.1*
	Mean time – ACCESS	*3.3*	*3.0*	*4.2*	*3.2*	*3.9*	*4.5*	*1.5*	*3.4*	*2.0*	*4.2*	*2.5*	*3.7*	*5.2*	*5.4*	*5.2*	*3.7*
	Mean time – TERMS & CONDITIONS	*0.7*	*2.8*	*1.0*	*1.2*	*0.6*	*2.1*	*1.3*	*1.2*	*1.0*	*1.5*	*1.2*	*2.3*	*0.7*	*1.2*	*0.8*	*1.3*

Category	Time spent resolving problems	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Cloud storage	Mean time	1.9	3.4	1.5	1.9	1.2	3.0	2.1	2.1	1.8	2.3	1.6	2.8	1.9	2.3	2.7	2.2
	Mean time – QUALITY	*1.7*	*4.8*	*1.8*	*4.4*	*5.3*	*4.5*	*1.7*	*2.5*	*2.3*	*3.5*	*6.0*	*3.9*	*2.1*	*4.3*	*4.1*	*3.5*
	Mean time – ACCESS	*3.0*	*2.8*	*2.2*	*2.2*	*2.2*	*4.2*	*3.8*	*3.0*	*2.2*	*1.7*	*1.4*	*2.9*	*4.6*	*2.3*	*3.6*	*2.8*
	Mean time – TERMS & CONDITIONS	*1.3*	*3.3*	*0.9*	*0.7*	*0.3*	*1.7*	*1.7*	*1.2*	*1.2*	*2.3*	*1.0*	*1.8*	*0.3*	*1.8*	*0.9*	*1.4*
All products	**Mean time (Average across all products)**	**2.0**	**3.2**	**2.0**	**1.9**	**1.6**	**3.2**	**1.9**	**2.3**	**1.9**	**2.2**	**2.0**	**2.9**	**1.8**	**2.5**	**1.9**	**2.2**
	Mean time – QUALITY	***2.6***	***3.4***	***2.1***	***2.3***	***3.1***	***3.9***	***1.9***	***2.6***	***2.2***	***3.2***	***3.0***	***2.6***	***2.0***	***3.0***	***3.0***	***2.7***
	Mean time – ACCESS	***2.7***	***2.6***	***2.3***	***2.1***	***2.4***	***3.7***	***2.1***	***2.6***	***1.8***	***2.5***	***1.7***	***2.7***	***3.3***	***2.9***	***2.8***	***2.5***
	Mean time – TERMS & CONDITIONS	***0.9***	***2.9***	***1.0***	***1.2***	***0.5***	***1.9***	***1.4***	***1.1***	***1.1***	***1.5***	***0.9***	***2.4***	***0.6***	***1.3***	***0.6***	***1.3***

Source: Q18 – Time spent resolving problems?

Base: Those who had experienced a problem

- Overall, respondents reported spending the longest time trying to resolve problems with quality (2.7 hours per person), followed by access problems (2.5 hours per person). In contrast, they reported spending only about half that time trying to resolve problems with terms & conditions (1.3 hours per person).
- These trends were reported across all product types, except for anti-virus software, where respondents reported spending the longest time trying to resolve problems with access (3.7 hours per person, compared to 3.1 hours for quality issues and 1.3 hours for problems with terms & conditions).
- Consumers in Spain reported spending the longest time trying to resolve problems with quality (3.9 hours per person) and access (3.7 hours per person), while consumers in Bulgaria reported spending more time trying to resolve problems with terms & conditions (2.9 hours per person) than consumers in any of the other Member States.

4.7 Psychological effects on consumers

4.7.1 All problems

Table 99 presents findings of the extent to which consumers felt negative emotions as a result of problems with digital products.

Table 99 Extent to which consumers have felt under stress, angry, worried or frustrated as a result of the problem (% of consumers who had experienced a problem)

To what extent have you felt… (under stress, angry, worried or frustrated)	Under stress				Angry				Worried				Frustrated			
	Music	Games	Anti-virus	Cloud storage	Music	Games	Anti-virus	Cloud storage	Music	Games	Anti-virus	Cloud storage	Music	Games	Anti-virus	Cloud storage
A great deal	7%	7%	10%	11%	12%	11%	12%	13%	6%	6%	9%	10%	13%	14%	13%	14%
A fair amount	18%	17%	21%	18%	21%	23%	22%	20%	14%	13%	22%	20%	27%	25%	25%	23%
A little	26%	26%	27%	27%	29%	30%	28%	27%	25%	25%	30%	29%	30%	31%	27%	30%
Not at all	46%	47%	38%	41%	35%	33%	34%	37%	51%	52%	35%	38%	27%	27%	31%	30%
Don’t know	3%	3%	4%	3%	3%	3%	4%	3%	4%	4%	4%	3%	3%	3%	4%	3%

Source: Q21 – To what extent have you felt… (under stress / angry / worried / frustrated)

Base: Those who had experienced a problem

- The survey found that most consumers who experienced problems with digital products did feel some negative emotions as a result of problems with digital products:
  - Consumers were most likely to feel frustrated (65-70 per cent of consumers who had experienced problems reported feeling at least a little frustrated) and angry (60-64 per cent reported feeling at least a little angry).
  - Just over half of consumers who had experienced problems (50-58 per cent) admitted feeling at least a little 'under stress'.
  - Feelings of worry were more mixed, affecting 44-45 per cent of consumers experiencing problems with music and gaming products, but affecting a higher proportion of consumers experiencing problems with anti-virus software and cloud storage (59-61 per cent felt at least a little worried).
- Overall, consumers were more likely to feel worried and under stress as a result of problems with anti-virus software and cloud storage. The proportions of consumers feeling angry or worried were similar across content categories.

4.7.2 Different types of problem

0 shows the extent to which consumers experienced feeling 'under stress' as a result of different types of problem with digital products.

Table 100 Extent to which consumers have felt 'under stress' as a result of any problems experienced (% of consumers who had experienced a problem)

To what extent have you felt 'under stress'	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
A great deal	9%	6%	5%	9%	6%	6%	14%	13%	5%	16%	11%	8%
A fair amount	19%	18%	15%	19%	15%	14%	21%	31%	15%	27%	22%	12%
A little	25%	29%	22%	25%	28%	21%	32%	28%	24%	32%	33%	22%
Not at all	44%	44%	54%	44%	48%	53%	29%	24%	53%	23%	33%	54%
Don't know	3%	3%	4%	3%	3%	6%	4%	4%	3%	2%	1%	4%

Source: Q21 – To what extent have you felt under stress

Base: Those who had experienced a problem

- As stated above, consumers were more likely to feel under stress as a result of problems with anti-virus software and cloud storage.
- Consumers were most likely to feel under stress as a result of issues relating to quality of music and gaming products and cloud storage, but were most likely to feel under stress as a result of issues relating to access for anti-virus software.
- Problems relating to terms & conditions were the least likely to cause consumers to feel under stress for all product types.

