Convergence and the Potential Ban on Interactive Product Placement in Germany

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Abstract

This paper addresses the economic impact of German advertising regulations. The digital convergence of media provides a starting point for the analysis. This convergence makes technically feasible "interactive product placement" (IPP), the integration of interactively purchasable products in television programs and movies for the purpose of advertising. Such advertising could conceivably outstrip traditional product placement as a source of revenues for the film industry. Moreover, IPP could provide valuable incentives to create new audiovisual hardware and software. As product placement is generally banned in Germany, we critically review relevant regulations. Additionally, a simple model is developed that allows for a welfare economic approach to the analysis of an IPP ban.

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Advertising regulations, German film industry, interactive product placement, law and economics

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1 Introduction

Digital technology permits the use of devices such as personal computers and television for similar functions. This digital "convergence" also makes it possible to provide consumers with interactive services. Until quite recently the term "interactivity" was little more than a buzzword. In the case of television broadcasting, for instance, it simply meant selecting programs or choosing teletext pages. Viewers wishing to interact further had to communicate with broadcasters or advertisers by email, telephone, or letters. Industry observers report this situation is about to change dramatically,[1] with the introduction of enhanced television devices (e.g., set-top boxes) that allow viewers to interact directly with web-based information.[2] In practical terms, viewers will be able to use their remote controls to purchase goods associated with the broadcast without having to go online with their personal computer. The change opens up possibilities for advertisers, not only in traditional spot advertising, but also in connection with products appearing within regular programing. Putting products directly into a program or film is referred to as "product placement" or "brand placement." Product placement is currently used as a means to help finance movies and TV programs.[3]

The combination of interactivity and product placement could alter the market for product placement considerably. First, it is likely to enlarge the market substantially and, hence, raise its weight in program financing. Traditional product placement is limited to branded products, i.e., products already familiar to the viewer. Interactive product placement (IPP) in contrast is useful in building brands, because it makes any placed product interactively identifiable and easy to buy.[4] Second, the commercial possibilities of IPP will likely motivate development of new products by the audiovisual and telecommunications industries, and in the case of television, foster the

[1]See Blickpunkt:Film (2001) *Interaktives TV mit analogem Fernsehen*, No. 13., p. 43; Berger, R. (2000) T-Commerce could dwarf web sales, *Electronic Media*, November 6, 2000, and McDonald, K.A (2001) Advertisers test interactive arena, *Variety*, January 15-21, 2001 (Section: spotlight television).

[2]A number of television set manufacturers already offer television devices with internet access, e.g., Fujitsu Siemens Computers (Activy 300), Grundig (WB1), Loewe (Xelos @media TV), and Commodore (Web.it). There have been trials and tests of interactive television since the 1970s. For a review of the history of interactive television trials and experiences, see Carey (1997).

[3]For examples from the US, see Snyder (1992). German cases are described by Auer, Kalweit, and Nüßler (1991).

[4]Digitalization also allows for new types of product placement. In a 1999 episode of a US soap opera, a technology that allows advertisers to have products digitally added to a scene was tested. That technology was subsequently used in sports broadcasts to add or change content of commercial billboard areas seen during baseball and football games.

development of new content formats and services as well.

In Germany, as elsewhere in Europe, however, advertising regulations – above all, the principle of separation between programmingand advertising – constitute major impediments to the deployment of IPP. Further, the political discussion seems very much concerned with the desirability of such advertising methods.[5]

Thus, several questions arise. What specific regulations apply to IPP? Will IPP be banned? Which arguments might favor IPP and what legal counterarguments support a ban? How would the introduction of IPP affect economic welfare? We address these questions in the following discussion. Our focus lies on the application of IPP to motion pictures.

The remainder of this paper is organized as follows. Section 2 identifies the legal framework of IPP in Germany.[6] Section 3 critically reviews that framework and explores some of its economic dimensions. In this context, a brief description of the US legal framework is provided. Section 4 presents a simple equilibrium model that permits a welfare economic analysis of a ban on IPP. Section 5 summarizes the main findings and concludes.

2 Legal Framework

German advertising regulations are complex and differ extensively with respect to media and services. In the following, we seek to examine regulations potentially relevant to IPP. First, we turn to the field of television broadcasting and briefly consider the established principle of separation of regular programmingand advertising and its relation to surreptitious advertising, as well as regulations and guidelines concerning specific classifications of advertising such as "teleshopping," "long time advertising" (*Dauerwerbung*), and "prop & wardrobe credits, and accompanying items" (*Ausstatterhinweise, Begleitmaterial*). Second, we discuss regulations that apply to movies that are initially produced for theatrical release. Third, we look at so called teleservices. Then, we consider the *Deutsche Grundgesetz* (German Basic Law), and specifically, the rulings of the *Bundesverfassungsgericht* (Federal Constitutional Court - BVerfG) which provide the legal basis for the current

[5]This scepticism is well illustrated by a recent announcement of the Commission of the European Communities of its intention to study new television advertising techniques, in particular with regard to interactivity and product placement. The main focus of the study is "...to analyze how to ensure a clear distinction between advertising and other content." See Commission of the European Communities (1999), p. 17.

[6]The focus of the legal analysis here is the German framework, which serves as a fair representation of the regulatory environment found in much of Europe.

framework for advertising legislation. We take these constitutional interpretations into account in a critique of the current design of the legal framework.

2.1 Television Broadcasting

General Regulations

Advertising regulations in the field of television broadcasting can be found at three levels. At the highest level, there are EU directives that provide supranational guidelines.[7] Within Germany, the *Rundfunkstaatsvertrag* (RStV*)* governs broadcasting at the interstate level.[8] Finally, there is specific media regulation at the state level. Besides, there are television advertising guidelines issued by the public television stations and a special authority of the federal states, the *Direktorenkonferenz der Landesmedienanstalten* (DLM), which deals with advertising regulations in detail.[9]

For our purposes, it is at first sufficient to discuss the RStV as it is the primary source of regulations governing German television advertising. At the heart of these regulations lies the principle of separating advertising from other programing. This notion may well be considered the great dictum of German broadcasting advertising law.[10] The principle is spelled out in § 7 III RStV:

> "Advertising and teleshopping must be clearly identifiable as such. They have to be separated unequivocally from other programing, by optical means in the case of television and by acoustic means in the case of radio."[11]

A violation of the separation principle may lead to television broadcasting law complaints and can be prosecuted as a regulatory offense. Of course, it

[7]Council Directive 89/552/EEC 03/10/1989. Official Journal L 298, 17/10/1989, modified by 97/36/EC, Official Journal L 202, 30/07/1997 and the European Convention on Transfrontier Television, 05/05/1989.

[8]Rundfunkstaatsvertrag vom 31. August in der Fassung des vierten Rundfunkänderungsstaatsvertrags, in Kraft seit dem 1. April 2000, GBl., Baden-Württemberg vom 30.12.1999. The *Bundesverfassungsgericht* in its very first judgement on television broadcasting in 1961 ruled that broadcasting legislation is, in principle, subject to the jurisdiction of the states. See *Entscheidungen des Bundesverfassungsgerichts* [BVerfGE] [Federal Constitutional Court] 12, 205 ff. (F.R.G.) Therefore, interstate agreements similar to multilateral agreements under international law emerged alongside law at the federal level.

