
The impact of cross-border access to audiovisual content on EU consumers

Prepared for a group of members of the international audiovisual industry

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Key findings

Key industry characteristics			
1	The European audiovisual (AV) sector is worth around €97bn a year and employs between 0.7m and 1.1m people		
2	Content production is inherently risky, with many ‘misses’ for every ‘hit’. The returns generated on the ‘hits’ must cover the cost of the ‘misses’ in order for the industry to be financially viable		
3	Consumers in individual EU Member States place different values on AV offerings, and consume different mixes of local and international content		
4	The industry has developed to match consumer preferences, by grouping consumers into segments and offering different consumers different experiences in terms of content, timing and location, and at different prices		
What would unrestricted cross-border access mean?			
Short-term impacts			
5	In the short run, consumers and the AV industry would be exposed to significant losses		
	Up to €9.3bn annual consumer welfare loss	Up to €8.2bn annual producer revenue loss	Up to 48% less content made (and in some scenarios even more would be at risk)
Medium to long term			
6	Given the significant scale of these impacts, industry participants will try to respond in a variety of ways		
	However, it is unclear whether the industry could adapt or how many years this would take		
	Our analysis suggests that there will still be significant consumer losses in the long run, of up to €4.5bn per annum		
	a	Less content would be produced—the less mainstream content would be dropped	
	b	Locally targeted content would be particularly affected, threatening cultural/language diversity	
	c	Some consumers would pay a higher price and/or be left with a lower-quality offering; others would be priced out of the market altogether	
7	How the impact is felt would vary by territory. In particular, consumers in the lower-income EU Member States (mostly Eastern Europe and the Balkans) would be disproportionately negatively affected		

Summary

Analysis undertaken for this report indicates that greater cross-border access to audiovisual (AV) content and services, as outlined in the European Commission's Digital Single Market strategy, is likely to be significantly detrimental to European consumers and the AV industry in Europe, as well as to international AV businesses active in Europe.

This report, by consultancies Oxera and O&O, demonstrates that although the Commission's proposals are intended to increase the availability of content across Europe, it is likely that they would result in significant adverse short-term impacts, and that the medium- to long-term consumer outcomes would be worse than they are today. In particular, consumers would be worse off through a combination of two main effects:

- less access to content and/or higher prices—consumers, particularly those in lower-income Member States, would have less access to content and/or have to pay higher prices than they do now;
- less content being made—undermining the current system of exclusive and territorial licensing would reduce investment in content, resulting in less content being produced.

As well as the adverse impact on consumer welfare, changes to content production would be likely to reduce cultural diversity in the AV sector across Europe as a result of a weakening in the financial position of many local producers, publishers, distributors and platforms.

Potential legislative changes, and scope of this report

Known potential legislative changes include a Regulation proposed on 9 December 2015 that would allow 'portability' of online services between Member States. This would mean that consumers would be able to access their home AV subscriptions during trips abroad. Such access is currently restricted in many cases because AV service providers agree with rights holders that they will offer content only in the geographic areas for which they have purchased the content rights. The 'portability' proposal is, however, outside the scope of this report.

The scope of this report covers further potential legislative changes and other regulatory measures designed to facilitate 'the ultimate objective of full cross-border access' to AV content (as stated by the Commission on 9 December 2015). Such additional measures could, in effect, allow consumers to purchase services and access content from providers located in any Member State without the explicit consent of the local rights holder. The report focuses on the effect of these potential further changes.

Economics of the sector

To provide context for the likely implications of the legislative changes, we have examined the key economic features of, and relationships within, the EU AV industry. Our assessment is limited to film and TV (and excludes radio and music, for example). It covers recent developments and the size of the sector, the market participants, and the flow of funds through the industry and into production. We explain why and how the industry's structure has developed into its current shape. It is these market characteristics that are most important in understanding how the potential changes to cross-border access are likely to affect consumers and the AV industry in Europe.

In 2013 the EU AV sector generated revenues of approximately €97bn, with around €40bn spent on content. However, content production is a fundamentally risky activity, in a highly competitive environment. Every new film or TV work is a prototype, the actual financial performance of which may fall below expectations. For all types of content, there are many more failures than there are successes—for example, the British Film Institute (BFI) estimates that only 6.6% of UK independent films produced between 2003 and 2011 were profitable. Similarly, in television, analysis of UK drama shows that only 31% of series that were first aired between 2006 and 2010 were commissioned for a second season, with only one in 20 making it to five seasons or more.

To make content production financially viable, producers must generate a sufficient return on a portfolio basis, where profitable content balances the unprofitable content. The hits need to pay for the misses. In Europe, an additional complexity of commercialising AV content is that every national audience values content differently based on (for example) cultural and linguistic factors or local tastes. Generating sufficient returns while catering for differences in consumers' preferences, tastes and valuation of the content means using a range of approaches. This can be achieved, and consumer choice broadened, by charging different prices for:

- access to content at different times (known as 'windowing');
- different experiences (e.g. cinema versus home viewing);
- ownership versus rental of content;
- access in different geographical territories.

Segmenting consumers into territories along national lines, or regions with a common language, is important to producers and consumers as it fits with the nature of demand. Indeed, differentiation by geography is a key means of enabling content producers to achieve a sufficient return and recoup investment, as well as allowing more content to be accessed by different consumers at prices they can afford. This is because differentiation by geography allows the industry to reflect and acknowledge differing consumer content valuations driven by cultural differences, tastes and preferences, and to reflect the different costs associated with serving each market.

Risk to content creation

The extent to which producers expect to achieve a reasonable return on their investment is key to the decision to invest in content. A mechanism known as 'green-lighting' ultimately determines the range and quality of content that is made, and thus the choice available to consumers. The decision to provide the required level of funding for a production to go ahead centres around expectations of future revenues (on a territory-by-territory basis), with the revenues that are deemed to be the least risky typically holding the most weight in the decision-making. Changes in expected revenues can therefore have a significant effect on content funding and production. The decisions to produce certain types of content—such as small-to-medium-scale locally produced films and certain TV genres (drama, children's, and factual)—are particularly prone to (even small) changes in available funding.

In deciding whether a production can go ahead, producers and rights buyers take a view on the audience that the content is likely to generate in each territory and window. If buyers believe that the audience will have already seen the content on other services (such as international VOD providers, or the original

broadcaster's catch-up service), they will be unwilling to invest or will substantially reduce any investment. Greater uncertainty around likely audiences and revenues from different windows and territories would be likely to lead to a large proportion of content not being green-lit. Conversely, the degree to which the content is exclusively licensed in a given temporal, platform and territorial window is of paramount importance, since this will provide strong incentives for platforms, distributors and other buyers and financiers to contribute to the production process.

Likely impact of legislative changes enabling cross-border access

Based on a detailed understanding of the economics of the sector, we analysed the likely changes to the AV industry in a world with significantly increased cross-border access. We considered this in two ways.

1. By analysing the effects in a 'no response' scenario in which today's wholesale prices and licensing arrangements remain unchanged, but the legislative proposals result in consumers adjusting their consumption patterns (to take advantage of cross-border opportunities) and buyers of content adjust their valuation rights to account for the loss of territorial exclusivity.

This scenario allows us to establish the potential scope and scale of the impact of the changes in legislation on overall industry revenues, output and welfare if producers do not adjust their licensing terms and conditions. The 'no response' scenario acts as a benchmark for how damaging the short-term frictions and uncertainties could be.

2. By considering a range of responses from industry participants (existing and new entrants) as they seek both to take advantage of the opportunities presented by the new system and to minimise any harm to their businesses. While we consider distinct scenarios, in reality the likely equilibrium would involve some combination of these changes.

In the 'no response' scenario, international differences in content availability, prices and timing would result in some consumers switching their premium film pay-TV or VOD subscriptions, or their local TV (whether paid or free), theatrical exhibition and/or home entertainment products to other international providers. Platforms would find rights less valuable because they would no longer be exclusive, and therefore not a means by which they could differentiate and promote themselves as offering a greater choice or quality of content.

A combination of consumer switching and the loss of exclusivity would remove revenues from the industry. In particular, the loss of content exclusivity would reduce distributors', broadcasters' and platform owners' willingness and ability to commit in advance to acquiring it. As a result, uncertainty around future revenues would weaken established funding mechanisms such as output deals, co-production agreements or pre-sale agreements. All of these effects would ultimately translate into a reduction in content investment and a consumer welfare loss through reduced quality and/or quantity of available content.

We estimate that the net revenue reduction to European distributors, pay-TV platforms and FTA broadcasters would be up to €5.8bn per annum in the short run or transition period. This would have a significant adverse impact on producers, which would be exposed to revenue losses of up to €8.2bn per annum as they would also be affected by the reduction in value from the loss of exclusivity, as well as the cannibalisation of revenue in other profitable windows (such as home entertainment).

As a result, a significant proportion of output might not get made; our modelling suggests that this could affect up to 48% of TV and up to 37% of film content. Based on analysis of available producer data, the proportion of content production put at risk by these proposals could be even higher (at least 10% higher in relation to film, in some cases). Furthermore, revenue reduction would be likely to have consequences in terms of reduced quality of output (lower production values), less innovative productions, and reduced cultural diversity. Overall, our analysis suggests that the total consumer welfare losses in this scenario would be up to €9.3bn per annum.

Given the magnitude and scope of the impacts described above, industry participants would attempt to respond in order to minimise these effects wherever possible. We considered a range of potential industry responses aimed at allowing producers to retain their chances of recouping their content investments. Some of the individual responses explored further in this report include:

- moving to a pan-European licensing model in order to preserve exclusivity;
- imposing restrictions on the availability of content on OTT distribution platforms, particularly in low-income Member States;
- moving to wholesale pricing arrangements that are more variable in nature, and adjusting content pricing across Europe;
- licensing content on an enforced dubbing basis, particularly in low-income Member States.

Crucially, however, none of the responses we identified would fully overcome the overall negative impact on industry revenues, content production and consumer welfare from cross-border access measures. Indeed, some responses may aggravate the negative impacts on certain customer groups through a reduction in content availability and/or increased prices. For example, if the industry were to succeed in moving towards a pan-European licensing model, the concentration of key rights in the hands of a few large operators would place many local players at risk, threatening the viability and diversity of the local AV industries in many Member States. Similarly, restrictions on the availability of content on OTT distribution platforms—while potentially effective at restoring the territorial exclusivity of rights—would significantly affect the quality of the offering received by consumers, and therefore their willingness to pay for AV content and the benefit that they derive from AV services.

Therefore, regardless of how the industry responds, our analysis suggests that there would be significant consumer losses in the medium to long run, in the order of up to €4.5bn per annum, as well as a reduction in content production of up to 35% for some types of content (with an even higher proportion of content being put at risk).

Furthermore, the process of transition to the new industry equilibrium is likely to take time, given the range of potential outcomes and the number of industry participants. As such, the industry would be exposed to the full extent of adverse impacts and magnitude of losses identified in the ‘no response’ scenario for as long as it takes to fully adapt to these changes.

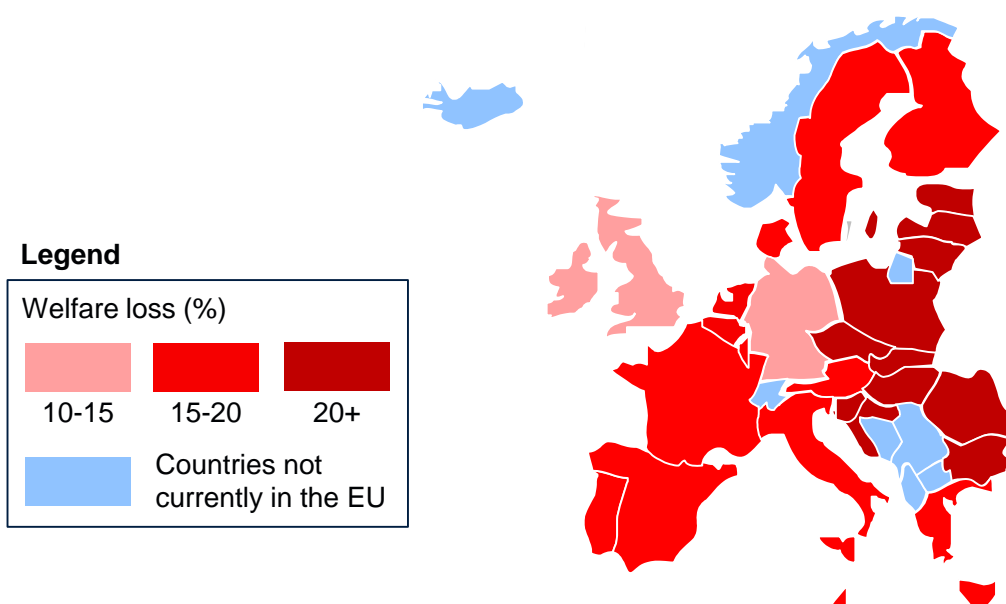
Summary of potential impacts versus the status quo (per annum)

Losses of...	'No response'	Long term
Producer revenue	€8.2bn	€3.6bn
Content production	48%	35%
Consumer welfare	€9.3bn	€4.5bn

Source: Oxera and O&O analysis.

In addition, our analysis shows that the smaller, lower-income Member States would suffer disproportionately, as shown below. This is because they stand to lose more from the combination of reductions in spending on local content, increases in the prices of the international content to which they currently have access, and/or a deterioration in the quality of AV services received (e.g. restrictions on OTT availability or enforced dubbing of content).

Long-run distributional effects on consumer welfare



Source: Oxera and O&O analysis.

Concluding remarks

The Commission's stated aims for its cross-border access initiative are to improve the circulation of online content, offer more choice to European consumers, strengthen cultural diversity, and provide more opportunities for the creative sector. However, cross-border access initiatives that have the effect of eroding the territorial nature of rights can result in large and complex second-order effects and unintended consequences. This study analysed these effects in detail, and explained how measures to promote cross-border access to content that is currently licensed on an exclusive territorial basis would directly affect the financing and risk-management models that sustain the creation of AV content.

While the industry may seek to mitigate these impacts, none of the identified responses are likely to be fully effective, and it is unclear how long it would take the industry to adapt fully. As a result, both during the transition period and in the medium to long run, there would be a significant reduction in content production and overall consumer welfare, with the effects likely to be felt disproportionately by consumers in small and low-income Member States.

Glossary

Active sales	Actively marketing and selling to consumers located outside of the territories for which the licensee holds the relevant content licence
AV	Audiovisual, in this report specifically referring to film and TV content (excludes radio)
Catch-up service	Services providing TV programmes, on demand, on devices connected to the Internet. Access is normally available following a programme's linear TV broadcast
Consumer switching	Behaviour whereby consumers abandon a product or a service in favour of another service. This report is primarily concerned with cross-border switching of premium pay-TV subscriptions, or free-to-air (FTA) content
Consumer welfare	A measure of individual benefits derived by people consuming particular goods and services
Consumption effect	In this report, consumption effect refers to consumer welfare changes associated with consumers switching to products with a different price, content availability or release date, and reflecting both short- and long-term changes in quality
Country of origin principle	A principle in EU law for resolving conflict between the laws of different EU Member States. In this instance, where a broadcast service is performed in one country but received in another, the applicable law is the law of the country where the action or service is performed. For example, under the Satellite and Cable Directive, rights cleared in one country allow the broadcasting organisations to broadcast to the whole of the EU
Cross-border access	The ability to access content via services that are available in a Member State that is not the consumer's country of residence
Day-and-date release	First release of television content via simultaneous broadcast in both the home country and other licensed markets. In the case of film content, day-and-date release can refer to a film being made available in theatres and via home entertainment, in all markets, at the same time
DSM	Digital Single Market—the European Commission goal for a harmonised and integrated European market without barriers to trade in digital and online services
DTO	Download to own—content is downloaded via the Internet and saved onto the consumer's digital storage. DTO is the Internet-based equivalent of a DVD or Blu-ray purchase. In the case of television content, episodes can normally be purchased on an individual basis
DTT	Digital terrestrial television—a means of receiving terrestrial television channels. DTT is an upgrade from the traditional analogue terrestrial broadcast signal. The majority of EU Member States have already undertaken a full analogue terrestrial switch-off, moving to digital terrestrial broadcast
DVR	Digital video recorder—a device used to record, save, and play back television programmes. A DVR can also pause live TV by recording the current show in real time
EEA	European Economic Area—this provides for the free movement of persons, goods, services and capital within the internal market of the EU between its 28 Member States, as well as three of the four members of the European Free Trade Association (EFTA): Iceland, Liechtenstein and Norway
EU	The European Union
FTA	Free-to-air—an unencrypted TV broadcast, allowing any person with the appropriate equipment to receive the signal for free (subject to a licence fee that may be payable to the public service broadcaster in a particular market)

Geo-filter	An approach taken by Internet-based content services to restrict access to particular territories, normally those for which the service has acquired the relevant content rights
Green-lighting	A content investment decision mechanism that determines which content gets made. The green-lighting decision is the point at which commissioners decide whether a production is financially viable
Home entertainment	A content window in which consumers have in-home access, prior to television broadcast. The home entertainment window traditionally includes video, DVD and Blu-ray, but has now expanded from physical products to include TVOD services
IP	Internet protocol—references to IP can be taken to mean 'Internet'; we refer to IP as a means of delivering television and film content to consumers
Member States	The 28 member countries of the EU: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Spain, Slovakia, Slovenia, Sweden and the UK
OTT	Over the top—delivery of content over the Internet directly to the consumer without the involvement of a local operator, such as a cable or satellite provider, in the control or distribution of the content
Output deal	An agreement in which a producer agrees to sell (a part of) its overall content to the buyer for a specified duration
Output effect	In this report, output effect refers to changes in consumer welfare relating to a change in the total volume of content being made (where consumption is affected across all screening windows)
Passive sales	An act of serving consumers in territories for which the licensee has not acquired the relevant rights, as long as such consumers come forward with requests to access the service
Pay-TV	Paid-for TV services—normally subject to a monthly subscription fee. In this report, 'pay-TV' is applied broadly, to refer to linear broadcast on traditional pay-TV platforms and their associated VOD services
Portability	The ability for consumers to access their AV content outside their country of residence (e.g. on trips)
Pre-sale agreement	A contract between the producer and the distributor, whereby the distributor agrees to pay the producer a fixed advance/minimum guarantee upon completion, with a share of any upside. In exchange, the distributor is granted the right to sell the content in a given territory and/or window, generally exclusively
Quality-based tiering	Offering content packages of varying quality levels at different price points
SVOD	Subscription video-on-demand—a service that gives users unlimited access to a wide range of VOD programmes for a monthly flat rate
Territorial licensing	Licensing of content rights to a specific geographic area
TVOD	Transactional video-on-demand—services that allow consumers to pay for access to individual television programmes or films. There are two types of TVOD: download to own (DTO—also known as electronic sell-through, or EST) and download to rent (DTR)
VOD	Video-on-demand—an interactive television technology that allows subscribers to view programming in real time or to download programmes and view them later. IP TV technology is often used to bring VOD to TV sets and personal computers
Windowing	Release arrangements for the exploitation of film and TV rights across different platforms, timings and geographies. Release windowing is a way of applying differential pricing to consumers who are willing to pay for the content at different times, or in different formats or settings, and/or to distinguish between the value of ownership and access

1 Introduction

1.1 Overview

Oxera and O&O were asked to prepare a report for a group of international audiovisual (AV) industry members in response to the European Commission ('the Commission') developing proposals to facilitate cross-border access to digital services.¹

The group consists of the following, which are jointly referred to in this report as the 'Sponsors':

- Allianz Deutscher Produzenten—Film und Fernsehen;
- British Association for Screen Entertainment (BASE);
- Bundesverband Audiovisuelle Medien (BVM);
- Constantin Film;
- Danish Producers' Association;
- Danish Video Association (DVA);
- Digital Entertainment Group Europe (DEGE);
- Entertainment One;
- European Film Agency Directors (EFADs);
- Fédération Internationale des Associations de Producteurs de Films (FIAPF);
- 21st Century Fox;
- HDF Kino;
- International Video Federation (IVF);
- ITV;
- Motion Picture Association (MPA);
- NBCUniversal International;
- Pact;
- Sky;
- Verband der Filmverleiher (VdF);
- Viacom.

This report responds to concerns expressed by the Commission about the accessibility of digital media content. This is in relation to both the short-term/temporary portability of content subscribed to in one Member State (for example, allowing consumers when travelling on holiday or business access to a

¹ European Commission's Digital Single Market (DSM) initiative; see <http://ec.europa.eu/priorities/digital-single-market/>, accessed 27 April 2016.

service to which they have subscribed at home), and the long-term/permanent cross-border access to content available in another Member State.²

On 9 December 2015, the Commission released a Proposed Regulation on Portability, and at the same time indicated in a Communication on Copyright its ultimate objective to achieve full cross-border access.³ To that end it is proposing 'a gradual approach to removing obstacles to cross-border access to content and to the circulation of works'. The Commission also believes that there is a strong cultural argument to make it easier for content from one Member State to be available to all, which could give rise to a wider cross-border access legislation.

The Commission has recognised the need to 'preserve the financing of the EU media and innovative content', as well as 'respecting the value of rights in the audiovisual sector'. The effect of any legislative proposal that potentially limits the ability of rights holders and distributors to reach licensing agreements with territorial restrictions could, however, have a significant impact on the financing and risk-management models that sustain the creation of AV content in the EU, as well as internationally.

The scope of this economic study is limited to the changes arising from wider cross-border access; it does not address portability. Of particular focus is whether service providers would be able to supply content outside their licensed territory (see further detail in section 1.4).

This study explores how changes to territorial restrictions on access to content would lead to changes in the wider functioning of the EU AV markets. It focuses on consumer welfare impacts resulting from two main mechanisms:

1. consumers switching to products available abroad with different prices, better content availability or earlier release dates; or consuming a product with different price or quality domestically (the 'consumption effect');
2. changes in welfare related to a change in total volume of content being made (the 'output effect').

Many of the likely scenarios have an uneven distributional impact across the EU, with a particularly large impact on the quantity of locally (nationally) produced content.

The report demonstrates that the changes in cross-border access would be likely to leave consumers worse off, on average, than under the status quo, with consumers in the lower-income EU markets being disproportionately affected.

1.2 Methodology

Our methodology is based on, first, laying out the changes that the industry is likely to go through as a result of opening up cross-border access. This relies on evidence from industry and public sources. Second, we build an economic model explaining changes in revenue flowing into the industry emerging from changes in cross-border consumption patterns, and their effect across the AV value chain. The model also allows us to capture the effects of the loss of content exclusivity and revenue cannibalisation across windows, as well as to

² European Commission (2015), 'Commission Staff Working Document: A Digital Single Market Strategy for Europe - Analysis and Evidence', 6 May, p. 26, http://ec.europa.eu/priorities/digital-single-market/docs/dsm-swd_en.pdf, accessed 27 April 2016.

³ The proposed regulation would mandate portability of certain online services for subscribers who are temporarily present in another Member State. The proposal will now be considered by the Member States and the European Parliament.

draw conclusions on the impacts on consumer welfare and overall content creation, stemming from the removal of obstacles to cross-border access to AV content.

The major workstreams which made up our approach to conducting the study and producing this report included:

- a high-level review of likely policy interventions (section 1.4);
- a detailed review of the industry value chain, and breakdown of the key mechanics that underpin it at present: windowing; content financing, the green-lighting decision and its links to different sources of revenues; and price differentiation (section 2);
- an assessment of the likely impacts that cross-border access would have on the industry, if there were no producer response (section 3);
- a conceptual analysis, sketching out a set of scenarios on how the industry could respond as participants seek to protect themselves relative to the 'no response' scenario (section 4);
- interviewing many of the Sponsors and other AV organisations, in order to gather the data required to model the possible impacts, as well as reviewing the publicly available data sources (see further details below);
- building a model of the AV industry in Europe, illustrating the effects of the introduction of cross-border consumption on industry revenues, content funding, output creation and consumer welfare.

Appendix A1 contains a more detailed explanation of the methodology and the sources used, and in particular details of the economic model we built to quantify the effects on industry revenues, content production and welfare.

1.3 Scope limitations

Given the extensive scope of the changes that could unfold, we have narrowed down our assessment to only certain types of content. Specifically, we do not consider the impact on sport, video games, radio or music, and focus only on films and TV content. Even within TV, we focus on genres that derive a large proportion of their funding and revenues from international distribution, namely drama/fiction, children's and factual programming.⁴

We also do not consider the implications of the adoption of a portability regulation; all the changes are measured relative to today's consumption statistics.⁵

1.4 Likely policy changes

According to the Commission, the Digital Single Market strategy aims to bring down barriers to online opportunities and trade. In the case of the AV sector, the

⁴ This reduced scope is consistent with the interests of the report Sponsors. It also matches the scope of the ongoing e-commerce sector inquiry, as highlighted in the preliminary results. See European Commission (2016), 'Antitrust: Commission publishes initial findings on geo-blocking from e-commerce sector inquiry', Factsheet, 18 March, http://europa.eu/rapid/press-release_MEMO-16-882_en.htm, accessed 27 April 2016. While 'loosely defined' portability could result in effective cross-border access, we do not consider the legislative or regulatory differences between these different outcomes.

⁵ A loosely defined portability that does not factor in a limitation on how long the content is available abroad, among other aspects, could lead to outcomes similar to those described here.

likely policy changes are focused on portability and cross-border access, and this report focuses on the consequences that could flow from such changes.

At present, the majority of content across Europe is distributed using licences that grant the broadcaster, platform, or distributor exclusive rights to exploit that content in their respective territory and the designated window(s).⁶ One possible policy change would be to prohibit rights holders (studios, producers, etc.) and their licensees (distributors, broadcasters, online platforms) from agreeing on provisions that bar the licensees from responding positively to unsolicited requests from subscribers located outside of the licensed territory (effectively being beyond the territorial scope of the licence granted). In other words, one avenue is to authorise ‘passive sales’—i.e. the ability to serve consumers in territories for which the licensee has not acquired the relevant rights, who come forward with such requests. This could be achieved via legislative action.

Another form of sales are ‘active sales’, where platforms actively market content to consumers located outside of the licensed territory. In the AV industry, where a significant and growing proportion of content is accessed via an Internet connection, the distinction between what constitutes an ‘active’, as opposed to a ‘passive’, sale is not clear.

For example, if an OTT operator were to set up a server in another territory (to increase service quality), this could be argued as being an attempt to directly market and actively sell its content in that territory beyond the scope of its licence. Furthermore, given the increasing prevalence of using online channels as a means of communicating and advertising (e.g. Facebook, Twitter), there seems to be limited meaningful ways of distinguishing passive and active marketing techniques. Some OTT providers, such as Netflix and Amazon, are particularly adept at using social media to find subscribers. It would seem difficult for broadcasters to actively monitor the reach of their online advertising campaigns on platforms such as Facebook, and social media recommendations could drive sales without ‘active’ promotion. For all these reasons, in a world with cross-border access, licensing on an exclusive territorial basis would be rendered essentially meaningless.

Geo-filtering is one tool currently used by rights holders to manage Internet-based access to their content. In selling rights to distributors, broadcasters and platform owners, rights holders and service providers tend to agree on licensing terms that involve service providers using geo-filtering tools, to ensure that content cannot be accessed by those in geographical areas for which the providers have not acquired the rights. In general, for the purpose of this report, we do not explicitly consider the potential subtle differences between various potential policy or legislative changes. The Commission has been clear that its ultimate objective is ‘full cross-border access’, so we have studied that outcome scenario. The avenues to achieve it are potentially diverse. In a recent *Communication on Copyright*, the Commission indicated that it was considering proposals for enhancing cross-border distribution of TV and radio programmes online via a number of policies.⁷ These might include the extension of some of the provisions of the Satellite and Cable Directive to the online world (e.g. the ‘country of origin’ principle); or supporting rights holders and distributors to reach agreement on licences that allow for cross-border access to content.

⁶ This section has been developed jointly with the Sponsors’ legal advisers, Wiggin.

⁷ European Commission (2015), ‘Communication from the Commission towards a modern, more European copyright framework’, 9 December, COM (2015) 626 final.

Throughout this report we focus on how the EU AV markets could evolve if greater cross-border access to AV content and services were provided for, 'in one way or another', without the rights holders' explicit consent.

1.5 Data-gathering

Alongside qualitative interviews with the Sponsors, and other producers and distributors, we conducted an extensive data-gathering exercise to calibrate the economic modelling. This included public and industry-wide sources, as well as proprietary data on film revenues and production statistics from individual companies.⁸ All commercially sensitive information received from Sponsors and other stakeholders has been suitably anonymised and aggregated; neither the modelling nor the rest of this report contains identifiable data from any one particular Sponsor.

In addition, some key assumptions have been made in order to arrive at the impact estimates under different scenarios. These assumptions are laid out in Appendix A1.

1.6 Overview of the report

The report proceeds as follows:

- section 2 outlines the main economic features of the AV industry in Europe;
- section 3 provides an assessment of the likely impacts that cross-border access would have on the industry if there were no producer response. Given the significant scale of impacts under this scenario, the analysis in this section also demonstrates why the industry will try to respond in order to mitigate these effects;
- section 4 then considers scenarios on how the industry participants could respond, and what this implies for how the market as a whole could develop and how it affects consumer welfare;
- section 5 summarises the main effects and concludes;
- Appendix A1 details the modelling approach, as well as all assumptions used in the modelling.

⁸ Many of the public statistics featured in section 2 have not been uniformly reported across the Member States.

2 Economics of the audiovisual industry

In this section we give an overview of the markets for TV and film content in Europe, including the current market size, approaches to exploitation across all windows (from theatrical to FTA television), and the underlying economic characteristics. In particular, we give:

- an overview of the market, and recent developments within the sector;
- an overview of the typical value chain for film and TV content and how money flows through the system, including the typical financing methods;
- an explanation of the key market characteristics, covering the economics of the industry and the resulting importance of market segmentation;
- an explanation of the process behind film and TV commissioning and investment decisions.

2.1 An overview of the TV and film content sectors in Europe

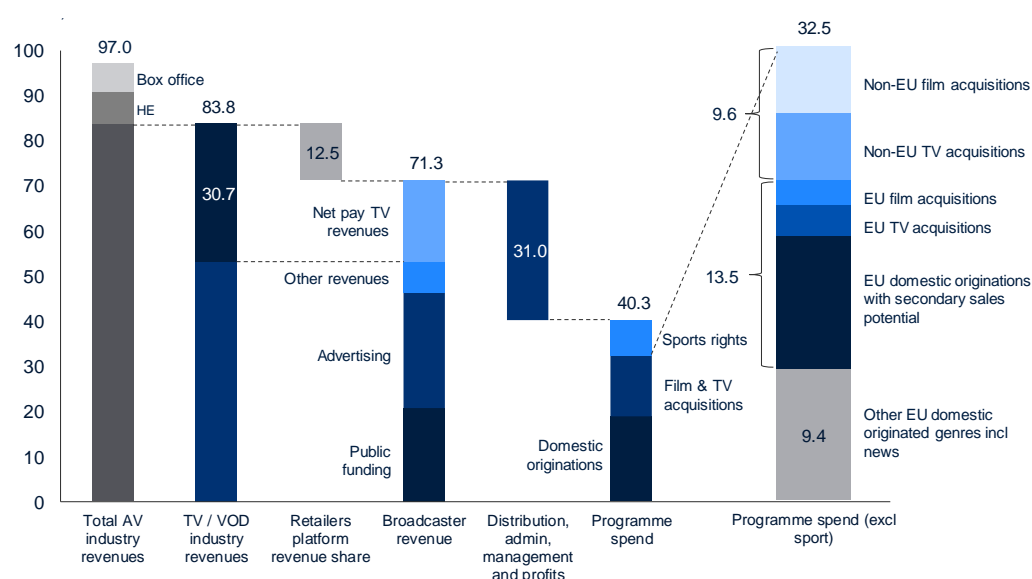
In this section we assess the overall market size and key trends affecting the sector.

2.1.1 Industry overview and dynamics

The content sectors have undergone several changes in recent years, following digitisation of content, and the rise of global IP-based content aggregators. The overall scale of the TV and film content industries in Europe is dependent on a number of windows and revenue sources during the lifecycle of the content.⁹

Figure 2.1 below sets out a high-level view of industry revenue generated from European broadcasters, split between the key value chain participants. It shows that the European AV sector generated gross revenues of approximately €97bn in 2013. After retained platform revenue shares of consumer payments, this comes to about €72bn. European broadcasters spent just over €40bn on content (programme spend). Of this, about a third is spent on film and TV acquisitions, and around half on originated programmes (the rest is sport).

