

## Cross-border licencing: how to offer portable audiovisual services to Europeans?<sup>1</sup>

Camille Rosay  
Cerna, MINES ParisTech

---

### Abstract

Because of vertical restraints in the distribution of audiovisual copyrighted goods (meant to version and promote the works to the targeted audience), licencing agreements are concluded on a territorial basis. Territoriality is therefore crucial in Europe, where the media market is a mosaic of 28 countries, all specific by their culture, language, industry structure and regulatory system. However, because of consumers' increasing mobility, the question today arises of standardising the market by introducing portable audiovisual services that subscribers could access whatever their location. The purpose of this paper is to help understanding how originates a cross-border demand for such services, and to present alternative means to respond to it. We find that tolerating a form of grey market can appear efficient, as long as the market is not yet mature (as it is the case for video on-demand services). In this situation, nomadic consumers are not impeded to have access to their service from a territory where the distributor is not authorised to exploit the licenced works. However, as the market expands, the distributor may decide to offer a legal portable service to internalise the benefits of nomadic consumption. The shift toward portability induces an additional fixed cost, linked to the adaptation of the service and of copyright enforcement techniques to international distribution on the one hand, and to supplementary private copying levies on the other hand. The legislator should therefore estimate the impact of this additional cost before regulating the specific matter of cross-border portability.

### 1. Introduction

Since 2011, the European Commission has been willing to establish a single market for audiovisual products – such as movies, TV series and programmes, etc. This can be achieved either by imposing the pan-European licencing of such goods, or by introducing the cross-border portability of audiovisual media services<sup>2</sup>.

While North America is a wide and rather homogenous cultural and linguistic basin, the European media market is not unified. Diverse industrial and regulatory paths have been followed in the 28

---

<sup>1</sup> Preliminary draft.

<sup>2</sup> See the European Commission's "Green Paper on the online distribution of audiovisual works in the European Union: opportunities and challenges towards a digital single market", 2011.

Member States of the European Union, which comprise 24 different official languages<sup>3</sup>. This paper focuses on the rationale and consequences of dismantling borders for the licencing of audiovisual products in the EU area.

The distribution of audiovisual copyrighted works relies on different release channels (movie theatres, television, physical and digital video...) and is based on territorial licencing agreements. The first aspect - multi-format distribution - can be explained by the need to discriminate between consumers, to whom different versions of the product are proposed at different time points. According to Caves (2000), sequential release windows allow to set “higher prices to consumers eager for the latest thing; lower for those who will wait until the movie comes out on videocassette”. The legislation governing such release windows is set nationally, according to the media industry’s characteristics. On the other hand, the territorial dimension derives from the necessity to adapt and *mediatise* audiovisual products according to each audience’s specificities. By *mediatisation*, we refer to the process of advertising and publishing a work for a given audience. For instance, when a movie is released, there is no *a priori* demand for it. For that reason, every new product requires the creation of an entirely new market. This market is built through *mediatisation*, which adds meaning to the product but incurs sunk costs, on each cultural or linguistic territory.

Therefore, licencing agreements between a right owner (the producer of the work, who can be referred to as the “manufacturer” consistently with the literature on vertical relations) and a distributor (the “retailer”) are concluded for a given territory, because of its cultural, linguistic, industrial and regulatory specificities. Indeed, vertical restraints between the right owner and the distributor are needed to ensure discrimination and the contextualisation of the work. As a consequence, territoriality must be envisioned as a vertical restraint that is necessary to encourage production and *mediatisation* investments, and, once they are sunk, to prevent free riding on those investments.

Nevertheless, the means of access to audiovisual goods are flourishing. In particular, digitalisation and the rollout of on-demand services on the Internet are deeply changing consumers’ habits. On the other hand, in view of European citizens’ mobility<sup>4</sup> it can be anticipated that an increasing number of consumers will like to be able to access media services provided in their country of origin while travelling in a foreign country.

As long as rights are granted to distributors territory by territory, allowing cross-border access outside the contractually authorised territory means tolerating the emergence of “grey markets”. The phenomenon of grey markets – or “parallel imports” – refers to the distribution of a genuine good in a country, without the authorisation of the product’s trademark or copyright owner. Hence, grey goods

---

<sup>3</sup> On this matter, see Bomsel (2011).

<sup>4</sup> According to the Eurostat database, there are 12.8 million intra-EU expatriates (2.5 % of the total EU population) while 3.8 million EU citizens (0.8 % of total population) are travelling abroad within the EU on a given day (2011 data).

are not counterfeit, but their sale infringes intellectual property rights (IPR) and is naturally seen as harmful for the right owner and the authorised retailer in the country concerned. However, in many industries a certain level of tolerance for parallel imports can be observed, and some potential benefits have been analysed in the previous literature. As regards audiovisual goods and their distribution, the issue has arisen with satellite broadcasting: a satellite's area of coverage includes several countries, while television channels target the audience of one or a limited number of countries. From the distributor's perspective, preventing the unauthorised reception of copyrighted works by using encryption methods or by tracking subscribers appears to be costly. On the other hand, parallel imports from foreign distributors violate the exclusivity granted by the right owner on this territory.

Concerning audiovisual subscription services, grey markets of different natures need to be distinguished. The cross-border demand originates either from the price differential between two territories<sup>5</sup> or from subscribers' wish to access a service available in their country of origin from a foreign country. The purpose of this paper is to describe how grey markets emerge because of those two factors, and, in the second case, what are the possible means for the distributor (i.e., the service provider) to respond to subscribers' cross-border demand.

### **1.1. Previous literature on grey markets and fair use**

Grey markets arise when the price difference between two countries or markets encourage the unauthorised importation of a product, from the market where the retail price is lower (Cespedes et al., 1988). This phenomenon may affect all kinds of products in every industry, and today appears to be global, arising in less developed as well as in well-developed markets. Preventing grey markets' harmful effects on both the manufacturer and the legal retailer has long been subject of investigations. Dilution of exclusivity and free riding are two of the main ensuing concerns (see Antia et al., 2004) that are critical in the case of media goods, which release and success highly depend on the exclusivity granted to the distributor and his efforts to promote the goods. Huang et al. (2004) tackle the grey market issue from a demand perspective, and find that price-quality inference ("the higher the price, the higher the quality") and risk averseness negatively influence consumer attitude toward grey market goods, while the effect of price consciousness would be insignificant.