[9]The DLM consists of representatives from each state's broadcasting authority. The DLM seeks to coordinate the licensing of federal broadcasting, efforts involving protection of children and young persons against immoral influences, and the setting of advertising guidelines.

[10]See Engels and Giebel (2000), p. 271.

[11]Author's translation.

is problematic to apply the separation principle strictly – advertisements and brand name products are ubiquitous parts of everyday life. Therefore, a program that does not display advertisements and brand names does not give an authentic picture of reality. Moreover, it would be impossible to broadcast reports about products. Consequently, it is beyond legal dispute that some usage of brand name products and the filming of advertisements within the scope of programming is tolerable.[12] The distinction between admissible and prohibited product presentations is provided by the term *surreptitious advertising* defined in § 2 II No. 6 RStV:

> "Surreptitious advertising is the reference to or the presentation of goods, services, names, trademarks or activities of a manufacturer of goods or a supplier of services in programs when such reference or presentation is intended by the broadcaster to serve advertising purposes and can mislead the general public as to its real purpose."[13]

The ban on surreptitious advertising is expressed in § 7 VI RStV. Infringements against this ban can result in a regulatory fine and the confiscation of revenues generated by surreptitious advertising (§ 49 I RStV).[14]

We can see that there are two elements to the definition of surreptitious advertising: the broadcaster's intent to advertise and the potential for viewer deception. With respect to the broadcaster's intent to advertise, section § 2 II No. 6 RStV explicitly enumerates broadcasters receiving a payment or a similar valuable monetary consideration for product presentation. Furthermore, the legal literature suggests compulsory indication of the advertising's intent where contractual obligations with respect to a product placement exist or if the screenplay has been adjusted accordingly.[15] Therefore, there is a strong likelihood IPP will be classed as surreptitious advertising under existing television broadcasting law. With respect to IPP's potential for viewer deception, the RStV is silent. However, several rulings and discussion in the legal literature indicate that traditional product placement is widely

[12] See Platho (2000), p. 48.

[13] Author's translation.

[14] Regulatory fines run as high as € 510,000. § 7 III RStV also reveals that the fulfillment of the separation principle requires a clear identification of advertising. Basically, this means that advertising has to be readily recognizable as such, for example, by displaying the caption "advertising" on screen. Such identification is sufficient if it is displayed for several seconds at the beginning of a block of commercials.

[15] However, the broadcaster's intent is generally not considered with respect to the broadcast of pure licensing products, e.g., foreign movies or sport events that contain product placement. In such cases, broadcasters will not be held liable. See e.g., Engels and Giebel (2000), p. 278. We return to this matter later in the paper.

considered as potentially deceptive.[16] This perception is further supported by other provisions of the RStV such as § 7 II RStV, which bans advertisers and advertisements from having any influence on programming content or editorial decisions.

Specific Regulations

The border between illegal surreptitious advertising and pure product presentations is blurred. Legal practices, legislation, and broadcasting authorities have therefore created narrower definitions for making the necessary distinctions. Let us briefly explore the most relevant terms with respect to their applicability to IPP.

- Teleshopping

First, one might assume that IPP constitutes one of several permitted types of "teleshopping" and, hence, could be classified as legitimate. Teleshopping is generally defined in § 2 II No. 8 RStV as a broadcast that directly offers goods and services to the public. On the other hand, the RStV says teleshopping is subject to the separation principle of § 7 III RStV. Thus, IPP will probably not be classed as a type of teleshopping under the RStV.

Second, "teleshopping channels" are not regulated by the RStV, but by the *Mediendienstestaatsvertrag* (MDStV), an inter-state agreement on media services. Such channels operate for the limited purpose of selling products to their viewers. While one might logically presume that movies that contain IPP could simply be transmitted via a pure teleshopping channel, § 9 II MDStV states that the "advertising must be clearly identifiable as such and has to be separated unequivocally from other content of the services."[17] Again, the separation principle is reflected in this provision, which suggests that even on the teleshopping channel, which exists expressly to sell products, it is likely illegal to show a movie that contains IPP.

- Long time advertising (Dauerwerbung)

Another type of permitted advertising that might be relevant with respect to IPP is "long time advertising." The classification applies to infomercial-type ads. Typically, such advertising is packaged as demonstrations, testimonials, or game show formats. Although, the law offers no explicit definition of such advertising, it is characterized by a combination of advertising and

[16] See BGH "Boro" decision, I ZR 78/88 of 22.02. 1990 and Hartstein, Kreile, and Ring (1999).

[17] Author's translation.

editorial parts of product presentations addressed under § 7 V RStV. The advertising elements must dominate the presentation to ensure that the separation principle is followed, and the presentation must display writing that clearly indicates that the purpose of the presentation is to sell a product.[18] Again, although one might expect convergence to enlarge the market for such presentations, IPP does not necessarily fit the term because it will not necessarily come to the fore in a broadcast. While some interactive presentations may largely be sales events, the sales intention embedded with a movie is only incidental. Again, IPP in movies will likely be banned, because it violates the separation principle.

- Prop & wardrobe credits, accompanying items (Ausstatterhinweise, Begleitmaterial)

Further, the "prop and wardrobe credits" view could be considered to apply to IPP. In exchange for prop and wardrobe credits, producers of goods such as furnishing and clothing make their products available at no cost to movie or television show producers. In return, the product manufacturers are mentioned in the end credits by the broadcaster. This approach is not banned according to No. 19 DLM television guidelines. Naming products *within* the program, however, is forbidden. The same holds for accompagnying items that are intended to deepen the editorial content of a broadcast, e.g., a companion book to the film.[19] Moreover, money paid to use a prop is generally considered to constitute surreptitious advertising. Thus, also due to its financing function it is unlikely that IPP will be classified as a legitimate means of showing prop credits.

2.2 Theatrical Releases

IPP seems unlikely to occur in movie theatres. Nevertheless, it is reasonable to discuss traditional product placement in films, because the analysis here provides insight into the legal discussion of this advertising method. With respect to movies produced for theatrical release, competition law, in particular, the *Gesetz gegen den unlauteren Wettbewerb* (Act Against Unfair Competition - UWG) contains provisions potentially relevant to product placement. § 1 UWG, a universal civil blanket clause, has been invoked by the courts in resolving previous litigation:[20]

[18] See Engels and Giebel (2000).

[19] See Engels and Giebel (2000).

[20] § 3 UWG, which bans deceptive advertising, may also be somewhat relevant. However, § 3 UWG sets broader limits than § 1 UWG. For an extensive discussion of product placement in the context of competition law, see Asche (1996), p. 52 ff.

> "Whosoever in business dealings for the purpose of competition takes up practices that offend against good morals may be called upon to cease and compensate for damages"[21]

The legal literature on this matter states that the potential harm of product placement is covered by two areas of the law: consumer deception (fraud) and rule infringement.[22] With respect to consumer deception, it is argued that product placement may be used as a means to circumvent natural consumer skepticism about advertising. When consumers are not in a position to deal critically with the product appearance, the product placement is seen as an act *contra bonos mores.* Similarly, with respect to rule infringement, it is argued that product placement gives the advertiser a competitive advantage over its law-abiding business rivals and is a violation of the separation principle and other RStV prescriptions.