Table 101 shows the extent to which consumers experienced felt ‘angry’ as a result of different types of problem with digital products.

Table 101 Extent to which consumers have felt 'angry' as a result of any problems experienced (% of consumers who had experienced a problem)

To what extent have you felt 'angry'	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
A great deal	15%	12%	8%	16%	11%	8%	17%	14%	7%	18%	15%	9%
A fair amount	21%	24%	15%	26%	23%	19%	28%	28%	15%	32%	22%	13%
A little	34%	33%	20%	30%	36%	23%	29%	34%	24%	26%	35%	22%
Not at all	28%	29%	53%	25%	28%	45%	21%	21%	50%	20%	27%	52%
Don't know	2%	2%	4%	3%	2%	5%	5%	3%	4%	4%	1%	4%

Source: Q21 – To what extent have you felt angry

Base: Those who had experienced a problem

- The survey responses suggest much less variation between types of product in terms of consumers feeling angry at the problems they had experienced.
- However, there were more significant differences between the types of issue. Consumers reported feeling much more angry with issues relating to quality and accessibility, compared to those relating to terms & conditions.
- For example, of the consumers experiencing problems with anti-virus software, 46 per cent reported feeling angry with issues relating to terms and conditions, compared to 74 per cent who felt angry with quality issues and 76 per cent who felt angry with accessibility issues.

Table 102 shows the extent to which consumers experienced felt ‘worried’ as a result of different types of problem with digital products.

Table 102 Extent to which consumers have felt 'worried' as a result of any problems experienced (% of consumers who had experienced a problem)

To what extent have you felt 'worried'	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
A great deal	9%	5%	4%	7%	5%	5%	14%	9%	5%	16%	9%	8%
A fair amount	14%	12%	13%	14%	12%	12%	25%	31%	14%	29%	23%	14%
A little	22%	24%	27%	25%	21%	29%	32%	32%	29%	30%	33%	26%
Not at all	51%	56%	52%	50%	59%	49%	26%	24%	48%	22%	34%	48%
Don't know	4%	3%	4%	4%	3%	5%	3%	4%	4%	3%	1%	4%

Source: Q21 – To what extent have you felt worried

Base: Those who had experienced a problem

- As stated above, consumers were most likely to feel worried as a result of problems with anti-virus software and cloud storage.
- These consumers reported being particularly worried about the quality and accessibility of anti-virus software and cloud storage and were less worried about issues with terms & conditions.

Table 103 shows the extent to which consumers experienced feeling ‘frustrated’ as a result of different types of problem with digital products.

Table 103 Extent to which consumers have felt 'frustrated' as a result of any problems experienced (% of consumers who had experienced a problem)

To what extent have you felt 'frustrated'	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
A great deal	16%	15%	7%	17%	14%	9%	18%	17%	8%	15%	20%	10%
A fair amount	29%	31%	18%	27%	26%	19%	29%	35%	18%	36%	27%	14%
A little	30%	34%	26%	31%	37%	26%	28%	27%	25%	30%	34%	29%
Not at all	23%	18%	46%	22%	21%	41%	22%	16%	45%	16%	18%	43%
Don't know	2%	2%	3%	3%	2%	5%	3%	5%	4%	3%	1%	4%

Source: Q21 – To what extent have you felt frustrated

Base: Those who had experienced a problem

- Consumers of all products were most likely to feel frustrated at problems they had encountered. The likelihood of feeling frustration was also fairly consistent across the different types of product.
- As with the other feelings described above, the survey found that consumers were more likely to feel frustrated with issues relating to quality and access, and were less likely to feel frustrated with issues relating to terms and conditions.
- For example, of the consumers experiencing problems with cloud storage, 53 per cent reported feeling frustrated with issues relating to terms and conditions, compared to 81 per cent who felt frustrated with issues relating to quality and access.

The tables below provide a summary of proportions of users experiencing various forms of psychological detriment. Typically, feelings of stress were more prevalent for consumers of anti-virus and storage, feelings of worry were more prevalent for consumers of anti-virus and storage, whilst feelings of anger and frustration were more even in terms of their prevalence across the content categories.

Table 104 Percentage of digital content users experiencing various forms of psychological detriment as a result of a problem

		% of digital content users who have experienced stress		
Member State	**Music**	**Games**	**Anti-virus**	**Storage**
Austria	20%	20%	23%	25%
Bulgaria	15%	12%	17%	18%
Czech Republic	16%	11%	20%	18%
Germany	30%	28%	39%	26%
Denmark	5%	11%	16%	12%
Spain	35%	32%	38%	32%
France	24%	23%	31%	28%
Ireland	17%	19%	25%	21%
Italy	22%	22%	28%	26%
Latvia	27%	21%	29%	24%
Netherlands	14%	14%	18%	18%
Poland	37%	39%	40%	44%
Sweden	15%	17%	19%	22%
Slovenia	13%	13%	17%	16%
United Kingdom	16%	17%	30%	33%

			% of digital content users who have experienced worry	
Member State	**Music**	**Games**	**Anti-virus**	**Storage**
Austria	12%	13%	22%	28%
Bulgaria	15%	15%	17%	23%
Czech Republic	20%	14%	28%	21%
Germany	18%	16%	31%	32%
Denmark	8%	10%	18%	37%
Spain	31%	29%	41%	44%
France	23%	20%	30%	37%
Ireland	17%	17%	25%	38%
Italy	16%	20%	31%	33%
Latvia	29%	26%	38%	53%
Netherlands	15%	11%	14%	25%
Poland	31%	35%	41%	55%
Sweden	7%	14%	19%	34%
Slovenia	15%	14%	24%	18%
United Kingdom	12%	12%	28%	35%

		% of digital content users who have experienced <u>anger</u>		
Member State	**Music**	**Games**	**Anti-virus**	**Storage**
Austria	24%	32%	31%	18%
Bulgaria	22%	24%	25%	22%
Czech Republic	35%	29%	32%	40%
Germany	27%	34%	34%	33%
Denmark	15%	17%	20%	17%
Spain	46%	43%	52%	40%
France	39%	39%	32%	32%
Ireland	27%	28%	30%	26%
Italy	34%	35%	36%	37%
Latvia	42%	38%	42%	42%
Netherland s	20%	21%	16%	15%
Poland	46%	47%	42%	50%
Sweden	19%	23%	23%	21%
Slovenia	34%	32%	30%	27%
United Kingdom	19%	23%	26%	26%