Moreover, grey markets can in certain cases induce benefits and therefore be tolerated. The way such benefits occur differs according to the channel structure, and whether the parallel importer is an official retailer or a third party (Xiao et al., 2011). Matsushima and Matsumura (2008) show that permitting parallel imports from a foreign a country where IPR protection is weak allows softening price competition and is beneficial to both the right holder and a foreign imitator. They base on their

---

<sup>5</sup> On this matter, see the decision of the European Court of Justice relative to Football Association Premier League and Karen Murphy cases (C-403/08 and C-429/08). Right holders sued pub managers who used "grey" satellite decoder cards bought in Greece to receive football matches in the UK at a lower price. Similar cases occurred in Canada, where grey-market satellite dishes were sold to receive US programming (see DirecTV, Inc. v. Donaldson, 2010).

results to explain why some DVD content distributors use distinct technologies to differentiate geographic markets while the others do not. Indeed, the concerned distributors would sell famous and more expensive content, making the transport cost relatively small which favours parallel importation. The rationale and consequences on social welfare of the DVD regional coding system were further developed by Dunt et al. (2002).

Tolerance toward grey markets can also be explained by the cost and results of enforcing exclusive territories. Dutta et al. (1994) studied the influence of resellers' services, margin from bootlegged sales and time commitment on the manufacturer's level of tolerance when retailers can bootleg.

In our case, leaving consumers the possibility to access copyrighted products outside the authorised territory can also be tied to the literature on "fair use". To make it simple, fair use can be defined as a doctrine that allows some copying of a copyrighted work without deeming the copier an infringer, even though the copyright holder has not authorised the copying. The analysis made by Landes and Posner (1989) shows that tolerating some amount of unauthorised copying permits to reach an optimal level of copyright protection. Miceli and Adelstein (2006) also investigate the role of fair use and its efficiency when originals and copies are considered as differentiated products. In practice, assimilating cross-border portability of protected works to a type of fair use might incur additional taxes – private copying levies are somewhat popular in Europe – that are to take into account when analysing how portable audiovisual services could be offered to consumers.

## **1.2. Originality and purpose of our approach**

Contrarily to the classic analysis that is made of grey markets, in the case of unauthorised cross-border access to media services they emerge as a consequence of users' behaviour. The distributor does not voluntarily import the product in a territory where he is not authorised to do so, and he has to deal with the ambiguous impact of grey practices. On the one hand, the concerned users legally pay for the products they consume, and preventing them from accessing the service outside the territorial borders would be costly to the service provider. On the other hand, the distributor does not capture the externality generated by cross-border uses, and the arrival of grey goods from another country infringes the local distributor's exclusivity.

The two sections of this paper focus on two different natures of cross-border demand: price difference between territories and consumers' mobility.

To model the development of grey markets in a classic framework of price difference, we will first consider the situation of two distributors offering a subscription service targeted to the audience of two distinct countries. Although IPR are granted for one of the territories, consumers arbitrate according to their willingness to pay and preference for the local service's characteristics, to decide whether and where to subscribe. Indeed, consumption patterns vary greatly from one European country to another. The annual spendings on subscription video services per consumer range from € 24.5 in Greece to

€ 164.5 in Denmark<sup>6</sup>. This first approach is developed in Section 2.

Section 3 deals with the cross-border demand due to subscribers' nomadism, that is to say to their wish to access a subscription service from a foreign territory. We consider the case of a distributor set in a given country, who can respond to nomadic consumers' cross-border demand by three different means. In a first situation, the distributor only offers a territorial service. He or she does not monitor where subscribers access their account, and therefore tolerates the emergence of a grey market. In a second situation, the distributor only offers a multi-territorial service. Portability is applied to all subscribers, and the existence of a grey market is no longer relevant. Finally, in a third situation, portability is offered to consumers as an option, with a specific pricing. Consumers chose to pay for a territorial or multi-territorial service, or to circumvent the portability clause by having recourse to the grey market. In these last two cases, introducing portability in subscription contracts is supposed to incur an additional cost  $C_p$  to the distributor who adjusts the subscription price accordingly.

We find that tolerating a form of grey market can appear efficient, as long as the market is not yet mature (as it is the case for video on-demand services). However, as the market expands, the distributor may decide to offer a legal portable service to internalise the benefits of nomadic consumption. We finally discuss the nature of the fixed cost  $C_p$  that faces the distributor when offering a portable rather than territorial service. Indeed, its magnitude is key to determine which of the three alternatives we analyse is the most efficient mean to respond to the cross-border demand.

## **2. Grey markets due to the price difference between two territories**

In October 2011, the European Court of Justice (ECJ) rendered an important judgement in the area of broadcasting grey markets. In two similar cases (C-403/08 and C-429/08), right holders and notably the Football Association Premier League (FAPL) sued pub managers – among them the pub landlady Karen Murphy – using “grey” satellite decoder cards, and the suppliers of those cards. They were bought in another Member State, such as Greece, to receive football matches in the UK at a lower price. The ECJ found in the latter's favour, and stated that granting exclusive broadcasting rights on a territorial basis and prohibiting “the import, sale and use of foreign decoding cards is contrary to the freedom to provide services”. Moreover, this conclusion was not affected by the fact that a device meant for private use was diverted to circumvent territorial restrictions for commercial purposes, and it has been specified that foreign decoding devices, imported from another Member State, do not comply with the Conditional Access Directive's definition of “illicit devices”. The Court also considered that the object of intellectual property rights was to ensure their holders' right to exploit them commercially and obtain “appropriate remuneration”, which should take into account “the actual and potential audience both in the Member State of broadcast and in any other Member State in which

---

<sup>6</sup> In 2013, according to IHS ScreenDigest estimations.

the broadcasts are received”. Hence, “a prohibition on using foreign decoder cards would go beyond what is necessary to ensure appropriate remuneration for the holders of the rights concerned”.