Recently, the German *Bundesgerichtshof* (Federal Court - BGH) considered product placement in detail with respect to the theatrical showing of the movie *Feuer, Eis und Dynamit.*[23] The court's decision found that it is reasonable to assume an audience will not be deceived by product placement as long as the amount of product placement in a motion picture is no more than "generally expected" and kept to a "tolerable" level. In addition, the BGH demanded that the audience be informed about product placement.

Subsequent legal writings have considered product placement in the context of motion picture production for initial theatrical release legal as long as the product placement is announced to the audience.[24] This view contrast sharply with the rules concerning IPP in television broadcasting.

[21] Author's translation. Apart from the legal consequences enumerated in § 1 UWG, a contract that offends good morals will void the contract and make it unenforceable. A prominent German example of a voided product placement contract was seen in the case of a textile firm's advance payment of DEM 200,000 (approximately € 102.500) for a product placement in the popular music telecast "Formel 1." Although the placement never actually appeared, the firm's attempt to recover its advance payment was not heard by the regional court, because the court said the contract offended good morals. See Scheele (1986), p. 28, for this and other examples.

[22] See Asche (1996).

[23] BGH, 06.07.1995, in: *Neue Juristische Wochenschrift* 1995, p. 3177 ff. and BGH, 06.07.1995, in: *Neue Juristische Wochenschrift* 1995, p. 3182 f., for discussion, see Asche (1996), p. 72 ff.

[24] A narrower evaluation of the BGH ruling is given by Hartstein, Kreile, and Ring (1999), p. 60. Product placement is considered legal when no more than 20% of the movie's financing stem from product placement. If this limit is exceeded, the use of paid product placement must be announced to the audience before the movie is shown.

2.3 Tele-Services

The federal *Teledienstegesetz* (TDG) law governs electronic telecommunications services for personal use, e.g., internet use. Under this law, no separation of advertising and other content is necessary. The TDG clearly allows IPP as part of telecommunications services provided to individuals and clearly contradicts the regulation of IPP in television broadcasting.

To sum up, our analysis suggests that the regulation of IPP differs in accordance with the medium. IPP seems likely to be prohibited in television broadcasting, permitted on a limited basis in movies primarily produced for theatrical release (as long as the amount of IPP is tolerable and announced), and permitted without restriction in electronic telecommunications services provided to individuals.

2.4 Constitutional Issues

German Basic Law provides the legal basis for television broadcasting regulations, competition law, and teleservices provisions. Therefore, an analysis of constitutional aspects of IPP and traditional product placement may clarify the underlying reasoning behind the differences in regulation depending on media type.

With respect to competition law, German Basic Law can be used as a guideline for interpretation of the civil blanket clause of § 1 UWG.[25] The literature suggests that from this perspective product placement ultimately has to be judged as a balancing of artistic freedom as specified in Art. 5 III phrase 1 Basic Law and consumers' right to autonomously contract stated in Art. 2 I Basic Law.[26] The latter right implies that consumers have the right to decide autonomously if they want to contract, with whom, how, and what subject matter the contract might contain. However, to be in a position to decide autonomously it is necessary that consumers can deal freely with product advertisements. If a consumer is unaware that a product in a movie is

[25]The BGH argued for such interpretation in the *Feuer, Eis und Dynamit* case. Basic constitutional rights, in principle, govern relations between citizens and the state, but they may also be used as guidelines for interpretation of civil blanket clauses. See BVerfGE 73, 261 (269) (F.R.G.).

[26]Other German Basic Law provisions that protect product placement are the freedom to freely choose one's profession (Art. 12 I phrase 1) and the freedom of opinion (Art. 5 I phrase 1). However, the freedom of artistic expression (Art. 5 III) rules these provisions out. On the other hand, viewers' interest in undisturbed movie viewing could also be deduced from the general freedom of action Art. 2 I Basic Law. However, since viewer decide herself to watch or not to watch a movie, it is implausible to refer to this provision. For an extensive discussion of this issue see Asche (1996), p. 95 ff.

part of a product advertising campaign, he or she might view the advertising message uncritically. Therefore, product placement can be considered to disturb the consumer's free decision of purchasing. Consequently, one faces a trade-off between the freedom of art and the personal rights of Art. 2 Basic Law, i.e., a trade-off between artistic freedom and consumers' autonomy to contract.

With respect to the field of broadcasting, essentially Art. 5 I phrase 2 Basic Law has to be considered. It states,

> "Freedom of the press and freedom of reporting by means of broadcasts and movies shall be guaranteed."[27]

While one might expect this provision supports the broadcaster's freedom to choose whether to broadcast product placements, the juridical interpretation is quite the opposite. The key to this surprising interpretation lies in a number of seminal decisions by the *Bundesverfassungsgericht* (Federal Constitutional Court - BVerfG). These serve as reference points for all television broadcasting regulations.[28] Traditionally, the ruling of the BVerfG has stated that the freedom of broadcasting must serve primarily as a means to ensure the process of free and comprehensive formation of personal and public opinion, which is considered essential in a pluralist democratic society. Therefore, the freedom to broadcast and report freely is considered to represent an institutional guarantee, rather than a basic right to pursue one's own interests.[29] Moreover, the BVerfG considers television broadcasting, due to its scope and suggestive power, to be of special importance in the process of opinion building.[30] The essential role of television broadcasting also extends beyond information dissemination and political broadcasting to the field of entertainment.[31] In this context, the separation principle can be considered to protect the "market for opinions" within society.[32] Any direct or indirect influence on programming is considered to be incompatible with this protective function.[33] Hence, television broadcasting legislation considers the separation principle to be a means to protect the function of free

[27]Translation from Steiner (1996), p. 129.

[28]So far there have been eight decisions. These "broadcasting decisions" are milestones in the interpretation of German broadcasting law: BVerfGE 12, 205 ff. (F.R.G.); 31, 314 ff. (F.R.G.); 57, 295 ff. (F.R.G.); 73, 118 ff. (F.R.G.); 74, 297 ff. (F.R.G.), 83, 238 ff. (F.R.G.); 87, 181 ff. and 90, 60 ff. (F.R.G.).

[29]BVerfGE 57, 295, 320 (F.R.G.) and BVerfGE 87, 181, 197 (F.R.G.).

[30]BVerFGE 90, 60 (87) (F.R.G.).

[31]BVerfGE 90, 60 (87) (F.R.G.).

[32]See BVerfGE 57, 295 (323) (F.R.G.), regarding the term "market for opinions" (*Meinungsmarkt*).

[33]BVerfGE 90, 60 (87) (F.R.G.).

and comprehensive formation of opinions by the individual and the public at large.

3 Critical Review

We have seen so far that juridical arguments supporting a ban on IPP are essentially based on two grounds. First, following the traditional television broadcasting model of the BVerfG, the ban protects the institutional guarantee of a free "market for opinions." Second, the ban attempts to protect viewers from deception that could occur if products appear unannounced in a broadcast. We next question whether these arguments are necessarily sufficient to justify a total ban on IPP and consider the problems that could arise from a ban on IPP.