⁹ A number of sources were used to establish both top-down and bottom-up approaches to gain a rigorous picture of the AV industry. These include published sources such as industry statistics and company accounts, supplemented with key stakeholder interviews from across the value chain. Through the interviews, we were able to obtain a range of case studies to quantify our understanding of how revenues are split between windows for different content types.

Figure 2.1 Breakdown of European TV content spend (2013, €bn)


Source: OBS, Ovum, company reports, Oliver & Ohlbaum analysis.

To model the potential impacts of regulatory changes, we segmented content spending data accordingly: spend on non-EU film and TV acquisitions, totalling just over €9bn; and European content spend (both acquired and originated) totalling almost €23bn. European acquired film and TV content represents a much smaller proportion of spend than non-EU acquired content, at less than €4bn across film and TV. The biggest spending by far is on domestic-originated programmes (just under €19bn). Originated spending within the EU is driven by the PSBs and commercial FTA broadcasters; with a few exceptions such as Sky and Canal+, pay-TV channels still tend to invest a relatively small amount in originated content.

Of the originated spending, we are concentrating on three main genres: fiction/drama, high-end factual and children's programmes. These genres tend to have a higher secondary and international revenue potential, and are therefore also much more likely to be affected by legislative changes which could affect non-domestic revenues.¹⁰ We estimate that the three genres represent around 50% of all domestic-originated spend (just over €9bn).

Underpinning the industry is an estimated employment base of between 715,000 and 1.1m workers, split across AV content production (475,000–700,000) and broadcasting/platforms (240,000–400,000).¹¹

2.1.2 The expansion of multichannel

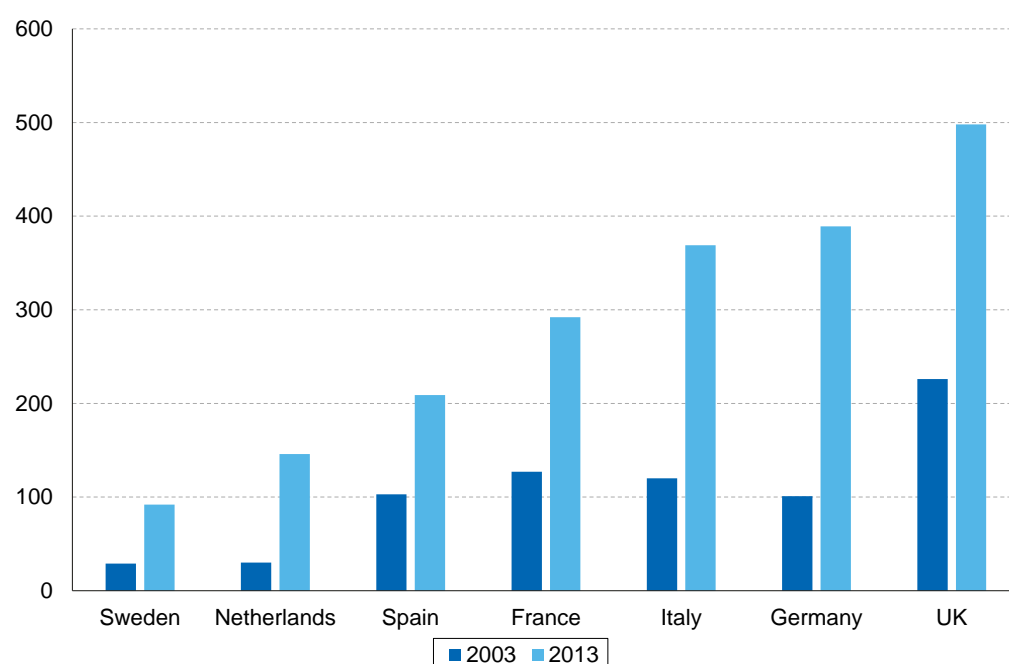
Perhaps the single biggest change in the AV sector in the past decade has been the rise of multichannel in most territories. Digitisation has seen a rapid expansion in the number of channels available to consumers, and a resulting loss of share of historic terrestrial services which dominated analogue distribution. Figure 2.2 shows that, across a sample of EU countries, the number of nationwide channels available increased substantially between 2003 and

¹⁰ Genres such as news, sport, entertainment and soaps are overwhelmingly domestic in their consumption. Consideration of the impacts of cross-border changes on sports rights is outside the scope of this report.

¹¹ Ernst & Young (2014), 'Creating Growth: Measuring cultural and creative markets in the EU' and Eurostat (2015), 'Data on the AV Industry in the EU'. From the total reported 805,000 employees of the EU audiovisual sector, we excluded 37,000 in cinemas, as well as reported 58,000 working in radio broadcasting.

2013—during which time multichannel services were launched on DTT in most markets.

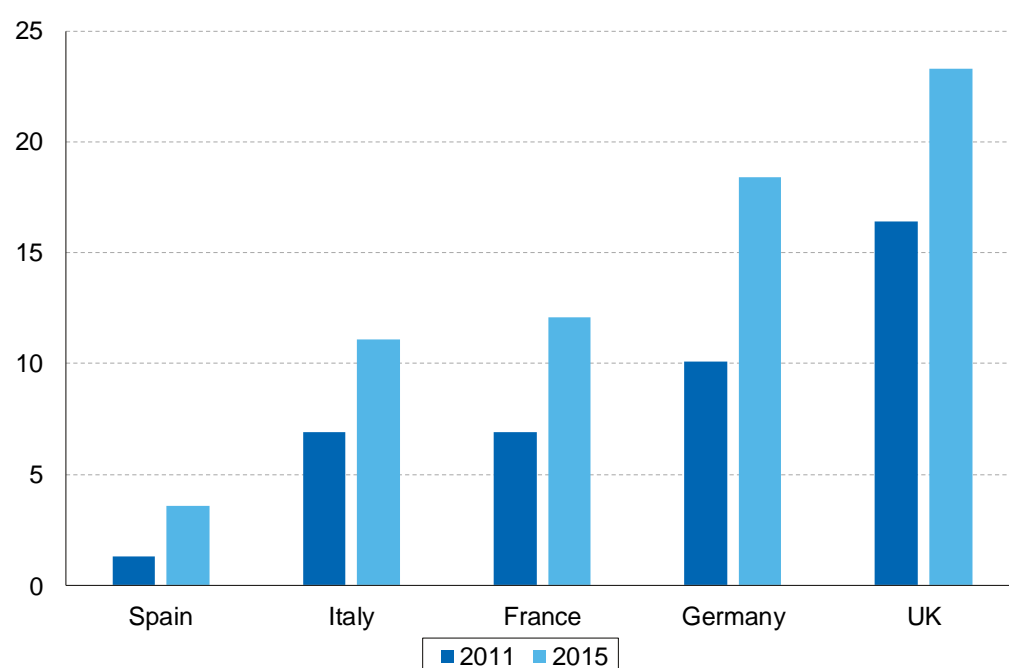
Figure 2.2 Available nationwide channels, by country, 2003 and 2013



Source: OBS, Oliver & Ohlbaum analysis.

Coupled with this expansion of choice, DVR penetration has grown significantly. Figure 2.3 shows that the number of DVRs in use has increased significantly in most markets. This means that viewers are now able to defer viewing more easily, and there has been a resulting increase in non-linear viewing.

Figure 2.3 DVR install base, 2011 and 2015



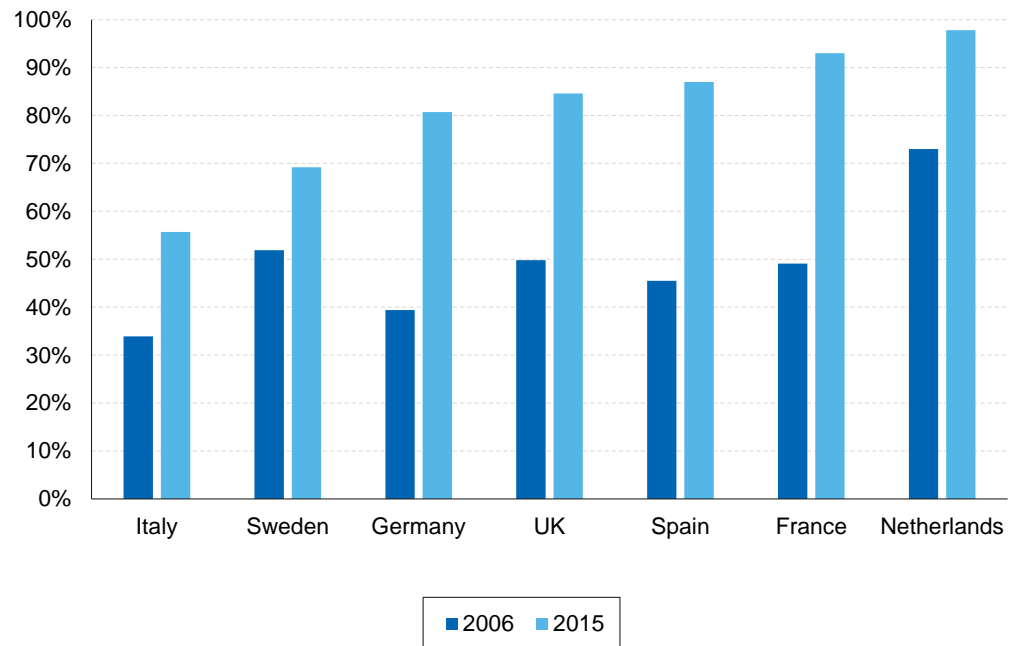
Source: Ovum World Television Information Service, Oliver & Ohlbaum analysis.

This has been complemented by the growing availability of online (IP-based) TV services which have further fragmented viewing.

2.1.3 The rise of online distribution

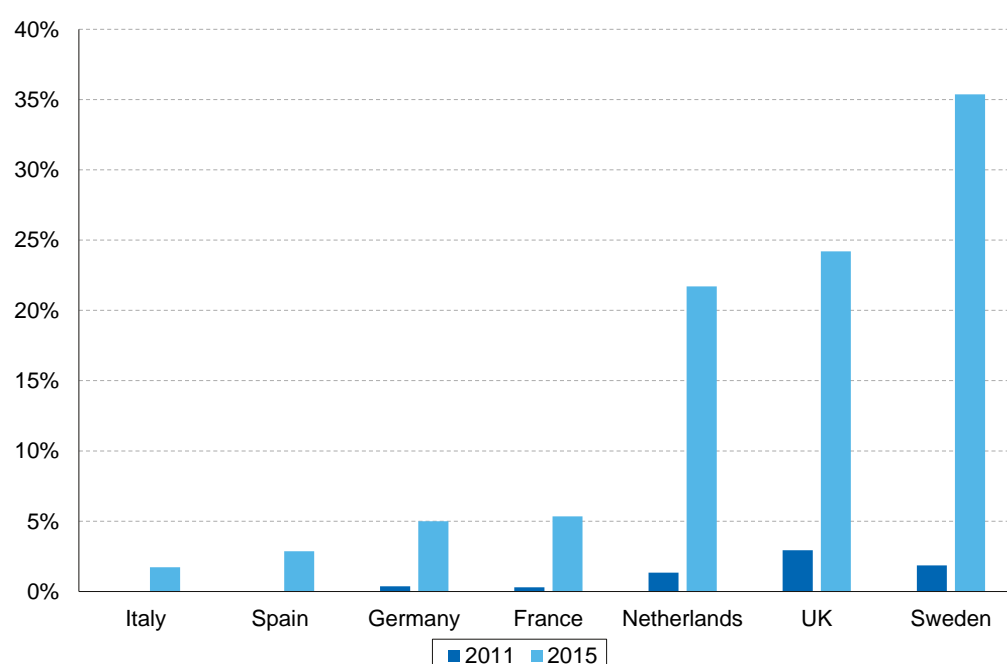
As well as an explosion of catch-up services from traditional broadcasters, new global players have entered the market offering content on an OTT basis. These services have been supported by rapid expansion in household penetration of broadband, Figure 2.4 shows how broadband penetration expanded in a selection of European countries between 2006 and 2015.

Figure 2.4 Household penetration of broadband, 2006 and 2015



Source: Ovum World Television Information Service, Oliver & Ohlbaum analysis.

The OTT services, such as Netflix and Amazon Prime, have now matured in the USA and in several European territories that they entered first. Figure 2.5 shows that household penetration of SVOD streaming services has increased rapidly in some European Member States, from a very low base in 2011 to more than 20% penetration in Sweden, the UK, and the Netherlands. Uptake has been slower in other territories, but we expect to see further growth in the coming years, with the impact on traditional broadcast services likely to vary by territory.

Figure 2.5 Household penetration of SVOD services, 2011 and 2015

Source: Ovum World Television Information Service, Oliver & Ohlbaum analysis.

Such services are encouraging consumers to move away from traditional content bundles, offered by pay and FTA platforms. Instead, consumers can opt for IP delivered 'pay lite' services which typically cost less than pay-TV subscription and offer greater flexibility. This active unbundling of content by consumers means platforms are less able to maximise the value through bundling, and consumers are more able to focus their purchases only on the content they want. This process of 'cord-cutting' as it is called, is currently a US phenomenon, and it is yet to have a major impact in Europe.

This trend is set to continue as IP services are becoming increasingly fragmented. Many channels now offer their own OTT services. These are the equivalent of catch-up services for FTA channels, but some pay channels, such as Discovery, are now offering SVOD services for their channels alone. These emerging trends could lead to a world where consumers are able to access and pay for only the content they want.

2.2 The flow of finance through the system

Finance enters the system from a number of sources, including both commercial revenues and public funding. For European content (both film and TV) public funding plays an important role through interventions such as subsidies and tax credits which directly encourage content investment. Most European countries also have publicly funded broadcasters which do not rely on revenue generated by subscription and advertising in the same way as their commercial rivals. For the commercial market participants, the core revenue sources from consumers are similar—subscription, advertising and home entertainment revenues apply to both TV and film content, while theatrical is an additional and considerable revenue source for film, but is not generally relevant to TV content.¹²

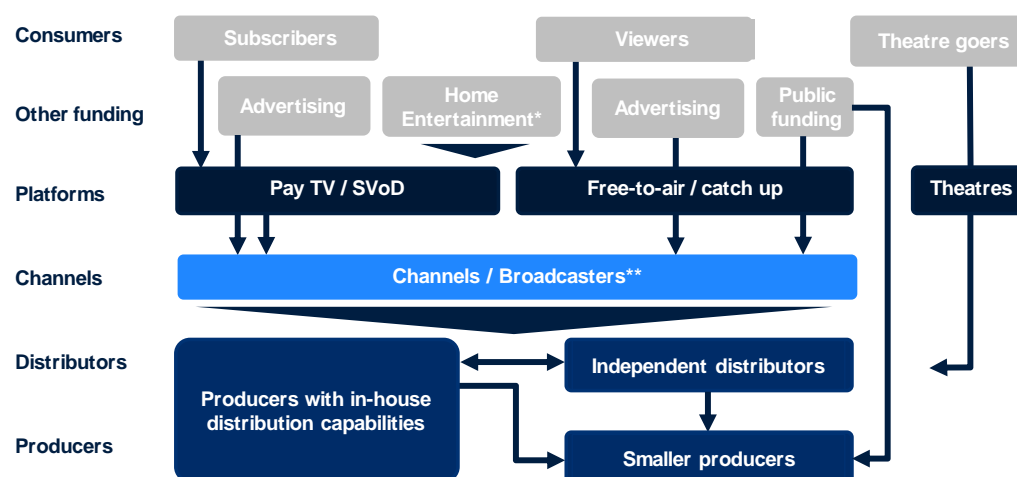
Subscription and advertising revenues are underpinned by the sale of content rights to channels broadcasting the content, whether domestically or

¹² A few examples exist where TV content is broadcast in the cinema, such as *Wallander* in Sweden.

internationally. In both film and TV, distributors (either in house or third parties) purchase rights from producers and then sell them in other windows and territories. This complex web of funding flows therefore has a time element as well, which we explore in more detail in section 2.3.2.

Ultimately, viewing—however it occurs—drives the amount of money entering the system, and since this flows through the value chain to the producers, the level of consumption has a significant effect on the amount available for investment in content. Figure 2.6 shows the key stages of the value chain and the main players within each stage.

Figure 2.6 The TV and film content value chain



Note: * Includes physical sales and TVOD. Revenues flow to the relevant rights holder.

** Commissioning broadcasters can interact directly with producers.

Source: O&O and Oxera analysis.

In the case of pay-TV (which we define broadly, and include SVOD), subscription revenue is generated by the platforms, while advertising revenue tends to flow direct to the channels.¹³ For free-to-air content, most countries have one or more PSB broadcaster, funded (at least in part) by a licence fee; this money, along with advertising revenue, flows to the channels. For both paid and free content, advertising is an important revenue stream and it is closely related to audience size.

Platforms generate revenue from consumers either through subscription or, in the case of FTA platforms, by selling set top boxes or through integration with products from hardware manufacturers. The platforms play an enabling role in bundling channels and other services (including on demand services) and providing channels with access to their audience. Channels, in turn, receive income from advertising revenue and, in some cases, carriage fees from the platforms; the level of revenue they generate ultimately dictates the amount they can spend on content. Premium film and other pay-TV services can be owned by platforms (e.g. Sky Movies), can be platforms in their own right (e.g. Netflix), or can be standalone or producer/studio-owned entities (e.g. HBO).¹⁴

When channels commission TV content, or purchase content rights, funding flows further through the value chain to distributors and producers. Some TV content is fully funded by broadcasters (particularly PSB content) but, where there is an expectation that the content can be sold internationally, additional

¹³ SVOD services tend not to carry advertising.

¹⁴ When discussing channels, we do not differentiate between ownership structures.

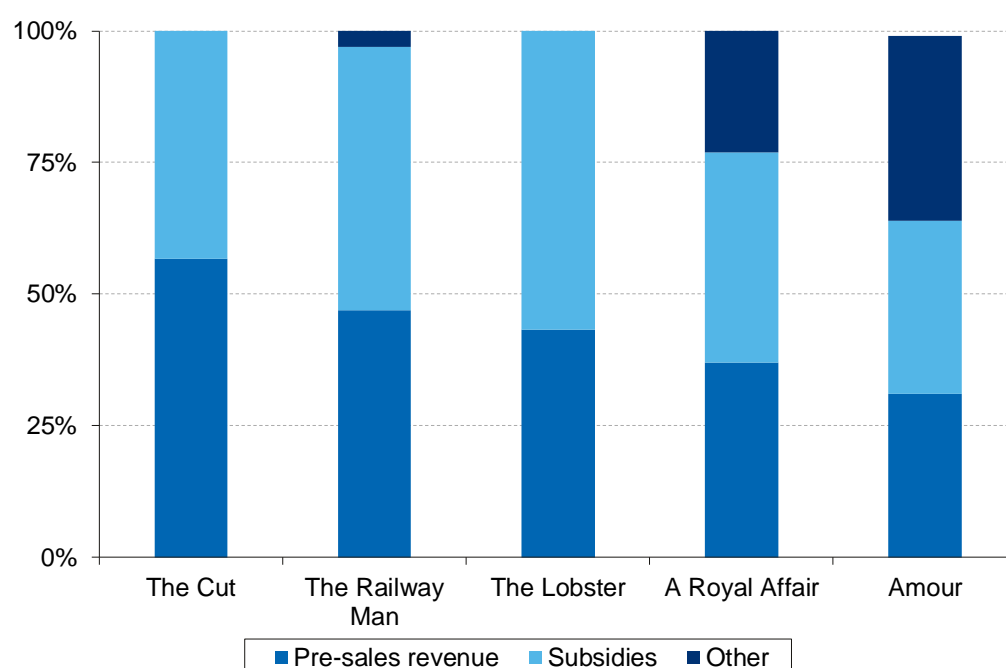
funding may be sought from producers and distributors—in exchange for the rights to sell the finished content in particular markets and windows. The amount of funding available for investment in content is therefore linked to both the level of viewing in a given market, and the appetite for investment from distributors, channels and producers.

For both TV and film content, production companies need to find ways to finance production, whether contributing to broadcaster investment, in the case of TV content, or financing a film outright. The main sources of finance available to them are set out below.

- **Pre-sale agreements** are contracts between the producer and the studio/distributor, whereby the distributor promises to pay the producer a fixed advance/minimum guarantee upon completion, with a share of any upside. In exchange, the distributor is granted the right to sell the content in a given territory and/or window and/or distribution channel, generally exclusively. These agreements are important because they provide advances or collateral to help cash flow production.
- **Self-funding** is funding the producers themselves provide to fill any costs of production that cannot be covered by other finance sources. The revenue from previous content including pay-TV revenue (e.g. output deal revenue) can be used for self-funding.
- **Co-production or co-financing arrangements** are a means of raising additional finance by increasing available self-funding. These arrangements involve producers, often in different markets, jointly financing or producing content in return for an agreed proportion of the proceeds and/or the right to exploit the finished content in different markets.
- **National film bodies and subsidies.** Governments often offer tax breaks, subsidies and additional funding to films that are shot in particular territories. Similar subsidies are also available in some countries for TV production of certain genres, such as animation or high-end drama.
- **Additional sources of funding,** for example from private equity and bank loans. ‘Gap’ financing from banks is rare, but may be available where the project has proved its commercial viability through pre-sale agreements. The loan is secured on the value of the sales territories not yet sold as part of the ‘pre sales’ process.

These sources of finance come with significant risk for those providing them since the quality and performance of the finished content is uncertain when finance is committed. In TV content, deals for the key genres which are sold internationally tend to be agreed with distributors in advance; these pre-sale agreements or production advances are often necessary to secure a commission and so distributors’ outlook for potential programme sales is an important factor in determining the level of content commissioning. This outlook is partially driven by distributors’ ability to offer exclusive content which adds value for platforms. Pre-sale agreements are one of the main sources of financing for independent films. Figure 2.7 indicates the breakdown of the budgets of a few successful and recent independent European films.

Figure 2.7 Examples of recent independent film funding



Source: IVF/FIAPF/IFTA and MPA case studies on the financing and distribution of recent European films & television series.

The value chain set out in Figure 2.6 and described above covers the main stages and actors in the content production and delivery process—however, it is worth noting that in many cases there is a degree of vertical integration. This is particularly true in the case of broadcasters, which often produce content in-house, as well as using independent producers, and some also have their own distribution arm.

2.3 Key market characteristics

The participants operating within the structure set out above are subject to the following two key market features that should be understood.

1. The inherent riskiness of the content production sector.
2. The resulting need to segment the market via a combination of:
 - time-based windowing;
 - territoriality and exclusivity;
 - content-bundling.

These market characteristics apply similarly to both film and TV content; we explain each in turn below.

2.3.4 The riskiness of content production

The high risks involved, with very few projects making a return for their creators, require those that do to make significant profits. In the case of film making, for example, historical statistics suggest that only one in ten films retrieves its investment from domestic exhibition and four out of ten never recoup their original investment.¹⁵ The sector is therefore characterised by extreme events,

¹⁵ Küng, L. (2008), *Strategy Management in the Media*, Sage Publications, p. 69.

with most of the industry's revenue generated by a few huge successes: research in 2004 described universal and durable features of the film industry and stated that less than 20% of movies earn 80% of gross revenues.¹⁶

In the UK, the British Film Institute's (BFI's) Statistical Yearbook provides analysis of the performance of UK produced film. While profitability is difficult to measure, one metric used is the worldwide box office revenue to budget ratio, where a ratio of two or more suggests that the film is likely to be in profit once returns from ancillary revenues are included and all costs deducted.¹⁷ Table 2.1 is taken from the BFI Yearbook for 2014, and shows that only 6.6% of independent UK films have a box office revenue to budget ratio greater than two. Those in the lower budget bands, which include most UK and EU films, are the least likely to make a profit; yet it is these films which provide a wealth of consumer choice, accounting for much of the sector's film output.

Table 2.1 Independent domestic UK films achieving multi-territory box office to budget ratio of two or above by budget, production years 2003–11

Budget band (£m)	Number of films released within two years of principal filming	Number of films achieving a ratio of 2 or more	Percentage of films achieving a ratio of 2 or more
<0.5	122	4	3.3
0.5–2	142	7	4.9
2–5	104	9	8.7
5+	54	8	14.8
Total	422	28	6.6

Note: Release rates subject to two-year release limit. Box office figures to 2014.

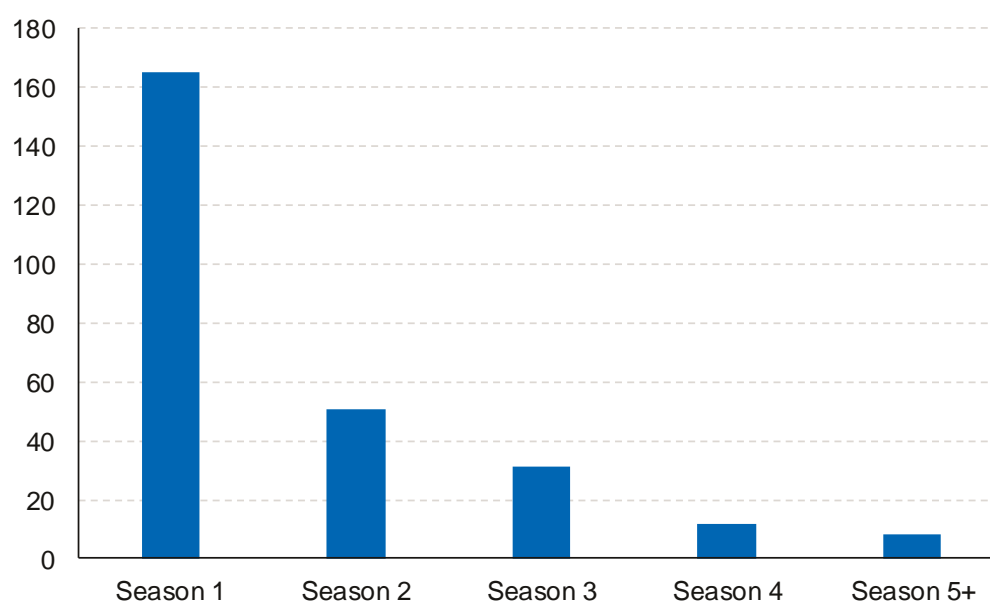
Source: Rentrak, BFI.

Similarly, low re-commissioning rates exist in TV. Figure 2.8 demonstrates that few productions succeed, as evidenced by the fact that 69% of TV dramas were not re-commissioned after their first series. The analysis focuses only on UK content, including that sold into Europe, but the same economics apply across EU produced content. Significant costs are incurred in development, production and promotion, yet only a minority of projects are a 'hit'. Since most projects will lose money, content producers run portfolio businesses, and the returns on successes must both make a return for the business and fund development of the next round of content.

¹⁶ De Vany, A. (2004), *Hollywood Economics: How extreme uncertainty shapes the film industry*, Routledge: Taylor & Francis Group, p. 261.

¹⁷ The BFI acknowledges that while the box office to budget ratio is used for films of all budget, it has not been tested on very low budget films (under £500k), and therefore it is possible that a different proxy measure of profitability is more appropriate—e.g. because a higher proportion of total revenue might come from video and digital sales.

Figure 2.8 Re-commissioning rates on the main five UK terrestrial channels, series first aired between 2006 and 2010



Note: Includes first run originated content debuting between 2006 and 2010 on the UK's five main terrestrial channels; runs of three or more episodes between 2006 and 2014 are counted as a season. There were 165 seasons in total.

Source: Barb, Oliver & Ohlbaum analysis.

2.3.5 Approaches to market segmentation

Given the risk associated with content creation, rights holders seek to spread the risk on the content they control. Their ability to do this depends on their ability to segment the market and charge different customers different prices for the same content. These price differentials reflect differences in consumer's preferences, the differing value consumers place on content, and the differing costs to serve customers in different markets. In addition to the time-based windowing of content, price differentiation occurs between national markets or regions—this allows creators to reflect the different cultural values placed on content across Europe and to meet local tastes (for example domestic, home produced content or sport), as well as differences in ability to pay.

Three approaches are currently used to segment the market; they are discussed in turn below.

Time- and experience-based windowing

Release windowing is a way of applying differential pricing to consumers willing to pay for the content at different times, in different formats or settings, and/or to distinguish between the value of ownership and access.

Film producers/rights owners have traditionally sought to recoup upfront investment by commercialising rights through a complex and segmented set of global release windows. Revenues from its theatrical and home entertainment sales (cinema admission and traditionally DVDs/Blu-rays) are followed by a primary broadcast window (premium pay-TV¹⁸), then subsequent TV sales over a number of years—this segmentation is key to making many films financially viable, since many become profitable long after their theatrical release. Each of these TV and home entertainment windows now has a video-on-demand (VOD)

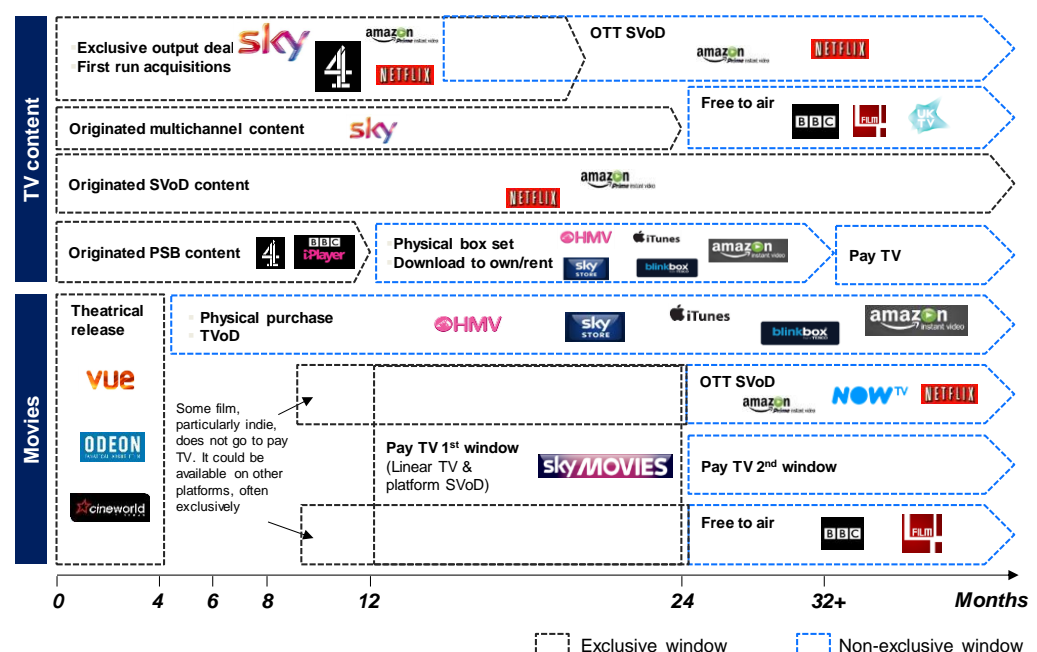
¹⁸ Airline sits between theatrical and pay-TV, but is not a broadcast window and is relatively small.

element—both through bundled closed platform exploitation (e.g. Sky, Liberty Global VOD services) and OTT services (streamed directly to viewers over the Internet)—including subscription video on demand (SVOD) models (e.g. Netflix and Amazon) and download-to-own (DTO) or rent (DTR) services (e.g. Apple iStore).

While not first broadcast in cinemas, the distribution of US TV programming in Europe follows much of the same structure as film in terms of broadcast windows and physical sales. The distribution in Europe differs slightly by territory, some territories mainly operate with studio deals (e.g. Germany) while others tend to deal more on a title by title basis (e.g. the UK). For European originated TV content the majority of revenue is generated within the primary broadcast window. This varies by genre: news, sport and entertainment are typically immediate, whereas fiction has a longer term revenue stream and some children's productions have a lifespan measured in decades. The first window increasingly has an associated VOD element, enabling broadcaster catch-up services.

Figure 2.9 demonstrates indicative windowing arrangements for the exploitation of rights for TV and film in the UK. These critically depend on the source of the commission, particularly in TV, where new players such as SVOD services are entering the market and originating their own content, which tends to spend its entire life on their platforms (though could be licenced to broadcasters after a period of exclusivity on the SVOD platform). For the main networks and channels, linear rights licences often run for three or four years in total, but content is only held back as exclusive from other outlets for 12–24 months. Of course, the specific arrangements vary on a case by case basis; in the 'non-exclusive' windows, content may have exclusivity within its own category but not against other types of platform. In film, for example, broadcasters in the FTA window tend to have exclusivity against other FTA broadcasters, but not necessarily against pay and SVOD platforms.