			% of digital content users who have experienced <u>frustration</u>	
Member State	**Music**	**Games**	**Anti-virus**	**Storage**
Austria	32%	34%	36%	28%
Bulgaria	29%	25%	25%	23%
Czech Republic	20%	14%	21%	21%
Germany	35%	40%	45%	32%
Denmark	41%	40%	40%	37%
Spain	46%	43%	48%	44%
France	52%	45%	38%	37%
Ireland	35%	39%	40%	38%
Italy	29%	29%	30%	33%
Latvia	55%	52%	52%	53%
Netherlands	28%	31%	24%	25%
Poland	54%	52%	53%	55%
Sweden	33%	32%	32%	34%
Slovenia	23%	17%	23%	18%
United Kingdom	37%	37%	32%	35%

5 Remedies and resolution

This section presents the survey findings relating to the remedies offered by suppliers in response to problems raised by consumers, consumers' views of the reactions of suppliers, and consumer satisfaction with the outcomes.

As above, the survey focused on the problems reported with products obtained or accessed for personal use during the last 12 months. Respondents were asked to consider their most recent problem encountered (for up to 2 products).

5.1 Remedies offered by suppliers

0 shows the different remedies offered by suppliers in response to problems with digital products.

Table 105 Remedies offered by suppliers of digital content products (% of consumers who had experienced a problem)

Remedy offered	Music	Games	Anti-virus software	Cloud storage
Nothing	45%	44%	44%	38%
Acknowledged the problem	9%	12%	9%	11%
Investigated/is investigating the problem	7%	9%	8%	9%
Offered / provided a replacement product or service	5%	3%	5%	7%
Offered / provided an alternative product or service	4%	4%	5%	6%
Offered / provided a full refund	3%	3%	3%	4%
Offered / provided a partial refund	2%	2%	2%	3%
Offered / provided compensation in money	1%	1%	1%	2%
Offered / provided compensation in credit note or in vouchers	1%	2%	2%	2%
Given you a satisfactory explanation for the problem	2%	4%	4%	2%
Given you an unsatisfactory explanation for the problem	2%	2%	2%	2%
Apologised	4%	6%	4%	5%
Referred/is referring the problem elsewhere (e.g. to another company or organisation)	1%	1%	1%	1%
Solved/is solving the problem	5%	7%	6%	5%
Did not apply the unfair terms	2%	2%	2%	2%

Remedy offered	Music	Games	Anti-virus software	Cloud storage
Any other actions taken by the company/organisation (please specify)	1%	-	1%	1%
Don't Know	22%	20%	18%	18%

Source: Q19 – Remedy offered by supplier

Base: Those who had experienced a problem

Table 106 Remedies offered by suppliers of digital content products (number of consumers who had experienced a problem), thousands ('000)

Remedy offered	Music	Games	Anti-virus software	Cloud storage
Nothing	19,335	22,096	15,635	9,636
Acknowledged the problem	3,974	6,062	3,275	2,877
Investigated/is investigating the problem	3,187	4,407	2,835	2,220
Offered / provided a replacement product or service	2,170	1,750	1,966	1,798
Offered / provided an alternative product or service	1,530	1,980	1,734	1,526
Offered / provided a full refund	1,307	1,320	1,079	1,056
Offered / provided a partial refund	1,084	1,079	879	657
Offered / provided compensation in money	623	563	480	551
Offered / provided compensation in credit note or in vouchers	631	832	696	534
Given you a satisfactory explanation for the problem	919	1,867	1,309	582
Given you an unsatisfactory explanation for the problem	943	1,127	890	620
Apologised	1,665	3,216	1,481	1,299
Referred/is referring the problem elsewhere (e.g. to another company or organisation)	417	331	347	293
Solved/is solving the problem	2,307	3,720	1,974	1,309
Did not apply the unfair terms	674	783	621	434

Remedy offered	Music	Games	Anti-virus software	Cloud storage
Any other actions taken by the company/organisation (please specify)	363	190	241	145
Don't Know	9,419	10,102	6,567	4,560

Table 107 Percentage and number of consumers receiving remedies, per type of digital content

	Music		Games		Anti-virus		Cloud Storage
	Intangible medium	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**	**Tangible medium**	**Intangible medium**
Share of those reporting problems receiving financial remedies	**9%**	**11%**	**8%**	**8%**	**10%**	**10%**	**14%**
Number of digital content users receiving remedies							
Sample MS	4,562,000	1,399,000	4,896,000	1,317,000	4,128,000	1,492,000	4,868,000
Non-sample MS	800,247	245,407	858,836	231,023	724,116	261,720	853,924
EU-28	**5,362,247**	**1,644,407**	**5,754,836**	**1,548,023**	**4,852,116**	**1,753,720**	**5,721,924**

- The survey responses suggest that between 38 per cent and 45 per cent of consumers that had experienced problems with digital products did not receive any type of reaction by the supplier. This corresponds to at least 22 million consumers across the EU.
- The most common response from suppliers was simply to acknowledge the problem (for 9-12 per cent of consumers experiencing problems). This corresponds to at least 6 million consumers across the EU.
- Suppliers offered a replacement, refund and/or compensation in money to 1 in 10 consumers who experienced problems, on average across the four types of digital content. This corresponds to at least 5 million[206] consumers across the EU.

5.2 Value of remedies offered

Respondents were asked about the approximate value of the remedy offered by suppliers and the findings are presented in this section. However, these findings should be treated with caution because of the relatively small sample sizes within individual Member States.

5.2.1 Value of remedies offered for 'paid' and 'free' products

Table 108 provides estimates of the average values of replacements, alternatives or remuneration offered by suppliers. The highlighted cells identify the Member States reporting an above average value of remedy for the different types of product.

[206] There exists potential overlap in consumers between product categories; therefore the estimate is derived from 'games – intangible medium', 'music – intangible medium' and 'storage – intangible medium', which is the maximum number of consumers affected in one category. It is likely the number will exceed 5 million - however it is not possible to deduce the precise number from the information available.