3.1 The "Market for Opinions"

Lets start out with a potential economic argument in favor of a ban on IPP. With respect to the protection of the "market for opinions" Akerlof's "market for lemons" (Akerlof (1970)) might be addressed. If IPP is assumed to reduce program quality, and quality cannot be observed by viewers (but by broadcasters), the market for programs may work inefficiently or even break down. The reason is that with IPP broadcasters have less incentives to show programs without IPP, because IPP rewards them with additional revenue. Thus, the market adversely selects by substituting programs with IPP for programs without IPP. The "market for opinions" becomes biased towards motion pictures containing IPP. As this problem arises from the informational asymmetry between broadcasters and viewers, the introduction of a simple obligation to inform viewers about IPP may resolve it. Thus, a simple policy measure can create symmetric information so that there is no "market for lemons"-problem in the "market for opinions." Note that to the extent the announcement fails to inform viewers, e.g., because viewers may forget or ignore the announcement, a bias towards IPP movies remains possible. However, with respect to IPP broadcasters have strong incentives to make sure that viewers are informed, because they want viewers to "click" on IPP products. This constitutes a contrast to traditional product placement. Thus, overall a ban on IPP in order to prevent a "market for lemons" problem seems misguided.

Other arguments against a ban can also be suggested. First, we should remember television broadcasting is only part of the "market for opinions." This market also includes radio, newspapers, books, personal conversations,

and increasingly the internet.[34] Therefore, the "scope and suggestive power" of television broadcasting as suggested by the BVerfG is decreasing. Second, it seems unlikely that movies as escapist entertainment are as important in building public and personal opinion as informative programs such as news, current events analysis, or documentaries. Third, movies exist in enormous diversity. In Germany, viewers can choose between 46 television channels with a nationwide license, and many foreign stations available via satellite.[35] In 1998, 10,864 different movies were broadcast on 21,492 occasions.[36] Thus, viewers had access to over 29 movies a day. Given this enormous variety and the demanding tastes of audiences,[37] it seems implausible to argue IPP would significantly restrict the process of opinion building. Fourth, the "market of opinions" is protected by various television broadcasting provisions that supplement general competition law. For instance, the RStV prescribes that private television broadcasting groups that reach more than 10% of viewers on an annual average have to provide transmission time for independent third parties. Broadcasting groups that reach on average more than 30% of viewers have to sell stakes of related media companies or, alternatively, have to provide transmission time for independent third parties and have to set up an "advisory program council" that consists of members that represent the spectrum of opinions within society. The council then has various informational rights and changes of the program scheme have to be approved by the council (see RStV §§ 25-32).[38] Fifth, public television broadcasters (which still reach, by far, the largest average share of viewers) are obliged to provide programs that represent a variety of opinions.

We conclude it is implausible to suggest that IPP will endanger the "market for opinions."

[34]The potential of the internet as a tool for political organization is often recognized in public debate with respect to non-governmental organizations, and, in a negative context, e.g., with respect to extremist groups. Moreover, questionnaires indicate that 34% of internet users state that they watch less TV due to internet use (See *Media Perspektiven*, No. 8, 2001, p. 389).

[35]See *Kommission Zur Ermittlung der Konzentration Im Medienbereich - KEK (2000)* - (Commission for the investgation of media concentration - KEK).

[36]Kommission Zur Ermittlung der Konzentration Im Medienbereich - KEK (2000), p. 26.

[37]See e.g., De Vany and Walls (1999).

[38]Up to now there have been no private television broadcasting-groups that reach more than 30 per cent viewer share. The two obvious candidates, *Kirch Group* and *RTL Group*, reach about 25 to 28 per cent average viewer share. See Kommission Zur Ermittlung der Konzentration Im Medienbereich - KEK (2000), p. 24. Due to the insolvency of parts of the Kirch Group in early 2002 the market structure is likely to change in the future. However, so far it remains an open question how the insolvency will affect the market structure.

3.2 Viewer Deception and Confusion

With respect to viewer autonomy, the *Feuer, Eis und Dynamit* ruling of the BGH suggested that deception of viewers can be prevented as long as the audience is reasonably forewarned of the product placement. We argue, as above, that this consideration could also be applied to the field of television broadcasting. The deception of television viewers could easily be avoided by obliging broadcasters to announce that the broadcast movie contains IPP. For instance, such an announcement could be realized by a simple symbol that appears on the screen during the transmission of a movie that contains IPP. This solution would be similar to teleshopping and long time advertisement regulations and should reasonably prevent deception of viewers. Moreover, as stated above, even without an obligation, broadcasters have strong incentives to announce IPP voluntarily, because they want viewers to "click" on the IPP products offered. Unlike traditional product placements, the fact that the viewer may actively seek information about a product helps avoid viewer deception.

Further, the current ban on traditional product placement in television broadcasting may actually be counterproductive, since it is not enforced strictly. Product placement occurs routinely on German TV screens as US and other foreign productions often contain product placements. This is tolerated, because legislators and courts consider a trade-off between the freedom of program choice and the risk of surreptitious advertising to be acceptable.[39] One might also presume that German productions sometimes breach the separation principle, since it is difficult to provide evidence and enforcement costs are high. Moreover, German movies initially produced for theatrical release are permitted to legally contain product placement. These motion pictures, however, typically find their way to television, too. Taken as a whole, this constitutes a confusing situation for television viewers. Viewers that believe in good faith that the ban on product placement is consistently enforced under the current regime seem more likely candidates for deception than viewers reasonably apprised of product placement or IPP in a movie.

3.3 Potential Cost-Inefficiencies/Dynamic Inefficiencies

Media-dependent IPP regulations, and most notably the discrepancy between internet-related services and television broadcasting, will become increasingly meaningless with convergence. Future viewers could own a device that enables them to surf the internet, watch television, play music, and possibly

[39] See Engels and Giebel (2000), p. 278.

call their friends. In a convergent world, then, the viewer's susceptibility to deception is quite independent of the transmission technology.

Given that the actual technological realization of IPP is still an open question, existing regulations could prevent a cost-efficient application of IPP. Technologies that are relatively close to traditional television broadcasting are likely to be banned while teleservices-oriented technologies such as internet-based applications of IPP are permitted. Furthermore, hampering a new technology always implies the risk of dynamic inefficiencies.

3.4 US Regulations and Competitive Disadvantage

In the US, the legal setting differs considerably from German legislation. In the US motion pictures that are produced initially for theatrical exhibition face no regulations at all. Nevertheless, product placement has been in public debate for a while and some critics are seeking legislative regulations. For instance, the Center for Science in the Public Interest has called on the Federal Communications Commission (FCC) and State Attorney General to require that product placement be disclosed to theatrical movie audiences. Similarly, the Center for the Study of Commercialism has asked the Federal Trade Commission (FTC) to require disclosure of product placement. However, neither inquiry lead to the creation of any regulations.[40]

Regarding television broadcasting, product placement is not banned, either. However, § 317 of the Communications Act of 1934 demands product placement to be announced, if the station receives a payment:[41]

> "All matter broadcast by any radio station for which any money, services or other valuable consideration is directly or indirectly paid, or promised to or charged by the station so television broadcasting, from any person, shall, at the time the same is so broadcast, be announced as paid for or furnished, as the case may be, by such person."

Hence, there exist no regulations that would ban IPP in the United States, if it is announced.[42] Against that background, a ban on IPP may also create

[40]For details, see Snyder (1992), p. 312 and FTC File no. P 914518.