Figure 2.9 TV and film content windowing in the UK



Note: Timing is indicative, and will vary for specific titles. For PSB-originated TV content, the physical/DTO window can start much earlier.

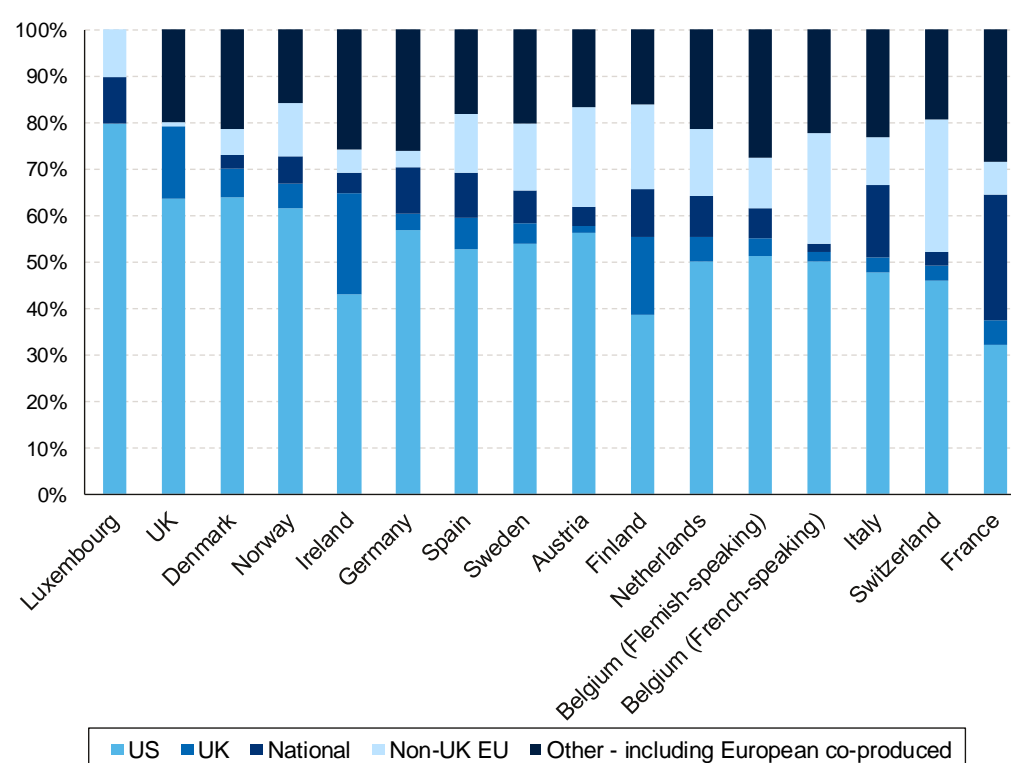
Source: Company websites, interviews, Oliver & Ohlbaum analysis.

Territoriality and exclusivity

Cultural tastes and local languages play an important part in the content sectors, particularly in the smaller European territories. Outside of format rights, where local versions can be produced successfully, most European content in the original language version travels predominantly in related geographical language and cultural clusters, e.g. German speaking areas (Germany, Austria, and part of Switzerland). English language content is the main exception; it tends to hold broader appeal and is popular in all territories.

Figure 2.10 shows that for film and TV series, UK and US content is popular across the majority of the main EU territories. While the share taken by national commissioning varies considerably, in all territories, content from the UK and US accounts for a larger share of hours than all other non-national hours combined.

Figure 2.10 Origin of film and TV series, soaps and animation content broadcast by TV channels in Europe (2011)



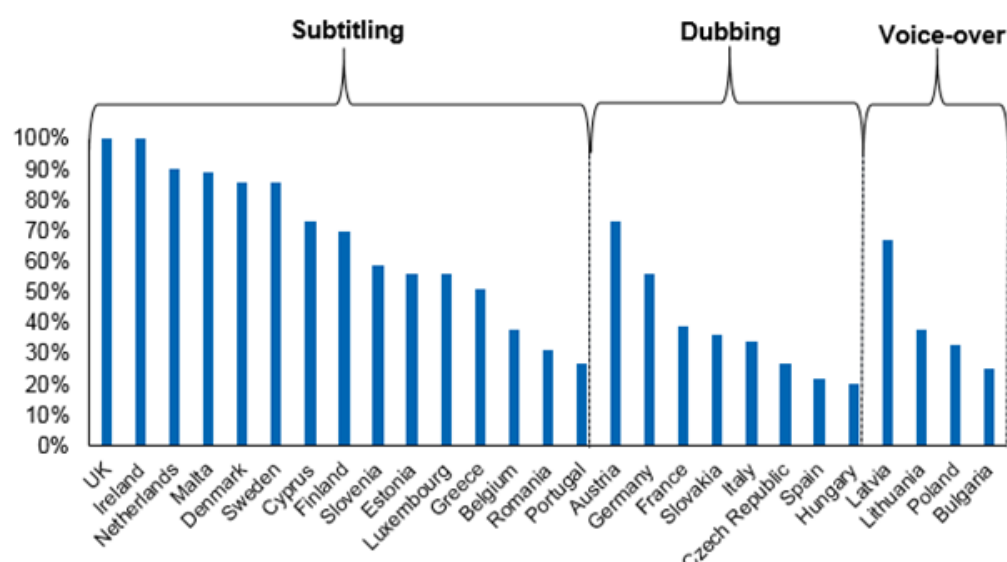
Note: content includes feature films, TV films, short films, series & soaps, and animation (except animation feature film) broadcast by TV channel in Europe. 'Other' includes co-productions.

Source: OBS Yearbook 2012.

Different countries and regions also have different preferences for the way that foreign content is presented. Figure 2.11 shows the proportion of English speakers by country, and the country's preference for subtitling, dubbing, or voice-over. The option a country uses to translate foreign content tends to relate to the history of the country in question, but the Figure shows that more than half of the counties opt for sub-titling over dubbing or voice-over. Subtitling is the most cost effective option and is the least invasive to the original content—it is often favoured in countries where a large proportion of the population speak English, and can therefore watch popular English language content using the original audio.

As such, the approach to translating foreign content is likely to impact on content popularity and viewer value in different countries, e.g. viewers in a country where subtitling is prevalent would be unlikely to have the same appreciation for dubbed content, since the original audio including the actors' voices are part of the viewing experience.

Figure 2.11 Proportion of English speakers and preferred language options



Source: European Commission (2011), 'Study on the use of subtitling'; and Eurobarometer (2013), 'Europeans and their languages'.

To reflect the varying preferences between markets, most film and TV content is licensed on a territory-by-territory basis in each exploitation window. Territorial licensing reflects the structure of the industry, in particular, the fact that the distribution and showcase of film and TV content is largely carried out by local operators, which seek to license content on a territory-by-territory basis. This, in turn, is a reflection of the fact that AV markets are territorial—consumers demand locally tailored offerings, and are most responsive to localised marketing and promotional campaigns. Technical infrastructure and the rules and regulations affecting content distribution, such as consumer and/or youth protection rules, are also organised on a national basis.

Segmentation into separate territories along national lines, or regions with common language, fits with the nature of demand, and enables rights holders to respond to variations in consumers' valuation of content. Domestic consumers may value content developed specifically for them more highly, compared with foreign consumers. Equally, consumers' disposable income varies—those in Northern European Member States tend to have more disposable income than those in Eastern Europe, for example. Market price differentiation seeks to ensure sufficient returns for pan-EU distributors and those selling rights into multiple markets; to achieve differing prices, availability of content must also be restricted by territorial agreements, supported by geographic filtering.

Within each territory, the approach can vary between TV and film content. TV programmes in Europe (both home-grown and imports) tend to be licensed on an exclusive basis across most of their important revenue outlets. Both FTA TV networks and pay-TV services enjoy exclusive rights to given release windows of exploitation for TV programmes over fairly extended periods within either specific territories, or occasionally within specific language regions (e.g. Germany,

Austria and German-speaking Switzerland are sometimes treated as one territory, as are the UK and the Republic of Ireland).

However, within TV content, approaches to exploitation and the order of the windows can vary. The first window can be pay-TV, SVOD, or FTA depending on the specific content in question. This first window tends to be on an exclusive basis, within a territory, across all media. Subsequent windows may also be exclusive, but this will often be limited to a particular media, e.g. a FTA service may have exclusivity against other FTA services, but not against SVOD. In home entertainment, TVOD content licensing tends to be done on a non-exclusive basis within each territory. DVD and Blu-ray distribution tends to be on an exclusive basis with a specified distributor in a given territory, but on a non-exclusive basis between retailers. Certain territorial limitations exist from a retail perspective due to the varying classification systems in individual markets assessing the suitability of under-age viewing for each market.¹⁹ This remains a notable cultural difference between Member States, and, like other matters that are closely intertwined with local tastes and preferences, it is not harmonised at European level.

In most windows, a similar approach is adopted for film as for TV programmes across Europe; the major difference is the initial theatrical release where deals are still done on a national territory-by-territory basis with cinema chains, but are rarely exclusive to a given chain of cinemas within a territory. Pay-TV or SVOD tends to be the first broadcast window, though this can vary depending on the relative strength of different media in a given market. Again DVD/Blu-ray and TVOD releases may be exclusive to a distributor but not to any given retailer, and in the case of DVD and Blu-ray, territorialisation across Europe is often limited to language or marketing rights, with retailers able to sell copies across national borders to consumers via passive sales. However, some territorial limitations do exist due to the individual classification systems as described above.

The effect of these practices is to increase the recoupment of investment through and the amount of revenues a particular film or TV production can be expected to generate over its lifetime. Without the ability to segment the market in this way, revenues would be lower, with greater uncertainty and thus content investors would be less willing to commit funds ahead of production. Since funding needs to be in place to finance production, these practices increase the probability that content gets funded in the first place (as explained in section 2.4 below).

Content bundling and connectivity/content bundling

As well as windowing, territorial licensing, and exclusivity, content providers and platform owners often bundle services into broader packages of content or together with levels of TV and digital connectivity. This allows even greater potential market segmentation, with those buying individual access to content such as live sport or recent film releases in a given territory often paying more than those buying them together, and those buying them together paying more than those who buy both alongside a package of other services and/or broadband connectivity.

Such bundling can be an efficient form of price differentiation, effectively charging users very different component prices for the same services within a bundle. Where user preference rankings within a territory vary considerably,

¹⁹ For example, age ratings for *Fifty Shades of Grey* varied significantly. The film received a 12 rating in France, a 15 in the Netherlands, while other countries, including the UK, rated it 18.

such bundling can significantly increase the total revenue available to content owners when compared with a set of standalone single prices for each type of content or service. The arrival of less bundled TV, film and sports services via stand-alone over the top (OTT) web services can, therefore, be less effective at contributing to a return on investment to content and content services even if it helps erode the distributors' share of that revenue.

Release windows continue to evolve

Release windowing by format and bundling of content are an effective and widely used means of recoupment of investment by charging different prices and maximising access to customers. Film prices are highest for cinema release or DVD/Blu-ray/DTO,²⁰ next highest for first pay-TV exploitation, and lowest for free-to-air and archive TV; this roughly matches the release order in each territory—you pay more the earlier you want to see the film. Similarly, product bundling facilitates price differentiation, whether with different tiers of transactional VOD, pay-TV service, or increasingly by combining TV, broadband and telephony services together.

However, both these methods of price differentiation are under increasing competitive pressure—increasing the importance of territorial differentiation. The windowing of films between cinema, home entertainment and first pay-TV has changed in recent years as IP-based content aggregators have emerged, offering stand-alone OTT web-based TV services (SVOD and TVOD). The availability of these new digital services is allowing pay-TV subscribers to effectively unbundle their cable and satellite pay-TV content in favour of a mix and match approach through web-based delivery. Being able to tailor offerings in response to different cultural demand remains a crucial means of earning a return on investment while meeting consumer demand.

2.4 The content production decision

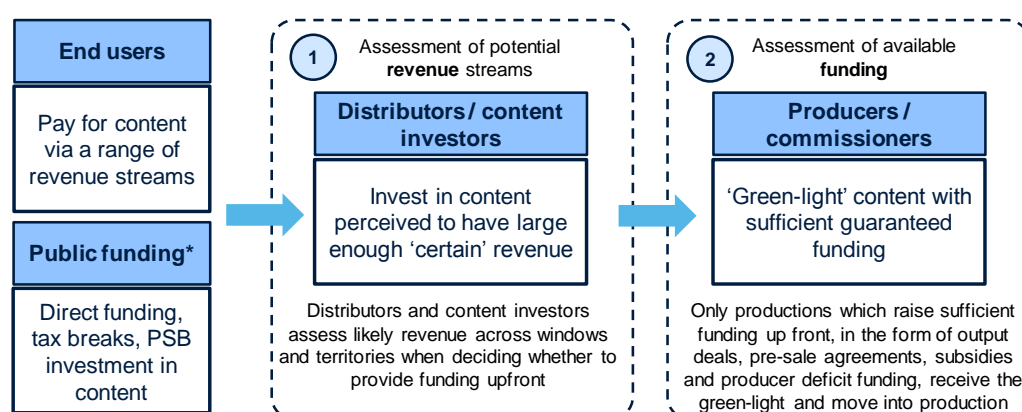
As we have seen, the ability to differentiate content prices is extremely important in allowing producers to address the riskiness of content creation. The resulting revenue expectations determine what content is produced in the first place, since they determine the availability of upfront funding, which is required for production to start.

Content creation is triggered through the commissioning process, via a mechanism called the green-lighting decision—a fairly standard process across the industry. The green-lighting decision is the point at which commissioners decide whether or not a production is deemed financially viable, and thus whether or not to go ahead. The mechanism therefore ultimately determines what content is available to viewers. Since the availability and quality of content affects the viewing decision, and this in turn determines the level of revenue entering the sector, the mechanics of the content production decision are crucial to the sector.

An overview of the interactions involved in the content production decision is set out in Figure 2.12, and explained in more detail below. In broad terms there are two stages to the decision, an assessment of likely revenues by content investors and a related assessment of available funding by the content producers—with the latter ultimately determining what content is produced.

²⁰ DTO (download to own) is a sub-set of TVOD along with download to rent, or DTR.

Figure 2.12 Overview of the green-lighting decision



Note: * Tax breaks can be available to both producers and distributors, though more commonly the former, so they tend to be most relevant to the assessment of available funding by producers.

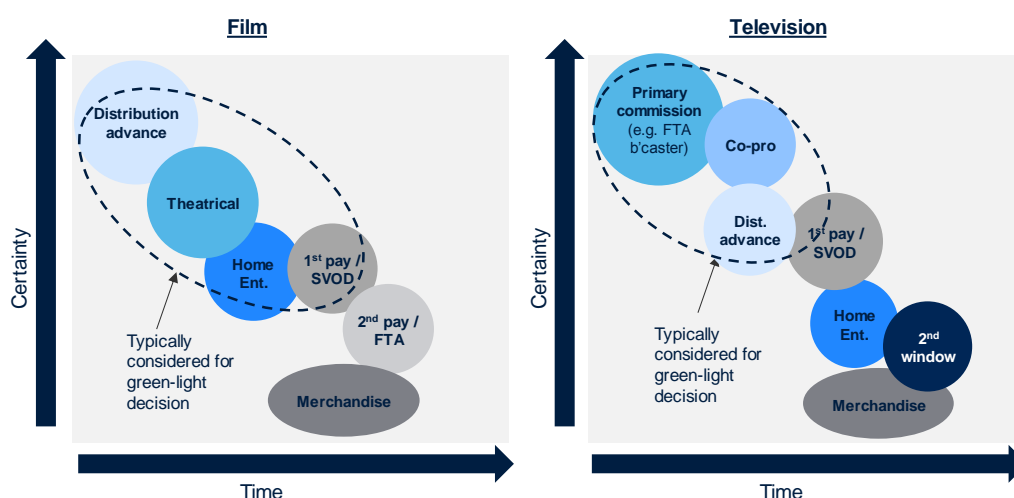
Source: O&O and Oxera analysis.

Distributors and other content investors assess whether to invest in the project by analysing the expected return on their investment over all windows and, where relevant, on a country by country basis. This will also reflect the relative profitability of different revenue streams; some, such as pay-TV are predominantly profit, while others, such as cinema and home entertainment, involve marketing and logistics costs. As we saw in section 2.3.4, content production is an inherently risky business so budgets tend to be set with a range of potential revenue outcomes.

Through our discussions with market participants we found that distributors and other content investors generally distinguish between revenue streams based on risk, with the least risky streams most important in influencing the green-lighting decision. As such, the ability of producers to secure funding through output deals and pre-sale agreements will often depend on content investors' assessment of the least risky revenue streams. In television, this is particularly important for new programmes (rather than returning series) and means that revenue streams which are most sensitive to the success of the programme are seen as a bonus and do not influence the decision to make the content. Figure 2.13 provides an illustration of which revenue streams may be considered at the green-lighting decision and which may not.²¹

²¹ The actual method used varies across the individual producers and studios: some incorporate all the expected revenue streams but the high-risk ones are appropriately weighted down; others do not consider them at all.

Figure 2.13 ‘Riskiness’ of revenue streams, an illustrative example



Note: Illustrative only, the revenue streams considered the ‘least risky’ vary by content type and market.

Source: Producer and distributor data and interviews, O&O and Oxera analysis.

We found that the ‘least risky’ revenue streams vary by content and producer type. For example, for independent productions, investors are more likely to take a territory by territory approach; basing investment decisions on their assessment of the revenue streams which are strongest in a given territory. For example, in the UK, though still highly uncertain, theatrical, DVD/TVOD, and SVOD, would likely be seen as the least risky revenue streams for film—while theatrical and free TV would offer more certainty in Spain. TV content in each of those countries would be different again, particularly in the UK where DVD revenue from TV content would be seen as less certain.

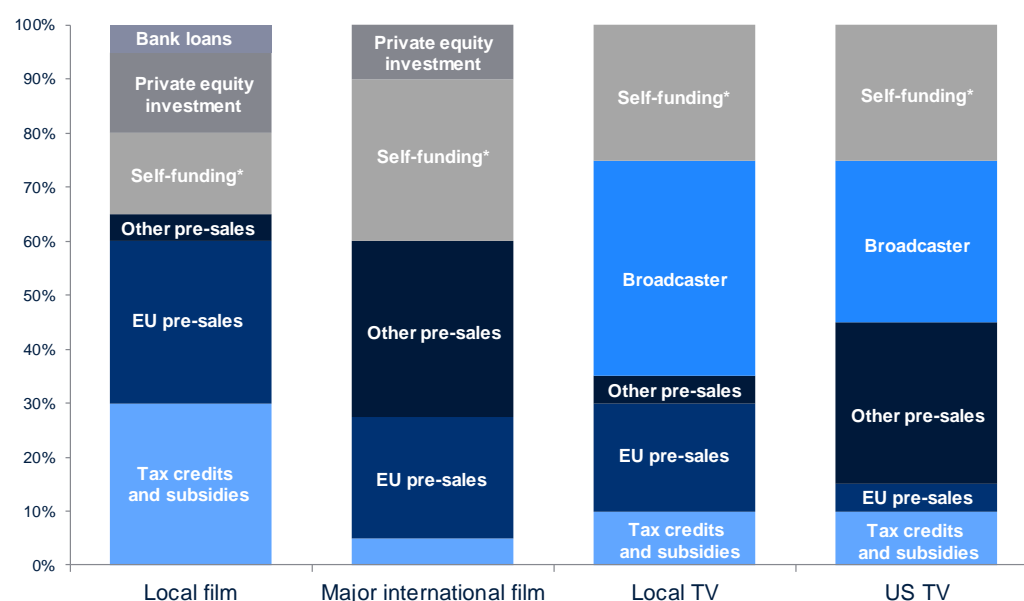
Content investors forecast the identified ‘low risk’ revenue streams along with the associated costs, to establish whether a production will deliver an acceptable margin. The green-lighting decision therefore distinguishes between the most certain revenue streams and the expected total lifetime revenue—with the former used to justify investment. It is worth noting that the assessment of expected revenue is most important to the distributors and content investors, along with vertically integrated studios, which require a particular expected level of return in order to commit funding. Producers, on the other hand, are likely to be more focused on raising the necessary funding to commence production; for local and more niche films this is particularly true, since a larger proportion of funding is likely to come from other sources such as government subsidy or tax breaks.

It is also important to note that most independent film deals tend to be ‘all rights’ deals, where distributors in each territory acquire the rights to all windows (theatrical, home video, TVOD, SVOD, FTA and Pay-TV, etc.). Revenue from pay-TV and SVOD is most valuable given the low costs (for the distributor) associated with exploiting it, but it is vital in the distributor’s financial model and investment recoupment to offset the high exploitation costs of the theatrical release. Advances/minimum guarantees of any size are only justifiable if all rights are acquired on an exclusive basis.

Once the expected revenues are appraised by content investors and the content has been approved for production, the required level of funding must be in place

before production can start. Figure 2.15 demonstrates how the typical mix of funding differs between different content types.²²

Figure 2.14 The funding mix, an illustrative example



Note: The funding mix can vary significantly within a given content type, this chart is therefore illustrative only. In particular, non-US films aimed at an international audience may have a funding mix most similar to that categorised in this chart as 'local film'. * Can include co-production and co-financing arrangements, as well as output deals (where they exist).

Source: Producer and distributor data, BSAC, BVA, O&O and Oxera analysis.

The source of funding also has a bearing on the availability of investment at the time of the commission. Investors from countries such as the UK and France have greater access to additional finance through tax credits, and grants. These are typically only available in certain genres and for content meeting particular criteria. The availability of such funding at the outset may therefore also have a bearing on decisions around the types of content to commission.

Ultimately, since future performance is unknown, the level of content investment is highly sensitive to the outlook of the investing parties and their response to risk. An assessment of potential future revenue determines the level of funding available, so expectations of future sector revenues more broadly are an important driver of overall content investment. For commissioning broadcasters, this could mean exposure to the response of both producers and distributors to uncertainty caused by changes in legislation. Producers may be less willing to co-produce or deficit-finance content if they are unsure about the appetite of distributors. Distributors, in turn, may be reluctant to invest in content through production advances and pre-sales if they are uncertain about the demand for programmes from channels and platform owners as well as their own ability to monetise content through TVOD. In an industry that is already exposed to a high degree of risk, increased uncertainty due to legislative change would likely exacerbate and accelerate the negative impacts on content investment.

²² The actual mix of funding varies significantly within content types. Therefore, while the figure is informed by financial information from a range of contributors, it is illustrative only.

3 Impacts assuming no industry reaction

In this section we analyse the effects of measures to facilitate cross-border access to AV content in a ‘no response’ scenario where today’s wholesale prices and licensing arrangements remain unchanged, but the legislative proposals result in consumers adjusting their consumption patterns (to take advantage of cross-border consumption opportunities) and buyers of content adjust their valuation rights to account for the loss of territorial exclusivity.

This scenario allows us to establish the potential scope and scale of the impact of the changes in legislation on overall industry revenues, output and welfare if producers do not (or are unable to) adjust their licensing terms and conditions. In this regard, the ‘no response’ scenario acts as a benchmark for how significant the short-term frictions and uncertainties could be.

In this scenario consumers are free to purchase services available in other countries, but producers do not fundamentally change the way content is sold or distributed.²³ This helps to establish the incentives of consumers, and consequently broadcasters, platforms, distributors and producers, in a world where cross-border consumption would not be restricted. We demonstrate the likely mechanisms which bring about the change, and provide an indication of the overall scale of the impact on industry revenues.

This impact on industry revenues would, in turn, translate into changes in content creation and availability, as well as consumer welfare. Throughout this section, we look separately at the impact on different types of content. The first key distinction is between film and TV content. The second is, broadly speaking, between international content (produced outside Europe, or produced within Europe but travelling across multiple Member States) and local content (national content which does not currently get sold abroad).²⁴ This approach is driven by a number of factors, in particular the differing modes of consumption, as well as different value chains, funding structures, and mechanics of the green-lighting decisions.

We explain the different mechanics with reference not to individual countries, but instead to country groups: the ‘larger countries’ are the more populous and/or higher-income EU Member States, while the ‘smaller countries’ have less viewers and/or lower disposable incomes. This split helps to effectively showcase the different directions in which consumption would travel (see section 3.2 for more detailed description).

We demonstrate that enabling cross-border access could result in a significant reduction in both production and availability of content in the medium to long term—driven by reduced producer revenues. Platforms and broadcasters would suffer from their content being devalued due to it no longer being exclusive, thereby eroding industry revenues. Given these significant effects on industry revenues and returns, industry participants—and in particular content producers—may try to respond. We explore possible industry responses in detail in section 4.

²³ This scenario does allow for changes in the way retailers and platforms offer the content they have acquired. For example, we allow platforms to set new optimal prices for retail pay-TV services in response to cross-border access. Similarly, an implicit assumption in this scenario is that it is also possible for existing platforms to set up OTT offers that could be accessed more easily by consumers on a cross-border basis.

²⁴ This categorisation helps us demonstrate the separate effects on films and TV shows that travel internationally, and those that do not. Selling abroad is considered as selling across other EU Member States.

However, it is unclear whether or how the industry will adapt, and how long it will take. The industry will be exposed to the full extent of adverse impacts and magnitude of losses identified in the 'no response' scenario for as long as it takes to fully adapt to these changes.

3.1 Consumption changes

An important factor explaining the likely effects of legislative proposals to facilitate cross-border access is understanding how consumers might change their consumption patterns. For a consumer to switch away from their current provider they must prefer another service, for instance due to a different price, quality, availability, timing, language, or a mixture of all of these factors.

When considering the same content across markets, consumers are driven to the offering that best satisfies their preferences with respect to a range of factors. For example, for a given price, consumers may be compelled to switch services if it means they will be able to access content sooner. Similarly, for a given release window, consumers may be compelled to switch services if they can access the content at a lower price. In both cases it is necessary for the consumers to be able to understand the language in which the content is shown, or be provided with a suitable localisation option (e.g. dubbing or subtitles).

The European Commission has cited some evidence that in the absence of cross-border restrictions a significant number of consumers could indeed choose to take up the offering of international providers. For instance, it cites a finding of the Eurobarometer survey that 29% of European Internet users who are not currently accessing cross-border online content would be interested in watching AV content through online services that are meant for users in other EU countries. The European Commission has also noted that the percentage was higher in some countries.²⁵

Some aspects of the Eurobarometer report can be viewed as suggesting more limited consumer interest in accessing content cross-border, and there are other reports that could lead to different conclusions—e.g. that demand for cross-border access in Europe would be largely limited to migrant populations.²⁶ The large differences in the likely uptake of cross-border services across the EU are not surprising given the scale of differences between content pricing, availability and timing across Europe. One example of the heterogeneity between different countries is the differences in the windowing systems within the EEA. For example, Estonia has a total of two windows (i.e. film content is released onto all formats after a cinematic exclusivity period), while France has seven windows.²⁷

In terms of practicality, availability of access via an OTT platform would likely be important in facilitating effective cross-border consumption. At present, local film SVOD and TVOD services are typically provided by either Internet or satellite/cable set-top boxes. TV channels are also available on free terrestrial or digital networks, and typically offer online catch-up services. While access to foreign content could be achieved through both international set top boxes and

²⁵ Flash Eurobarometer (2015), 'Cross-border access to online content', August, p. 107.

²⁶ Plum (2012), 'The economic potential of cross-border pay-to-view and listen audiovisual media services'.

²⁷ Based on European Commission (2014), 'Analysis of the Legal Rules for Exploitation Windows and Commercial Practices in EU Member States and of the Importance of Exploitation Windows for New Business Practices'.

online OTT services, it is likely that OTT platforms would offer the most appeal to potential switchers.²⁸

Below we explore how consumption of individual types of content could be affected in this scenario.²⁹

3.1.1 Migrating from a local to a foreign premium subscription film service (SVOD)

Most pay-TV platforms in the EU offer consumers the option to subscribe to a premium film channel on top of their basic subscription package. Such premium channels are typically the first to screen new films the moment they enter the TV distribution window.³⁰ These services increasingly include access to content over the Internet, which would help to facilitate cross-border switching. SVOD services also tend to offer access to film content, often consisting of titles in the second pay window. These types of premium film services are available across Europe but there is currently significant variation between them in terms of both the price and timing of content availability.

There are significant price differentials between premium pay-TV film services, even in cases where the underlying content differences are relatively small. In the case of premium pay-TV film packages, for example, the price in France is around 70% of the UK price for access to similar content.³¹ Similar variations exist across Europe in SVOD retail prices.

Figure 3.1 shows the average monthly retail SVOD price per subscriber across a range of European countries.

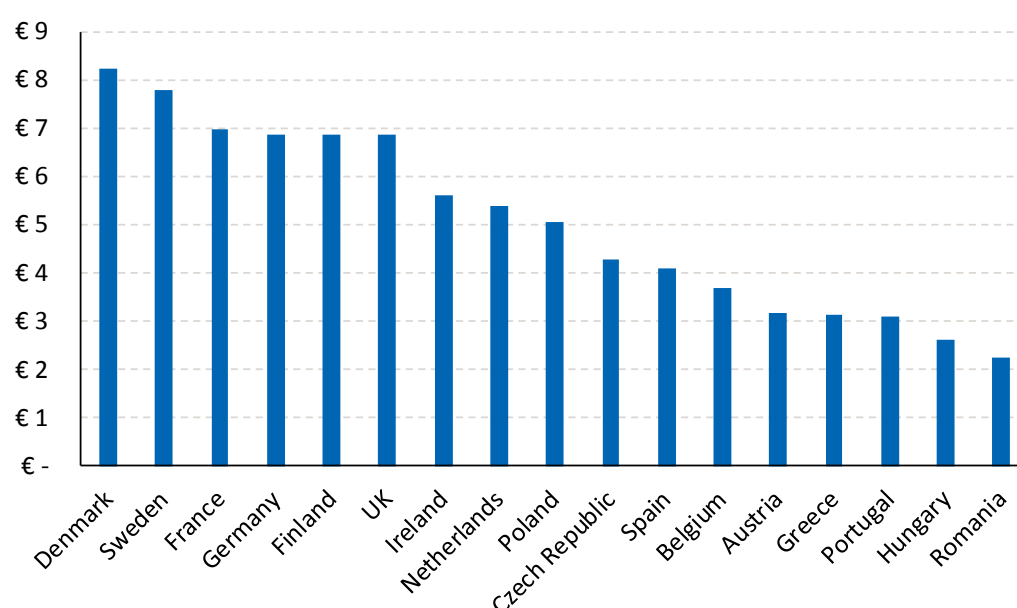
²⁸ As explained above, an implicit assumption in this scenario is that it would also be possible for existing platforms to set up OTT variants of their services that could be accessed more easily by consumers on a cross-border basis.

²⁹ As an aside, for both film and TV content, there is a group of consumers who already access content targeted at other countries, using technology to get around geo-blocking restrictions. These individuals would become legitimate users.

³⁰ The breadth of content in the SVOD windows varies significantly by country.

³¹ OBS (2012), 'OBS Yearbook 2012'. The data spans all services available and as such is not fully comparable, but it demonstrates the scale of differences in pricing of SVOD services between countries.

Figure 3.1 Average SVOD retail prices (€ excl. VAT, 2015)



Source: OVUM, Oliver & Ohlbaum analysis.