In the FAPL and Karen Murphy cases, subscribers have recourse to the grey market to receive audiovisual copyrighted goods, because of the price difference between subscribing in Greece and subscribing in the UK. In this section, we propose a simple model to describe and assess the weight of this kind of grey market. Price difference between territories is the factor leading to parallel imports that is most commonly studied in the economic literature on grey markets. As regards audiovisual products and audiovisual subscription services, consumers are sensitive not only to the traded good and its price, but also to the way it is promoted and published. Rather intuitively, our model shows that consumers are more likely to circumvent distributors’ territorial exclusivity by subscribing to a foreign service when the price difference is marked and when they consider the local and foreign services highly substitutable. This result illustrates the previous legal cases: pub managers who transmit football matches do not require the same quality and specificity of publishing (comments, information’s overlay on the screen, etc.) as other private subscribers.

Let us consider the situation of two distinct countries, indexed by  $i = 1,2$ . In each territory, one authorised distributor purchases to right holders the exclusivity to sell copyrighted works to the local audience - both markets being supposed to be of the same size  $N$ .

We assume that the works are proposed to consumers under the same kind of service in both country: a monthly subscription giving access to a bundle of movies and series for instance. It is also assumed that there is no difference of quality (such as smaller or higher definition formats), but that distributors adapt the products to the – national – targeted audience: they advertise works according to local cultural preferences, systematically propose subtitles in the national language, etc. The two services available are therefore not substitutable, even if the content of each distributor’s catalogue can be assumed identical.

The cost faced by distributors can be decomposed in:

- the wholesale price paid to rights holders to be authorised to broadcast the works to consumers
- the marketing and adaptation costs, specific to the national market

The marginal cost borne by the distributor for every subscriber is thus:  $c_i = w_i + m_i$  ( $i = 1,2$ ).

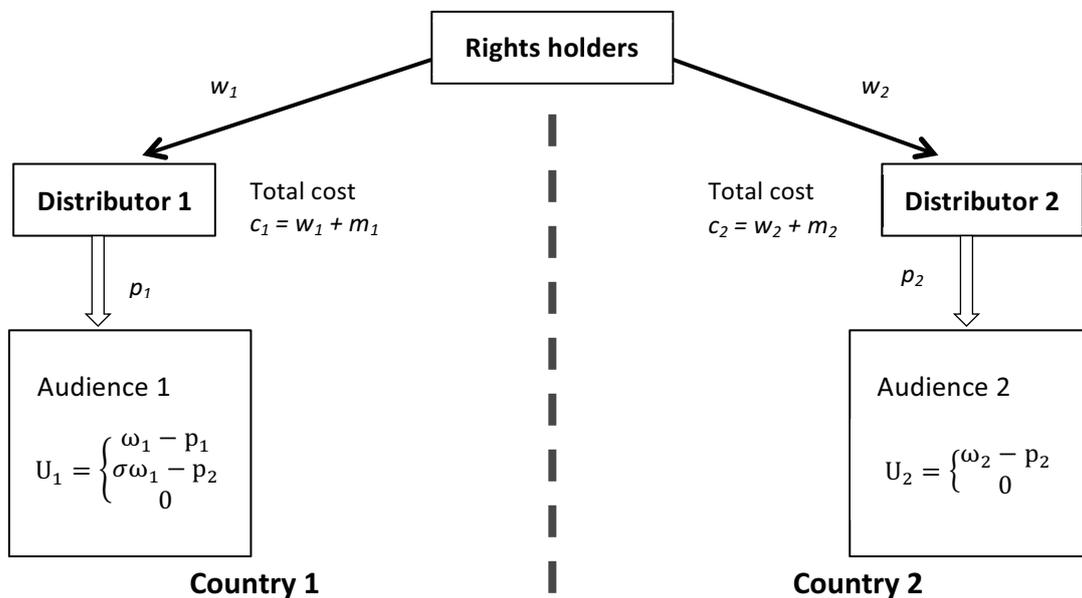
Distributor  $i$  charges a price  $p_i$  to allow consumers access the bundle of works in country  $i$ . This price can be viewed as the monthly subscription paid by the service’s users to access a catalogue of videos. However, the distributor does not control the place where the works are eventually watched or listened: some consumers may not respect the subscription contract and access the service from country  $j$ . Consumers originating in country  $i$ ’s are differentiated according to their willingness to pay  $\omega_i$  for the service:  $\omega_i$  is uniformly distributed over  $[0, \Omega_i]$  (with a density  $1/\Omega_i$ ). The consumer’s utility from purchasing a service is defined as follows:

$$U_i(\sigma) = \begin{cases} \omega_i - p_i & \text{for subscription to distributor } i \text{'s service} \\ \sigma\omega_i - p_j & \text{for subscription to distributor } j \text{'s service} \\ 0 & \text{if the consumer does not subscribe} \end{cases}$$

Where  $\sigma \in ]0,1[$  represents the substitutability of consuming products that have not been marketed or adapted in consideration of one's preferences. Consumers will then choose whether and where to subscribe to audiovisual media services, according to the corresponding utility: they prefer to access the service proposed by the distributor of their country of origin, but some of them may choose the foreign service if the price difference compensates the loss in utility.

We assume that prices and the income level are higher in country 1 than in country 2, so that the average willingness to pay is also higher in country 1:  $p_1 > p_2$  and  $\Omega_1 > \Omega_2$ . Consider the example of the UK where the annual spend on subscription video services is €123.6 per subscriber (and that can be assimilated as country 1) and Greece (€24.5 per subscriber, assimilated as country 2)<sup>7</sup>. British consumers will arbitrate between subscribing in the UK at a higher price but to a service that is more suited to their expectations, subscribing in Greece to access a less costly but less adapted service or not subscribing to any service. Greek subscribers would find no interest in subscribing to the British service (which is more expensive and less adapted to their demand and linguistic preferences), and therefore will consider only two options: subscription to the Greek service and no subscription at all. The main features of this model are summarised in Figure 1.