[41]In addition, a similar prescription is given by a FCC regulation. See § 73.1212 FCC = 47 CRF 73.1212.

[42]Nevertheless, product placement could conceivably be classified as commercial speech in a future decision. The theoretical argument here is that movies with product placement are denied protection of freedom of speech under the First Amendment of the Constitution of the United States. Hence, further regulation could be possible. However, Snyder (1992) who provides an in-depth analysis of this issue concludes that "...such movies should not be regulated under the commercial speech doctrine" (p. 309).

a substantial competitive disadvantage for Germany with respect to product innovations in the audiovisual and telecommunications industry. Consider, for instance, innovative program formats and potentially associated technological innovations that may be created by deploying IPP. Dynamic inefficiency is also therefore relevant in this context.

In summary, we suggest that, from a Basic Law perspective, (i) neither the protection of the "market for opinions" nor consumer deception necessarily provide sufficient legal bases to outlaw IPP in Germany. Therefore, IPP could be realized, if advertising regulations were modified. Further, we conclude that (ii) the current ban on product placement is counterproductive, (iii) may cause cost-inefficiencies with respect to technological choices, and (iv) may induce dynamic inefficiencies. Finally, a ban on IPP (v) may constitute a substantial international competitive disadvantage.

Interestingly, one aspect of product placement is usually not considered in the legal discussion. That is the observation that viewers might simply feel disturbed by product placement, especially, if product placement might have influence on the "ideal" plot of a movie. In the following, part of the paper we turn to this and other economic issues that explicitly refer to potential costs and benefits of IPP.

4 Economic Analysis

In contrast to the juridical view on IPP, which stresses problems of viewer deception and the role of television broadcasting for the "market for opinions," we do not consider these to be the main issues for IPP. Rather, we seek to evaluate the possible ban on IPP against the costs it might cause and the benefits it might deliver to viewers, advertisers, and broadcasters.

Advertising serves as a link between product markets and the television market. We consider that it entails both positive and negative effects. On the one hand, it disturbs viewers who would prefer to watch a program without interruptions or product placement.[43] On the other hand advertisements finance the programing. Moreover, advertisers benefit from selling products as a result of advertising and broadcasters benefit from "selling" their viewers to advertisers.

Our intention is to perform welfare comparisons by contrasting two settings: one with commercials (advertising spots) only and the other with commercials and IPP.

4.1 Related Literature

Two strands of economic literature relate to our analysis. First, some empirical work has been carried out on the effects of advertising bans. This work typically focuses on whether a ban on a specific type of product, such as alcoholic beverages or tobacco, leads to less total demand. Duffy (1996) conducts a survey of such studies and concludes that bans are generally ineffective. For instance, Schneider, Klein, and Murphy (1981) analyze a ban on cigarette advertising and find that it caused an increase in total consumption. They suggest that one reason for this result may be that a ban leads to lower production costs (because advertising is costly) and, therefore, to lower prices. Stewart (1993), in contrast, analyzes data on tobacco advertising bans in six OECD countries and finds negative, but statistically insignificant, effects on total consumption. Theoretical literature on the issue is rare. One notable exception is Motta (1997) who shows that the effect of an advertising ban depends on two crucial points: the extent to which the ban tightens aggregate demand at given prices and the extent to which the ban results in lower

[43]Market research questionaires show that television commercials are by far the most disliked type of advertising. A study from 1999 indicated that 98.8% of the interviewees agreed that there is too much television advertising. In a similar questionaire 42.8% of respondents found television commercials annoying. This indicates that there are, in fact, nuisance costs from advertising (for reference see Media Digest (2000) *Kino/Film/Video.* MMM/Hamburg, Issue 1/2000, p. 44 and p. 16).

equilibrium prices due to less advertising induced product differentiation. Advertising bans therefore may raise or reduce total consumption.

For our question, however, neither the named empirical nor theoretical literature is particularly instructive, since we seek to analyze the effects of a ban on a specific type of advertisement and not the effects of a ban on advertisements for specific products. Moreover, the literature does not take into account the fact that advertisements may impose nuisance costs on consumers, which is vital for our analysis.

The second strand of related literature refers to the economic analysis of television and radio program choice. Work in this field traditionally focuses on the question of how competition between broadcasters affects program diversity.[44] It is frequently argued by critics that there would be too many "mass appeal" programs and too few programs for viewers with specialized preferences in television. This focus might be one reason for the neglect of advertising, which is typically considered exogenous in such models. Moreover, benefits to advertisers are usually ignored. There is, however, a growing literature that considers advertising related issues more closely. For instance, Vaglio (1995), Wright (1994), and Gabszewicz, Laussel, and Sonnac (1999) address the effects of advertising rate regulations on quality and program differentiation.[45] Vaglio (1995) applies a Hotelling-type approach and finds that rate regulations may reduce the degree of program quality. Broadcasters' decisions on program quality depend on advertising rates: if they choose higher advertising levels, a higher investment in program quality is necessary to keep audiences watching the program. However, the paper does not identify the equilibrium path of the associated sequential game, which reduces considerably the scope of the presented conclusion.[46] Similarly Wright (1994) explains that, although advertising quantity restrictions may reduce nuisance costs, they may also reduce program quality. Therefore, its effect on viewers' welfare is ambiguous. Gabszewicz, Laussel, and Sonnac (1999) develop a three-stage sequential game with broadcasters, television viewers, and advertising agencies. Broadcasters select their optimal program differentiation and their optimal advertising rates, taking into account an upper

[44]For comprehensive surveys, see Owen and Wildman (1992), Chapter 3 and 4, and Brown and Cave (1992).

[45]In addition, Nilssen and Sorgard (2000) present a model of the television industry that covers product markets, as well as markets for television programs. They find that under a TV monopoly, there may be both, more advertisements, as well as more viewers, compared to a TV duopoly. Another model is given by Owen and Wildman (1985), who assume that higher advertising levels lead to smaller audiences. They compare viewer surplus under pure advertising and pure price competition and find that viewer surplus is identical for both settings.

[46]Gabszewicz, Laussel, and Sonnac (1999), p. 3., make this point.

advertising limit imposed by the government. The authors find that program diversity rises with the level of advertising, while at the same time nuisance costs from advertising increase. Within this model, the net effect of advertising regulation is positive, because the reduction of the nuisance cost of advertising dominates the negative effect of advertising regulation on program diversity. Another facet of advertising in the television market is presented by Anderson and Coate (2000). Their model considers that advertising may entail negative external effects on viewers, because broadcasters care only about viewers who switch their channel off and not about viewers' nuisance cost intensities. Therefore, inefficiencies concerning the number of advertisements may occur. There are two potential sources of inefficiencies. The market may provide too few or too many commercials. Specifically, the result depends on the relative size of the social benefits, i.e., the benefits from sales triggered by advertisements and program provision, on one hand, and the nuisance costs which burden television viewers, on the other.

In the following we develop a model that is based on the approach of Anderson and Coate (2000), but which extends their work in that it (i) incorporates IPP as an additional source of broadcasters' revenues, and (ii) considers increasing marginal nuisance cost of both interruptive advertising and IPP. The intention of our analysis is to assess economic welfare effects of the potential ban on IPP in Germany.