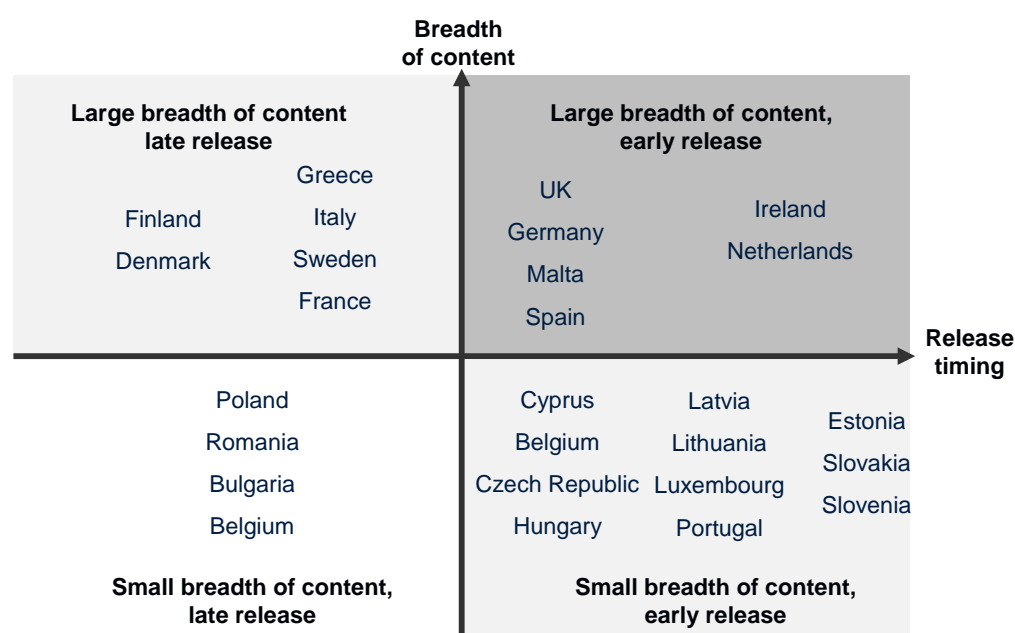
SVOD services are most expensive in Scandinavia, France, the UK, and Germany, with the available services in Denmark costing more than three and half times the amount paid by subscribers to Romanian services.³²

Figure 3.2 below groups the various European countries depending on the quality of the premium pay-TV film offering, and using the breadth of content and timing of release on the service as the key dimensions.³³ Moves towards the top right corner (large library available early) would constitute a quality improvement. For instance Denmark offers a broader service, while UK would have both a broader and a more timely service, than relatively new Member States, Romania or Bulgaria.

³² There are likely to be non-price differences in service across the individual countries.

³³ This is based on a sample of data from a few Sponsors, and may not be representative of the wider industry trends.

Figure 3.2 Comparison of quality of SVOD services across Europe



Note: Derived from producer data on country-specific release titles and dates.

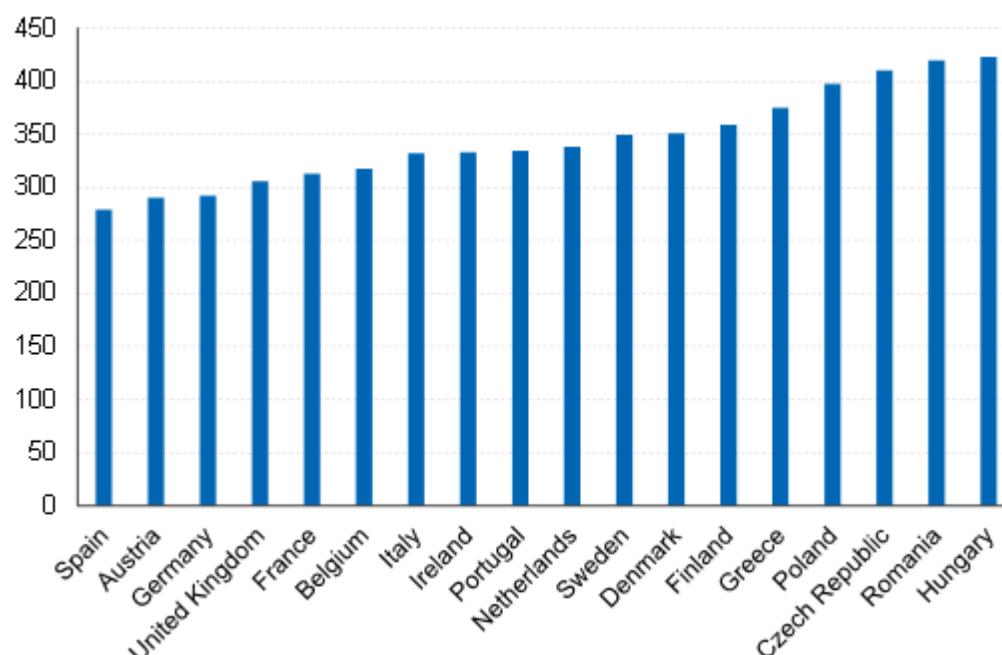
Source: Sponsors' data on content release dates across countries, Oxera analysis.

The timing and duration of the availability of pay-TV window content also varies between EU countries, so it is likely that some consumers would take advantage of more immediate content availability elsewhere. This switching could involve customers moving their current pay subscriptions for earlier access via an international subscription service. While many countries have similar timings, the length of delay between the beginning of the cinematic window and the first availability on SVOD services can vary from approximately four months in Italy to up to eighteen months in Finland for individual titles—these differences provide an incentive for some consumers to switch provider.³⁴

We analysed release dates for a sample of 250 films released between 2011 and 2014 to demonstrate the variation in their availability on pay-TV services between European countries. Our sample included a wide variety of films of differing budgets and popularity, making up the entire catalogue of several sponsors. While not necessarily representative of all film output, Figure 3.3 shows that the average delay from theatrical release to release on pay-TV or SVOD services can vary by up to 144 days, or 52%, between individual European countries.

³⁴ IVF (2015), 'Survey of feature film release trends in European Member States'.

Figure 3.3 Average delay between theatrical and pay-TV or SVOD release, by EU country (days)



Note: Based on representative sample of 250 films first released between 2011 and 2014, supplied by the Sponsors. The data may differ from the official lengths of the individual windows due to averaging.

Source: Producer and distributor data, O&O and Oxera analysis.

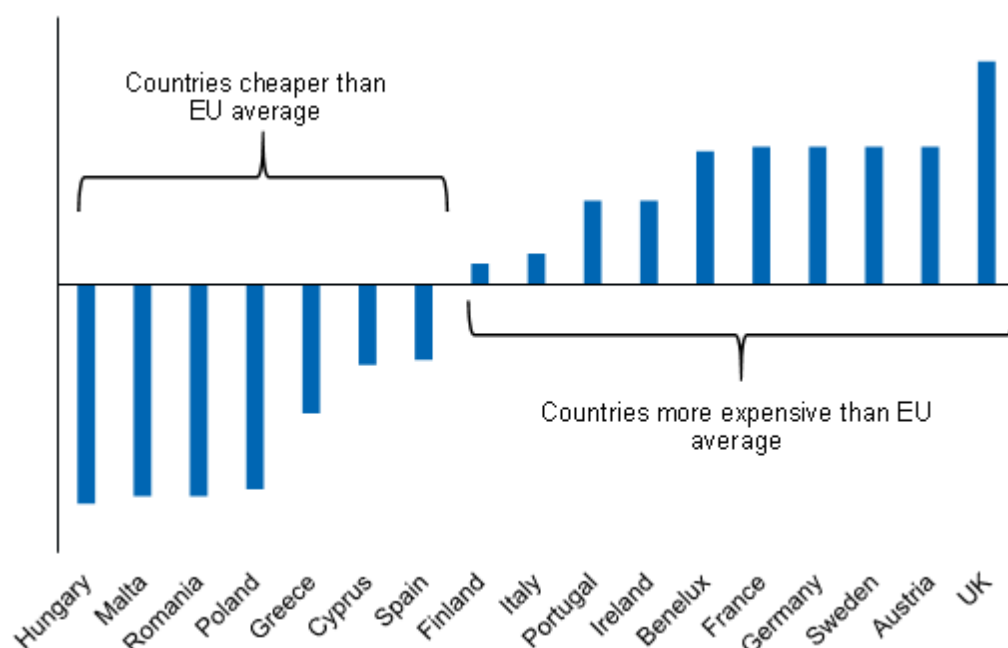
This level of differences in release times on the pay-TV window across Europe could incentivise switching to cross-border pay services for earlier access. As well as this international switching within windows, the timing differences could lead to international switching to access content in other windows.

3.1.2 Switching of TVOD consumption

Similarly to pay-TV film packages, TVOD offerings often have similar content ranges and timing yet at differing prices. Consumers are likely to migrate to another TVOD service if it offers the same piece of content at a lower price or at an earlier date—in fact they could be more likely to do so for one-off consumption occasions (such as TVOD purchases) than for subscription-based services (i.e. SVOD or subscription pay-TV packages).

Figure 3.4 shows the extent of divergence in TVOD prices across Europe, based on wholesale price data. The variation is significant: users in high-income countries (e.g. the UK) are likely to pay significantly more for the services than consumers in low-income countries (e.g. Hungary).

Figure 3.4 Approximate differences in local TVOD prices versus the European average



Note: We used wholesale data to approximate the level of retail TVOD price differentials.

Source: Producer and distributor data, O&O and Oxera analysis.

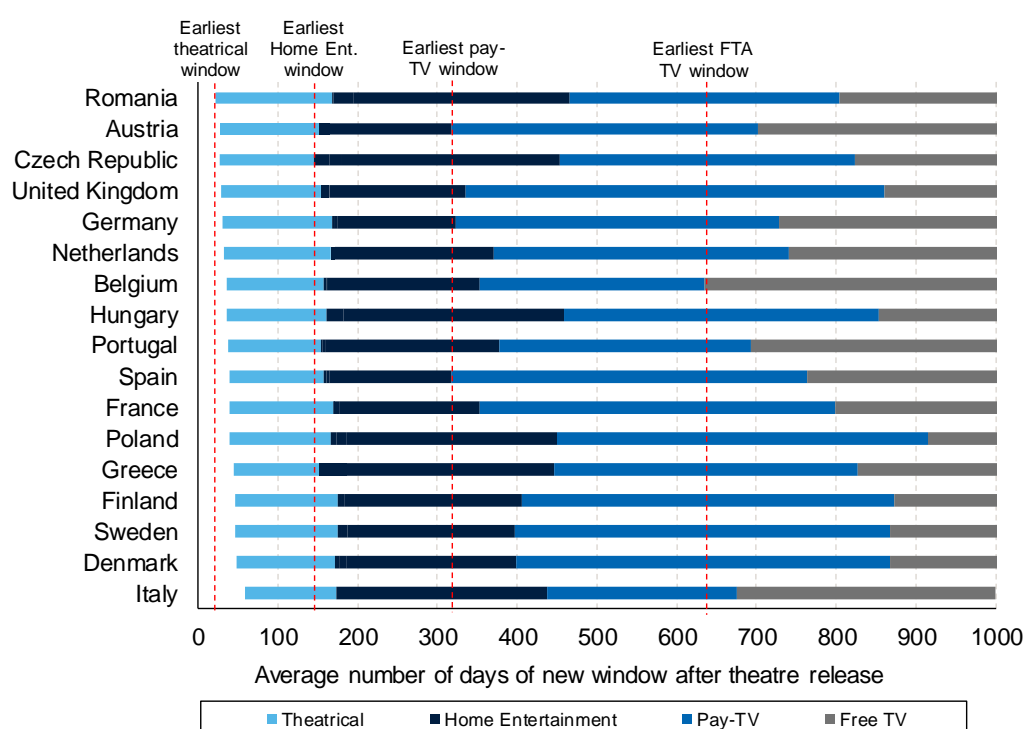
3.1.3 Switching consumption across windows

Earlier access to pay-TV in another country would not only be attractive to pay-TV subscribers; it could also result in some consumers substituting home entertainment viewing in their own country for pay-TV viewing in another. The same logic applies across all windows: if content is available at a given time in a lower cost window in another country, some consumers are likely to switch their approach to consumption. The theatrical window could be cannibalised by the home entertainment window, the home entertainment window by the pay-TV window, and the pay-TV window by the free window.

Figure 3.5 provides a more complete view of the differences in windowing between countries. The Figure takes into account the average delay for the theatrical release, compared with the release in the first European territory, and then the average time from theatrical release to the start of each window. There is significant variation between both the length of release windows across Europe and the timing of the initial theatrical release, with Belgium, France, and Austria tending to receive the sample titles in theatres earlier than other territories.

Opportunities exist in all windows for some consumers to switch between countries to access content in a lower cost window, though the biggest opportunities are between home entertainment and pay-TV, and pay and free TV. In general the difference between first availability on home entertainment can be up to a month. As we saw in Figure 3.3, the timing of the start of the pay-TV window is much more varied, and the same is true of free-TV, with some countries waiting almost a year longer than others before content is available for free (e.g. Poland).

Figure 3.5 Average time between windows, by EU country (days)



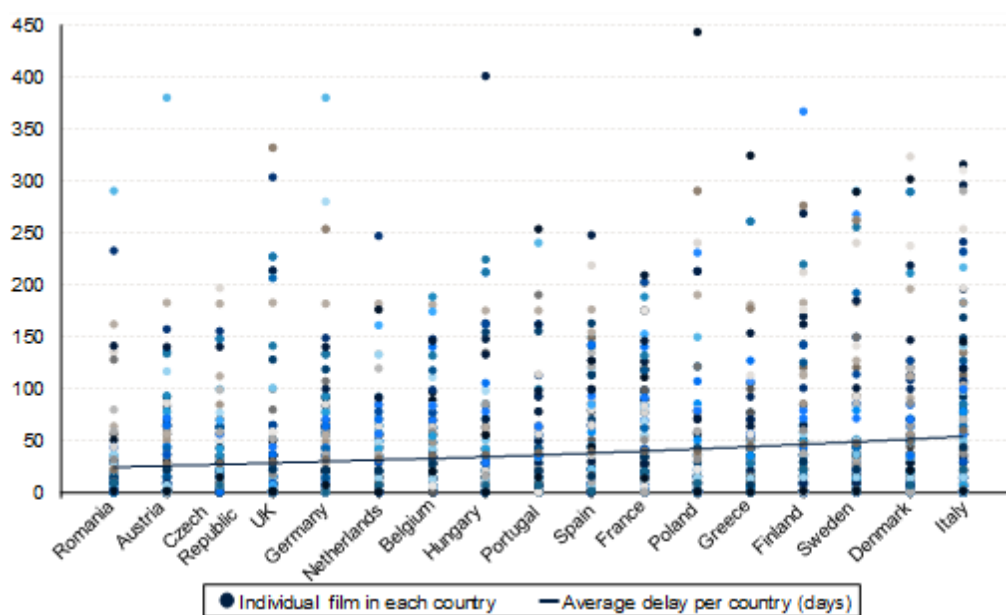
Note: Based on a sample of 250 films first released between 2011 and 2014. The home entertainment window includes physical, EST and TVOD—these windows tend to start almost simultaneously.

Source: Producer and distributor data across a wide range of international and local content, O&O and Oxera analysis.

One would expect these timing differences to lead to a transfer of viewing towards lower cost windows in other countries. For example, cinema viewers across Europe might opt to use TVOD services in Czech Republic or Greece, to access content at home rather than visit the cinema. Similarly, consumers might be attracted to subscription services in Austria, Germany and Spain to access content during their own home entertainment windows, or to Belgian and Italian free to air services during the pay windows in other countries.

The extent to which the same film could be available in different windows across Europe may be limited for the major international productions, but is likely to be fairly common for the smaller scale films. Individual titles are often released months apart across Europe, building first on national success—as shown for a sample of films on Figure 3.6. The films shown here were international productions. With cross-border consumption allowed, in many cases consumers would be able to switch from their domestic theatrical window and consume in the Home Entertainment/TVOD/SVOD/pay-TV windows abroad.

Figure 3.6 Average delay in theatrical release of films against first release in the EU, by country (days)



Note: Each data point shows a length of delay, in days, of release of a particular film against the first release date in the EU. Based on a sample of 250 films first released between 2011 and 2014, provided by the Sponsors.

Source: Producer and distributor data across a wide range of international and local content, O&O and Oxera analysis.

3.1.4 Overall direction of consumer switching for film content

If allowed to choose film packages freely, some consumers would be likely to switch their subscription away from a local to a foreign premium film service.

Switching can occur in one of two directions.

- Some consumers will switch in order to take advantage of the lower foreign prices—for example, consumers in ‘high-price’ countries, such as UK, Nordics, France or Germany, purchasing subscription services from the ‘low-price’ countries such as Malta, or Eastern European countries. In this case, consumers would experience a reduction in the quality-adjusted price they pay for content.³⁵
- Other consumers may switch in order to ‘up-trade’ their subscription services, towards more expensive but higher-quality offerings—for example, some consumers from ‘low-price’ countries switching towards the AV services in ‘higher-price’ territories in pursuit of more complete or more timely film packages that are not currently provided in their home country. On balance, one would expect this movement to be significantly smaller than the outflow of customers from high-price countries—if there were sufficient customers demanding the higher-quality service in the low-price countries at present, we would expect the market to already provide such a service.

An additional effect that could be observed is additional market creation in the current high-price countries. In other words, potential consumers who do not subscribe at current prices in those countries could now start consuming film packages provided in the low-price countries. This effect could be material if

³⁵ The benefit in terms of short-run consumer welfare would not be equal to the full amount of the price differential since the new service might be of a different quality to that available in the home country.

there was sufficiently high demand for the low-quality offering—however, had this been the case, platforms would have been likely to offer such a service already today (therefore, to the extent that market expansion is observed, we would expect its magnitude to be relatively modest).

One potential obstacle to cross-border migration would be language differences between countries. However, as discussed in section 2.4, certain languages are spoken across many countries—English being the most prominent example. Furthermore, subtitling is the means of localising content in many countries across Europe. Thus many non-English speaking countries have content available in English with local subtitles (or the provider offers multiple language options—e.g. Sky Italia). Subscribing to such a service, in particular if the subtitles can be switched off, would present consumers with an option of similar or identical quality to their current package, and potentially at a significantly reduced price.

3.1.5 Consumer switching for FTA content

As significant commissioners of internationally popular content, programming from FTA broadcasters in the more populous/higher-income European countries is likely to appeal to those in the smaller/lower-income European countries. The TV content which tends to have the most international appeal is drama/fiction, specialist factual, and children's; these are also important genres in determining consumers' platform decision. Allowing cross-border access is therefore likely to lead to changes in how such content is consumed.

The major difference between film and TV content is that the majority of TV content is consumed via FTA channels, either via a PSB or commercial ad-funded broadcasters (except the first run content that is shown on pay services first). Such content is typically screened in the home country and then broadcast in other countries by the local broadcasters, either simultaneously (via day and date-type agreements), or with some delay. Depending on the specific content, it could be available abroad on either free or pay-TV channels. As a result, the migration of TV content viewing is likely to travel in the opposite direction to films. Access to most originated TV content is free in the larger territories, so the legislative changes would potentially grant smaller territories earlier (and free) access.

Switching decisions would depend on individuals' preferences but, broadly speaking, viewers in smaller markets would be trading-off access to international FTA content via catch-up or OTT services against the same content available in their own country on either FTA or pay-TV. Drivers of the decision to switch to international FTA platforms are likely to be:

- **from local FTA:** switch provided content is available sooner in a suitable language;
- **from local Pay-TV:** switch provided that content is available sooner in a suitable language, and drop local pay-TV altogether (to realise cost saving) if a critical mass of programming is available from international FTA services.

In case of switching to international pay-TV platforms, the price difference between local and international platforms provides an added complication. We consider it unlikely, however, that there would be a significant degree of pay-to-pay or free-to-pay platform switching driven by TV content. The most likely outcome is that consumers would access specific programs abroad on FTA platforms, while retaining the majority of their local TV consumption (either or both pay and FTA).

3.2 Platforms and broadcasters

The impact of changing consumption on platforms and broadcasters will vary depending on the market they serve and their relative position within that market. The changes in consumption described above would translate into changes in subscription and advertising revenues for platforms and broadcasters. This would lead to a change in willingness and ability to invest in content, both acquired and originated.

The impact on platforms and broadcasters in any given country depends on whether that country experiences an outflow or inflow of viewing—i.e. whether it loses or gains viewers of a particular service. Throughout, we refer to the ‘larger’ and ‘smaller’ countries as follows.

- **Larger countries:**³⁶ territories that would be likely to experience a loss of pay-TV platform revenues, primarily through a reduction in pay-TV subscriptions. These are the territories where retail prices of such services are generally high and from which consumers would be most likely to switch.

As discussed above, in the case of FTA television, these countries are likely to see a net inflow of viewing, since they tend to be major originators and exporters of TV content (e.g. the UK). It is unlikely, however, that they would be able to monetise the inflow of foreign consumers effectively through advertising. The overall effect across platforms in this country grouping would therefore be a net outflow of revenue.

- **Smaller countries:** territories offering relatively low retail prices for paid television services. They would experience a net increase in viewership and associated revenue for subscription content as consumers from other countries switch pay-TV services. They would also experience a net loss of viewing of FTA content and thus some loss of revenue. The net effect would likely be positive (in the short run).

Below we discuss the likely impact on platforms and broadcasters in both groups of countries for both pay-TV film subscription and FTA TV content. These impacts are first discussed from the perspective of the larger countries, since it is these countries which are the main originators of content with pan-EU appeal.

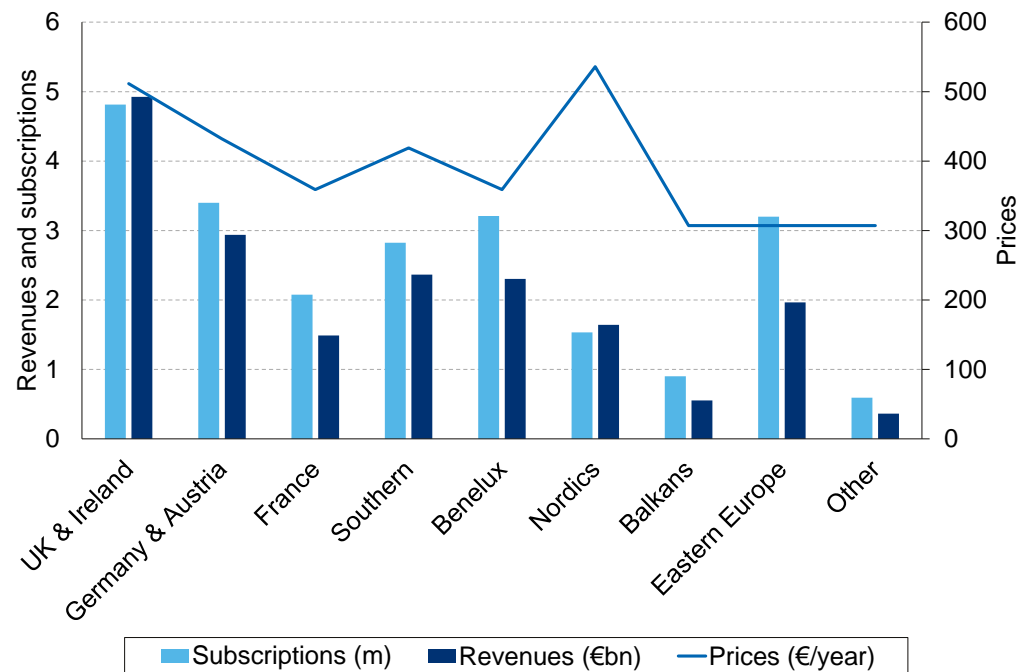
3.2.1 Erosion of subscriber base depresses revenues

As explained in section 2, premium film channels and pay-TV platforms tend to be funded largely by subscription revenues. Any reductions in subscriber base, as consumers switch to international services, would directly affect the revenues that such platforms and broadcasters generate.³⁷ The financial impact on platforms will depend on the actual prices and the resulting level of switching. The current revenues from premium pay-TV film channel subscriptions are estimated to be around €19bn across Europe, as shown in Figure 3.7 below.

³⁶ The terms chosen are a generalisation: ‘larger’ grouping stands for a mixture of large population, as well as high willingness to pay and high income. In addition to the UK, France and Germany, this group would span the Nordics, Italy and Spain.

³⁷ Premium film channels can be owned by platforms (e.g. in the case of Sky Movies, Netflix) or can be stand-alone identities (e.g. HBO); and similarly for pay-TV channels. Our description is generic and applies to all types.

Figure 3.7 Annual premium pay-TV film channel revenues, subscriptions and monthly prices (€)



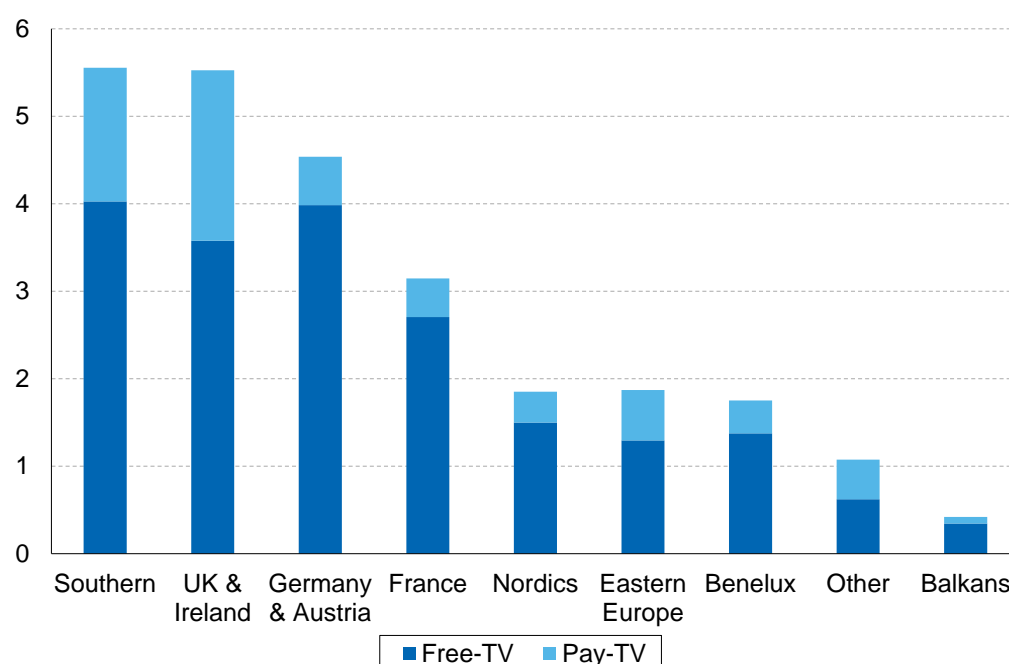
Note: Total revenues span both subscription and advertising revenues. Details of country groupings and assumptions used are in the Appendix.

Source: Individual companies' accounts, regulator websites, public data sources, O&O and Oxera analysis.

3.2.2 Erosion of viewership lowers advertising revenues

Advertising constitutes an important source of platform revenue across Europe. Figure 3.8 below shows the current estimated advertising revenues for pay-TV (€6bn) and FTA channels (€20bn) across Europe.

Figure 3.8 Advertising revenues (€bn)



Source: Individual companies' accounts, regulator websites, public data sources, O&O and Oxera analysis.

Basic pay-TV and FTA channels typically generate advertising revenue by running adverts between pieces of content. The level of advertising revenue generated tends to be directly related to the level of viewing, therefore, a reduction in viewership would lead to a reduction in the broadcasters' or platforms' advertising revenue. This would be the case of basic SVOD services in the larger counties, which would see viewers shift to international alternatives.

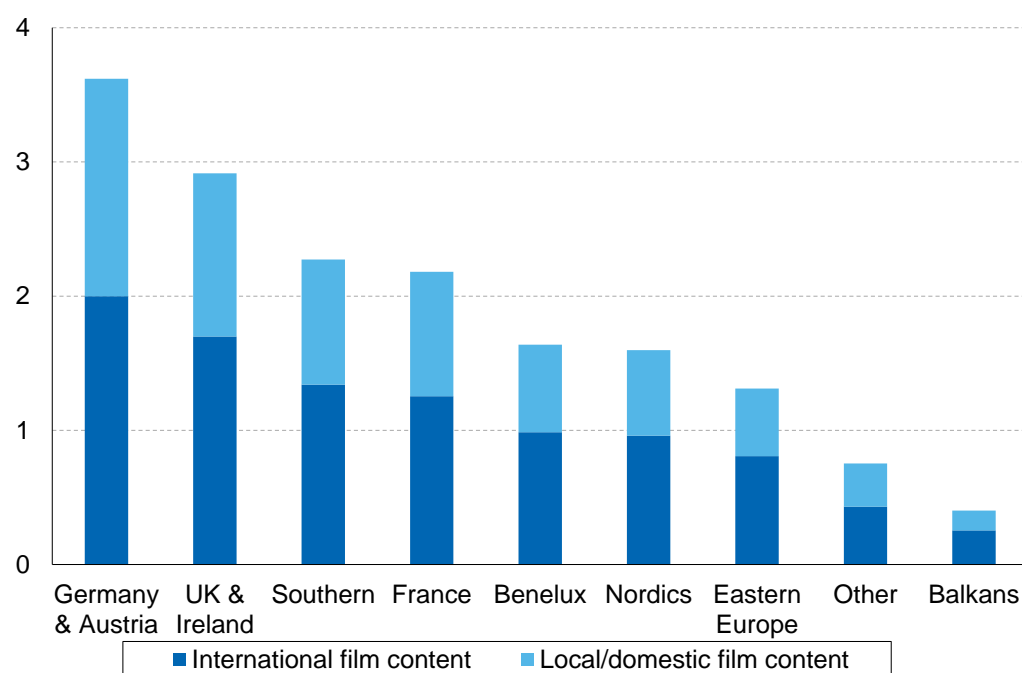
In the case of FTA television, the impact is slightly more complicated. Viewership of the domestic FTA service would likely increase in the larger countries as foreign consumers access free content sooner. The difficulty for the commissioning broadcasters producing popular FTA content is that this switching would ultimately reduce the value of their content rights in foreign territories. Reduced ability to sell content internationally is unlikely to be offset by increased advertising from foreign consumers accessing the domestically targeted content. In general, advertising strategies and budgets tend to be set at a national level (even for multi-national companies), and focused on the easiest-to-reach consumers. It is harder to target advertising at multi-country viewers on the conventional platforms (digital, cable, satellite), which is where the current marketing spend is concentrated. Even though the foreign viewers are assumed to access the content largely OTT, which should give greater flexibility of targeted advertising, it is likely to remain a costly and potentially unpopular advertising channel. Due to all these reasons, there is likely to be a significant net outflow of advertising revenues for FTA broadcasters across Europe.

The overall effect across pay-TV and FTA would be a fall in industry-wide advertising revenue, due to erosion of advertising spend in countries that see an outflow of viewership (the smaller countries) not being fully compensated in increased advertising spend in the inflow (larger) countries.

3.2.3 Lower actual and/or expected revenues translate into lower ability and willingness to pay for content

Figure 3.9 and Figure 3.10 demonstrate the estimated content spend of pay-TV and FTA platforms across Europe—which totals €17bn for films and €13bn for TV content.

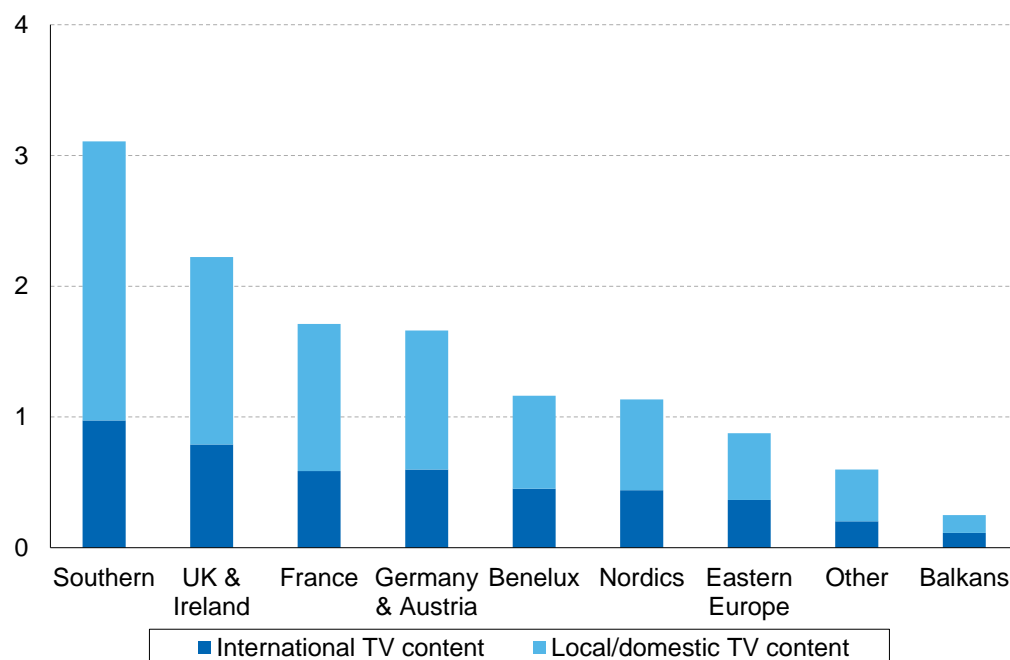
Figure 3.9 Estimated spending on film content by domestic pay-TV and FTA platforms (€bn, 2013)



Note: Includes both originations and acquisitions.

Source: Individual companies' accounts, regulator websites, public data sources, O&O and Oxera analysis.