**Figure 1. Structure of distribution channels, when prices differ in countries 1 and 2**



As a consequence, some natives of country 1 will choose to subscribe in country 2 because of this lower price:

<sup>7</sup> In the UK/Greece example, we have approximately  $\Omega_1 = 5\Omega_2$ . Assuming that distributors face costs proportional to consumers' purchasing power in each country and that they maximise profits independently of the cross-border grey demand, we can also consider that  $p_1 = 5p_2$ .

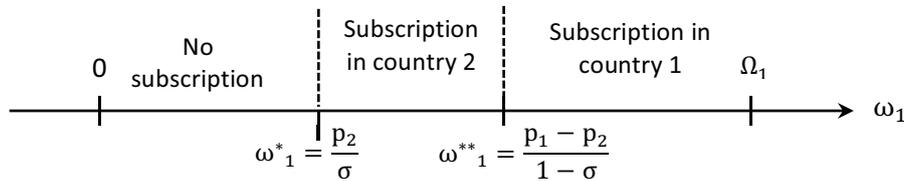
- Consumers of lowest willingness to pay will choose not to subscribe to any service or to subscribe in country 2. The marginal indifferent consumer has a willingness to pay  $\omega^*_1$  defined by:  $\sigma\omega^*_1 - p_2 = 0 \Leftrightarrow \omega^*_1 = \frac{p_2}{\sigma}$ . British consumers less willing to pay will not subscribe to a media service when their willingness to pay is lower than  $\frac{p_2}{\sigma}$ .
- Among country 1's consumers of high willingness to pay, the one who is indifferent between subscribing to distributor 1's or distributor 2's services is located at  $\omega^{**}_1$  such that  $\omega^{**}_1 - p_1 = \sigma\omega^{**}_1 - p_2 \Leftrightarrow \omega^{**}_1 = \frac{p_1 - p_2}{1 - \sigma}$ . British consumers subscribe to the less attractive but cheaper Spanish service if  $\omega_1 \in \left[\frac{p_2}{\sigma}; \frac{p_1 - p_2}{1 - \sigma}\right]$  and subscribe in the UK if  $\omega_1 \in \left[\frac{p_1 - p_2}{1 - \sigma}; \Omega_1\right]$ .

This arbitrage according to consumers' preferences for a service and willingness to pay constraints parameter  $\sigma$  such that:  $\sigma \in \left[\frac{p_2}{p_1}; 1 - \frac{p_1 - p_2}{\Omega_1}\right]$ .

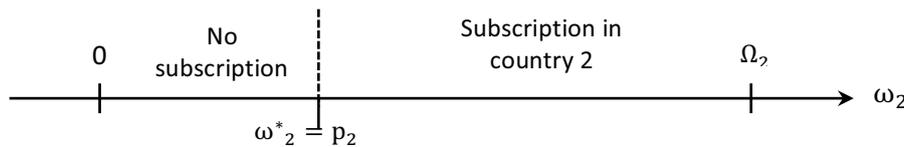
Consumers from country 2 will choose between subscribing in country 2 and not subscribing at all (since distributor 1's service is more expensive and considered of lower value):

- The marginal indifferent consumer originating in country 2 has a willingness to pay  $\omega^*_2 - p_2 = 0 \Leftrightarrow \omega^*_2 = p_2$ . Spanish consumers subscribe in Spain if  $\omega_2 \in [p_2; \Omega_2]$ .

Consumers in country 1:



Consumers in country 2:



It is then possible to determine the number of subscribers and the respective demand for the services offered by distributors 1 and 2. Those demands can be decomposed as shown in Table 1. Within this framework, some grey marketers in country 1 circumvent the territorial provisions of licencing agreements, because prices are lower in country 2:

**Table 1. Legal and grey demand for distributors 1 and 2 services in each country**

	Demand from country 1	Demand from country 2
Distributor 1	$N \left(1 - \frac{p_1 - p_2}{(1 - \sigma)\Omega_1}\right)$	0
Distributor 2	$N \frac{\sigma p_1 - p_2}{\sigma(1 - \sigma)\Omega_1}$	$N \left(1 - \frac{p_2}{\Omega_2}\right)$

The grey demand is then the demand for distributor 2's service in country 1:  $D^{GM} = N \frac{\sigma p_1 - p_2}{\sigma(1-\sigma)\Omega_1}$ .

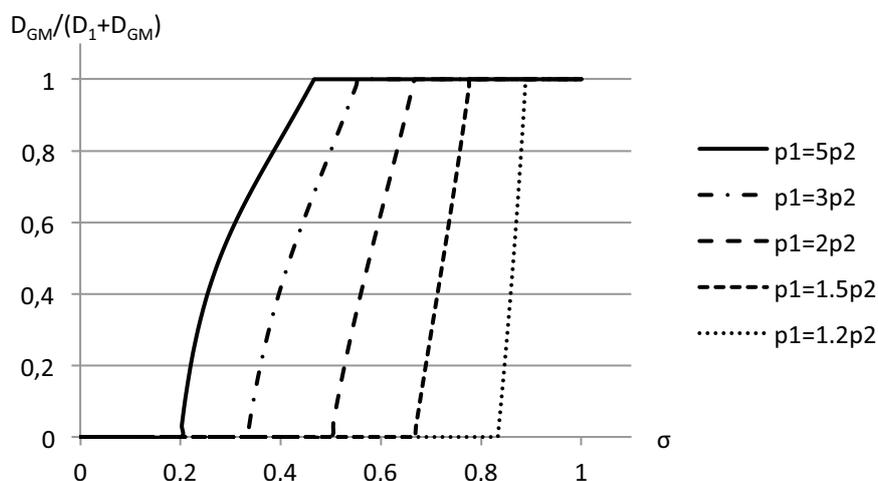
Distributor 1 loses some of his exclusive territory's total demand. The share of this grey demand relatively to the total demand in country 1 is:

$$\frac{D^{GM}}{D_1 + D^{GM}} = \frac{\sigma p_1 - p_2}{(1 - \sigma)(\sigma \Omega_1 - p_2)}$$

To assess the magnitude of the grey market phenomenon and the influence of the differential in price and of the services' substitutability, we consider that the costs borne by the distributor (to acquire the rights on the copyrighted works,  $w_i$ , and to mediatise those works,  $m_i$ ) are constant and proportional to the other parameters of our model, in each country. Distributor  $i$ 's profit maximisation then leads to  $p_i = \alpha \Omega_i$ . In order to simplify the following numerical applications, we set  $\alpha=2/3$ .