4.2 The Model

Television broadcasting is a good consumed by advertisers and viewers. In general, it is a private good for advertisers and a public good from the audience's point of view.[47] We consider advertising to provide information on the existence of new goods to consumers and, therefore, to facilitate beneficial trades.[48] We assume that there are two television broadcasters, A and B, and two types of programs $t \in \{1, 2\}$, both equally costly to produce.

[47] For simplicity, we ignore viewer exclusion.

[48] The role of advertising can be analyzed from distinct perspectives. The literature on the matter can roughly be divided into two extreme positions. One claims that advertising acts as a means of persuasion and alters consumer preferences. Therefore, advertising creates product differentiation that is not real. Work in this tradition is provided, e.g., by Kaldor (1950), Galbraith (1967), Solow (1967), and Nichols (1985). The second view considers advertising primarily as a means of solving informational issues. Starting with Telser (1964), numerous aspects of this role have been explored in the literature. Advertising has been interpreted as a signal for product quality (Milgrom and Roberts (1986)). We follow Butters (1977), Grossman and Shapiro (1984) and Stegeman (1991) in concentrating on advertising for new goods, i.e., we assume consumers only buy once they have seen the product advertised.

The production of a program only causes fixed cost C. Further, two forms of advertising, traditional commercials and IPP can be sold to advertisers. Potential television viewers can be divided into two equally sized groups of N individuals each. Each viewer is characterized by a pair (t, λ), where t denotes the type of program the viewer prefers and λ denotes the fraction of the viewing benefits from the less preferred program. The variable λ is distributed uniformly on the interval $[-\varepsilon, 1]$ with $\varepsilon \geq 0$. A viewer's benefit from watching the preferred program is β, with $\beta \geq 0$, and $\lambda\beta$ from watching the less preferred program. This benefit can, due to nuisance costs, be reduced by both types of advertising. We suppose that the marginal nuisance cost of interruptive advertising increases with the number of commercials a and, likewise, the marginal nuisance cost of IPP rises with the number of IPP z in the program.[49] This follows the concept of rising marginal disutility, which is a standard concept in a number of economic fields associated with negative or unpleasant issues. For instance, the cost of work in terms of effort in labor economics and pollution costs in environmental economics. Further, the cost of advertising depends on a parameter $\gamma \geq 0$ which represents the level of nuisance cost of advertisements to viewers. This parameter is assumed to be identical for all viewers and across the two forms of advertising. More specifically, we suppose that a viewer's net benefit from watching the preferred program is

$$u^p(\beta, a, z) = \beta - \frac{1}{2}\gamma(a^2 + z^2)$$

and

$$u^{lp}(\lambda, \beta, a, z) = \lambda\beta - \frac{1}{2}\gamma(a^2 + z^2)$$

from watching the less preferred program.[50] A viewer who does not watch any program receives zero benefit. If λ is negative viewers suffer from watching the less preferred program and the larger ε, the more viewers fall in this category.[51] Finally, we assume that viewers who are indifferent about

[49] The number z may also be considered to be the degree of negative influence of IPP on the "ideal" plot of a movie.

[50] This formulation greatly simplifies the analysis by implying that consumers receive no benefits from watching advertisements. However, product placements could conceivably benefit viewers. For instance, the way BMWs are presented in James Bond movies might be appreciated by many viewers. The same holds for commercials. In Germany, the *Cannes Rolle* provides a fun compilation of commercials that is even shown in movie theatres.

[51] For some viewers, folk music could be costly to watch, while others might suffer from watching MTV.

whether they watch a type-1 or a type-2 program will watch either program with identical probability.

With regard to producers that wish to advertise, we assume that there are m producers of new goods that can produce at most one product at a constant cost per unit, which is set to zero without loss of generality. Each good is of a type σ which is distributed uniformly on the interval $[0, \bar{\sigma}]$, with $\bar{\sigma} < 1$. A higher type σ indicates that a product is more attractive to consumers. Each viewer watching a commercial or IPP will receive information on the existence of the advertised good. If a viewer watches an advertisement she or he will either have a willingness to pay $\omega > 0$ for the product with probability σ or a willingness to pay 0 with probability $1 - \sigma$. The assumption that all viewers have a willingness to pay ω or 0 implies that each producer will set a price ω, because a lower price would not increase the probability of a sale. Therefore, a producer of a good of type σ is willing to pay $\sigma\omega$ for contacting each viewer. Furthermore, this implies that producers extract all the surplus from the trades that are stimulated by advertisements, i.e., viewers do not benefit from buying the advertised good. Moreover, we assume that the information on the existence of a new good is the essential feature of advertisements and, therefore, repetition of advertisements to the audience does not increase the probability of a sale. Within this setting, producers are indifferent with respect to the kind of advertisement they choose.

The Ban: Commercials Only

If broadcasters sell advertising spots only, the demand for advertisements can be described as follows. Let p denote the price per viewer of a commercial. Then the number of firms that wish to advertise is $a(p) = m \cdot [1 - \frac{p}{\omega\bar{\sigma}}]$ and the corresponding inverse demand curve is $p(a) = \omega\bar{\sigma} \cdot [1 - \frac{a}{m}]$ (see also Figure 2 on page 24).[52] Note that each producer's demand for advertising on one channel is independent of its demand for advertising on the other channel, due to the assumed constant marginal cost of production and the assumption that viewers watch only one program.

The two broadcasters A and B are supposed to maximize their profits via the choice of the type of programming they offer and the choice of the price per viewer of commercials. We consider the situation as a three-stage Cournot-type game. In stage one, each broadcaster chooses its type of program and whether to operate. In stage two, given the choices of stage one, each broadcaster chooses its profit-maximizing level of commercials. In stage

[52] These functions are approximated to avoid analytical difficulties of step functions. The fit of the approximation depends positively on the number of producers of new goods m.

three, given the choices of the previous stages, viewers decide if and which program to watch. The subgame perfect Nash equilibria of this game can then be solved by backward induction.

Consider stage 3 first. Viewer decisions on watching a program depend on the advertising levels of the broadcasters. If broadcaster A has the lower advertising level, it will get all N type-1 viewers and those viewers of type 2 for whom $(1-\lambda)\beta < \frac{1}{2}\gamma(a_B^2 - a_A^2)$ or, verbally, for whom the cost of viewing the less preferred broadcaster is lower than the cost of more advertising on the preferred broadcaster.[53] Similarly, if A has the higher advertising level, its program is watched by all type-1 viewers, except those for whom $(1-\lambda)\beta < \frac{1}{2}\gamma(a_B^2 - a_A^2)$.[54]

Now, suppose that in stage two, broadcaster A chooses the type-1 program and B chooses type 2. In this case, each broadcaster may set a price per viewer $p(a_J),\ J \in \{A, B\}$, which is independent of the advertising level of the other broadcaster, because each broadcaster has a monopoly in selling its viewers to advertisers. On the other hand, the overall number of viewers each broadcaster gets depends on the advertising level of the other broadcaster. Accordingly, A's and B's profit functions are:

$$\pi_A = N[1 + \frac{\gamma(a_B^2 - a_A^2)}{2\beta(1+\varepsilon)}]R(a_A) - C,$$

with $R(a_A) = p(a_A)a_A$ and

$$\pi_B = N[1 + \frac{\gamma(a_A^2 - a_B^2)}{2\beta(1+\varepsilon)}]R(a_B) - C,$$

with $R(a_B) = p(a_B)a_B$.