Figure 3.10 Estimated spending on TV content by domestic pay-TV and FTA platforms (€bn, 2013)



Note: Includes both originations and acquisitions.

Source: Individual companies' accounts, regulator websites, public data sources, O&O and Oxera analysis.

Since platforms and broadcasters would suffer from reduced revenues, they would likely be unable to maintain the current level of content spending. Another important and linked dynamic, explained in section 2, is that a large portion of the broadcasters' ability to price pay-TV content, or attract advertising revenues, is linked with the content's exclusivity. Introduction of cross-border access measures effectively eliminates this exclusivity, and thus weakens the ability for a broadcaster to compete, or its confidence over the ability to retain or attract new viewers. Even before platforms and broadcasters experience any change in their subscriber numbers or viewership, the lack of exclusivity means that they would be expected to pay significantly less to acquire (non-exclusive) content.

There are several mechanisms in which the lower willingness to invest in content would manifest itself.

- **Lower level of output deals.** In the first instance, lower actual or expected revenues would translate into a lower ability or willingness to continue paying the existing fixed and per subscriber fees implied by current output deals.
- **Shorter commitment of output deals.** Current output deals span multiple years of typically exclusive content access on a territorial basis. Given the increased uncertainty over the broadcaster's ability to monetise the content in its respective window, the length of time commitment that the broadcaster will accept is likely to shorten.
- **Lower acquisition spending.** Broadcasters would attach less value to the exclusivity of content (acquired within and outside of output deals), which would translate into lower willingness to pay for such content.
- **Increased willingness to re-negotiate contracts.** In addition to negotiating new agreements at lower levels, broadcasters might want to re-negotiate

existing deals. If the actual or expected fall in subscriber numbers is significant, the financial position of platforms and broadcasters would be significantly affected if they are also subject to inflexible (e.g. largely fixed) content spend agreements. It may in fact also be in the producers' interest to revise the contractual terms rather than see a local platform or broadcaster exit the market.

Broadcasters across Europe would not necessarily all react in the same way, (adding to the overall industry uncertainty). While many are likely to be forced to reduce content spending, some may be able to temporarily accept lower margins and continue to pay a similar price for the (non-exclusive) rights. This approach could be used to prevent the loss of market share to a rival in the local market. In the longer term, however, one would expect the content spending to be reduced.

While the specific agreements that individual broadcasters have with distributors and producers vary significantly between different types of content and between countries, this basic mechanism applies equally to film and TV content.

3.2.4 Impact in smaller countries

The impacts on platforms and broadcasters described above apply in the larger European markets. The smaller countries would experience the opposite effects. Subscription services in markets which experience an inflow of consumers may be well placed to pay more for their content licences. For pay-TV broadcasters, the increase in subscribers would translate into higher willingness to pay and feed into higher content spending through the variable agreements (e.g. per subscriber payment portion of output deals).³⁸

For FTA broadcasters located in the smaller countries the effect is reverse, since viewership and the associated advertising revenues are falling. This implies a lower willingness to invest in content which viewers are now able to access through international providers. It is possible that as a response local FTA broadcasters would adapt their content strategy towards more localised content—we discuss this option further in section 4.2.1 below.

3.2.5 Conclusion on the total willingness to pay for content

The net impact across both larger and smaller countries is likely to be a reduction in platform revenues; the inflow to the smaller markets will not compensate for the outflow from the larger markets. With less money in the system from subscription and advertising, less funds flow into the industry that can be made available to spend on content. This would result in a reduction in revenues that distributors and producers receive from broadcasters and platforms. This reduction is driven by an outflow of customers from countries with high retail prices (typically, the larger countries), towards countries with lower prices in the case of pay-TV subscriptions (typically, the smaller countries); and from countries that import significant amounts of TV content (smaller countries) towards those that originate it (the larger countries).

We expect that the volume of customers 'up trading' would be relatively limited. There will also be some new subscribers as a result of content being available more cheaply. As our modelling confirms, such revenue increases would be highly unlikely to outweigh the revenue reductions from existing customer bases,

³⁸ Recall that in the 'no response' scenario the contractual arrangements between broadcasters and producers/distributors are kept fixed. Hence we assume that there is no renegotiation of fixed components of output deals or similar fixed arrangements.

and hence total industry revenues at the platform level are likely to be eroded by cross-border access.

3.3 Distributors

As explained in section 2, distributors play an important role in providing finance for content production, typically on the basis of pre-sale agreements with individual broadcasters and platforms. The reduced willingness and ability of platforms and broadcasters to pay for content, whether purchased or commissioned, is likely to have a detrimental impact on distributors' ability to license their programming to channels. This would lead to reduced pre-sales deals and production advances from distributors and thus reduce the level of funding available for content creation (described more fully below).³⁹

A distributor's ability to monetise content sales would be eroded across non-broadcast windows (such as TVOD) as well, due to the consumers' ability to switch to content available in another country. This would naturally strengthen the market position of pan-European distributors, but be detrimental to local distributors that could not prevent the cross-border switching (we explore this further as part of the response scenarios in section 4.1 below).

This resulting reduction in distributor willingness to invest in content could be exacerbated, and brought forward, by distributor expectations of broadcaster and consumer responses to changes in legislation. In the lead up to any change in legislation, distributors may reduce spending on pre-sale agreements and production advances in response to uncertainty. While any overreaction could converge to a new market equilibrium in the medium term, the short-term industry impact could be significant—in particular in the form of market exit.

3.4 Producers

The effects on platforms, broadcasters and distributors described above translate into changes in expected producer recoupment of revenues and, crucially, the level of funding available at the time of the green-lighting decision.⁴⁰ The impact on individual producers will vary but we expect the net effect will be a loss of revenue and a resulting loss of content investment. This is driven by a number of effects across the rest of the value chain, as set out below:

- reduction in revenues from earlier windows (TVOD, HE, theatrical) due to window cannibalisation;
- reduction in variable revenues stemming from agreements with pay-TV and SVOD platforms due to losses of exclusivity;
- lowering the value, duration and viability of output deals;
- change in the value and existence of pre-sale agreements;
- lowering of, or removal of, expected funding from distribution advances due to loss of exclusivity;
- an increase in uncertainty of future deal shape and projected revenues/funds.

³⁹ Losses of exclusivity in distribution would affect not only distributors' willingness to fund content, but also their willingness and ability to actively promote it domestically. Such marketing activities are costly, and need to be recovered from revenue generated by content sales. If the latter fall, so would the former.

⁴⁰ Recall that in this scenario we assume that producers cannot change their existing distribution arrangements. Likely producer responses are considered in section 4 below.

As explained in section 2.3, guaranteed revenue streams, such as those from output deals, pre-sale agreements and distribution advances, are particularly important for the decision to produce and/or distribute content. In some cases, these guaranteed revenues are the only revenues that are taken into account at the green-lighting stage—and are therefore critical in determining whether a project is given the go ahead.⁴¹ The other sources of revenue, which are less certain, constitute the means to cover the production deficits, and subsequently generate margins for the producers.

Hence, even small reductions in content funding may have a significant impact on the green-lighting decision. In particular, films and TV content that are currently marginal (i.e. have expected financial returns close to the green-lighting threshold) may fall below the green-lighting threshold, and could not be made.

The extent to which this affects content production decisions varies significantly between different types of content, and depends on how reliant that content is on revenues in particular windows. For example, the likely revenue and profit impacts of an indicative 10% reduction in content spend from the European pay-TV window are set out below:⁴²

- an average large-scale global film would be expected to generate approximately 5–10% of its revenues from the EU pay-TV window—hence a reduction of 10% of the revenues from this window would lead to an overall reduction in the film’s revenues of 0.5–1% (or 5–10% of profits, if a film is making a 10% profit margin);
- an average EU film, or a small-scale international film, would generate approximately 20–40% of its revenues from the EU pay-TV window, meaning that a 10% reduction in those revenues are likely to have a 2–4% impact on revenues (20–40% of profits for a film with 10% profit margin);
- an EU TV fiction series could rely for up to 20–40% of its funding on international distribution—a drop of 10% in international broadcasters’ willingness to pay yields an impact on revenues of 2–4% (20–40% of profits, as above).

The overall impact would extend beyond the pay-TV window for most content types and so the likely impacts on revenues would be higher. For instance, in the case of international films, the effects on profits described above would be magnified further if cannibalisation of revenues from the Home Entertainment window were also included. Furthermore, in some cases, where the release dates are sufficiently far apart, viewers may leave their domestic theatrical screening in favour of films being available on VOD platforms abroad.

It is important to note that many of the films are made based on expected margins very close to the required green-lighting margin. Since any changes in expected revenues from Europe translate directly into reductions in the expected margin (assuming the costs of making the content are otherwise fixed), even small changes have the potential to significantly affect the producers’ output decisions. Furthermore, the contribution of European pay-TV to funding of various types of content varies significantly, and hence even within the broad

⁴¹ Independent and small producers typically have to rely on a much wider set of expected revenues.

⁴² The magnitude of impacts presented here is only indicative. Our model shows that the expected range of impacts will vary significantly across the individual Member States, and further variation may exist at the level of individual producers. We explain this further below, and in Appendix A1. We consider only impacts from pay-TV window, whereas cannibalisation of other windows could lead to total revenue impacts being higher.

categories we set out, there would be important distributional effects on output creation.

A similar mechanism applies to FTA TV content. Local platforms in smaller countries experience lower advertising revenues caused by an outflow of viewership to larger countries, translating into lower willingness and ability to spend on local content. In the larger countries, platforms may gain viewership and hence advertising revenues,⁴³ but that is likely to be more than offset by lower expected revenues through licensing of domestically originated content abroad. Consequently, local producers in the larger countries would also suffer a loss of revenues.

These revenue reductions would inevitably have a knock on effect on profitability of different firms in the value chain. Since most of the costs of producing and distributing content are fixed, the adverse revenue impacts would translate directly into losses of expected profits.

For many productions, EU revenue makes a significant contribution to the overall profitability—in particular for EU produced content, but also for the international content which may only turn profitable due to EU revenues. Losses of profits in the value chain could be significant (as shown in the next section). It is difficult to say to what extent market participants would be able to reduce costs to protect their margins as revenues decline, and how many would be forced out of the market. Overall, what is clear is that the reductions in revenue would reduce the profitability of the industry as a whole, and lead producers to create less content or otherwise have to re-think their business models, potentially even exiting the market altogether.

3.5 Quantifying the scale of the impact

So far we have conceptually explained the effects that a ban on territorial restrictions would be likely to have on the wider AV value chain. The economic model we have developed (explained in detail in Appendix A1) has allowed us to quantify these impacts and express them in a variety of ways, for instance, in terms of effects on industry revenues, consumer welfare and volume of output. In this section we present the results from our modelling of the scenario with no producer response to a change in legislation.⁴⁴

As above, we present the results in terms of impact on larger and smaller countries. We have modelled three primary consumer switching mechanisms: the effects of switching of premium pay-TV film services, switching of TVOD services providing film and TV content, and migration of consumption of FTA services. The model also allows us to capture the additional effect of reductions in producer revenue as a result of the loss of content exclusivity, as well as cross-window revenue cannibalisation—in particular, we model reductions in Home Entertainment revenues for international films.⁴⁵

The ranges reflect different assumptions on how the industry could respond to the changes in cross-border access, by varying the key parameters in the model (see Appendix for more details). For instance, low end of the estimates place a

⁴³ The increase in revenues will be lower than the loss of revenues in countries experiencing a fall in viewership.

⁴⁴ We built our model and generated the above results based on the market data gathered from a range of public and company sources, supplemented with interview inputs. The model helps to demonstrate the indicative scale of the impacts that the changes described above could have on the revenues across the value chain, output generation and consumer welfare. The model is explained in more detail in Appendix A1, together with the numerous assumptions required to calibrate it.

⁴⁵ We also capture changes in bargaining power of platforms in negotiation of wholesale content arrangements—explained further in the pan-EU licensing scenario in section 4.1.1.

relatively low cap on how much consumer switching would be observed and assume a relatively muted response by producers on output creation when faced with a reduction in expected revenues. Conversely, the high end of the range corresponds to a scenario where relatively few restrictions are placed on potential switchers and producers are assumed to be more conservative and take less risks when green-lighting content (resulting in a larger volume of content not getting made).

3.5.1 Pay-TV and TVOD

As explained above, changes in industry revenue are driven by migration of premium pay-TV film package subscriptions to a cheaper OTT platform service. This is driven by consumers' ability to exploit the retail price differential, which would be made available as a result of facilitating cross-border access to AV content across Europe. Our model predicts that in larger countries we would see an average outflow of 24–40% of pay-TV viewers, while in the smaller countries approximately 6–14% of FTA consumption would migrate abroad.

This shift in subscriptions would cause a significant reduction in domestic platform revenues in larger European countries (of around €2.4bn–€3.9bn in our modelling). Either because they anticipate this level of switching, or simply in response to the uncertainty caused by the loss of content exclusivity these platforms would want to reduce their content spend (as well as implement other cost saving measures), and such reductions would directly impact on the funds available for producers of both the domestic and international content.

In the smaller countries, the converse is the case. Inflow of new subscribers or viewers would boost platform revenues, which through existing content pricing agreements would result in an increase in producers' revenues.

However, the incremental revenues that flow to international producers as a result of this switching would not offset the losses of revenue they would experience in the larger markets. This is due to the current differences in wholesale content pricing, which enable differences in retail prices across Europe and the inability of broadcasters to buy exclusive content to differentiate their services from rivals. If content pricing was fully variable, for each consumer who switches between a large and a small country, an international producer would lose the revenue equivalent to the difference in the unit wholesale price between these two countries. In practice, while the content pricing arrangements are more sophisticated, and include a mixture of fixed and variable (per subscriber) payments, a broadly similar logic still applies.

The net effect of such switching of viewership of pay-TV and TVOD services would therefore be a loss of revenue for international producers. Our estimate of these losses is €1.8bn–€2.7bn, or 6–8% of their total European revenues (across all windows).

Producers of local film and TV content in the larger countries would also be significantly affected. These producers are reliant on domestic sources of funding, and hence even a small reduction of expected revenues/profits from pay-TV is likely to constitute a significant portion of the total content's revenues/profits. Local producers would not be in a position to offset revenue losses in one country against gains in another. Hence, as local platforms in larger countries cut back on content spend, local producers would be left with

significant revenue losses (estimated at €0.4bn–€0.6bn, or 2–3% of total revenues).⁴⁶

3.5.2 FTA

In the case of FTA, the direction of consumer switching is reversed compared with pay-TV subscriptions: viewership travels from smaller (typically ‘import’) countries to the larger (originating) Member States. Although the content may be free to watch for the end consumers, the respective broadcasters would see changing advertising spend. Our model predicts that consumer switching will result in a €0.4bn–€1.1bn loss to platform revenues in the smaller countries.

Furthermore, platforms and distributors in large originating countries that relied on international sales of content would find these revenue streams reduced, due to the loss of exclusivity. The inflowing viewership is likely to be also difficult to monetise. As a result, larger countries are expected to also experience a loss of platform revenues, estimated at €0.3bn–€0.9bn.

The net effect would be a fall in FTA platform revenues of €0.7bn–€2.0bn. This would translate into a total net fall in content spend of €1.2bn–€2.4bn across all EU FTA platforms. Out of this reduction, estimated €0.3bn–€0.8bn would feed back to lower local producers’ revenues, representing a fall of a further 2–4% of their total revenues.

3.5.3 Welfare impacts

The effects on consumer welfare fall into two broad categories:

- Changes in welfare of specific pay-TV or FTA viewers related to their AV consumption, with different price, timing and other quality characteristics (the consumption effect).⁴⁷
- Changes in welfare related to a change in total industry output in terms of volume of content produced. Consumers therefore lose the ability to access output which they currently benefit from across all windows (the output effect).⁴⁸

In the current scenario, consumers could benefit in the short term from a price discount in the case of premium pay-TV film subscriptions or on-demand content, or earlier access to FTA TV content. Not only would this incentivise cross-border switching, but it would also expand the market for premium film subscriptions in high willingness to pay countries, as additional consumers are ‘priced in’. On the other hand, in the long term the quality of such services would be eroded due to lower content production (see below). Altogether, this is captured in the negative long-term ‘consumption effect’, giving an overall estimated welfare loss of €0.9bn–€2.0bn per annum.⁴⁹

⁴⁶ The scale is relatively low due to the small level of contribution to local content by premium film pay-TV platforms.

⁴⁷ The consumption effect also captures the impact of changes in the overall quality of pay-TV and/or FTA services associated with the overall volume of content offered in these service packages. For example, in scenarios where substantially less content is assumed to get made, the consumption effect would capture the reduction in the quality of the relevant AV service, in addition to any direct consumption effect.

⁴⁸ In addition, given the scale of effects, it is likely that many of the productions that would be put at risk by these proposals only end up being made at the expense of cost cutting measures which would negatively affect the quality of the content—for example, lower production values overall, including less investment in special effects, make-up artists, costume and art designers; as well as taking less risks in the format and content of stories.

⁴⁹ Once the market readjusts, consumers may indeed be paying lower subscription prices for their film content, but reduced content investment would be likely to affect the quality of output, and therefore those

Lower producer revenues linked to migration of subscription and viewership, and uncertainty about the value of exclusivity, would impact on the level of output producers would create. Variation in both expected and actual revenue flows has significant impacts on funding of new content, and affects output creation decisions. In this case, the large revenue impacts on producers translate into significant output losses, both in the case of local and international content. This ‘output effect’ has an impact on all AV consumption windows, and its associated welfare loss is approximately €2.2bn–€4.0bn per annum.⁵⁰

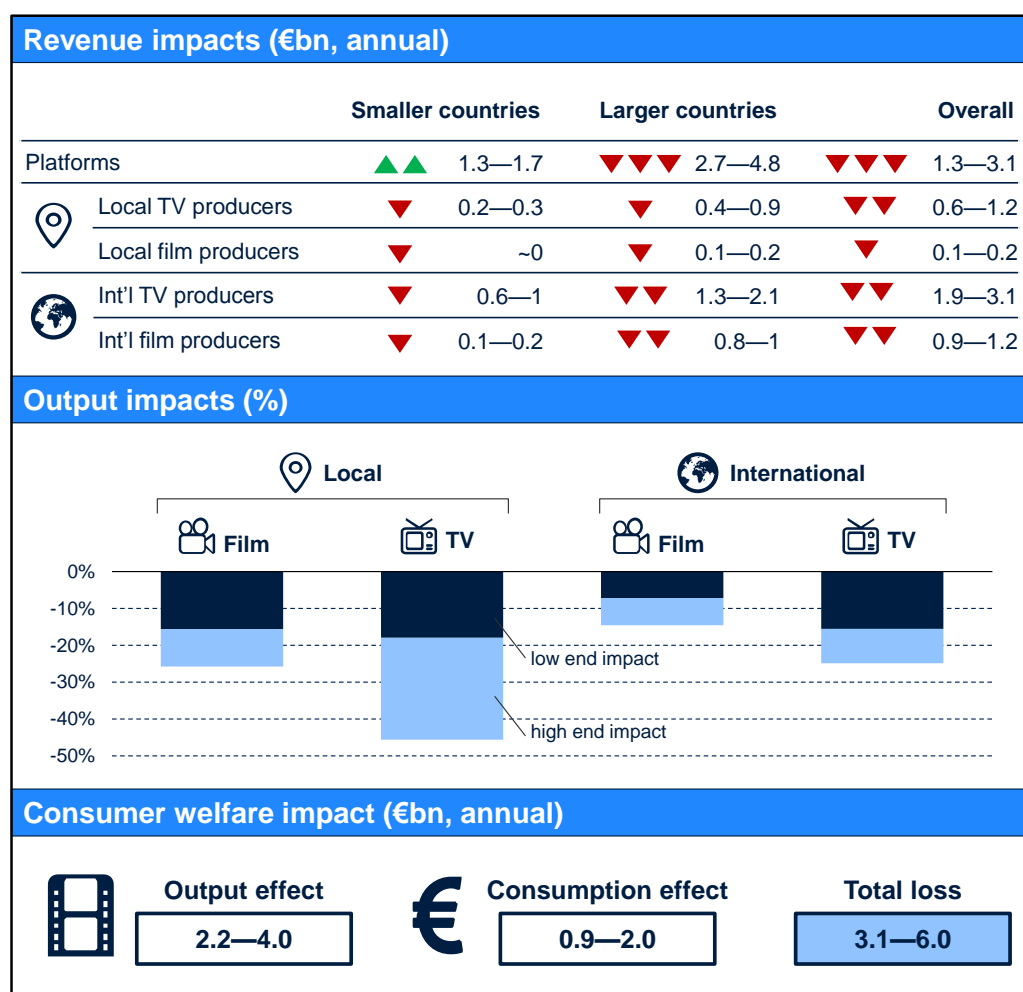
Changes in revenues will have a major impact on cultural diversity of the AV content available across Europe. As funds flow out of local producers, the availability of locally targeted content decreases, while the programming becomes increasingly dominated by content aimed at broad, international audiences. This further exacerbates the negative impact of increased cross-border access (although we have not quantified this explicitly in our model).

Overall, the most likely long-term result in this ‘no-response’ scenario would be a reduction in consumer welfare. This would greatly offset any temporary, short-term benefit to consumers from exploiting the current price differences. There would also be significant distributional differences to the welfare impacts, in particular in countries that experience a significant outflow of subscription revenues (i.e. the larger countries, in the case of premium pay-TV services, and smaller countries for FTA services).

film packages would be of worse quality than the current offering. This is reflected in the ‘consumption effect’ calculation.

⁵⁰ Our welfare estimates use a Compensating Variation measure—this is explained in detail in Appendix A1.7.

Box 3.1 The overall impact of the 'no producer response' scenario across Europe



Note: The output effects reported here represent an estimate of the proportion of content that will not get made as an average across the EU. In some scenarios, available producer data suggested that the proportion of content that is put at risk can be substantially higher.

Source: O&O and Oxera analysis.

3.6 'No producer response' with retail price adjustments

Without any producer response, there is likely to be further downward retail price adjustments, exacerbating the impacts described above. At present, platforms and broadcasters in the respective European countries rely on the exclusivity of their content to offer consumers a better choice or range of offerings than their competitors. If cross-border access were a viable option, these platforms and broadcasters would see the exclusivity of their content eroded. Consumers would no longer value that content differentiation as the same content would be available from anywhere in Europe. In the absence of making material changes to the current contractual arrangements, the main lever through which they would be able to respond is price adjustments.

This implies that a platform in a larger country, e.g. Germany or France, could only be likely to stem the loss of premium pay-TV movie package subscribers to a smaller country (e.g. Malta) by lowering its own price. This would reduce consumers' incremental benefits from switching to a foreign service, and thus may persuade them to remain with the original provider. A response from the platform in the 'inflow' country would be to try to reduce their own retail price so

as to make the trade-off more appealing again. Similar pressures would exist in other countries, and the natural price tendency would be downward.⁵¹

The limit as to how low the prices could fall would be set by the wholesale content pricing arrangements between platforms and distributors/producers. Our model suggests that, assuming such arrangements tend to be fixed and do not vary with the subscriber base, total platform revenues could fall by as much as €5.8bn annually across Europe.⁵²

As retail prices fall, so does the associated content spend by platforms, and hence producers' revenues would be materially eroded (we estimate producer revenue reductions of €5.0bn–€8.2bn per annum). The associated impacts on content would likewise be an order of magnitude higher than those set out above—as shown in Box 3.2, content production is estimated to fall by up to 48% for TV and 37% for films, and based on analysis of available producer data, the proportion of content production put at risk by these proposals could be even higher (more than 10% higher in relation to film in some cases).

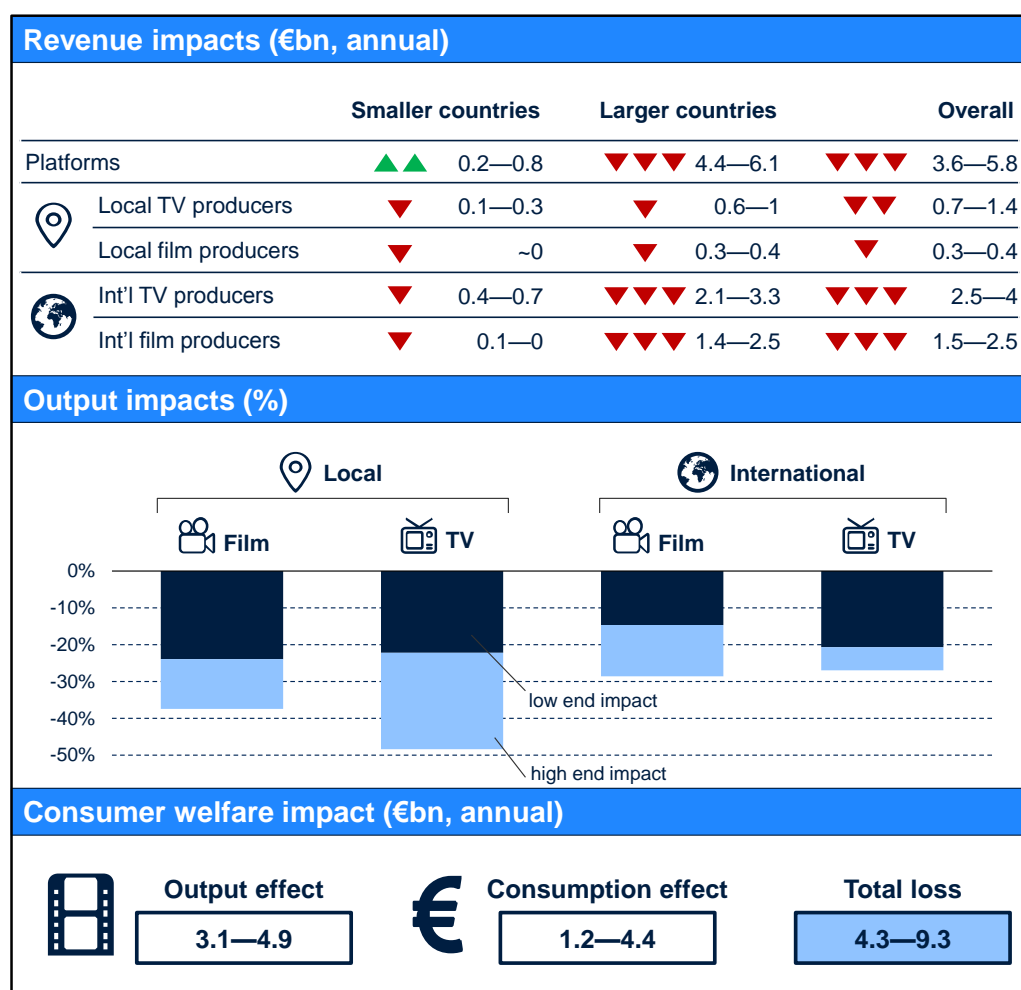
As reduced availability of content filters through the pay-TV and FTA offering, their respective qualities would be significantly reduced. Taking all these effects into account, our modelling suggests that the annual welfare loss could be up to €9.3bn per annum from a combination of both the consumption and output effects.

These are very significant losses, which would have the potential to drive many of the producers, distributors and potentially also platforms out of the market, or at least to force major changes in their business models. Given the significant scale of these impacts, industry participants will try to respond and adapt, and they could do so in a variety of ways, some of which are explored in further detail in section 4.

⁵¹ See Appendix section A1.4.2 for more details.

⁵² This would also translate into short-term price benefits to consumers, who would enjoy the current content at reduced prices in most EU countries. However, all such price benefits would be very short-lived.

Box 3.2 The overall impact of the 'no producer response' scenario with retail price adjustments across Europe



Note: The output effects reported here represent an estimate of the proportion of content that will not get made as an average across the EU. In some scenarios, available producer data suggested that the proportion of content that is put at risk can be substantially higher.

Source: O&O and Oxera analysis.

4 Impacts of possible industry responses

Producer response to changes in legislation is key in determining what the AV industry will look like in the future. Depending on the strategies that producers and distributors employ, and the contractual arrangements that they put in place, a number of new market outcomes might be reached. This section explores a range of such potential outcomes, their implications for the industry value chain, and ultimately the impact on consumer welfare. The scenarios we describe are purposefully stark and distinct. In practice, the new market outcome could feature a mixture of each of them depending on the type of content considered.

It is unclear whether the industry will be able to adapt and, if so, how long it might take. If there is lead time prior to implementation of the proposed changes in legislation, then industry players may have opportunities to plan. But the arrangements in place are often long term agreements that cannot quickly be terminated. Responses face many uncertainties—the response of specific broadcasters, service providers, distributors, and producers will be based on their expectations of consumer responses, as well as their beliefs on how other industry players will react. The reactions may or may not be successful, and may occur in several stages, and may take years.

However, as explained in further detail below, none of the responses we identified would fully overcome the overall negative impact on industry revenues, content production and consumer welfare from cross-border access measures. Indeed, some responses may aggravate the negative impacts on certain customer groups through a reduction in content availability and/or increased prices.

In this section we consider the likely chain of events under the different potential responses. We do so separately for paid and free services, since the nature of consumption as well as underlying content spend is different. Throughout, we refer to ‘pay-TV’ services as covering linear pay-TV, SVOD and TVOD, since the producers’ responses are likely to span all three service types.

4.1 Possible responses in pay-TV

As described in section 3, given the magnitude and scope of the impacts described above, industry participants will attempt to respond to minimise these effects wherever possible. We have considered a range of potential responses aimed at allowing producers to retain their chances of recouping their content investments. Some of the individual responses explored below include:

- moving to a pan-European licensing model in order to preserve exclusivity;
- adjusting wholesale pricing arrangements such that they are more variable in nature, and adjusting content pricing across Europe;
- imposing restrictions on the availability of content on OTT distribution platforms, particularly in low-income Member States;
- licensing content on an enforced dubbing basis, particularly in low-income Member States.

We explore the cycle of impacts and magnitude of effects for some of these responses in further detail below.

4.1.1 Pan-EU licensing

To prevent switching between various national pay-TV services, one medium- to long-term strategic response by rights holders could be to sell rights only to a pan-EU pay-TV/SVOD platform. The content would be available exclusively with the pan-EU licence holder throughout the first run pay-TV window, and the platform would set a single retail price across Europe and across all languages.⁵³ This would remove all opportunities for end consumers to save money by switching between services in different countries to access this content (in the pay-TV window).

The number of pan-EU platforms is also important—an ‘exclusive’ pan-EU licence holder may place greater value on exclusivity, whereas multiple pan-EU platforms would not.⁵⁴

It is important to note that an industry outcome with a single pan-EU provider would not be feasible in the short run. Building up brand and reputation is a long process, and at present there is no platform that operates across all EU Member States. This means that transition to an exclusive pan-EU licensing scenario could be relatively long.

We analyse the effects of this scenario on the market participants in more detail below.

Consumers

Premium film and US TV content would only be available via the pan-EU offering, so consumers would have limited incentive to retain their existing local services. Consumers would have three options, they could: purchase the pan-EU offering, retain the local (non-premium) platform which would only offer local content and older international content, or not purchase any of these packages.

As explained above, the optimal retail price of the pan-EU service will be lower than the price paid in the larger countries (e.g. France and the UK), but higher than the current price in the majority of smaller territories.⁵⁵

Such a price would have different effects across Europe:

- **high perceived value (‘larger’) territories:** consumers will pay a reduced price. The subscriber base in these markets would increase as new consumers are ‘priced in’;
- **low perceived value (‘smaller’) territories:** consumers will be worse off due to the increased price. There would also be a reduction in the subscriber base.

The total welfare effects of a change depend on the relative size of the harm to consumers in countries where prices increase compared with the size of the benefit to consumers in countries where prices fall, as well as the effect of a reduction in the quality of the pay-TV offering due to reduced content investment. Customers in high-income countries would be paying less for less,

⁵³ As set out in section 1.4, we assume that the use of geo-blocking would not be permitted at a retail level, meaning that broadcasters would not be able to continue to effectively price-discriminate based on geo-filtering.

⁵⁴ It is possible that rights holders would license content to a few SVOD platforms at the same wholesale price. All these platforms would then offer pan-EU services at the same retail price (since any price differentials would lead to consumers’ switching).

⁵⁵ This would represent a result of optimisation for a platform that deals with the consolidated European demand and has to set a single retail prices across all countries. Such a price would be similar to a weighted average of current retail prices (assuming these prices are optimal in their respective countries today).

whereas consumers in territories where prices rise would be paying more for less, exacerbating the welfare loss experienced by these consumers. The overall impact on consumer welfare is therefore expected to be negative, with consumers in smaller countries experiencing significant declines in welfare.