Under these assumptions, Graph 1 illustrates the influence of the price difference between country 1 and country 2. The plotted price differences range from  $p_1=1.2p_2$  to  $p_1=5p_2$ . This last value approximates the previous UK/Greece example and approximately corresponds to the maximum spending magnitudes that can be observed between European countries.

**Graph 1. Grey market share for various price differences**



The main and rather intuitive result is that grey markets emerge for lower values of parameter  $\sigma$  when the price difference is marked. Indeed, consumers arbitrate between the two audiovisual services according to the subscription prices and to their preference for the national service. If the foreign price is low, consumers are induced to subscribe to the foreign service, even though they poorly value the way works are adapted and published in its catalogue.

As regards the common use of subscription video services, it is very likely that a large majority of consumers would only be interested in subscribing to local TV channels and on-demand services (i.e. the value of  $\sigma$  is low, so that this category of subscribers generates no grey market). However, some

marginal consumers may more value the foreign service ( $\sigma$  close to 1). In the FAPL and Karen Murphy cases, pub managers who subscribed in Greece to receive sport programmes in the UK sought to transmit live football matches, but did not care about the comments, publishing, etc., designed for a Greek audience. Finally, expatriates who permanently live outside their country of origin also strongly value audiovisual services broadcasted from a foreign territory. The corresponding demand nevertheless has an upper bound, which is the rate of migrants in the total population, while largest migrant communities are likely to be proposed a legal offer to access their country of origin's audiovisual services.

### 3. Subscribers' nomadism: dealing with the arising cross-border demand

This section focuses on the cross-border demand linked to consumers' temporary mobility, which we refer to as *nomadism*. For instance, a Belgian subscriber may be willing to access his subscription account while travelling in Italy. We place in a given country, where consumers decide whether to subscribe to the exclusive distributor or not. Subscribing to a foreign service is supposed to present a high transaction cost and to be poorly substitutable with subscribing to the local service, so that consumers do not seek to access content through this kind of grey market. However, they may try to access a service limited to their national territory from a foreign country while travelling abroad. This behaviour defines a new nature of grey market, due to nomadism.

To analyse the interest of the distributor in proposing a portable subscription service and the effect on the subscription price, it is assumed that portability induces an additional fixed cost  $C_p$ . This cost comprises several factors, notably:

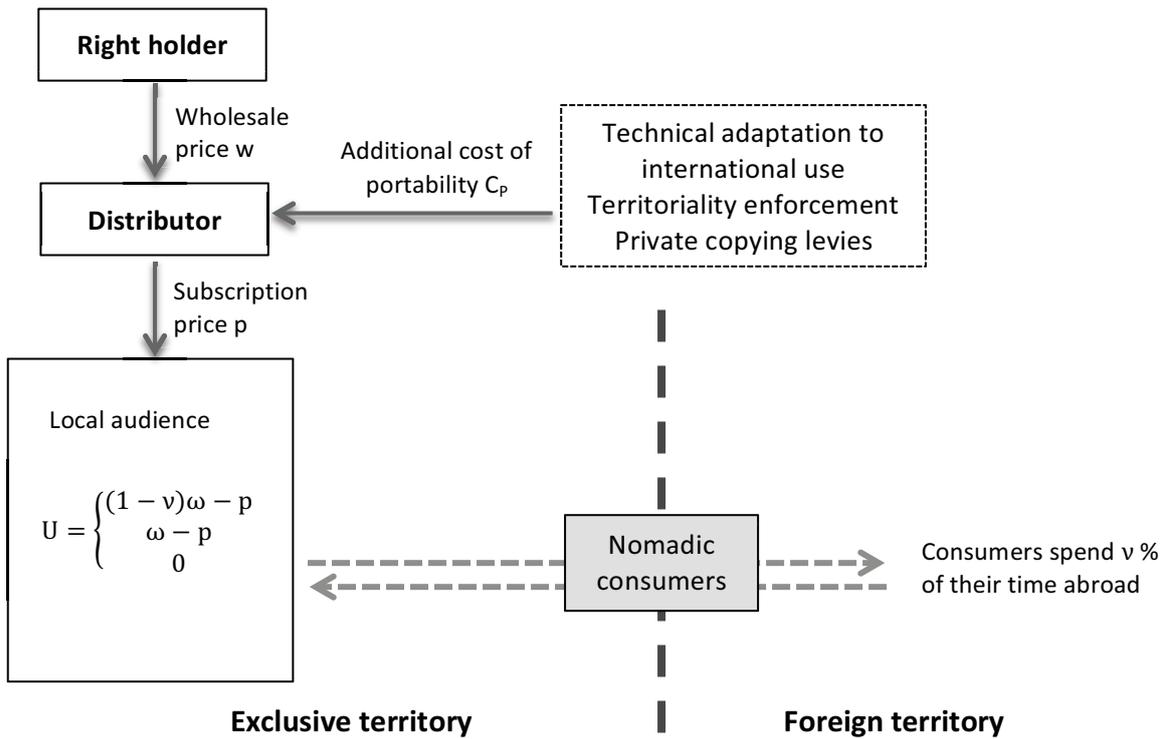
- the technical adaptation of the service to an international use<sup>8</sup>;
- the requirement to enforce copyright not only within the distributor's exclusive territory but in all countries where subscribers can access their account;
- the transaction cost of negotiating new multi-territorial licencing agreements;
- additional private copying levies, that copyright collective societies would require to consent the cross-border distribution of audiovisual works

Considering that subscribers spend a certain share  $v$  of their time abroad, they see the utility of subscribing to the video service reduced by  $v$  % if they cannot access it while they are travelling. If the subscription price is  $p$ , their utility is therefore  $(1 - v)\omega - p$  if the service is only available in their country of origin, and  $\omega - p$  in the case of a multi-territorial service. The utility of consumers who do not subscribe to an audiovisual service equals zero.