Differentiating w.r.t. a_A and a_B yields

$$\partial\pi_A/\partial a_A = N\left[1 + \frac{\gamma(a_B^2 - a_A^2)}{2\beta(1+\varepsilon)}\right]R'(a_A) - N\frac{\gamma a_A}{\beta(1+\varepsilon)}R(a_A) \qquad (1)$$

and

$$\partial\pi_B/\partial a_B = N\left[1 + \frac{\gamma(a_A^2 - a_B^2)}{2\beta(1+\varepsilon)}\right]R'(a_B) - N\frac{\gamma a_B}{\beta(1+\varepsilon)}R(a_B). \qquad (2)$$

[53] For simplicity, we assume that each broadcaster chooses an advertising level that does not drive all viewers away, i.e., $a < \sqrt{\frac{2\beta}{\gamma}}$. We take this into account in the welfare analysis that follows, and naturally, exclude negative values for a.

[54] See the appendix to this paper for a detailed description of viewer choice and associated broadcaster profit functions.

Expressions (1) and (2) reveal two effects. The first term of the marginal profit functions on the right-hand side represents the marginal revenues from all viewers who watch the program of the broadcaster, while the second term indicates the loss of revenues from viewers who switch to the other channel. Obviously, broadcasters face a trade-off between a higher price per advertisement against the loss of viewers that switch to the other broadcaster.

In equilibrium, the first derivatives of A's and B's profit function must equal zero. It is straightforward to show that the equilibrium levels of advertising a_A^*, a_B^* are equal such that $a_A^* = a_B^* = a^*$.[55] Figure 1 illustrates the way to that equilibrium. It depicts broadcasters' reaction functions $r_A(a_B)$ and $r_B(a_A)$, which represent the profit-maximizing output for each output choice of the other broadcaster. The Cournot equilibrium is at (a_A^*, a_B^*), where the two reaction functions cross.

Tedious, but simple, evaluations show that the reaction functions have positive slopes. Moreover, the slopes are smaller than one, which indicates that a unique symmetric equilibrium exists.

By substitution of a^* for a_A^* and a_B^*, the optimal decision of each broadcaster can be expressed as

$$R'(a^*) = \frac{\gamma a^* R(a^*)}{\beta(1+\varepsilon)}. \tag{3}$$

In other words broadcasters maximize their profits when marginal revenues equal marginal costs, which are represented by the term on the right-hand side of equation (3) and equal marginal lost revenues per viewer. In terms of equation (3), the equilibrium is characterized by Figure 2 on page 24.

As can easily be seen from equation (3) and Figure 2, the level of a^* depends negatively on the nuisance cost parameter and positively on viewers' benefits from watching television.

By recourse on the inverse demand function, equation (3) can be rewritten as

$$1 - \frac{2a^*}{m} = \frac{\gamma a^*}{\beta(1+\varepsilon)}(1 - \frac{a^*}{m})a^* \tag{4}$$

which we use for the determination of a^* in the welfare analysis.

In stage one, both broadcasters will choose to provide different programs. If they chose the same type of program, competition for viewers would be

[55] Consider $a_A^* > a_B^*$. Both the first term and the second term of the right-hand side of (1) are negative. Hence, if $a_A^* > a_B^*$, there is no equilibrium. The same applies to $a_B^* > a_A^*$ with respect to (2).

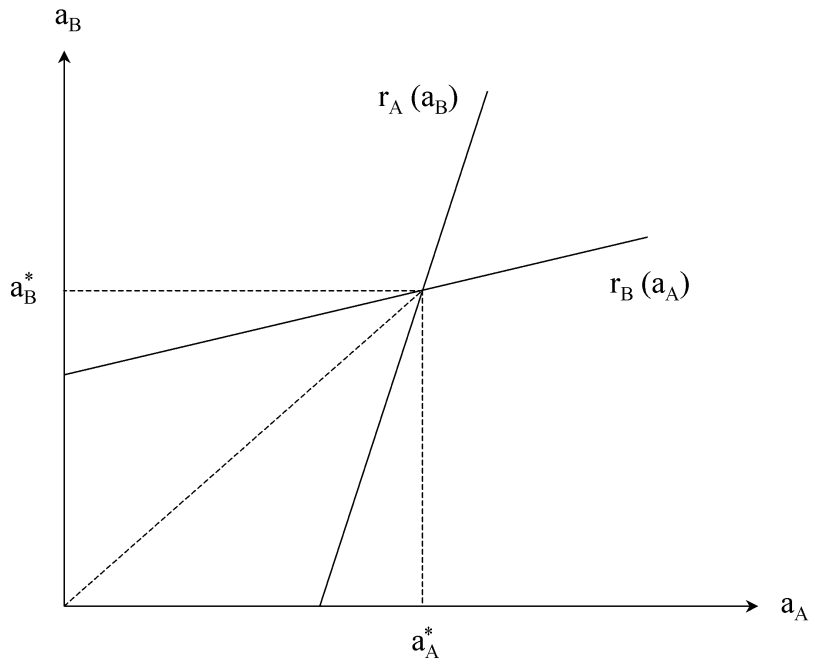

Figure 1: Reaction Functions and Cournot Equilibrium

introduced and result in zero profits, because the broadcaster with less advertising gains all viewers. Hence, rational broadcasters would not give up their monopoly in selling their viewers to advertisers and would choose different programs.[56]

No Ban: Commercials and IPP

Now consider a case where broadcasters sell both interruptive advertising and IPP. At stage 3, viewers' decisions are similar to the case above. If

[56]For the sake of completeness, the question as to whether the channels would operate at all depends on the extent of the fixed cost C. There would be no operation where C exceeds the revenues that one broadcaster generates. One broadcaster would operate if C is less than these revenues, but exceeds each broadcaster's revenues in the case that two firms operate, and both would operate if C is less than the latter revenues. Given the high number of broadcasters in the business, this question does not seem to be relevant to reality.