Platforms

There would be a large reduction in local platform revenues due to significant numbers of subscribers switching to the pan-EU platform. We assume that the pan-EU platform would not be able to enforce price differentiation strategies at the retail level and it would therefore generate lower revenues than the existing local platforms.⁵⁶ This means that there would be less funding in the system to pay for content. The overall net revenue loss at a platform level in our model is €0.8bn–€2.4bn (or 2–7% of total platform revenues).

The pan-EU operator would be expected to focus on content with cross-border appeal. It would therefore be likely to devote a large proportion of its content spend to international film and TV producers. If it chooses to also carry more localised content, it can do so for two primary reasons: either it would want to promote such content internationally, or it would be used to encourage further switching away from the local product offering towards the pan-EU platform. In either case the total platform spend on international content would fall compared with today's levels (reflective of lower aggregate platform revenues), but less so than in the case of the 'no response' scenarios laid out in section 3.

Given the large degree of consumer switching away from the domestic offering, the local platforms would experience a very significant revenue reduction: our modelled impact is a revenue loss of €9.6bn, or 31% of total revenues. This implies that the local platforms' ability to invest in local content would be subject to a vicious cycle; as local platforms see their revenues squeezed they would be less able to invest in local content which would further reduce their appeal and thus their revenue. Taken to the extreme, some local platforms would be forced out of the market altogether (or forced to discontinue their premium first run offering), leaving pan-EU platforms as the only provider of premium content.

Another distinct feature of pan-EU licensing is that the exclusive platform would have a strong bargaining position when negotiating wholesale deals with producers. Given no viable alternatives, producers may be forced to accept lower payments compared with what they would have been able to negotiate if multiple platforms competed for the content (this is reflected in content spend changes below).

Distributors

Local and international distributors would be affected differently. Distributors would have fewer relationships since the pan-EU service would carry the majority of the content. Those distributing internationally focused content would deal with the pan-EU service—their revenues may be affected only to a limited extent. Those distributing localised content, on the other hand, would experience a reduction in revenues due to lower willingness to pay by local platforms. Ultimately there would be a reduction in the number of distributors, with a few pan-EU distributors serving the pan-EU platform(s).

In the case of smaller/independent film productions, rights to all windows tend to be sold as a package (see section 2.4). If the rights that have relatively low

⁵⁶ We assume that the pan-EU provider could not implement geo-blocking or filtering in order to engage in effective price discrimination. See section 1.4 for details.

distribution costs (namely pay-TV and SVOD rights) are sold separately, distributors would struggle to offset the high costs of distributing content in the other windows. This would significantly dampen the distributors' ability and willingness to offer funding advances or minimum guarantees.

As a result, total distributor revenues would fall and their willingness to engage in funding of content creation would be adversely affected. Producers, in particular those of local content, would therefore experience reduced distribution advances and have more difficulty raising the necessary funding to produce content. These effects would occur both in the short run (when added uncertainty over the future evolution of the industry could compound the effects) and the long run (by which time some of the distributors may be forced to exit the market).

Producers

Due to the reductions in revenues at platform level, the overall expected revenue generated by producers from the pay-TV/SVOD window would fall. The mechanisms through which it affects the content creation and the green-lighting decision are the same as explained in section 3.4 above.

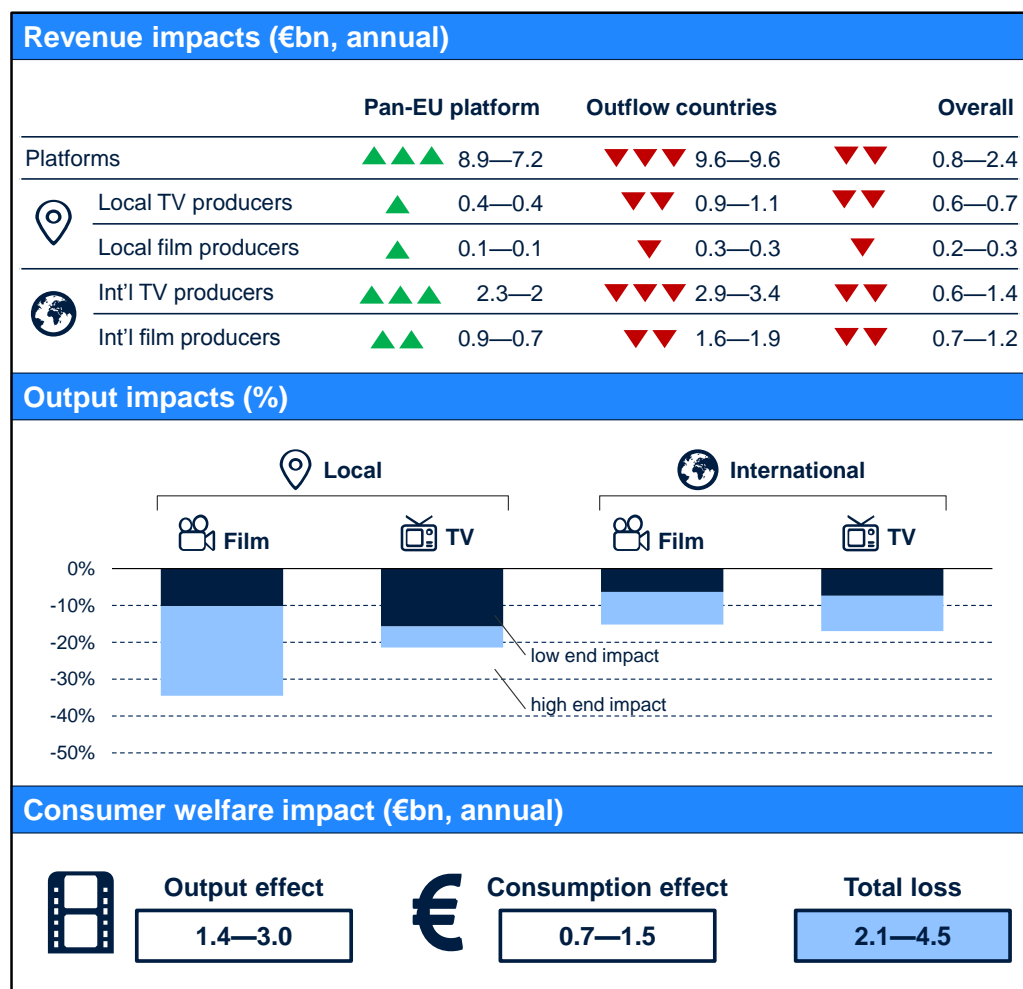
International producers would be able to offset some of the short-term/transitional losses via additional revenues from the pan-EU platform. In our model, across TV and film, the international producers would nonetheless lose €1.3bn–€2.6bn, or around 4–8% of total European revenues (or 1–3% of total revenues).

The adverse impact of pan-EU licensing would also be felt by local content producers. As viewership migrates away from local to a pan-EU platform, local platforms and distributors would have a lower ability to pay for content and would be less able to invest in new local content creation. In our model, the local producers would lose approximately €0.7bn–€1bn of revenues from the pay-TV platforms (or approximately 4–5% of their total revenues).

Quantifying the scale of the impact

The effects of a pan-EU licensing model on revenues, output and consumer welfare are shown in Box 4.1 below.

Box 4.1 Overall impacts of the 'pan-EU pay-TV platform' scenario across Europe



Note: The output effects reported here represent an estimate of the proportion of content that will not get made as an average across the EU. In some scenarios, available producer data suggested the proportion of content that is put at risk can be substantially higher.

Source: O&O and Oxera analysis.

Consumer switching to the pan-EU platform would cause a large reduction in local platform revenues and a correspondingly large reduction in local output, up to 35% and 21% for film and TV, respectively.⁵⁷ Following these changes to platform revenue there would also be a reduction in revenues for producers of internationally focused content; this is the result of an inability to price differentiate between territories as they can at present, as well as the reduction in their bargaining power vis-à-vis the pan EU operator. We estimate that international content could fall by up to 15% and 17% for film and TV, respectively. However, as we have noted before, based on detailed data made available to us on green-lighting procedures and the underlying revenue expectations, the proportion of local and international content put at risk could in reality be significantly higher and in certain circumstances, it could be more than 20 percentage points higher.⁵⁸

⁵⁷ This effect is smaller than in our 'no response' case since that case involves impacts from both pay-TV as well as FTA switching.

⁵⁸ Based on the sample of producer data.

Consumer welfare would also be negatively impacted. We estimate that the consumption effect would lead to a reduction in welfare of €0.7bn–€1.5bn per annum, reflecting the move to new pan-EU pricing and significant changes in the availability of content and the offering of local platforms. Furthermore, there would also be a large reduction in consumer welfare for consumers in all countries as a result of the reduction in content produced in this scenario (estimated at €1.4bn–€3.0bn). The overall welfare impact would therefore be a reduction of up to €4.5bn per annum.

Quality-based content tiers to complement a pan-EU licence

In a variation of this scenario, rights holders could use product differentiation rather than price differentiation and offer two tiers of content. Alongside the main, ‘full’ product with a single pan-EU price, customers would have access to a reduced quality package—either targeted at a pan-EU market, or locally focused.

This would provide a means of extracting greater value from the lower-income markets, where some consumers who would otherwise drop the premium movie package altogether could instead opt for the cheaper package with appreciably ‘inferior’ content. The overall impact would be to reduce the negative implications of the pan-EU scenario, to some extent—particularly if the lower cost packages were designed to cater for local markets and therefore better support local content production.⁵⁹

The overall welfare impact of this scenario would remain negative, however. While multi-tiered pan-EU offering could offer producers of international film and TV a more effective way to protect their revenues than retaining the status quo, local content would nonetheless be significantly affected (driven by outflow of revenues to the pan-EU services which, as explained above, would have lower incentives to invest in local content). As such, more consumers could benefit from switching to the service, but at the same time others would trade down from the ‘high-specification’ package to the ‘low-specification’ package, with uncertain effects on overall platforms’ revenues and welfare effects. In any case, the output effect would remain significantly negative, in particular due to losses of local film and TV (however, we have not explicitly modelled the impacts of this scenario).

4.1.2 Producers shifting to variable price (CPS) models

As we have seen in section 3.6, under the current (largely fixed) content pricing arrangements platforms would have an incentive to engage in price competition in order to protect their subscriber bases. Instead of choosing to establish pan-EU licence(s), rights holders could alter the level of wholesale prices charged for content (in this case, mainly in the first run pay-TV window). Specifically, they could change the structure of these charges, and make them proportional to the subscriber base. This would remove the incentives for platforms (in particular in lower-income countries) to actively pursue foreign subscribers by offering progressive price reductions.

The main type of content that consumers pursue when switching platforms between countries is the international film and TV content (since their domestic content is not available elsewhere). This gives producers of international content an advantageous position in deciding how the market would evolve. An optimal

⁵⁹ While some of the tiered products could offer more tailored, localised packages, they are unlikely to be able to generate similar revenues and hence contributions to content funding as today (due to of the types of content being removed, or the price being adjusted from today’s levels).

variable pricing strategy is likely to involve wholesale content pricing equilibrating across Europe in order to facilitate retail platforms moving towards a similar pricing strategy that would limit the extent of cross-border switching opportunities. There may still be retail price differentials between the various services, reflective of their other content mix, cost structures, efficiency etc. but the underlying revenues (per subscriber) that an international producer would expect would be equal or very similar between the countries. This naturally implies that, compared with today, platforms in smaller countries (where the willingness to pay is lower) would face increased prices for international content; platforms in larger countries may experience a content cost reduction.

If it could be successfully implemented, such an outcome would be broadly similar to the pan-EU licensing scenario.⁶⁰ International producers would be able to limit some of their revenue losses, while local producers would still see their revenues significantly reduced. This also carries similar consequences in terms of consumer welfare.

4.1.3 Platform exclusivity

Rights holders could sell first run pay-TV film and US TV content only to satellite and/or cable platforms, and remove open access to OTT and catch-up services from the licences. As explained earlier, OTT consumption is the easiest mode to migrate cross-border; by restricting the availability of content on OTT platforms consumers would only be able to access first run pay-TV and FTA content via the conventional channels, namely set top boxes and live terrestrial transmission. This scenario would allow producers to maintain de facto territorial licensing, but they would nonetheless suffer revenue losses as the quality of the pay-TV package offering would be significantly poorer, affecting consumers' valuation of the services.

Consumers

Due to the platform exclusivity restrictions, there would be limited switching cross-border, and hence consumers in all countries would be affected in broadly the same way. They would not have cross-border access via standalone OTT-based foreign services. Content would only be available through the set-top-box of their local satellite or cable service (who would no longer be able to offer OTT functionality with their subscription services), or by subscribing to a full foreign cable or satellite service. The effort required to install an additional set-top box, and potentially also additional satellite dishes, presents an added cost to consumers that would discourage switching.

Furthermore, subscribers to existing OTT platforms must either migrate to cable/satellite platforms, or lose access to film and US TV content in the first-run pay-TV/SVOD window altogether. Lack of access to OTT and catch-up services would force some consumers to change their viewing patterns—some would switch to satellite and cable operators, others would simply stop watching film and US TV content altogether. Either way, this represents a loss of consumer welfare, as an important mode of consumption would be removed.

Platforms

Local OTT platforms would lose all revenues associated with first-run content. Local cable and satellite pay-TV platforms, on the other hand, could gain some

⁶⁰ It is difficult to imagine how this strategy could be any more effective than pan-EU pricing, except in circumstances where differentiated levels of consumer inertia would enable producers to retain a set of differentiated wholesale content pricing and thus differentiated retail pricing by the platforms (albeit not to the same extent as today). We have not considered this scenario.

additional subscribers. On balance, not all lost OTT subscribers would take up full satellite or cable pay-TV packages, which would tend to be more expensive and potentially problematic to set up. Pay-TV platforms would also be unable to offer complementary OTT services, reducing the value of their services to their customers. As a result, total platform revenues would decrease—our modelling estimates a total fall of platform revenues of between €1.9bn and €3.7bn per annum.

Distributors and producers

Both distributors and producers would be subject to lower willingness to pay from platforms. In the same way as in the other scenarios, this would translate into lower pre-sales and output deals, and in turn would adversely affect output creation. The key difference is that in a platform-exclusivity scenario producers retain de-facto territorial licensing arrangements, and are able to differentiate prices between the various platforms. It is worth noting that the OTT distribution is particularly important to small, independent productions, which are often not shown on the major pay-TV platforms and which rely on the revenue from the OTT SVOD services in their financial planning. As such, the effects of removal of OTT distribution would have disproportionately large effect on the local, independent content.

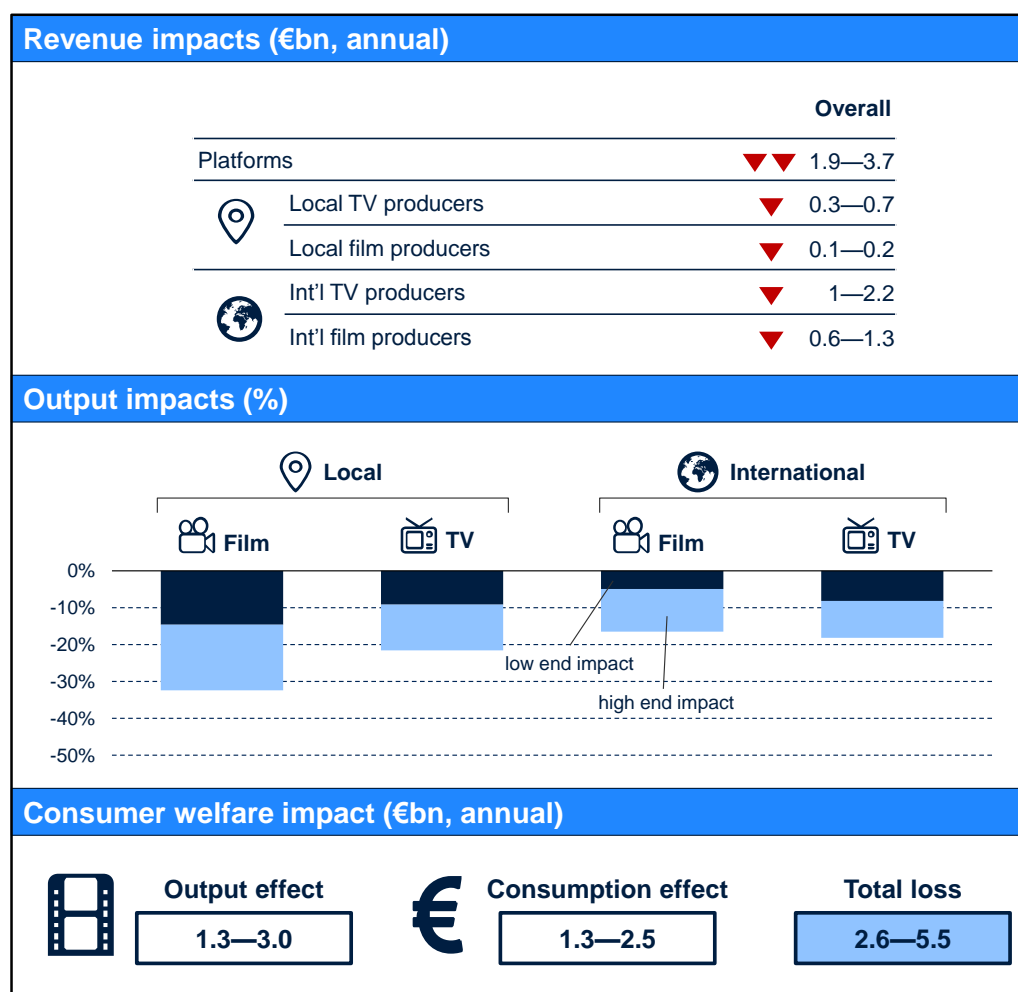
On the whole, local producers would be expected to lose around €0.4bn–€0.9bn per annum in revenues, while international producers would lose €1.6bn–€3.5bn per annum.

Overall impact

Platform-licensing offers a viable way for producers to limit some of the adverse impacts on the local content. End consumers would nonetheless suffer welfare losses through withdrawal of OTT services, estimated to be €1.3bn–€2.5bn per annum, and ultimately the platforms' revenues would fall, resulting in lower or less certain revenues feeding back to the producers, affecting the content creation decision. As a result, the welfare loss from output reduction is €1.3bn–€3bn per annum. The combined adverse welfare effect could therefore be up to €5.5bn per annum.

Overall, the distribution model that removes OTT broadcast rights results in significant consumer welfare loss compared with today's licensing arrangements. These losses are likely to be understated, since the prevalence of OTT consumption is expected to increase in the future—and hence the removal of the ability to view content using OTT services likely to have a larger negative impact in the future relative to today.

Box 4.2 Overall impacts of the platform exclusivity scenario



Note: The output effects reported here represent an estimate of the proportion of content that will not get made as an average across the EU. In some scenarios, available producer data suggested the proportion of content that is put at risk can be substantially higher.

Source: O&O and Oxera analysis.

4.1.4 Exclusive language licensing (enforced dubbing)

As another defence strategy, rights holders could move towards language-based licensing. This would involve licensing content by language market and enforcing dubbing (rather than subtitling)—the effect would be that a given language version would only be attractive to the intended national market. The availability and windowing of content could remain similar to the current arrangements. However, due to high diversity of languages, the costs of dubbing in Eastern European or Scandinavian countries would be significant, and present a major financial challenge to the local distributors or platforms.

Dubbing content for each language market would mean that where content is available at a lower cost in lower-income markets, only those customers who speak the language of that market would consider switching. Hence, there would be minimal impact on viewers in higher-income countries that tend to be large content originators. In lower-income countries, consumers would have several options: watching dubbed content locally; watching in the original language

abroad (and paying more to do so); or choosing not to watch. Each of these would represent a net welfare loss relative to the present situation.⁶¹

In some countries and with regard to certain types of content, consumers' choice may be even more restricted. Given the high costs of dubbing, platforms' and distributors' incentives to provide all of the current international content in each territory would be limited. While the most mainstream/ commercial content may continue to be distributed, it is likely that the more avant-garde content would no longer reach some lower- income countries.

These changes in the distribution of content would have direct impact on revenues of platforms, distributors and producers. As in the other scenarios, this would translate into lower output—in particular of international content that would be directly affected by the losses of distribution, but in turn, also of local content that would suffer from lower willingness to spend by platforms and distributors.

Overall, therefore, we would expect exclusive language licensing to result in losses of consumer welfare through both lower quality of the existing offering, and reductions in output. This scenario would be very costly to implement fully and, depending on the degree of implementation, the consumer and industry outcomes could vary (although they would be unambiguously negative). We have therefore not explicitly modelled this scenario.

4.1.5 Overview of impacts on pay-TV

We considered a range of potential responses that the individual industry participants could try to implement following introduction of cross-border access. These ranged from moving to a pan-EU licensing, adapting wholesale prices, or introducing platform or language exclusivity. While each of these scenarios limits the adverse impact of not responding at all (see section 3), crucially, none of the responses we identified would fully overcome the overall negative impact on industry revenues, content production and consumer welfare. Therefore, regardless of how the pay-TV sector responds, our analysis suggests that there would be significant consumer welfare losses in the medium to long run (as shown in Table 4.1).

Table 4.1 Qualitative impacts of premium pay-TV scenarios

Response	International content		Local content		Consumption effect		Output effect		Other impacts
Pan-EU: single pan-EU price set below largest current market price	▼▼	Reduction in content spending	▼▼	Local platforms eroded, big impact on local film investment	▼▼	Increase in price for most markets, availability changes	▼▼	Big loss of local output	Some consumers are priced out of content they currently have access to
Platform exclusivity: OTT services only available via certain STBs	▼▼	Loss of OTT revenue leads to a reduction in content spending	▼▼	Loss of OTT revenue leads to a reduction in content spending	▼▼	Some forced switching of platforms, price impact	▼▼	Small reduction in level of output	Loss of consumer convenience / access to OTT, which is increasingly important

Source: O&O and Oxera analysis.

4.2 Possible responses in FTA TV

In the case of FTA, consumers would initially benefit from earlier access via foreign broadcasters' OTT services. However, the knock-on effects would reduce the total industry revenues and ultimately damage consumer welfare as content investment and available output falls.

⁶¹ Subtitling tends to be favoured over dubbing across Europe (see Figure 2.11) as it provides a better viewing experience for those happy to watch in the original language.

With consumers in secondary markets (countries that acquire content from the originating countries) switching to foreign catch-up services to access content earlier, broadcasters in the secondary markets may not acquire the rights for local exploitation. This would reduce access for consumers not using the foreign catch-up service and reduce secondary market revenue for the commissioning broadcaster, as well as encourage more switching to the international services. With reduced international demand for content, distributors would be less willing to provide funding, reducing the level of content investment.

Rights holders would be faced with a simple trade-off between:

- losing international revenues due to the cross-border consumption of the catch-up services; and
- discontinuing their domestic catch-up service, and losing that element of domestic revenue (largely advertising).

Broadcasters would choose to lose the smaller of these revenue streams and the size of the loss would dictate the magnitude of the impact on content investment. These options are set out in more detail below, together with an alternative response based on removing the incentive to switch by aligning release windows for the most popular content.

4.2.1 Loss of international sales

As described above, the default position (if rights holders do not respond) would be a loss of international sales. With FTA content from high-income markets available sooner in low-income markets via international catch-up services, this would reduce the attractiveness of the content to the local providers in low-income markets—who would see their audiences migrate to the foreign services.

Consumers

Some consumers in low-income markets would switch viewing to the foreign catch-up services (located in the high-income markets which originate most of the content with international appeal). Based on our modelling, we estimate that such switching would be between 6–14% on average across Europe. We assume that this process is smooth and effortless, and based on accessing a foreign FTA broadcaster's OTT platform. As such, consumers would be able to access the content earlier than in their home country, but potentially in a different language.⁶²

Platforms

FTA platforms in high-income markets are the commissioning broadcasters originating the internationally popular TV content in question. They would experience increased viewership from catch-up viewing by consumers in lower-income countries. One response for these broadcasters would be to attempt to monetise the increased traffic on their portals, in particular via sophisticated advertising.⁶³ However, as noted in section 3.1.5, monetising the increase in traffic is likely to prove difficult. Smaller Member States that see an outflow of viewership, would be likely to see an outflow of advertising and thus a reduction in revenues. On the whole, platforms would be expected to lose €0.7bn–€2.0bn

⁶² For the purpose of our modelling we have assumed that the increased utility of earlier access to content is offset by a welfare loss due to watching content in a different language.

⁶³ Other options, such as pay walls, would take these broadcasters closer to TVOD or SVOD services, which would likely reduce the level of switching to minimum levels.

per annum in this scenario, which naturally translates into reduction of the platforms' ability to fund content.⁶⁴

Distributors and producers

The impacts on distributors and producers of FTA TV content would likely be different, depending on the country. In the larger countries that see an inflow of viewers, local producers would enjoy increased expected revenues from the domestic windows; however, they are also likely to see reduced willingness to spend by foreign distributors, and expected licensing revenues from foreign exploitation would decrease. In the smaller countries, distributors and producers are left with lower revenues as the local FTA platforms' revenues fall, and so the effect on local content production is unequivocally negative.

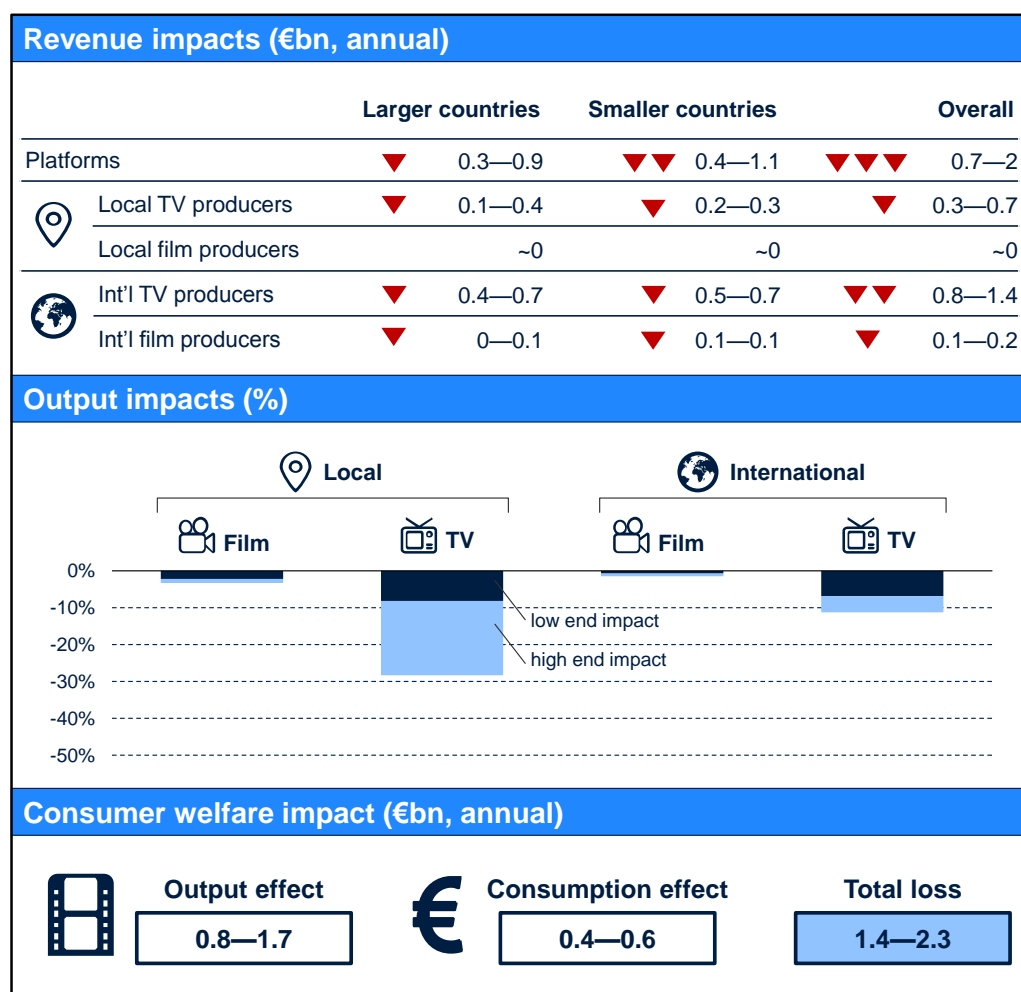
These changes to platforms and distributors would be expected to result in producer revenue reductions of €1.2bn–€2.3bn per annum.

Overall impact

The overall welfare effect would be negative, and is composed of two separate elements. On the output side, as with all other scenarios, the content reduction translates into a negative welfare impact of €0.8bn–€1.7bn per annum.

As far as consumption is concerned, consumers would benefit from more timely access to content, albeit they may not take full advantage of it due to language differences. In the longer term, as output reductions affect the quality of local FTA platform offerings, the annual consumption effect would be negative (€0.4bn–€0.6bn). The net overall welfare impact would therefore also be negative.

⁶⁴ We have assumed that there would be limited impact on pay-TV platforms currently carrying the affected content in low-income countries, because this content alone is unlikely to influence their subscription decision.

Box 4.3 Overall impacts of free TV switching

Note: This scenario captures the FTA effects presented in the 'no response' modelling in section 3. The output effects reported here represent an estimate of the proportion of content that will not get made as an average across the EU. In some scenarios, available producer data suggested the proportion of content that is put at risk can be substantially higher.

Source: O&O and Oxera analysis.

4.2.2 No OTT catch-up

One approach to defend against the loss of international revenues experienced in the scenario above is to remove the FTA catch-up service. This would mean sacrificing revenue associated with the catch-up service (largely advertising spend), rather than the international secondary market revenues—although these secondary market revenues would be reduced if they too had no catch-up service.

Consumers

Consumers in low-income markets would not be able to access content from the FTA broadcaster in the high-income market, since no catch-up service would exist. There would therefore be no FTA switching. There would, however, be a loss of consumer welfare due to the loss of service (and potential related loss of viewing) for consumers in the high-income market originating the content.

Platforms

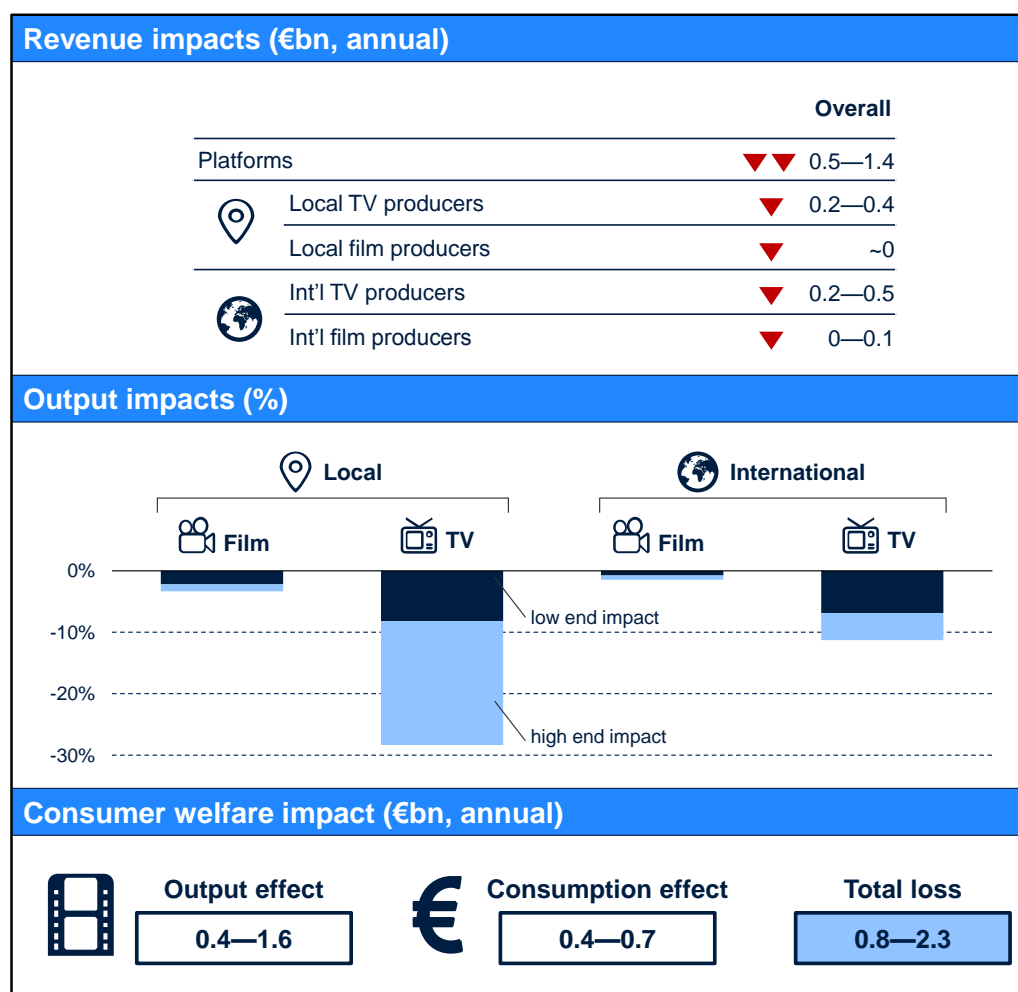
The commissioning FTA broadcaster would lose revenue from its catch-up platform. We have assumed that the main driver of changes in revenues in this model is a loss of viewership (of 2–4%). This may be preferable to the loss of international secondary window revenues (as per the previous scenario) though this situation could change as IPTV distribution becomes more important to FTA broadcasters in the coming years. The estimated overall impact on the platforms would be a loss of revenues of €0.5bn–€1.4bn.