Table 108 Average value of replacement, alternative or remuneration offered by suppliers in Member State (€) – All products and all problems

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	4.57	3.36	3.10	7.11	1.54	6.88	4.26	6.57	6.30	3.04	3.55	7.50	2.70	1.66	5.76	4.53
	NET PAID	3.00	3.29	4.29	16.88	1.35	11.90	18.05	18.39	12.66	3.94	10.30	27.43	5.22	1.17	11.26	9.94
	NET FREE	4.91	2.84	2.89	1.38	0.89	1.93	1.82	3.03	1.22	2.42	1.05	3.84	0.60	1.25	2.02	2.14
Games	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	2.41	5.81	0.74	5.02	2.84	5.24	2.94	4.83	5.45	5.68	1.20	6.29	3.33	1.27	5.99	3.94
	NET PAID	2.79	3.49	2.17	7.80	6.57	11.99	4.52	5.64	13.41	16.78	4.44	8.51	8.03	4.52	2.46	6.88
	NET FREE	1.95	8.43	0.80	3.18	1.46	3.60	4.43	3.16	1.45	5.21	0.81	4.23	1.45	0.81	3.31	2.95
Anti-virus software	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	4.90	5.10	2.84	6.76	1.94	7.57	2.05	6.43	4.76	2.25	0.87	3.55	8.16	1.87	17.25	5.09
	NET PAID	1.54	4.58	3.30	12.33	1.73	23.49	1.41	10.17	12.64	6.18	0.90	3.42	17.51	6.15	33.87	9.28
	NET FREE	1.72	6.54	4.02	4.65	3.69	4.26	2.08	2.45	1.00	0.72	-	4.72	2.78	0.28	1.94	2.92
Cloud storage	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	1.63	5.56	3.42	7.23	2.69	18.20	10.49	10.30	12.36	10.86	5.08	12.23	3.62	2.25	18.18	8.27

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	NET PAID	2.11	10.43	2.41	17.82	7.73	26.67	14.45	17.33	24.37	5.95	16.58	16.07	13.67	6.68	33.17	14.36
	NET FREE	1.69	0.98	5.27	-	0.43	13.85	13.86	6.58	1.51	1.13	1.98	14.07	0.04	0.63	7.85	4.99

Source: Q20 – Value of remedy

Base: Those who had received a remedy to a problem

- The average remedies received by consumers were estimated to be €4.53 per consumer for music products, €3.94 for gaming products, €5.09 for anti-virus software and €8.27 for cloud storage.
  - These average remedies are all lower than the estimates of costs incurred by consumers who had experienced problems, as described in Section 4.5, which averaged €7.27 per consumer for music products, €7.37 for gaming products, €11.83 for anti-virus software and €16.47 for cloud storage – implying a net financial detriment when problems are experienced, for all products.
- The average remedies received in relation to problems with 'paid' products were higher than the remedies for 'free' products. However, the estimated value of remedies for 'paid' and 'free' products were all lower than the consumers' estimates of costs incurred, as reported in Section 4.5.
- The average value of remedies was reported to be highest in the UK, Germany, Ireland, Spain, France, Poland and Italy.

5.2.2 Value of remedies offered for 'tangible' and 'intangible' products

Table 109 provides estimates of the average values of remedies offered by suppliers in response to problems with tangible products. As above, the highlighted cells identify the Member States reporting an above average value of remedy for the different types of product.

Table 109 Average value of remedy for problems with tangible products by Member State (€) – All problems

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	I have bought music on CD	6.15	6.84	3.31	9.52	16.67	50.20	9.16	6.88	42.22	6.79	6.36	7.48	2.59	4.16	6.44	12.32
Games	I have bought a game on DISC/CARTRIDGE	8.22	6.86	0.94	17.85	3.51	11.97	1.76	21.54	33.87	-	0.48	35.37	2.82	-	48.34	14.89
Anti-virus software	I have obtained (PAID) a disc containing anti-virus software for a computer	28.87	8.85	2.78	11.86	-	3.26	6.29	12.97	3.88	2.36	7.33	4.08	3.49	5.00	20.97	8.71
Cloud storage	I have obtained (FREE) a disc containing anti-virus software for a computer																

Source: Q20 – Value of remedy

Base: Those who had received a remedy to a problem

- The net values of remedies associated with tangible products, presented in Table 109, are significantly higher than those for intangible products.
- There were also significant differences between Member States. For example:
  - The average net value of remedies associated with tangible gaming products was reported to be €14.89 per consumer, although estimates ranged from €0.48 in the Netherlands to €48.34 in the UK.
  - The average net value of remedies associated with tangible music products was reported to be €12.32 per consumer, with estimates ranging from €3.31 in the Czech Republic to €50.20 in Spain.
  - The average net value of remedies associated with tangible anti-virus software was reported to be €8.71 per consumer, with estimates ranging from €2.36 in Latvia to €28.87 in Austria.

0 provides estimates of the average net values of remedies offered by suppliers in response to problems with intangible products and services. As above, the highlighted cells identify the Member States reporting an above average value of remedy for the different types of product.

Table 110 Average value of remedy for problems with intangible products by Member State (€) – All problems

Category	Content format	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
Music	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	4.41	2.89	3.07	6.62	1.05	3.68	3.76	6.54	3.50	2.65	3.20	7.51	2.70	1.24	5.69	3.90
Games	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	1.97	5.77	0.74	3.47	2.80	4.66	3.06	3.08	3.10	5.82	1.25	4.47	3.38	1.31	2.59	3.17
Anti-virus software	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	1.25	4.56	2.85	6.16	2.08	8.20	1.49	5.10	4.87	2.23	0.34	3.46	8.56	1.47	16.13	4.58
Cloud storage	NET VALUE OF received replacement, alternative or remuneration (codes 4-9)	1.63	5.56	3.42	7.23	2.69	18.20	10.49	10.30	12.36	10.86	5.08	12.23	3.62	2.25	18.18	8.27

Source: Q20 – Value of remedy

Base: Those who had received a remedy to a problem

- The net values of remedies associated with intangible products are significantly lower than those associated with tangible products.
- They were also more consistent between the different types of product, ranging from €3.17 per consumer for intangible gaming products to €8.27 per consumer for cloud storage.

5.2.3 Value of remedies offered for different types of problem

Table 111 provides estimates of the average net values of remedies offered by suppliers in response to different types of problem. As above, the highlighted cells identify the Member States reporting an above average value of remedy for the different types of product.