---

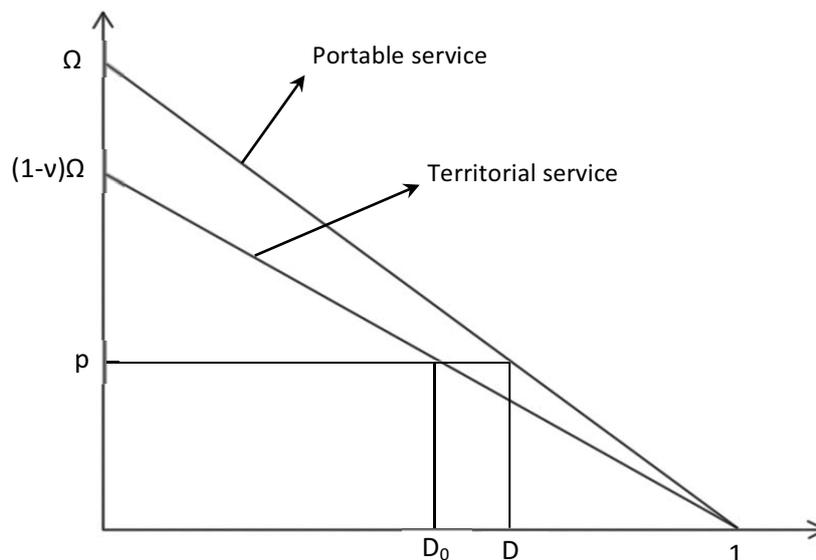
<sup>8</sup> In particular, services available through set-top boxes should also be provided through an over-the-top platform. Moreover, a minimum bandwidth is required to provide a service of quality, which is potentially a matter for negotiation in every country covered by the multi-territorial service.

**Figure 2. Structure of the distribution channel in a given country, when consumers travel abroad  $v$  % of the time**



The utility of subscribing to an audiovisual service is supposed to be homogenously distributed over consumers, with a density  $1/\Omega$ . Offering a territorial rather than portable service to consumers therefore leads to decrease the total demand from  $D$  to  $D_0$ , as shown in Figure 3:

**Figure 3. Consumers' demand curb for a territorial or portable service**



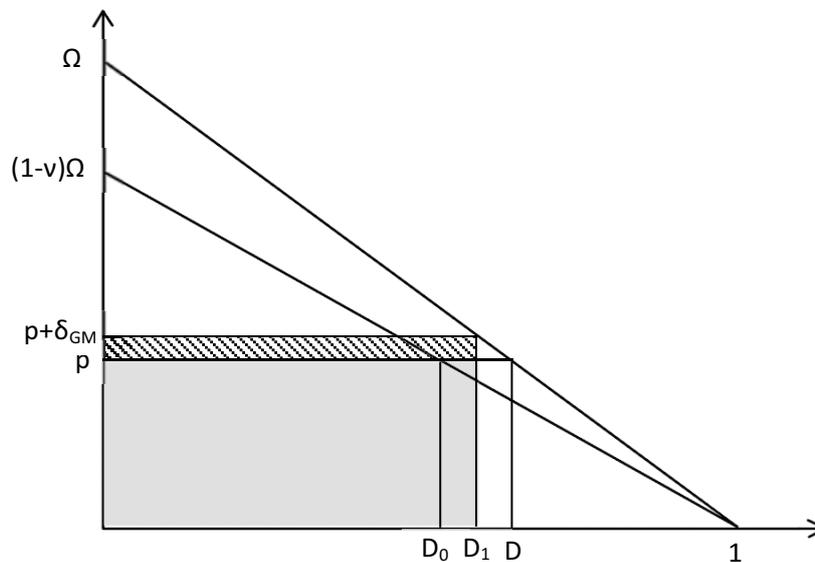
In what follows, we consider three different ways of responding to the cross-border demand. In the first situation, the distributor offers only a territorial service but does not enforce territoriality. As a consequence, he or she does not bear the cost of portability  $C_p$ , but some consumers try to access the service from abroad and therefore circumvent the licencing agreement. Secondly, we consider the case

of “mandatory” portability: the distributor offers only a multi-territorial service, which is priced in order to cover the additional cost  $C_p$ . Finally, in a third situation portability is offered to consumers as an option and at a specific price. The distributor still faces the cost  $C_p$ , and lets subscribers choose the territory covered by their subscription.

**3.1. Consumers’ recourse to the grey market when no multi-territorial service is offered**

If territoriality is not fully enforced – i.e. the distributor poorly controls the location where subscribers access their account – some consumers who most value cross-border portability may decide to access a territorial service from a foreign country. The cost or discomfort to access the service by breaching the territorial clause of the subscription contract is supposed equal to  $\delta_{GM}$ . In strict logic,  $\delta_{GM}$  should not be viewed as a fixed and unique disutility, since it may vary greatly from one consumer to another – some subscribers will not be technically able to access the grey market, while a few hackers may find it fun. Moreover, the market for SVOD services is still in its native stage. The first subscribers are probably the most proficient with digital technologies, and thus also the most likely to cheat. As a consequence, the average value of  $\delta_{GM}$  can be supposed to increase as the market will expand and as consumers less likely to hack subscribe to on-demand services.

**Figure 4. Consumers’ recourse to the grey market when no portable service is offered**



As shown in Figure 4, tolerating the grey market leads to introduce price discrimination. Consumers who most value cross-border portability of the service are ready to bear the disutility  $\delta_{GM}$  of infringing the subscription contract, bringing the total demand for the service from  $D_0$  to  $D_1$ . This situation is beneficial to both the distributor (who sees the demand for the service increase, while not paying the cost of portability  $C_p$ ) and consumers (whose utility is increased).