Distributors and producers

Reduced revenues for the commissioning broadcaster would lead to a reduction in the quality and/or volume of commissioning. There would be limited impact on secondary market producers and distributors, but a drop in revenue for the commissioning broadcasters as well as reduced distribution revenues associated with the lost catch-up service. Overall, producers would be expected to lose €0.4bn–€1.1bn.

Overall impact

The overall welfare effect on consumers would be negative, albeit likely less so than in the case of dropping international sales. The withdrawal of OTT services leads to some utility and welfare reduction (a consumption effect of €0.4bn–€0.7bn), as well as lower advertising revenues and hence a negative output effect (€0.4bn–€1.6bn).

Box 4.4 Overall impacts of the no-OTT catch-up scenario for FTA

Note: The output effects reported here represent an estimate of the proportion of content that will not get made as an average across the EU. In some scenarios, available producer data suggested the proportion of content that is put at risk can be substantially higher.

Source: O&O and Oxera analysis.

Option to also launch a single pan-EU VOD TV licence

In this scenario, an additional OTT service with a pan-EU price could be made available by the rights holders. Though this could capture some additional revenue, the benefit to the rights holder would need to be traded off against a resulting reduction in the international secondary market revenues, which the removal of FTA catch-up is designed to protect.⁶⁵ Due to the likely marginal impact, we have not considered this option in detail.

4.2.3 Alignment of FTA TV content windows

An alternative response would be to align release windows across all countries to dis-incentivise viewers from accessing content from other markets. This would be challenging to achieve across all titles, but the approach could be focused on the most popular/highest grossing content which would drive most cross-border switching. To an extent, this already happens for the mainstream productions, but the alignment could be taken further.

⁶⁵ There could also be an impact on revenue in the originating market, where OTT rights could effectively change hands.

Unified release dates would mean bringing forward the availability of content in most markets, and the price paid by platforms in each country would be subject to individual negotiation, reflecting both earlier access and reduced schedule flexibility. Where there are cultural and technical issues which hamper synchronisation, such as a need to prepare dubbed versions of the content, this could delay availability across all markets. The net impact would still be likely to result in earlier access in most markets on average.

Consumers

Where there is no price difference, the alignment of release windows means that consumers have no incentive to switch to foreign services—unless access is withdrawn altogether by their local provider. Therefore, cross-border switching would be minimal, and largely limited to those who do not currently have access to the content.

Where content from higher-income countries is only available in lower-income countries on pay channels, there would also be limited switching. It is unlikely that the reason consumers have pay-TV packages is solely to access content originated by foreign FTA broadcasters, so most consumers would retain their pay-TV packages and thus continue to access foreign FTA content via their existing service, benefiting from the earlier content availability.

Platforms

The limited incentive to switch means that there would be very little impact on platform revenues—maintaining the status quo. Few consumers (in particular in low-income markets) would drop their local pay-TV platform altogether, so there would be no notable loss of revenue. The main impact would be based on the ability of platforms in low-income countries to monetise the content in the earlier window. Whether this is positive or negative would vary by market; some broadcasters would benefit from earlier access, while others would suffer from a lack of schedule flexibility and would therefore be willing to pay less.

Distributors and producers

With little impact on platform revenue, there would be little impact on distributor revenues. Some change would occur as the attractiveness of content in the new window varies by market, but the overall impact would be small and likely negligible. As such, there would be no notable impact on producer ability to finance content, unless the uncertainty around the consumer response drives distributors to invest more cautiously.

Overall impact

There would be an overall positive welfare effect for consumers since some viewers will receive access to content sooner, and there is no loss of access. This benefit would fall disproportionately to consumers in lower-income countries since the originated FTA TV content with the most international appeal tends to come from higher-income markets.

It should be noted that the actual feasibility of arriving at this outcome would be very limited, and would lead to complications across the complete value chain. As a results, we have not modelled this scenario more explicitly.

4.2.4 Overview of impacts on FTA TV

The likely impacts of cross-border access on FTA TV are presented in Table 4.2 below. On the whole, we would expect some significant losses of local outputs

(both film and TV) if cross-border access translates into lower international sales. One potential strategy would be for FTA platforms to stop offering OTT catch-up service, thereby reducing the viewership from abroad, but that would also impact the domestic viewers. This impact could be important, given the recent trends for increasing consumption of catch-up.

Another option would be to push for synchronisation of release dates on the FTA content—this would only be practical for the most popular films and TV series, but would be likely to minimise cross-border switching.

Table 4.2 Summary of qualitative impacts on FTA TV

Response	All content		Consumption effect		Output effect		Other impacts
Limited international sales: viewers switch to FTA catch up, devaluing broadcast rights	▼	Loss of revenue from int'l rights sales. Reduced investment in content	—	No impact on prices, but consumers can access content earlier	▼	Reduction in local and international output	OTT viewers need to register with multiple services
No OTT catch up: broadcasters protect int'l rights value by removing catch up service	▼	Loss of revenue from domestic catch up service. Reduced investment in content	—	No impact on prices	▼	Reduction in output from FTA broadcasters	Loss of consumer convenience / access to OTT, which is increasingly important
Synchronised FTA release: for FTA content across all markets	—	Limited impact due to reduced incentive to switch	—	Marginal positive impact if some pay consumers drop package	—	Negative impact on availability due to reduced schedule flexibility	Some consumers benefit if some broadcasters pay for earlier access

Source: O&O and Oxera analysis.

5 Summary of effects and concluding remarks

The Commission's stated aims for its cross-border access initiative are to improve the circulation of online content, offer more choice to European consumers, strengthen cultural diversity, and provide more opportunities for the creative sector. However, cross-border access initiatives that have the effect of eroding the territorial nature of rights can result in large and complex second-order effects and unintended consequences. These effects have been examined in detail in this report.

The report has analysed the impact of further potential legislative changes that could, in effect, allow consumers to purchase services and access content from providers located in any EU Member States without the explicit consent of the local rights holder.

To provide context for the likely implications of the legislative changes, the study examined the key economic features of, and relationships within, the EU AV industry. It has covered recent developments and the size of the sector, the market participants, and the flow of funds through the industry and into production, and it explains why and how the industry's structure has developed into its current shape.

Based on a detailed understanding of the economics of the sector, we have then analysed the likely changes to the AV industry in a world with significantly increased cross-border access. We have done this both through a conceptual analysis of the mechanisms at play, and by building an economic model that has allowed us to quantify these effects.

In the short run, our analysis suggests that producers would be exposed to a revenue shortfall of up to €8.2bn per annum caused by a combination of a reduction in retail platform revenues from consumer pricing arbitrage, the cannibalisation of revenue from profitable windows (such as home entertainment), and the loss of content exclusivity that would reduce platforms' and distributors' ability to purchase content and their willingness to commit in advance to its acquisition (via pre-sale agreement or output deals, for example). As a result, up to 48% of TV and 37% of film output might not get made (in some scenarios, even more would be put at risk), with consequences for the quality, innovation and cultural diversity of content. We estimate that the overall reduction in consumer welfare would be up to €9.3bn per annum.

Given the significant scale of these impacts, firms in the industry would try to react. We considered a range of potential industry responses aimed at allowing producers to retain their chances of recouping their content investments. Some of the individual responses explored further in this report were pan-EU licensing, wholesale variable pricing, restrictions on OTT and catch-up distribution, and enforced dubbing restrictions.

However, none of the responses that we identified would fully overcome the overall negative impact on industry revenues, content production and consumer welfare from cross-border access measures. Some could even aggravate the impact on certain customer groups, particularly in smaller Member States, as they would be likely to experience price rises, restrictions on their ability to access content, and less content being made overall (with the less mainstream and niche content being particularly affected).

Therefore, in the medium to long run, our analysis suggests that there would be significant consumer welfare losses of up to €4.5bn per annum, as well as a

reduction in content production of up to 35% for some types of content (in some scenarios an even higher proportion of content being put at risk).

Furthermore, it is unclear whether the industry would fully adapt to these changes, or how long this would take. During this period, the industry would therefore be exposed to the full magnitude of losses identified in the short-run ('no response') scenario.

Table 5.1 Summary of potential impacts versus the status quo (per annum)

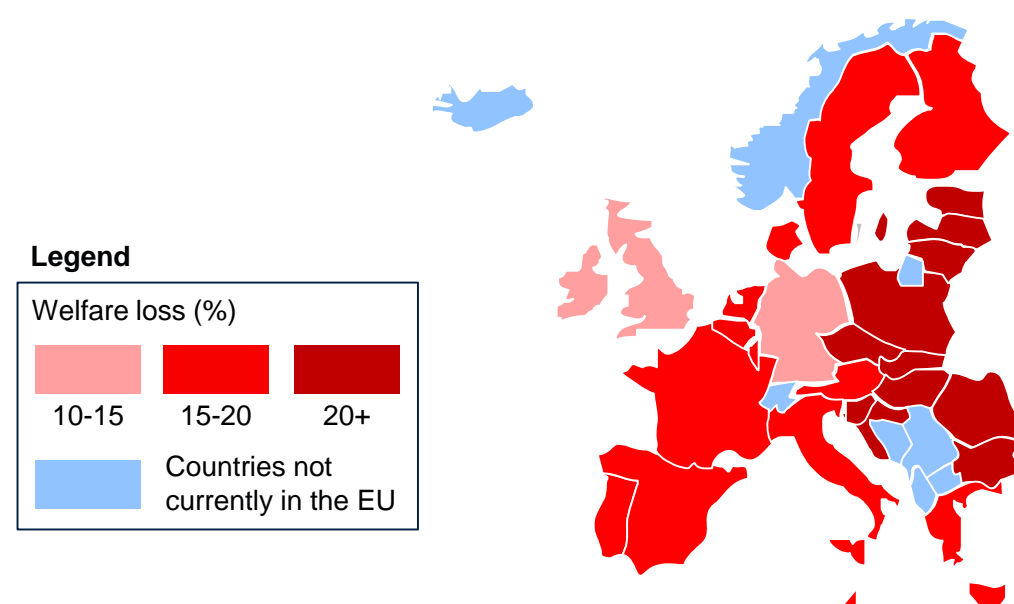
Losses of...	'No response'	Long term
Producer revenue	€8.2bn	€3.6bn
Content production	48%	35%
Consumer welfare	€9.3bn	€4.5bn

Source: Oxera and O&O analysis.

Having set out the likely impacts of a range of short-run and long-run scenarios, it is useful to conclude by considering the overall distributional effect of these changes.

As an illustration of the distributional effects of cross-border access measures, Figure 5.1 sets out an overview of the likely range and scale of these effects if the industry were to react by implementing pan-EU licensing arrangements. The figure shows the percentage welfare loss in different Member States, taking account of both the consumption and output welfare effects.

Figure 5.1 Distribution of overall welfare impacts



Source: O&O and Oxera analysis.

As shown in the figure, consumers in all countries would experience a loss of welfare—by approximately 20% on average across the EU. The lower-income

countries would be likely to suffer the most significant welfare losses. In the UK and Germany the negative effects would be lowest, but significant (10–15%). In contrast, in Eastern Europe, consumers would suffer a more than 25% reduction in welfare associated with the consumption of AV content.

A1 Appendix: Outline of the economic modelling

In this appendix we give an overview of the modelling approach we have adopted to quantify the likely impact of legislative changes aimed at facilitating cross-border access of audio-visual services and content across Europe.

A1.1 Overview of the methodology

As a result of cross-border access, some consumers may switch their consumption of AV content from domestic to foreign services. Our model first estimates the expected level of switching for different products (premium pay-TV movie services, TVOD and FTA) under the ‘no response’ scenario, and then derives the effect of this switching on the revenues of platforms.

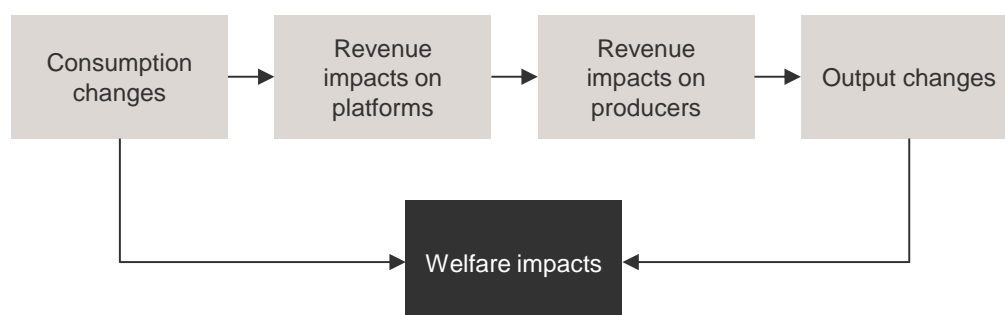
Platform revenues are used to cover the costs of acquisition and origination of content, and hence changes in platform revenues and the erosion of content exclusivity will change the revenue European and international producers can expect to receive from the European pay- and free TV windows. A change in revenue from these windows would have the effect of reducing the level of content production. The relationship between changes in revenue and a change in output creation is outlined in section A1.6.

In addition to capturing the revenue and output impacts across different types of content, we demonstrate the overall welfare effects with the help of two measures:

- the consumption effect, which measures the change in consumer welfare associated with consuming (and paying for) a new pay-TV package that differs from the consumers’ original package in terms of price and quality. Hence, in addition to capturing changes in the price paid for AV services, this measure also captures changes in the quality of the purchased service, even if the actual price paid remains unchanged.
- the output effect, which measures the consumer welfare loss associated with a reduction in total content production.

An overview of the model is shown below.

Figure A1.1 Overview of modelling approach



Source: Oxera.

The remainder of this appendix outlines the key modelling assumptions behind all of the results presented in the report, and is structured as follows:

- section A1.2 explains the base data used;
- section A1.3 explains how we estimate potential consumer switching;

- section A1.4 explains the methodology used to calculate the demand of the foreign product;
- section A1.5 explains how we estimate the revenue impacts;
- section A1.6 shows how expected and actual revenue changes translate into lower content production;
- section A1.7 explains how we estimate welfare effects;
- section A1.8 provides the results of the sensitivity analysis;
- section A1.9 shows the estimates we make for some of the parameters in our economic model.

A1.2 Base data used

The model uses industry revenue and content spend data for 2013. This is based on a number of bottom-up and top-down estimates, which have been calibrated using published company accounts, supplemented by interviews with stakeholders from across the whole value chain, and from multiple countries.

Due to data constraints, and aiming for clarity of the overall presentation of findings, throughout this report we have aggregated the various European countries into wider groupings—they are shown in Table A1.1.

Table A1.1 Country groupings

Country groupings	Individual countries	Rationale for grouping
France	France	Large market with significant domestic content origination
UK & Ireland	UK and Ireland	Language and content similarities, significant originators of content
Austria & Germany	Austria and Germany	Language and content similarities, significant originators of content
Southern	Italy, Portugal, Spain	Content similarities, dubbing preference
Benelux	Luxembourg, Netherlands, Belgium	Content and language similarities/overlaps
Nordics	Denmark, Finland, Norway, Sweden	Content similarities, some language similarities
Balkans	Bulgaria, Romania, Slovenia	Content and market size similarities
Eastern Europe	Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia	Lower degree of market maturity
Other	Greece, Cyprus, Malta	

Source: Oxera analysis.

A1.3 Estimating the expected level of consumption and switching

Our starting assumption is that the current level of prices set by the individual pay-TV services across Europe is optimal. This means that the providers cannot increase their profits today by altering prices charged to their (local) customers.

Based on this assumption, we subsequently use an oligopoly model with vertical differentiation in order to calibrate the demands in the individual country

groupings.⁶⁶ This model is then also used to estimate the potential level of cross-border switching between the individual countries, where consumers choose between either the local or the foreign product, or indeed non-consumption. This approach appears to be a close parallel to the actual choices that consumers would face in the presence of cross-border access for pay-TV services. In the case of FTA, the approach has been different—see section A1.4.4.

A1.3.1 Consumer utility and propensity to switch

Switching is typically defined with reference to two (or more) alternatives, which have different quality and/or price points. In our model, we have assumed the domestic products to be of relatively higher quality for their domestic consumers—they are delivered on existing local platforms, in the local language, and have a blend of content that is tailored to the local population.

The utility a consumer receives from consuming the domestic ‘high-quality’ product of quality q_H and price p_H is:

$$sq_H - p_H$$

where s denotes importance of quality to an individual consumer, and is uniformly distributed on the line $[0, 1]$. Conversely, the utility of consuming the foreign ‘low-quality’ product is:

$$sq_L - p_L$$

We divide the customers in each country grouping into two pools: those who may be willing to switch to a cross-border service, and those who are not. We will assume that the people who are willing to switch (‘switchers’) are random with respect to their value of s (this means that people who switch could value quality to a differing extent—i.e. it is not just those that value it highly that switch to a foreign service).

The proportion of switchers is denoted $(1-c)$, where c represents a friction parameter. This proportion has been calibrated using Eurobarometer data on the level of declared willingness to switch to access cross-border AV content.⁶⁷ While the declared willingness to switch has been on average 28% across Europe as a whole, our model allows for higher level of switching, assuming the price/quality differentials are sufficiently high.

A1.3.2 Calculating domestic quality and demand

We assume that each consumers in each country can currently only access first-run pay-TV services from a single premium pay-TV platform. This assumption, along with the observed current retail price charged by the platform and the current subscriber numbers, allows us to calibrate the quality parameter of the existing pay-TV platform in each country.

If there is only one premium pay-TV platform in a given market, it is possible to calculate the demand for its offering. A potential consumer, i , will only choose to purchase the pay-TV offering if their utility of doing so is positive—i.e. the following holds:

$$s_i q_H - p_H \geq 0 \quad (1)$$

⁶⁶ An example of this model is described in Gabszewicz, J. and Thisse, J. (1979), ‘Price Competition, Quality and Income Disparities’.

⁶⁷ Eurobarometer (2015), ‘Cross-border access to online content’.

It follows that the demand curve for the high-quality, home offering is as follows:⁶⁸

$$D_H = 1 - \frac{p_H}{q_H} \quad (2)$$

Note that (2) represents the proportion of the total number of potential subscribers that subscribe to the home platform in the status quo for each country grouping. Total demand is given by multiplying (2) by the number of potential subscribers in each country grouping.

Assuming the marginal cost of an additional platform subscriber is zero, the profit maximising problem of the platform is as follows:

$$\max_{p_H} p_H D_H$$

Solving the above maximisation problem generates the optimal retail price for a given quality level:

$$p_H = \frac{1}{2} q_H \quad (3)$$

Inserting this result into the demand equation above gives the result that half the potential subscribers are being supplied at the current price and quality. Using industry data, we have calculated the average price of the premium movie package in each country grouping. Rearranging equation (3) gives the result that the quality parameter in each country grouping is two times the current price.

A1.3.3 Calibrating quality in presence of foreign alternatives

While quality of the domestic platform's product is determined by the current prices, this is not true of the foreign platform's offering. The quality of foreign alternatives (within a given country) is assumed to be a mix of three aspects:

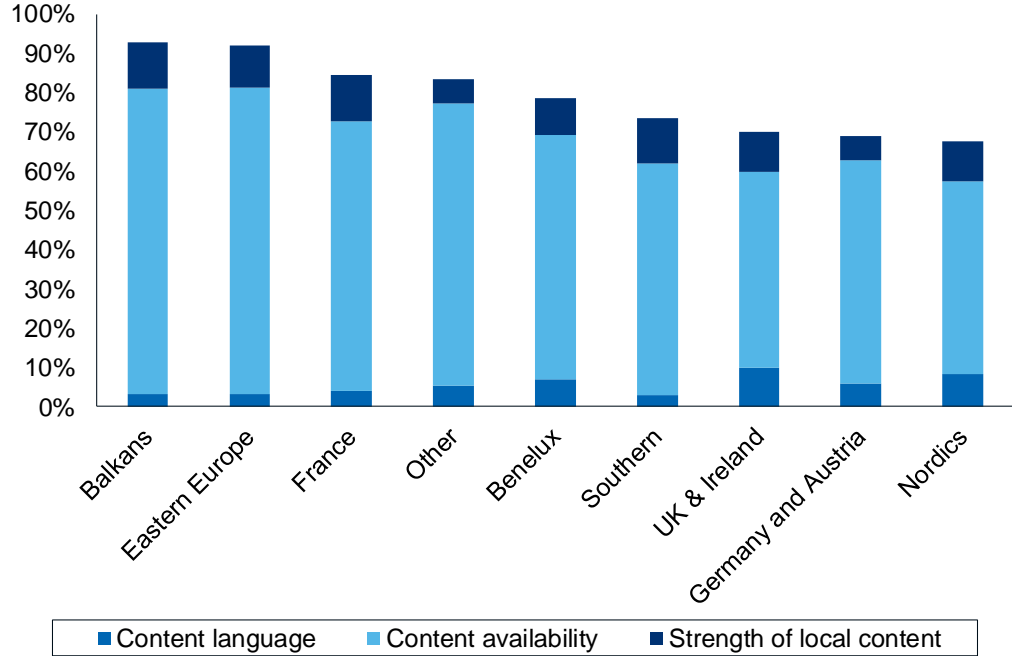
- **content language**—we assume that a successful foreign offering will offer the content in its original language. Most of the content that travels well internationally is produced in English (for instance, major Hollywood films and US TV series). Therefore, the model assumes that the higher the proportion of English speakers in a given country grouping, the higher the perceived quality (on average) of the foreign offering in that country.
- **content availability**—the perceived quality of the offering on a platform will be greater if the breadth of content available is greater, or if the same content is made available at an earlier date. Therefore, the model assumes that in countries where the domestic service already offers significant amounts of content, the perceived quality of the foreign offering will be lower.
- **importance of domestic content**—the more consumers value domestic (local/national) content, the lower the perceived quality of the foreign product (since that platform will typically not offer the local productions).

Figure A1.2 shows the relative quality of the English-language foreign offering to the existing home offering. The relative importance weightings are assumed to be: 10% for content language, 55% for content availability and 35% for importance of domestic content. The relative quality measure aggregates the individual scores in the three areas—for example in the Balkans, the foreign

⁶⁸ The demand curve is the proportion of consumers for whom equation (1) holds, i.e. $\Pr(s_i q_H - p_H \geq 0)$. Given s is uniformly distributed, $\Pr(s_i q_H - p_H \geq 0) = \Pr\left(s_i \geq \frac{p_H}{q_H}\right) = 1 - \frac{p_H}{q_H}$, which gives the result.

offering's level of quality is 91% of the local premium film pay-TV offering (i.e. it would be relatively high, but still lower than the local offering), as opposed to Nordics, where the relative quality would be lower.

Figure A1.2 The relative quality of an English-language foreign offering compared with the home platform's offering



Source: Oxera analysis.

A1.4 Calculating demand in presence of the foreign product

A1.4.1 'No producer response' scenario

With the introduction of cross-border access, and absent any response from producers, consumers can now choose between their domestic and foreign platforms. As such, in each country grouping we introduce a foreign, low-price alternative premium pay-TV platform, which is assumed to be 50% cheaper than the most expensive pay-TV movie package in the sample.⁶⁹ For consumers who do not consider switching, demand is determined by equation (1) above. Potential switchers choose between the foreign and the domestic offerings, such that a potential switcher, i , chooses the foreign product over the domestic one when they prefer the former to the latter (i.e. when it gives them more utility). This occurs when the following condition holds:

$$s_i q_I - p_I \geq s_i q_H - p_H$$

It follows from this analysis that the demand curves (that is the proportion of customers that choose the foreign and home product) for each product, in each country grouping, are as follows:⁷⁰

$$\text{Foreign product: } D_I = (1 - c) \left(\frac{p_H - (p_I)}{q_H - q_I} - \frac{p_I}{q_I} \right) \quad (4)$$

⁶⁹ This is in line with the variation of current SVOD prices as shown on Figure 3.1.

⁷⁰ Demand for the foreign product from potential switchers increases with an increase in the difference between domestic and foreign prices; it falls the higher the quality of the home offering relative to the foreign offering. It also falls the higher the price of the foreign product relative to its quality. The demand from potential switchers is then multiplied by the number of switchers $(1 - c)$ to generate total demand for the

$$\text{Domestic product: } D_H = (c)\left(1 - \frac{p_H}{q_H}\right) + (1 - c)\left(1 - \frac{p_H - (p_I)}{q_H - q_I}\right) \quad (5)$$

Consumers actively choose between the offerings of the foreign and home platforms. The ‘no response’ scenario assumes no pricing changes at either wholesale level (between producers and platforms) or retail level (prices charged by platforms to retailers). Hence, the demand for the products is determined by (4) and (5), with the prices fixed at the levels observed currently.

A1.4.2 ‘No producer response’ scenario with retail price optimisation

In this scenario, the individual national platforms will be unable to differentiate their services through exclusive content in each of the country groupings and are likely to optimise their price in response to competition from the cheaper foreign service. The optimal response is to lower the price in order to attempt to recover some of the lost subscribers. Likewise, the foreign service provider also adjusts its price, observing the falling prices in the individual country groupings. This leads to intense price competition that would drive the retail price of both the domestic and the foreign services down.

This logic can also be demonstrated mathematically. Platforms in outflow countries maximise the following profit function, assuming, as before, that the marginal cost of serving an extra subscriber is zero:

$$\text{Max}_{P_H} D_H P_H \quad (6)$$

Where D_h is as described in Equation (5).

The solution to this problem is whichever of the following two solutions gives the highest profit to the platform:

$$p_H = \frac{1 + (1-c)\frac{p_I}{q_H - q_I}}{X + Y}$$

$$\text{Where } X = \frac{2c}{q_H} \text{ and } Y = \frac{2(1-c)}{q_H - q_I}$$

Or the ‘status quo’ price (the price before legislative changes making cross-border access easier):

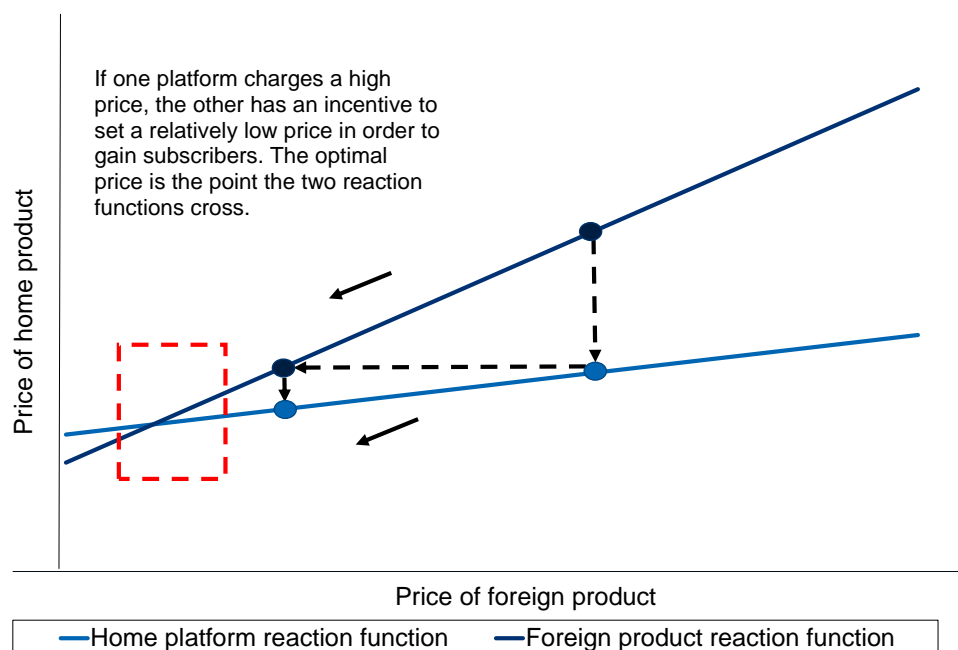
$$p_H = \frac{1}{2} q_H$$

In the case where P_H is equal to the status quo price, the platform effectively decides to only sell to the consumers who do not switch—switchers will decide between non-consumption and the consumption of the foreign product. This result is optimal if the number of potential switchers in a country grouping is small or if the optimal competitive price is very small. In either of these cases, the benefits of competing with the foreign offering in order to attract potential switchers is outweighed by the costs of charging a (low) competitive price. It should be noted that, given the assumed levels of switching, no platform chooses to retain its status quo price.

foreign product. Demand for the home product from non-switchers is determined in an identical way to in equation (1). This demand is then multiplied by the proportion of non-switchers (c). Potential switcher demand for the home offering falls in the price differential between it and the foreign offering, and rises the higher the home offering is when compared with the foreign offering.

Platforms in the 'foreign', inflow countries, will solve a similar optimisation problem to equation (6). Due to the complexity of the functional form of the price of the foreign offering, we use a numerical solution to find this value. The price optimisation problem gives rise to two 'reaction functions' as shown in the Figure below. The optimal solution is the point where these two reactions functions cross, in the red box in Figure A1.3.

Figure A1.3 Reaction functions of two competing platforms



Source: Oxera.

The operator providing the foreign service then optimises its price, taking into account how the operators in the other country groupings choose their price. The interaction can continue indefinitely until the new equilibrium is reached, as shown by the red dotted box in the Figure below. Due to the complexity of the functional form of the price of the foreign offering, we use a numerical solution to find this value.

A1.4.3 Pan-EU platform

In this scenario, first run pay-TV movie rights are sold only to a single pan-EU platform. As a result, consumers wishing to watch first TV run of films and movies must subscribe to the pan-EU package.

The pan-EU platform is assumed to offer an inferior quality product (on average) compared with each country's existing, domestic premium pay-TV platform. This assumption is consistent across both high- and low-price/-quality countries, but the explanation for it depends on the type of country being considered:

- For higher-priced countries, like the UK, the assumption reflects the fact that the current service being offered is already high in quality (as measured by the amount of international and local content available, their timing of release and the degree to which the offering it is tailored to the local preferences and tastes), and therefore a pan-EU service is unlikely to be equivalent in terms of breadth of content.

- For lower-priced countries, while the breadth of content and the timing of its release on a foreign platform may be superior to the domestic offering, the pan-EU platform is unlikely to be tailored to the local tastes.

Deriving the equation for the demand for the pan-EU platform in a given country, i , is precisely equivalent to the derivation of the demand equation (1), and therefore takes the following functional form:

$$D_p = (1 - \frac{p_e}{q_i}) (7)$$

Where q_i is the quality of the pan-EU offering in country i . The pan-EU operator then solves a profit maximisation problem, again assuming that the marginal cost of an extra subscriber is zero:

$$\max_{p_e} \sum_i^L (1 - \frac{p_e}{q_i}) N_i p_e$$

where i denotes a country grouping, N_i denotes the number of potential subscribers country grouping i and L denotes the number of country groupings. The solution to this equation gives the profit maximising price for the pan-EU product, which implies:

$$p_e = \frac{\sum_i^L (N_i)}{2 \sum_i^L \frac{N_i}{q_i}}$$

A1.4.4 Platform exclusivity

Granting local premium pay-TV platforms licenses that exclude the option of OTT broadcast restricts distribution of first run pay-TV content to ‘conventional’ distribution channels, namely satellite and cable. Consumers are not able to switch to the foreign offering, or if they can (e.g. via satellite), the cost of switching to a foreign provider is assumed to be large enough to reduce switching to the foreign platform to zero.

The second effect is that the quality of the domestic offering is also reduced, because the local platforms’ OTT broadcasts are also withdrawn. This leads to a reduction in platform revenue in the same way as a fall in quality does in the language licensing scenario, which is described in section A1.4.4.