Table 111 Average value of remedy for different types of problem by Member State (€)

Type of problem	Category	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
QUALITY	Music	12.14	7.85	5.76	5.90	3.35	7.07	4.27	17.79	8.28	3.89	7.19	8.51	3.63	0.88	18.13	7.27
	Games	1.78	13.79	1.25	2.19	-	8.58	1.06	5.67	4.08	9.44	2.27	3.11	0.88	3.37	8.22	4.61
	Anti-virus software	3.90	3.45	1.24	4.24	2.93	4.41	3.54	14.87	4.70	1.15	-	3.11	1.79	3.45	54.48	7.58
	Cloud storage	8.23	22.44	0.47	10.33	7.22	40.35	9.72	18.43	11.83	14.20	2.03	23.27	2.79	3.15	26.22	13.35
	Average	6.51	11.88	2.18	5.67	4.50	15.10	4.65	14.19	7.22	7.17	3.83	9.50	2.27	2.71	26.76	8.20
ACCESS	Music	3.85	0.24	1.01	9.03	1.09	1.93	2.10	1.38	2.69	3.52	1.20	7.56	0.89	2.26	4.36	2.81
	Games	2.37	2.14	0.88	4.28	5.01	4.19	2.30	3.15	2.08	7.14	0.64	5.61	2.99	1.01	0.31	2.88
	Anti-virus software	1.31	8.36	8.87	7.43	6.32	23.48	2.57	4.50	10.18	3.48	0.50	6.38	30.66	0.69	9.40	7.71
	Cloud storage	1.03	0.98	8.13	11.20	5.32	7.73	9.87	14.26	11.09	1.10	6.03	13.27	8.04	1.53	23.22	7.66
	Average	2.14	2.93	4.72	7.99	4.43	9.33	4.21	5.82	6.51	3.81	2.09	8.21	10.65	1.37	9.32	5.27
TERMS & CONDITIONS	Music	0.18	0.39	3.45	4.02	0.21	2.86	5.46	4.40	0.33	0.43	3.35	6.12	4.13	0.17	2.18	2.29
	Games	1.62	0.37	0.15	3.18	1.67	2.52	4.93	1.11	3.42	1.54	1.27	4.08	5.22	-	3.06	2.43
	Anti-virus software	0.36	1.46	0.36	6.37	0.16	2.48	0.71	0.32	1.60	2.17	0.31	1.71	-	0.86	5.33	1.70

Type of problem	Category	AT	BG	CZ	DE	DK	ES	FR	IE	IT	LV	NL	PL	SE	SI	UK	AVERAGE
	Cloud storage	0.27	1.34	1.39	3.21	0.92	18.04	10.85	4.72	13.50	17.60	5.12	2.53	1.22	2.54	9.49	6.09
	Average	0.61	0.89	1.34	4.20	0.74	6.48	5.49	2.64	4.71	5.44	2.51	3.61	3.52	1.19	5.02	3.13

Source: Q20 – Value of remedy

Base: Those who had received a remedy to a problem

- The average remedies received by consumers were also reported to vary between the different types of problem. The average remedy received in relation to quality issues was €8.20, compared to €5.27 for accessibility issues and €3.13 for problems relating to terms and conditions.
- There was significant variation in the remedies received for each type of product in relation to the different problems. For example:
  - Remedies received in relation to quality issues were lowest for gaming products (€4.61 per consumer) and were around three times higher for cloud storage (€13.35 per consumer).
  - Remedies for access issues were lower for music and gaming products (€2.81 and €2.88 per consumer respectively) and much higher for anti-virus software and cloud storage (€7.71 and €7.66 per consumer respectively).
  - Remedies for problems relating to terms & conditions were lowest for anti-virus software (€1.70 per consumer) and were almost four times higher for cloud storage (€6.09 per consumer).
- There was also significant variation between Member States:
  - Remedies for quality issues were reported to range from €2.18 in the Czech Republic to €26.76 in the UK.
  - Remedies for access issues were reported to range from €1.37 in the Slovenia to €10.65 in Sweden.
  - Remedies for problems with terms and conditions were reported to range from €0.61 in Austria to €6.48 in Spain.

5.3 Supplier reactions to problems

Following the consumer's decision to take action, they were then asked what was the supplier's response. 0 summarises the supplier reactions to these problems with digital products against which consumers had taken action (as per Section 5.1).

Table 112 Supplier reactions to problems with digital content products – All problems

Supplier reaction	Music	Games	Anti-virus software	Cloud storage
They indicated that they did NOT intend to take any action to resolve my problem	8%	9%	11%	9%
They said that the problem was caused by me	9%	11%	11%	14%
They said that according to the contract/terms and conditions they were not responsible for this kind of problem	14%	15%	16%	17%
They said that I did not provide sufficient proof that there was a problem/defect	13%	8%	9%	16%
They said that they were not obliged by law to satisfy my request	14%	10%	11%	14%

Supplier reaction	Music	Games	Anti-virus software	Cloud storage
Other	3%	4%	4%	2%
None of these	43%	45%	40%	31%
Don't know	6%	7%	7%	7%

Source: Q20b – Supplier reaction to action taken

Base: Those who had taken action in response to a problem

- Around half of consumers who had taken action in response to a problem, reported that the supplier had provided a negative / defensive reaction to the problem. This was true of 51 per cent of those taking action in response to problems with music products, 48 per cent of those taking action in relation to gaming products, and 53 per cent of those taking action in relation to anti-virus software. Respondents suggest that suppliers were most likely to provide a negative / defensive reaction in response to problems with cloud storage and had done so in 62 per cent of cases.
- The most common reaction from suppliers, in response to 14-17 per cent of problems, was to say that they were not contractually responsible for this type of problem.
- Other common reactions included: saying they were not obliged by law to satisfy the request; saying there was insufficient proof of a problem or defect; saying that the problem had been caused by the consumer; and saying they did not intend to take any action to resolve the problem.

Table 113 summarises the supplier reactions to different types of problems with digital products that were reported by consumers.

Table 113 Supplier reactions by type of problem with digital content products

Supplier reaction	Music			Games			Anti-virus software			Cloud storage		
	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions	Quality	Access	Terms & conditions
They indicated that they did NOT intend to take any action to resolve my problem	10%	7%	8%	12%	7%	10%	13%	12%	9%	3%	12%	13%
They said that the problem was caused by me	12%	7%	5%	11%	10%	14%	17%	8%	10%	16%	12%	13%
They said that according to the contract/terms and conditions they were not responsible for this kind of problem	14%	10%	21%	14%	15%	14%	9%	19%	18%	13%	18%	23%
They said that I did not provide sufficient proof that there was a problem/defect	13%	12%	16%	8%	7%	11%	14%	8%	5%	17%	17%	13%
They said that they were not obliged by law to satisfy my request	18%	10%	16%	8%	7%	19%	11%	12%	11%	17%	14%	12%
Other	3%	4%	1%	4%	3%	3%	1%	6%	3%	5%	1%	1%
None of these	38%	54%	27%	44%	50%	31%	40%	38%	44%	31%	35%	27%
Don't know	4%	5%	11%	8%	6%	5%	8%	7%	7%	7%	5%	10%

Source: Q10 – Length of time of problem

Base: Those who had taken action in response to a problem

- The negative / defensive reactions of suppliers were most common in response to issues associated with terms & conditions of digital products and particularly for responses stating the contractual and legal obligations of the supplier.
- Issues raised in relation to product quality were also reported to have been met with negative / defensive reactions from suppliers in most cases. Access issues were found to be the least likely to result in negative / defensive reactions from suppliers.