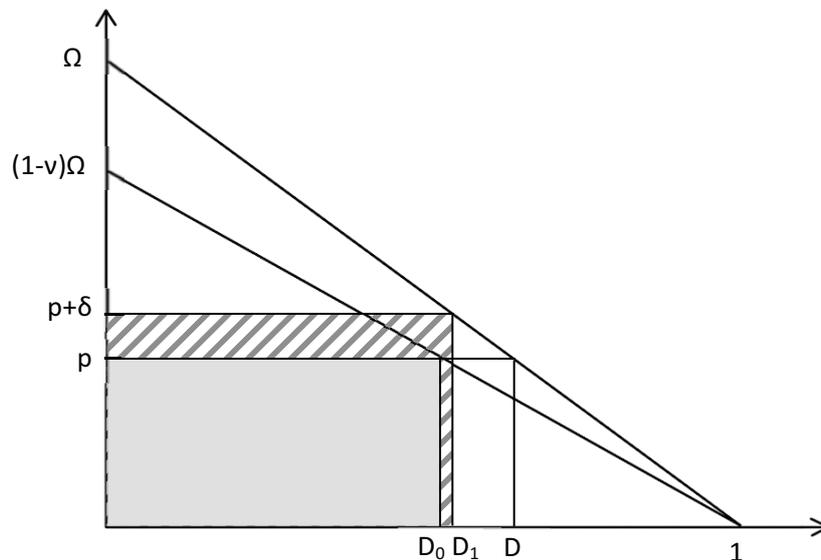
However, the distributor does not capture the externality created by the grey access to the territorial service (displayed by the hatched area in Figure 4). If the magnitude of this grey market expands, he or

she may decide to accept to pay  $C_p$  in order to introduce a portable service and make higher profit of the multi-territorial demand. Tolerance toward grey marketers therefore appears to be efficient, as long as the corresponding externality does not encompass  $C_p$ .

### 3.2. Portability is systematically offered to all subscribers

In this second situation, the distributor offers only a portable service. The initial demand for a territorial service priced at  $p$  is supposed to be  $D_0$ . The service provider sets the subscription price at  $p+\delta$ . In this case, since portability is automatically applied to all subscribers, the issue of consumers' recourse to grey markets no longer arises. As shown in Figure 5, the demand  $D_1$  for the portable service depends on the portability price  $\delta$ . If  $\delta \in \left[0, \frac{v}{1-v}p\right]$ , the distributor responds to a higher demand ( $D_1 > D_0$ ). If  $\delta > \frac{v}{1-v}p$  the distributor sees the demand for his service decrease when shifting to portability.

**Figure 5. Cross-border portability is applied to all subscribers and priced at  $p+\delta$**



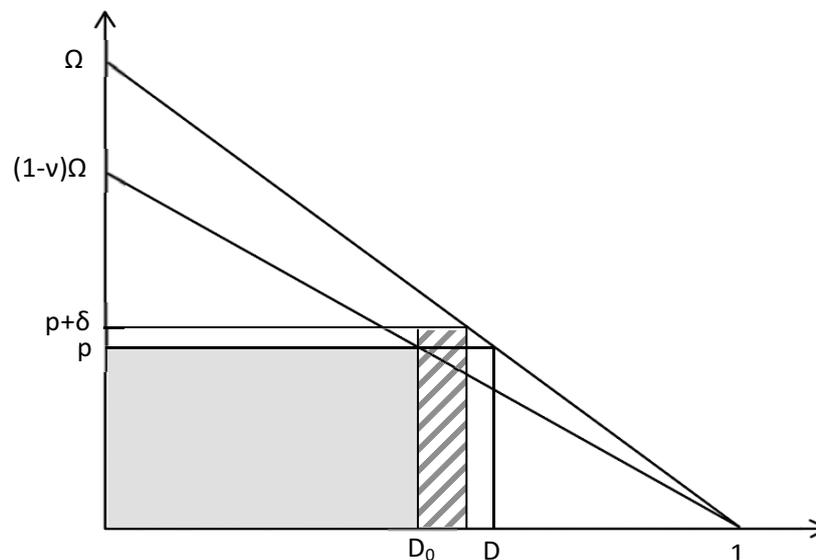
If we consider that the demand remains equal to  $D_0$  and that the distributor sets  $\delta = \frac{C_p}{D_0}$  to cover the additional cost of portability, the price increase will be even more significant that the initial market is reduced (i.e.  $D_0$  close to 0). This is the case of subscription video on-demand services. Conversely, if the market is already mature (i.e.  $D_0$  close to 1), the fixed cost of introducing portability can be distributed over a large number of subscribers, so that the price increase  $\delta$  is lower.

### 3.3. Portability is optional

In this last situation, portability is offered by the distributor (who therefore faces the corresponding cost  $C_p$ ) but as an optional clause. Consumers are therefore able to choose between subscribing to a territorial service (at a price  $p$ ) or to multi-territorial one (at a price  $p+\delta$ ). This price setting allows price discrimination of consumers who highly value cross-border portability of their subscription

service, as displayed in Figure 6.

**Figure 6. Cross-border portability is optional and priced at  $p+\delta$**



However, some consumers who are not willing to pay for the portability option may seek to access the territorial service from a foreign country. As explained in Section 3.1, circumventing territoriality presents a certain disutility to subscribers. Contrarily to the first situation in which the distributor tolerates grey markets, territoriality is now enforced. Hence, the disutility of accessing a service outside the authorised territory is supposed to be  $\delta'_{GM} > \delta_{GM}$ .

Two possibilities need to be distinguished:

- If  $\delta > \delta'_{GM}$ , grey marketers will bear  $\delta'_{GM}$  rather than paying for the portability option
- If  $\delta < \delta'_{GM}$ , there is no more interest in accessing the grey market instead of paying  $\delta$  for a portable service

However, as it has been previously highlighted, the value of  $\delta'_{GM}$  is likely to depend on the concerned consumer. The most probable outcome of the introduction of optional portability would therefore be a discrimination of both grey marketers and consumers of highest willingness to pay. Setting a low price  $\delta$  of legal portability permits to reduce the number of grey marketers.  $\delta$  should however be high enough to enable the distributor to cover the cost  $C_P$  of offering a multi-territorial service and of enforcing territoriality.