A1.4.5 Switching consumption of FTA content

We have assumed that cross-border access would extend to all AV services, both pay-TV and FTA. In the case of FTA, price is zero, and hence consumers would be able to access foreign FTA content at no additional cost (this could happen by accessing the foreign providers’ OTT catch-up service, for instance). Using the same framework as we use for pay-TV would imply complete switching, as long as quality of the foreign offering was higher than that of the domestic provider.

Instead, we have made a conservative assumption that, in each country grouping, only 20% of consumers that declared willingness to switch in the Eurobarometer survey actually migrate to the foreign FTA OTT catch-up service. This reflects the large amount of content that is available on FTA platforms, and captures the fact that consumers would be likely to switch only a portion of their FTA consumption. As a result, the estimated level of switching of FTA consumption is approximately 6–14%, and varies across the individual countries. (We further assume that the foreign FTA broadcaster captures only

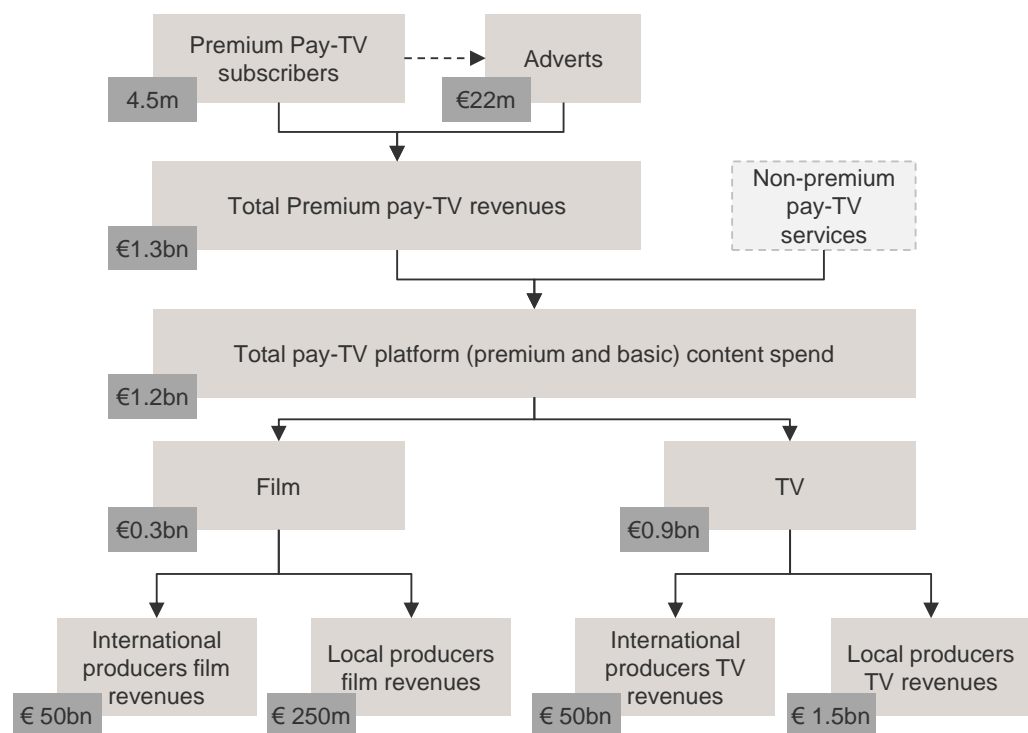
a small proportion of the advertising revenues that the switchers are worth in their home country.)

A1.5 Estimating revenue impacts

The revenue and output model converts the demand for pay-TV and FTA products into revenue impacts on broadcasters, and subsequently tracks the changes in money flows on distributors and producers, both local and international. The reduction in producer revenue then drives a reduction in content production, through the mechanism of green-lighting.

As a starting point, Figure A1.3 below outlines the main elements of our model for France (with build up being the same for the other country groups). We present only the pay-TV platform part, the FTA is very similar with the exception of there being no paid subscribers. The interdependencies between the individual parts of the value chain have been explained in sections 2 and 3.

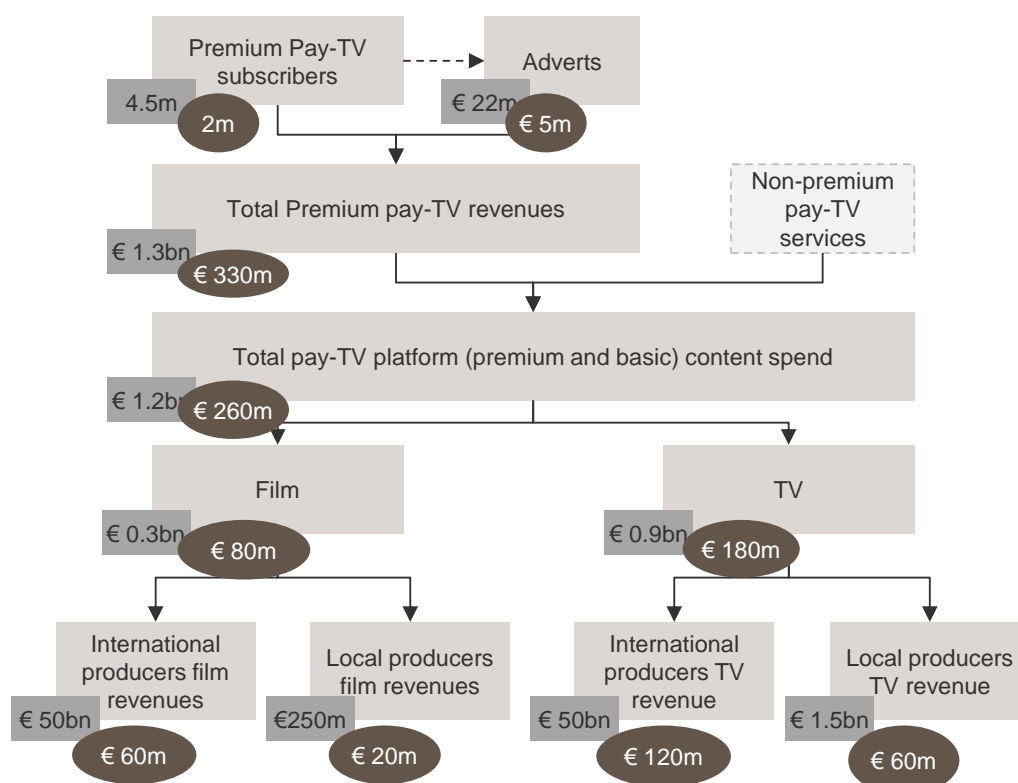
Figure A1.4 Overview of the revenue model for premium pay-TV in France



Source: Oxera analysis.

Once cross-border content access is allowed, the whole system is subject to a change in the money flows. What this means in the context of the 'no response' scenario is shown on Figure A1.5.

Figure A1.5 Revenue impacts in the ‘no response’ scenario in France



Note: All values in ovals represent losses/reductions.

Source: Oxera analysis.

The changes, mechanics of which we explained in section 3, have been modelled as follows in the case of France (similar patterns would occur across the other high-income countries).

- As a starting point, consumers will migrate between domestic and foreign platforms. A change in revenue for pay-TV platforms is therefore driven by a reduction in the number of subscribers and loss of retail revenues (of €330m), as well as the associated fall in advertising revenue of €5m (which, for simplicity, we have assumed to be proportional to viewership).
- Reduction in platform revenues, and erosion of exclusivity of content, would translate into lower willingness and/or ability to pay for content. We have assumed that 80% of the retail platform revenue loss would translate into content reduction (in this case, €260m), with the remainder being recovered through acceptance of the lower margin, as well as cost cuts across the operations.
- These reductions in content spend subsequently get passed to the producers of the individual types of content, across film and TV content as well as between local and international producers. We have assumed that the reduction in revenues falls on producers proportionately to the current split of their content spend. If films represent 50% of pay-TV platform's current spend, then also 50% of content spend reduction is assumed to fall on films; and likewise with international and local content.⁷¹

⁷¹ This assumption is conservative, and distributes the adverse impact modelled across all of the platform's content spend.

Producers' revenues are also affected by the following three key mechanisms that are linked with the introduction of cross-border access:

- cannibalisation of the home entertainment window—since staggered release dates across the EU mean that some content may be available in pay-TV/SVOD windows before reaching the HE window in other countries, we have adopted a conservative assumption that in the 'no response' scenarios 5–10% of HE revenues could be lost to international producers (and only up to 5% to local film producers);
- exclusivity losses—factoring in the lower willingness to pay by platforms due to the content no longer being exclusive, we have adopted a conservative assumption that the corresponding spend on international content would be 5–10% lower in the pay-TV/SVOD/TVOD and FTA windows;
- increased bargaining power of platforms—in the pan-EU scenario, since there is now only one purchaser of premium screening rights across the EU, its negotiating position over wholesale agreements with producers is stronger compared with the present market with multiple providers. As a result, we have assumed that in the pan-EU scenario 10–15% of current content spend is lost through the monopsony power of the pan-EU platform.

All these adjustments affect the content spend by platforms and broadcasters, and feed through to content production. All three effects are additive to the implied revenue losses due to consumer switching, and thus the overall revenue impact on producers would be significant, as demonstrated in sections 3 and 4 above.

A1.6 Estimating content production changes

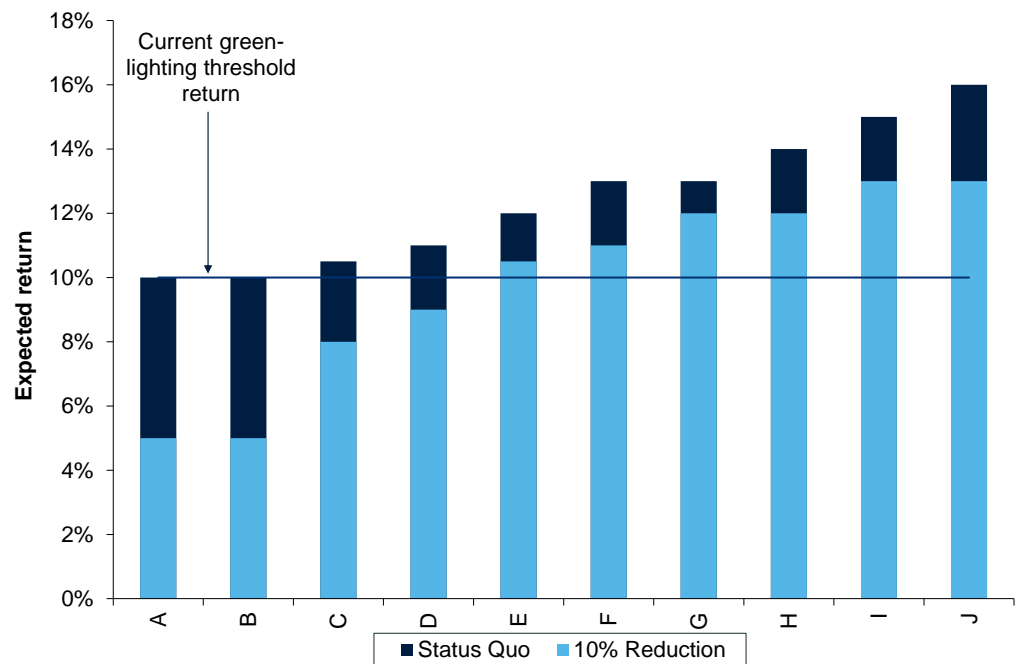
As a result of distorted revenue flows across the industry, producers of different types of content face a reduction in their expected revenues. We explained (in section 2.4) how the process of deciding on content creation works. For films and TV series produced on commercial grounds (rather than for more artistic/cultural reasons), the expected margins the piece of content would make across its lifetime would typically need to meet certain green-lighting thresholds.

In the model, we capture the complexity of production decision with a help of a 'content reduction multiplier', namely a measure of how responsive content production is to a change in producer (expected) revenues. We explain how this is derived and used below.

The main impact of lower platform and distributor revenues results in lower levels of payment or pre-commitment to funding content, and thus translates into lower expected revenues at the time of the green-lighting decision. The extent to which this fall is important is linked with how much a specific window contributes to (expected) profits. The more important a revenue stream is to overall profit, the higher the impact a reduction in revenues from that stream will be to content creation.

Each specific film and TV series will have a different set of expected revenues and thus a different expected margin. To estimate the effect of revenue loss on output creation, we used data showing expected revenues at the green-lighting stage, as well as information on the green-lighting threshold for film and TV content. A stylised example of the application of this analysis to international film content is shown in Figure A1.6 below.

Figure A1.6 Example analysis of international film responsiveness to fall in overall revenue



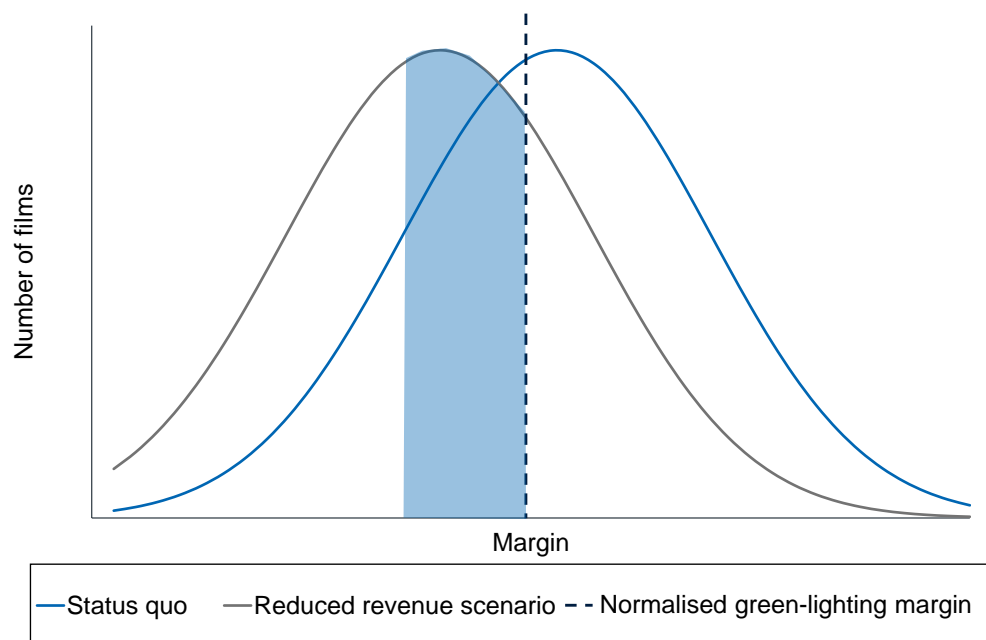
Note: A–J are sample films.

Source: Oxera.

In this example, a 10% reduction in overall revenues resulted in four films falling below the green-lighting margin. The analysis implied that the responsiveness of film production to a change in revenues is four (10% loss in revenues translates in $4 \times 10 = 40\%$ loss in outputs).

When considered together, the distribution of margins between the different films tends not to be uniform, but instead exhibits certain 'lumpiness', with a number of films falling close to the expected green-lighting margins. Consider, for instance, a typical distribution of returns to international films, as shown in Figure A1.7 below. This is based on a number of films from several Sponsors, and shows that a significant number of films is expected to just clear the green-lighting threshold.

Figure A1.7 Example analysis of international film responsiveness to fall in overall review, with a normalised green-lighting margin



Note: Margins have been normalised to reflect differing levels of green-lighting margins between the individual producers.

Source: Oxera analysis.

In this example, a reduction in expected revenues of 5% (as represented by horizontal difference between the peak of the two curves on the graph above) can be numerically, and graphically, shown to lead to a reduction in total output of international films of around 20% (the area of the light blue box in the graph). This implies an approximate multiplier of output reduction to producer revenue reduction of 4X.

In the model, the content multiplier is applied to the estimated percentage fall in total revenues for each of the four content types (international film and TV and local film and TV). This number is then applied to the estimated total output hours in each content category, which then gives the percentage of hours of output lost relative to total hours.

The above diagram also illustrates the fact that as the expected revenue reduction increases, the proportion of content that is no longer produced also increases, but at a slower rate. In other words, as the revenue impact increases, the content multiplier gets progressively smaller.

As Table A1.2 shows, the percentage of European TV revenue is higher for locally produced films and television shows than international content, implying that the impact of cross-border trade will have larger revenues impacts on local content than international content. This in turn implies the multiplier for international content will be larger (all else equal) than for local content.

Table A1.2 Contribution of EU pay-TV and FTA TV to the total revenues of different content types

	Pay-TV	FTA TV
International film	6%	4%
International TV	10%	25%
Local film	20%	47%
Local TV	4%	82%

Note: the data is averaged across a number of international and local producers, which included Sponsors as well as other stakeholders. Pay-TV includes SVOD and TVOD.

Source: company information, Oxera research and analysis.

As noted above, the content multiplier also changes depending on the importance of European pay-TV to overall content profitability. Due to confidentiality of the underlying film data, we are unable to present more detailed analysis here. Table A1.3 summarises the multipliers used across different types of content.

Table A1.3 Revenue loss to content reduction multipliers

	Values used in the model
International film	4-6X depending on scenario
International TV	3-6X
Local film	4-8X
Local TV	3X

Note: the underlying data is averaged across a number of international and local producers which included Sponsors as well as other stakeholders.

Source: company information, interviews with the Sponsors, Oxera research and analysis.

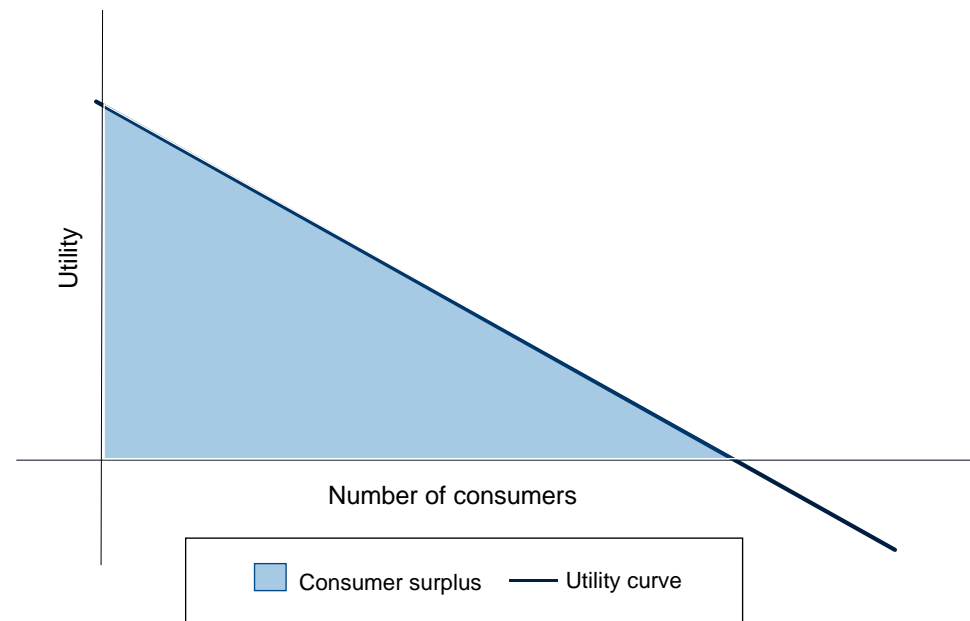
Lastly, while most country groupings will experience a fall in producer revenues, some attract new viewers, and hence the associated producer spend could increase. We have assumed that the multipliers applicable to such countries are skewed towards international content (since this is the content that foreign consumers switch for).

A1.7 Estimating welfare effects

A1.7.1 Consumption effect

Any change in the prices or quality faced by consumers for pay-TV subscriptions will result in a change in welfare. An increase in prices is harmful to consumers, while a price decrease is beneficial; and vice versa for quality. To calculate the change in welfare associated with a price change, we use a consumer surplus (CS) measure. CS can be calculated directly under the assumptions about consumer utility outlined in section A1.2. CS measures how much utility consumers receive from the good over and above what they pay for it and therefore is simply the area under the utility curve shown in Figure A1.8 below.

Figure A1.8 Consumer surplus is the area under the aggregate utility curve



Source: Oxera.

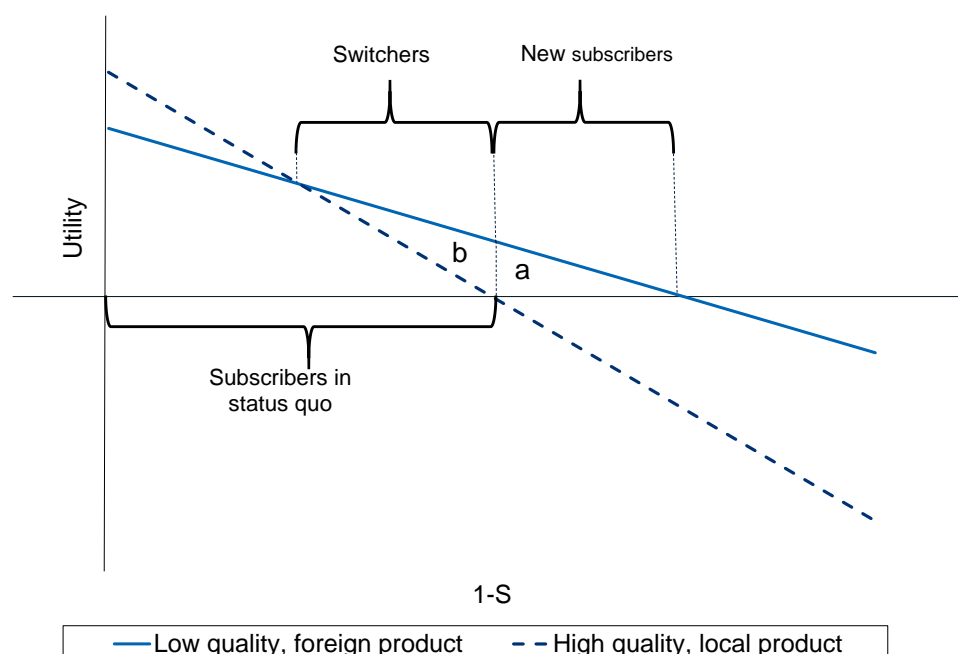
In the context of our consumer demand model, it is possible to measure the change in total utility by aggregating changes in each individual's utility as their consumption changes versus the status quo. These changes are linked to individuals changing their consumption to a product at a different price point and/or level of quality, as well as dropping out of the market (or indeed starting to consume).

Given the quasi-linear nature of the utility function described in section A1.3.1, the change in utility is equivalent to a change in CS, and furthermore can be expressed in monetary terms.⁷² This then becomes a measure of change in consumer welfare linked with adjustments to price and quality.

For example, let us consider a change in consumption and the associated changes in utility when consumers can freely choose between their domestic pay-TV platform, and a foreign platform. In the status quo, where the foreign product is not available, Figure A1.9 shows the proportion of customers who choose to consume, and those who do not.

⁷² Varian, H. (2015), *Microeconomic Analysis*, p. 160, 3rd edition, W.W. Norton & Company, Inc.

Figure A1.9 Consumer surplus changes through the introduction of a foreign, low-price offering



Source: Oxera.

When cross-border access is allowed, consumers now have the option of choosing the foreign pay-TV platform. We have assumed that this platform has lower quality, as well as lower price than the domestic platform. As a result, consumers with the highest valuation of quality are likely to remain with the local platform—these consumers do not experience a change in utility. Consumers who currently consume the local platform offering and who would switch to the foreign platform enjoy an increase in utility (measured by the area ‘b’ on the chart)—this is because the foreign platform offers them a better price/quality bundle than their local platform. Lastly, since the foreign platform is cheaper than the local platform, it would also capture some consumers who did not subscribe to the local platform in the first place. These consumers also enjoy an increase in utility, labelled as ‘a’ on the chart.

In the medium to long term, as changes in output production feed through to the platforms’ offering, the underlying quality of the offering would be reduced. In the absence of price reductions, this would adversely affect consumer welfare, since consumers would continue to watch a lower-quality service and continue paying the same for it.

Total CS, and hence the total ‘consumption effect’ associated with each scenario is an aggregation of all such changes in utility across all country groupings.

Consumption effect in FTA

In the case of FTA content, price does not enter the utility calculation. As such, all consumers who switch to foreign FTA content would be expected to experience an increase in utility (otherwise they would continue to watch the FTA content via their domestic platforms). We have used approximate welfare estimates based on scaling the consumption effect in pay-TV scenarios with relation to the estimated levels of the ‘output effect’ (explained below).

A1.7.2 Output effect on welfare

In addition to consumption effects, consumer welfare is also affected through changes in the volumes of AV content that are being produced/made available to consumers. Each individual film or TV series that is not being made carries with it a welfare loss. The implicit assumption being that consumers attach a positive utility to each occasion on which they consume such AV content—i.e. during a trip to the cinema, while watching it on DVD or via pay-TV at home, and as it screens on FTA channels.

In order to calculate welfare effects of these changes, we have drawn upon a methodology developed by Hu et al. (2003) for estimating the welfare benefits of increased content availability.⁷³ This methodology uses the concept of compensating variation (CV) to estimate the change in consumer welfare due to a change in content availability. CV measures the amount a consumer would have to be paid after a change in economic circumstances in order to be as well off as they were before a change in circumstances

The methodology further assumes the demand curve for content is log linear and the price of other content is not changed as a direct result of the change in availability of other pieces of content. Provided the assumptions hold, then the CV of a reduction in content creation is:

$$CV = -\frac{R}{1+\alpha}$$

where R is the revenue that would have been generated by the AV works that are no longer produced, and α is the price elasticity of demand for the works.

For the calculation of the output effect in our model we have used:

- an average estimated EU related revenue per hour across all its lifetime for each individual type of content (see Table A1.4 below);
- the average estimate of elasticity of demand for films from the empirical literature (see Table A1.5 below).

Table A1.4 Revenue in EU countries per hour

	EU revenue (€, m/hour)
International film	7
International TV	1
Local film	3
Local TV	0.2

Note: the data is averaged across a number of international and local producers which included Sponsors as well as other stakeholders.

Source: company information, Oxera research and analysis.

⁷³ Hu et al. (2013), 'Consumer Surplus in the Digital Economy: Estimating the Value of Increased Product Variety at Online Booksellers', *Management Science*, **49**:11, pp. 1580–96.

Table A1.5 Literature estimates of elasticity of demand for films

Paper	Authors	Elasticity estimate
Cheap Tuesdays and the demand for cinema (2014)	Mackenzie and de Roos	2.53
Cinema demand in Germany (2005)	Dewenter and Westermann	2.4–2.76
Average used in the model		2.56

Note: These price elasticity estimates refer to the demand for film watching in cinemas. Elasticity estimates for other window releases were unavailable.

Source: Oxera analysis.

A1.8 Sensitivity results

Due to the large number of parameters within the model, we have conducted an assessment as to how much the results change if some of the parameters are adjusted.

Tables below show how sensitive the headline results for platform revenues and the output effect are to changes in the individual assumptions used. This shows that while the expected numerical results will differ, the overall conclusions do not change. The same holds for the other key variables within the model.

Table A1.6 Sensitivity results for platform revenue change in the low case estimate across various scenarios

				Pay-TV			FTA	
		Parameter used at present	Sensitivity change	No response	Pan-EU	Platform exclusivity	Limited int'l sales	No OTT catch-up
	Current values in low case			-0.5	-0.8	-1.9	-0.7	-0.5
Switching	Switching friction parameter (relative to Eurobarometer)	1.5	2	-0.8			-1.0	
			1	-0.3			-0.5	-0.5
	% of consumers that switch to alternative local platform when FTA OTT is withdrawn	70%	0%					-1.7
			80%					-0.3
Reaction to revenue change	Reaction of content spend to revenue reduction of outflow countries	80%	100%	-0.5		-1.9	-0.7	-0.5
			50%	-0.5		-1.9	-0.7	-0.5
	Reaction of content spend to revenue reduction of inflow countries (pay)	24%	0%	-0.5				
			80%	-0.5				
	Inflow country reaction (free)	50%	80%				-0.8	
			25%				-0.6	
Multiplier	Multiplier	3-8, depending on the type of content	Higher multipliers for all content types	-0.5	-0.8	-1.9	-0.7	-0.5
			Lower multipliers for all content types	-0.5	-0.8	-1.9	-0.7	-0.5
Quality	Importance of no OTT to quality	10% reduction	20% reduction			-4.6		
			5% reduction			-1.9		
	Importance of language preferences to quality	Current level	Two times current level					
			Half current level					
	Quality of Foreign platform	Current level	5% better than current level	-0.8				
			5% worse than current level	-0.3				
	Quality of Pan-EU platform	10% worse than status quo movie package	20% worse than status quo package		-1.9			
			Same as status quo		-0.3			
Loss of exclusivity	Loss of exclusivity	5% additional revenue impact	10% additional revenue impact	-0.5				
			No additional revenue impact	-0.5				
Cannibalisation	The level of cannibalisation of HE revenues as a result of cross-border access	5% cannibalisation	10% cannibalisation	-0.5				
			No cannibalisation	-0.5				
Bargaining power	Reduction in content spend by a pan-EU platform due to increased bargaining power	10% reduction in spend	20% reduction in spend		-0.8			
			No change in spend		-0.8			

Source: Oxera and O&O analysis.

Table A1.7 Sensitivity results for the output welfare effect for the low end estimate across various scenarios

				Pay-TV			FTA	
		Parameter used at present	Sensitivity change	No response	Pan-EU	Platform exclusivity	Limited int'l sales	No OTT catch-up
	Current values in low case			-1.3	-1.4	-1.3	-0.8	-0.4
Switching	Switching friction parameter (relative to Eurobarometer)	1.5	2	-1.7			-1.0	
			1	-1.0				-0.3
	% of consumers that switch to alternative local platform when FTA OTT is withdrawn	70%	0%					-1.3
			80%					-0.3
Reaction to revenue change	Reaction of content spend to revenue reduction of outflow countries	80%	100%	-1.6		-1.3		-0.3
			50%	-0.9		-1.3		-0.3
	Reaction of content spend to revenue reduction of inflow countries (pay)	24%	0%	-1.6				
			80%	-1.0				
	Inflow country reaction (free)	50%	80%					
			25%					
Multiplier	Multiplier	3-8, depending on the type of content	Higher multipliers for all content types	-1.6	-3.0	-1.9		-0.3
			Lower multipliers for all content types	-1.0	-1.1	-0.6		-0.3
Quality	Importance of no OTT to quality	10% reduction	20% reduction			-3.2		
			5% reduction			-1.3		
	Importance of language preferences to quality	Current level	Two times current level					
			Half current level					
	Quality of Foreign platform	Current level	5% better than current level	-1.6				
			5% worse than current level	-0.9				
	Quality of Pan-EU platform	10% worse than status quo movie package	20% worse than status quo package		-1.8			
			Same as status quo		-1.3			
Loss of exclusivity	Loss of exclusivity	5% additional revenue impact	10% additional revenue impact	-1.3				
			No additional revenue impact	-1.3				
Cannibalisation	The level of cannibalisation of HE revenues as a result of cross-border access	5% cannibalisation	10% cannibalisation	-1.5				
			No cannibalisation	-1.1				
Bargaining power	Reduction in content spend by a pan-EU platform due to increased bargaining power	10% reduction in spend	20% reduction in spend		-1.9			
			No change in spend		-0.9			

Source: Oxera and O&O analysis.

A1.9 Parameter estimates

The model is underpinned by a number of parameters. We have used the revenue, spend and industry data from Sponsors and other stakeholders, as well as desk research, to calibrate the individual assumptions. The key parameters not already discussed in this appendix are presented below.

Table A1.8 Key model parameters

Parameter	Estimate	Data/assumptions underpinning estimate
Total film revenues in Europe	\$17bn	AV Observatory for box office revenues. The proportion of box office revenues to total revenues is derived from studio financials
Local film revenues in Europe	\$6bn	AV Observatory provides an estimate of the percentage of local film revenues to foreign film revenues, which is applied to the total film revenues estimate
Local film revenue in each country grouping	Number varies by grouping	The local film revenues for each country groupings is generated by assigning local film revenues to a grouping based on the relative size of the AV industry in that grouping. The size of the AV industry of each grouping is provided by Eurostat
Percentage of international film revenues explained by European pay-TV	6%	Studio data
Total production revenues for all international film	€79bn	Scaling pay-TV spend on film by the percentage of foreign film budgets explained by pay-TV spend
Total production revenues for all international TV	€20bn	Scaling pay-TV spend on TV by the percentage of foreign TV budgets explained by pay-TV spend
Proportion of total international film revenues generated in Europe across all windows	40%	Studio data

Source: Oxera.

www.oxera.com