5.4 Consumer satisfaction with outcomes

Table 114 shows the current status of problems with digital products experienced and reported by consumers.

Table 114 Current status of problems experienced

Current status of the problem	Music	Games	Anti-virus software	Cloud storage
The matter is closed	66%	69%	67%	66%
I am expecting further communications/actions	12%	13%	14%	16%
Don't know	22%	18%	19%	18%

Source: Q22 – Is matter closed?

Base: Those who had experienced a problem

- Approximately two-thirds of consumers who had experienced problems reported that they considered the matter was now closed.
- 12 to 16 per cent of consumers expected further action, with a larger proportion (18 to 22 per cent) of consumers said they did not know the current status of the problem.

Table 115 presents the findings of the survey in relation to consumer satisfaction with the outcome of remedies and resolution of problems with digital products.

Table 115 Satisfaction with the outcome of remedies and resolution

Level of satisfaction	Music	Games	Anti-virus software	Cloud storage
Very satisfied	10%	10%	11%	10%
Somewhat satisfied	23%	24%	24%	23%
Neither satisfied nor dissatisfied	37%	35%	35%	38%
Somewhat dissatisfied	13%	13%	12%	13%
Very dissatisfied	6%	8%	7%	6%
Don't know	11%	11%	11%	10%
NET Very/somewhat satisfied	**33%**	**34%**	**34%**	**33%**

Level of satisfaction	Music	Games	Anti-virus software	Cloud storage
NET Very/somewhat dissatisfied	**19%**	**21%**	**19%**	**19%**

Source: Q23 – How satisfied are you with the outcome?

Base: Those who had experienced a problem

- The survey asked consumers about their satisfaction with the outcome of remedies and resolution and found very little difference between different types of product.
- Approximately one in three consumers who had experienced a problem said they were very or somewhat satisfied with the outcome of the resolution. This was higher than the 19 to 21 per cent of consumers who said they were very or somewhat dissatisfied with the outcome.

Annex 4 Business Questionnaire

Digital Single Market -

Online Business Survey

Introduction

Responses to this survey are feeding into a study to inform future EU legislation applicable to digital content products. As such, this survey represents an important opportunity for businesses to make your views heard, and to influence and shape any future EU legislation.

We wish to assure you that the information you provide would remain strictly confidential and non-attributable:

- ICF is bound by the confidentiality provisions in its contract with the European Commission. Data collection is facilitated through a protected digital environment run by ICF, governed by national laws and the respective corporate information management policies. These rules apply to all activities performed by ICF.

- Access to company information collected through this survey is only granted through UserId/Password to a defined population of staff of ICF. Individual responses will be treated as strictly confidential and will not be disclosed to third parties. Results will be analysed and reported at an aggregate level.

Please note the additional information images () - please hover over these images for additional information being provided within the context of the question.

We thank you in advance for your contribution.

About your company

1. Name of your company:

____

______

2. In which country is your company headquartered:

❑ Austria	❑ Belgium	❑ Bulgaria
❑ Croatia	❑ Cyprus	❑ Czech Republic
❑ Denmark	❑ Estonia	❑ Finland
❑ France	❑ Germany	❑ Greece
❑ Hungary	❑ Iceland	❑ Ireland
❑ Italy	❑ Latvia	❑ Lithuania
❑ Luxembourg	❑ Malta	❑ Poland
❑ Portugal	❑ Romania	❑ Slovakia
❑ Slovenia	❑ Spain	❑ Sweden
❑ The Netherlands	❑ The UK	❑ Outside of the EU

3. Which of the following best describes your company?

❑ A Small or Medium sized Enterprise (SME)

❑ Large enterprise

4. Which of the following digital content products does your company sell or provide for free (against another counter-performance e.g. personal data, advertising content) to consumers?

Please tick all that apply

	Tangible formats - sold online	Tangible formats - sold via a bricks & mortar store	Digital content provided for payment in intangible formats	Digital content provided for free in intangible formats
Music	❑	❑	❑	❑
Movies and videos	❑	❑	❑	❑
Games	❑	❑	❑	❑
E-books	❑	❑	❑	❑
Streaming of sports events	❑	❑	❑	❑
Software and apps	❑	❑	❑	❑
Storage of digital content	❑	❑	❑	❑
All of the above	❑	❑	❑	❑

5. Do you sell your digital content or provide it for free <u>cross-border</u> within the EU?

By cross-border we mean providing digital content to consumers based in EU countries other than those where you have your head office or branches / subsidiaries

❑ Yes

❑ No

Contractual terms and conditions for the supply of digital content to consumers

6. **When you sell your digital content or provide it for free within the EU, is the contract concluded between the consumer and:**

Please select all that apply

- ❑ Your company's headquarters based outside the EU
- ❑ Your company's headquarters based in the EU
- ❑ Your company's branches / subsidiary in the EU country where the consumer is located

7. **Which law is determined as the applicable law in your contract?**

- ❑ The trader's (home country) law
- ❑ The law of the consumer's country of residence

Contractual terms and conditions for the supply of digital content to consumers

Is it clear to you what legislation applies to your contracts in case the content proves defective or fails to live up to you customers' (reasonable) expectations ?

8. (a) When supplying digital content in tangible format:

	Yes, very clear	Reasonably clear	Not particularly clear	Not clear at all

to domestic consumers:	❑	❑	❑	❑
to cross-border consumers:	❑	❑	❑	❑

Please provide further information, if relevant:

____
______

(b) When supplying digital content in an intangible format:

	Yes, very clear	Reasonably clear	Not particularly clear	Not clear at all
to domestic consumers:	❑	❑	❑	❑
to cross-border consumers:	❑	❑	❑	❑

Please provide further information, if relevant:

____
______

(c) When supplying digital content in return for payment

	Yes, very clear	Reasonably clear	Not particularly clear	Not clear at all
to domestic consumers:	❑	❑	❑	❑
to cross-border consumers:	❑	❑	❑	❑

Please provide further information, if relevant:

____

(d) When supplying digital content for free alongside another paid for product or against counter-performance

	Yes, very clear	Reasonably clear	Not particularly clear	Not clear at all
to domestic consumers:	❑	❑	❑	❑
to cross-border consumers:	❑	❑	❑	❑

Please provide further information, if relevant:

____

Contractual terms and conditions for the supply of digital content to consumers

9. If a customer considers that the digital content provided by your company is faulty or not as per description, what action do you normally take?