### 3.4. Trade-off between the three situations

The three cases that are described in this section are different means to respond to the demand for a multi-territorial service, due to consumers' nomadism. We have here compared those different situations, without determining under what conditions the distributor finds it more beneficial to tolerate the grey market, to impose portability to all subscribers or to offer an optional portability clause.

Indeed, this trade-off is based on a few key variables, which are the initial market size of a territorial service ( $D_0$ , that can be viewed as the market's level of maturity), the effective magnitude of the cost borne by the distributor when introducing portability ( $C_p$ ) and consumers' propensity to have recourse to the grey market ( $\delta_{GM}$ ). Finally, the demand curbs were here supposed linear for the sake of simplicity. The effective demand is however more complex to assess, since it is probable that consumers of high willingness to pay grant more value to portability than the others. In other words, the share of time spent abroad  $v$  is certainly not homogeneous for all consumers, and mobility habits may depend on consumers' purchasing power. Finally, the characteristics of consumers' demand are obviously more difficult to apprehend in the case of a recent market, such as the market for SVOD services.

#### 4. Conclusion

The European media market consists of 28 countries and almost as many linguistic, cultural and regulatory territories. Since licencing agreements are based on linguistic basins, trying to standardise the distribution of audiovisual goods on the overall EU territory would induce strong rigidities. This paper is an attempt to define the origin of European consumers' demand for multi-territorial audiovisual services, and to examine different means to respond to this demand.

The cross-border demand may first arise because of consumers' wish to subscribe to a service offered by a foreign distributor. We have shown that this situation occurs when consumers highly value the foreign service. In practice, this can be the case of expatriates who permanently live outside their country of origin, and, when the price set by the foreign service provider is significantly lower, of some marginal consumers who attach no importance to the way audiovisual goods are selected and published. This last situation is a "classic" illustration of grey market, similar to the legal cases examined by the European Court of Justice in 2011.

Secondly, consumers can be willing to access their audiovisual service while travelling abroad. This cross-border demand is driven by subscribers' nomadism and is the focus of the Commission's attention. This paper analyses three means of responding to this demand: grey market's tolerance, systematic portability of the service and optional portability. In these last two cases, introducing portability in subscription contracts is supposed to incur an additional cost  $C_p$  to the distributor who adjusts the subscription price accordingly.

The crucial point that should be noticed is that the purpose of allowing subscribers' mobility first applies to SVOD services. Though rapidly expanding, these services are still being rolled out and

account for a tiny share of the total audiovisual subscription market in Europe<sup>9</sup>. If service providers were required to introduce portability in their subscription contracts, they would need to allocate the ensuing additional cost over a very few number of subscribers. Moreover, since this market is still at an infant stage, it appears difficult to assess the main factors that should determine the most appropriate response to the cross-border demand. These parameters are notably the effective demand curb, consumers' attitude toward the recourse to the grey market and the level of the additional cost induced by the introduction of portability. Our analysis however highlights the following points:

- As it has already been discussed in the previous literature, tolerance for grey markets can be efficient in certain circumstances. As regards the issue of audiovisual services' portability, it has the advantage of allowing price discrimination of consumers who most value the multi-territorial availability of their service, while involving no supplementary costs to the distributor.
- If portability had to be mandatory (or possibly considered as fair use), it would incur a fixed cost borne by service providers. This additional cost would not only be generated by the necessary technical changes, but also by the need to enforce copyright on multiple and diverse market and by private copying levies that copyright collecting societies would probably require.
- Distributor and right holders share the same interest, which is maximising the audience for the licenced works. The necessity to offer audiovisual services best tailored to European consumers' demand leads to adapt those services according to the market's development. If grey markets appear to be an efficient solution at the initial stage of VOD services' rollout, the shift to legal portable services would occur when distributors will find benefit in internalising the benefits of nomadic consumption.

## References

- Antia, K. D., Bergen, M., & Dutta, S. (2004). Competing with gray markets. *MIT Sloan Management Review*, 11, 63-69.
- Bomsel, O. (2011). Do you speak European? Media economics, multilingualism and the digital single market. *Communications & Strategies*, 82 (2), 43-62.
- Caves, R. E. (2000). *Creative industries*. Harvard University Press.
- Cespedes, F. V., Corey, E. R., & Rangan, V. K. (1988). Gray markets: causes and cures. *Harvard Business Review*, 66 (4), 75-83.
- Dunt, E., Gans, J. S., & King, S. P. (2002). The economic consequences of DVD regional restrictions. *Economic Papers*, 21 (1), 32-45.
- Dutta, S., Bergen, M., & John, G. (1994). The governance of exclusive territories when dealers can bootleg. *Marketing Science*, 13 (1), 83-99.

---

<sup>9</sup> According to IHS ScreenDigest estimates, over-the-top SVOD services would generate revenues of nearly €130 million in 2013, while the total audiovisual subscriptions' revenues would reach €32 billion in Europe.

- Huang, J.-H., Lee, B. C., & Ho, S. H. (2004). Consumer attitude toward gray market goods. *International Marketing Review*, 21 (6), 598-614.
- Landes, W. M., & Posner, R. A. (1989). An economic analysis of copyright law. *Journal of Legal Studies*, 18, 325-363.
- Matsushima, N., & Matsumura, T. (2010). Profit-enhancing parallel imports. *Open Economies Review*, 21 (3), 433-447.
- Miceli, T. J., & Adelstein, R. P. (2006). An economic model of fair use. *Information Economics and Policy*, 18, 359-373.
- Xiao, Y., Palekar, U., & Liu, Y. (2011). Shades of gray - The impact of gray markets on authorised distribution channels. *Quantitative Marketing and Economics*, 9 (2), 155-178.