Please tick all that apply

	Digital content provided in tangible format	Digital content provided in intangible format	Digital content provided for payment	Digital content provided for 'free'	**All products**
All of the below remedies	❑	❑	❑	❑	❑
Update / replace digital content	❑	❑	❑	❑	❑
Offer a full refund and terminate contract if necessary	❑	❑	❑	❑	❑
Offer a partial refund and terminate	❑	❑	❑	❑	❑
Offer compensation in credit note or in vouchers	❑	❑	❑	❑	❑
Offer an extension of the contract period for free	❑	❑	❑	❑	❑
Offer a different type of digital content for free	❑	❑	❑	❑	❑
Provide monetary compensation for any damage caused to your customer's equipment or other digital content	❑	❑	❑	❑	❑
Refer the matter to the manufacturer / developer of digital content to remedy the defect	❑	❑	❑	❑	❑
Other:	❑	❑	❑	❑	❑

If other, please describe:

____
______

10. Why do you offer these remedies?

Please tick all that apply

	Digital content provided in tangible format	Digital content provided in intangible format	Digital content provided for payment	Digital content provided for 'free'	All products
It is a legal obligation to provide remedies to consumers if products or services are faulty or not as described	❑	❑	❑	❑	❑
Wish to offer a good consumer service	❑	❑	❑	❑	❑
Other:	❑	❑	❑	❑	❑

If other, please specify:

____
______

Contractual terms and conditions for the supply of digital content to consumers

11. **In the last 12 months, approximately how many instances of the following issues has your company encountered?**

Note: multiple instances could arise from a single transaction. If you ***do not know****, please leave blank.*

	None	1 - 100	101 - 500	501 - 1,000	> 1,000
Customer complaints regarding faulty digital content	❑	❑	❑	❑	❑
Customer complaints regarding digital content being different from its description	❑	❑	❑	❑	❑
Customer complaints regarding unfair terms and conditions	❑	❑	❑	❑	❑
Disagreement with customers about whether products or services match the description provided	❑	❑	❑	❑	❑
Your customer thought they were entitled to a remedy which your company did not think it was obliged to provide under the current law	❑	❑	❑	❑	❑

The current situation

For **digital content products provided online in intangible formats** (e.g. streaming/ viewing/ downloading / online access), there are no EU rules setting out the quality criteria and remedies available if the product is faulty or not as described.

This means national laws apply, which differ from one EU country to another.

To our knowledge, specific national legislation for digital content currently does not exist in most EU countries. There are, however, a few Member States which have started enacting specific legislation (for instance the UK, Ireland and the Netherlands).

In some Member States the rules on services, on lease or on sales contracts are applied - while in others any of those rules may apply, depending on the content of the specific contract

For **tangible goods** (including digital content provided in tangible formats e.g. on a CD/DVD or pre-loaded onto a device such as a phone or tablet or GPS device), the rules on remedies available in case of defective goods have been harmonised at EU level for business-to-consumers transactions (under the Consumer Sales and Guarantees Directive). This harmonisation sets minimum standards, i.e. Member States have the possibility to go further and add requirements to protect consumers.

Likewise, minimum harmonisation rules against unfair contract terms for consumer contracts have been laid down by the Unfair Contract Terms Directive. Many Member States have extended the level of consumer protection - on different points and to different extents.

These differences may create costs for traders who adapt their contracts, or increase the legal risk for those who do not adapt their contracts, when selling cross-border in the EU.

Impact of the current gaps in EU legislation and divergent national laws on businesses

12. Please rate the following in terms of the impact of the current gaps on your business:

	To a large extent	To some extent	Not at all
Does this result in additional costs for your company to expand its business to other EU countries?	❑	❑	❑
Does your business refrain from developing its activities cross border due to divergent national legislation on faulty or defective digital content or unfair contract terms and conditions?	❑	❑	❑
Do these result in lost revenues for your company?	❑	❑	❑
Does this result in additional costs to offer remedies and/or handle complaints?	❑	❑	❑
Other?	❑	❑	❑

If other, please specify:

____

Proposed options for online digital content

The text below lists a range of options that could be pursued to address the issues described earlier. These options include:

Non-legislative option:

A voluntary model contract for cross-border transactions (combined with a trust mark or accreditation scheme)

Development of 'model' contract(s) containing standard terms & conditions, which traders and their customers could sign up to on a voluntary basis, providing a minimum level of protection to consumers purchasing digital content online

The use of the model contract by the trader could be combined with a label ("trust mark" or accreditation scheme) that would increase consumer confidence in purchasing from the trader

Legislative option (a):

Fully harmonised EU rules for online purchases of digital content i.e. same rules apply in all countries (maximum harmonisation)

Introducing a common set of rules on:

(a) Quality of the digital content products

(b) Remedies and damages for defective digital content products

(c) How to exercise these remedies, like who has to prove that the product was, or was not, defective (the burden of proof) or time limits for exercising these remedies

(d) Terminating long term contracts

(e) The way the trader can modify contracts

Legislative option (b):

EU legislation based on minimum harmonisation. This would use the same common set of rules as under the full harmonisation option above, but Member States would be allowed to introduce higher levels of consumer protection in their national contract law than that prescribed by the EU rules. This would result in national variations.

Proposed options for online digital content

13. **Which of the following <u>incremental costs</u> (in relation to the current situation) would apply to your business?**

Please tick all that apply

Costs of familiarisation, reviewing and/ or updating consumer contracts/ terms and conditions in line with the voluntary model contract or new legislation:

	Non-legislative option	Legislative option (a): Based on maximum harmonisation	Legislative option (b): Based on minimum harmonisation	**Would apply to all**
Cost of external legal advice	❑	❑	❑	❑
Cost of updating any material such as in store posters, in store counter-top signage, consumer contracts, invoices, receipts, leaflets, brochures and other promotional material etc.	❑	❑	❑	❑
Transaction costs	❑	❑	❑	❑

Staff training - cost of providing training to staff on:

	Non-legislative option	Legislative option (a): Based on maximum harmonisation	Legislative option (b): Based on minimum harmonisation	**Would apply to all**

New terms & conditions	❑	❑	❑	❑
New rules or practices concerning: handling of consumer complaints and disputes	❑	❑	❑	❑
New rules or practices concerning: provision of remedies	❑	❑	❑	❑
New rules or practices concerning: modification or termination of contract	❑	❑	❑	❑

Ongoing costs of handling complaints and dispute handling:

	Non-legislative option	Legislative option (a): Based on maximum harmonisation	Legislative option (b): Based on minimum harmonisation	**Would apply to all**
Staff time involved in handling complaints and disputes	❑	❑	❑	❑
Cost of remedies offered to customers	❑	❑	❑	❑
Legal costs	❑	❑	❑	❑

Do you have any further comments or additional information regarding costs that would be incurred by your business under the different options?

Proposed options for online digital content

14. **Which of the following incremental benefits (in relation to the current situation) would apply to your business?**

Please tick all that apply

	Non-legislative option	Legislative option (a): Based on maximum harmonisation	Legislative option (b): Based on minimum harmonisation	**Would apply to all**
Savings from legal certainty	❑	❑	❑	❑
Savings from applying a standard industry-wide contract	❑	❑	❑	❑
Savings from application of common set of rules across the EU	❑	❑	❑	❑
Savings from reduced cost of dealing with disagreements with customers	❑	❑	❑	❑
Savings from reduced number of cases escalating to court	❑	❑	❑	❑
Savings from reduced costs of unreasonable claims made by consumers	❑	❑	❑	❑

This option will make it easier for my company to expand its operations to cross-border markets	❑	❑	❑	❑
Others:	❑	❑	❑	❑

If others, please specify:

____

15. **Do you have any further comments or additional information regarding the benefits that would accrue to your business under the different options?**

____

Proposed options for online digital content

16. **What would be the <u>other impacts</u> of implementing each option for your business?**

- ❑ A reduction in the availability of free digital content
- ❑ Create a level playing field for businesses across the EU
- ❑ Other

If other, please specify:

____

17. Please indicate your overall order of preference for the policy options considering the costs and benefits:

	1: Most preferable	2: Indifferent	3: Least preferable
Status Quo	❑	❑	❑
Non-legislative option: voluntary model contract for cross-border transactions	❑	❑	❑
Legislative option (a): Based on maximum harmonisation	❑	❑	❑
Legislative option (b): Based on minimum harmonisation	❑	❑	❑

Costs of business practices and final thoughts

We would also be grateful if you would provide us with an estimate of current costs of business practices by clicking **HERE**.

18. We would appreciate the opportunity to follow-up with you where we have queries on your above responses. If you are content, please provide your contact details below:

Name: ____

Organisation: ____

Email: ____

Phone number ____________________________________

19. If you have any further comments, please add them here:

____

Thank you

Once again, thank you for completing the above questionnaire.

Please press 'submit' below.

NOTES TO TABLE 2.1

IFPI (2015) Digital Music Report Accessed at http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf

International Video Federation 2014 – European Video Yearbook 2014. Based on consumer spending for legal content. This figure does not include illegal and advertisement-supported film and television content.

Data sources include: GDC Europe (2014); Newzoo (2013); Bigfishgames.com (2014); Ernst and Young (2012). Note that figures have been converted into euros at the prevailing rate where necessary

Rudiger Wishenbart Global eBook Report (2014)

Vision mobile. 2013. The European App Economy 2013

For all product categories, these are ICF estimates based on DSM consumer survey. Footnote ix below explains reasons for the range.

This may be an overestimation - national data sources indicate significantly lower usage (e.g. 6% of population, for Germany – from *German Booksellers and Publishers Association*)

This is close to the 53% based on Ipsos survey in this study (for 15 MS)

Estimated number of 18 – 99 years old consumers, based on DSM consumer survey micro-data on % using different types of online content, and Eurostat data on internet usage [proj_13npms].

Since content categories in the scope of this study spill across different parts of the DSM consumer survey ((i) tangible goods purchased online for private use and services ordered online but used offline; (ii) services used online for private purposes; and (iii) digital content accessed online for private use) it was difficult to extract information on a 'like for like' basis. For example, the DSM consumer survey combines music and film categories together for offline sales on a tangible medium, e.g. physical CD, DVD, or Blu-ray Disc. To address this, lower and upper bounds have been calculated where appropriate. Lower bound refers only to content covered in iii), Higher bound refers to content covered in i) and iii).

Lower bound is estimated based on the number of consumers that answered never to Q4a: Over the last 12 months, how many times on average have you used the Internet to access the following digital content (including both free and paid access): [digital content category x] * % of individuals that used internet in the last 12 months (Eurostat tin00028) * Estimated population in 2015 (Eurostat proj_13npms].

Higher bound was estimated based on a combination of Q2a and Q4a: Over the last 12 months I have never used the internet to buy or order [tangible goods & services category x] (ordered online but used offline) or used internet to access the following digital content: [digital content category x] * % of individuals that used internet in the last 12 months (Eurostat tin00028) * Estimated population in 2015 (Eurostat proj_13npms].

This may be an overestimation – see footnote vii.

Ipsos 2015 consumer survey conducted in this study

Estimated as consumer spending / number of online consumers

Estimated as industry turnover / number of online consumers

ibid

ibid

Ipsos 2015 consumer survey conducted in this study

IFPI (2015) Digital Music Report Accessed at http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf

International Video Federation 2014 – European Video Yearbook 2014

European Commission (2013)

Rudiger Wishenbart Global eBook Report (2014)

No. of record labels in 2012: Includes sound recording and music publishing enterprises in 2012 (source Eurostat sbs_sc_1b_se_r2)

IFPI (2014) The Evolution of Music in Europe Accessed at http://www.ifpi.org/downloads/Europe-Music-Industry-2014.pdf

Sum of businesses selling content in physical form, and those selling OTT / TV-based services. Data sources are: Physical: International Video Federation 2013 – European Video Yearbook 2013 / OTT and TV-based services: EC. On-demand audio-visual markets in the European Union. 2014

DSM consumer survey. Higher and lower estimates based on the questions: Over the last 12 months, where did you access online digital content from?: i) Tangible goods and services bought online but used offline: [tangible goods & services category x]; ii) Tangible goods and services bought online but used offline: [tangible goods & services category x] or [digital content category x] See footnote ix for further explanation of higher and lower estimates.

IFPI, 2014. The evolution of music in Europe. Available at: http://www.ifpi.org/downloads/Europe-Music-Industry-2014.pdf

International Video Federation 2014 – European Video Yearbook 2014

IFPI, 2014. The evolution of music in Europe.

International Video Federation 2014 – European Video Yearbook 2014

DSM consumer survey. Figures based on question Q4d: In the last 12 months, how did you access [digital content category x]?

Refers to use of services

Ibid

Categorisation of pricing models is based on a qualitative assessment. See Annex 1 for a detailed account for each content category.

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