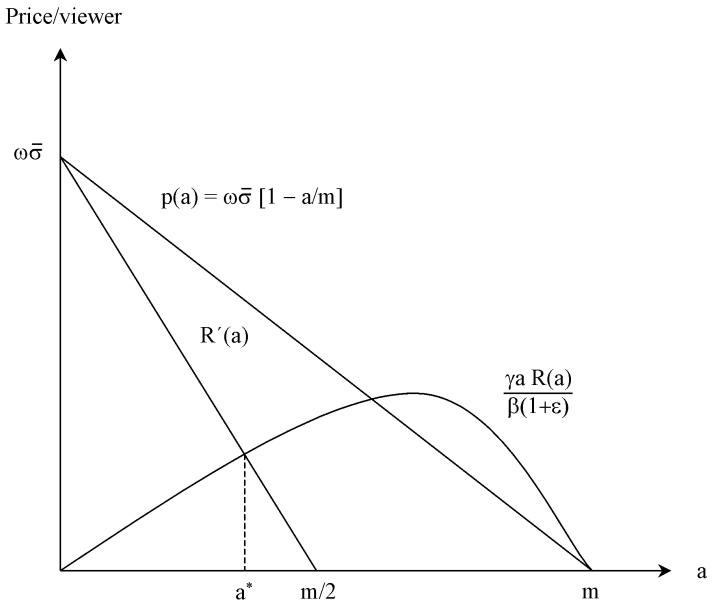

Figure 2: Optimal Number of Commercials

broadcaster A has the lower advertising level, it will get all N type-1 viewers and those viewers of type 2 for whom $(1-\lambda)\beta < \frac{1}{2}\gamma[(a_B^2+z_B^2)-(a_A^2+z_A^2)]$.[57] Similarly, if A has the higher advertising level, then its program is watched by all type-1 viewers except those for whom $(1-\lambda)\beta < \frac{1}{2}\gamma[(a_B^2+z_B^2)-(a_A^2+z_A^2)]$. Turning to stage 2, note that broadcasters will sell the same amount of a and z. This is an optimal strategy because, due to increasing marginal nuisance costs, the number of viewers who stop watching the channel for a given revenue is minimized if $a = z$. Therefore, the maximum "demand" for each type of advertising becomes $m/2$ from each broadcaster's point of view such that half of the potential advertisers will be offered interruptive advertising and the other half will be offered IPP. More specifically, let p° denote the per-viewer price of a commercial and q denote the per-viewer price of an IPP. The number of firms that buy the two types of advertisements are $a(p^\circ) = \frac{1}{2}m\cdot[1-\frac{p^\circ}{\omega\bar{\sigma}}]$ and $z(q) = \frac{1}{2}m\cdot[1-\frac{q}{\omega\bar{\sigma}}]$, respectively. The corresponding inverse demand curves are given by $p^\circ(a) = \omega\bar{\sigma}\cdot[1-\frac{2a}{m}]$ and $q(z) = \omega\bar{\sigma}\cdot[1-\frac{2z}{m}]$.

[57] See the appendix to this paper. We assume that broadcasters choose an advertising level that does not drive away all viewers, i.e., $a < \sqrt{\frac{2\beta}{\gamma}-z^2}$ and $z < \sqrt{\frac{2\beta}{\gamma}-a^2}$. We have to take this into account in the welfare analysis that follows. Naturally, we exclude negative values for both types of advertising.

It follows that the profit functions of A and B are

$$\pi_A^\circ = N\left[1 + \frac{\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]}{2\beta(1+\varepsilon)}\right][R^\circ(a_A) + R(z_A)] - C,$$

with $R^\circ(a_A) = p^\circ(a_A)a_A$, $R(z_A) = q(z_A)z_A$ and

$$\pi_B^\circ = N\left[1 + \frac{\gamma[(a_A^2 + z_A^2) - (a_B^2 + z_B^2)]}{2\beta(1+\varepsilon)}\right][R^\circ(a_B) + R(z_B)] - C,$$

with $R^\circ(a_B) = p^\circ(a_B)a_B$, $R(z_B) = q(z_B)z_B$.

Solving for the broadcaster equilibrium levels of advertising $(a_A^{\circ *}, a_B^{\circ *}, z_A^*, z_B^*)$, it is straightforward to show $a_A^{\circ *} = a_B^{\circ *} = z_A^* = z_B^* = \theta^*$. Hence, in equilibrium, it is given that

$$R'(\theta^*) = \frac{\gamma\theta^*}{\beta(1+\varepsilon)}[R(\theta^*) + R(\theta^*)].$$

Figure 3 illustrates the optimal number of advertisements in equilibrium.[58]

By substitution, we obtain

$$1 - \frac{4\theta^*}{m} = \frac{\gamma\theta^*}{\beta(1+\varepsilon)}2[\theta^* - \frac{2\theta^{*2}}{m}] \tag{5}$$

which we use for the determination of θ^* in the welfare analysis.

As before, in stage one both broadcasters will choose to provide different programs. If they chose the same type of program, competition would result in zero profits.[59]

4.3 Welfare Analysis

What are the total benefits generated by the provision of advertising financed television with respect to the two cases considered above? Viewer benefits consist of the benefits from watching their favorite program less the nuisance cost of advertising. Advertisers gain from selling their products to viewers and suffer from the price they pay for their advertisements. Broadcasters

[58]Note that Figure 3 is a simplification. It is limited to two, instead of three, dimensions.

[59]With respect to channel provision there would be no operation where C exceeds the revenues that one broadcaster generates. One broadcaster would operate if C is less than these revenues, but exceeds each broadcaster's revenues in the case that two firms operate, and both would operate if C is less than the latter revenues.

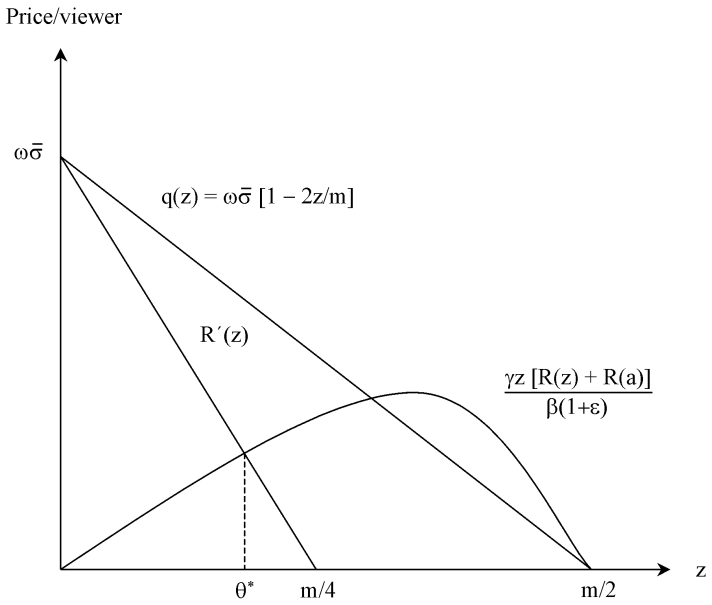

Figure 3: Optimal Numbers of Commercials and IPP

receive revenue from selling advertising space to advertisers less the fixed cost C of providing the program. These considerations give the following functions of the overall benefits B associated with advertising-financed television.[60]

Assuming broadcasters operate and IPP is banned, total benefits B are

$$B(a^*) = 2N(\beta - \frac{1}{2}\gamma a^{*2}) + 2N \int_0^{a^*} \omega\sigma(1 - \frac{\alpha}{m})d\alpha. \tag{6}$$

The first of the two terms represents viewers' welfare in equilibrium, while the second term accounts for the welfare of producers and broadcasters.[61]

[60] fixed costs are neglected as C is the same in both cases. We are only interested here in the differences in welfare.

[61] More explicitly, producers' welfare plus channels' welfare (neglecting C) is $2N \int_0^{a^*} \omega\sigma(1 - \frac{\alpha}{m})d\alpha - p(a^*)a^* + p(a^*)a^*$, which is simply the integral under the inverse demand function up to a^*.

With IPP benefits add up to[62]

$$B(\theta^*) = 2N(\beta - \gamma\theta^{*2}) + 4N \int_0^{\theta^*} \omega\sigma(1 - \frac{2\alpha}{m})d\phi. \tag{7}$$

The crucial question is in which case aggregated welfare is larger, i.e., if $B(a^*) \lessgtr B(\theta^*)$. However, the general solution of this is relationship is complex and not informative. We therefore solve the model parametrically. In doing so, we first solve for the optimal a^* and θ^* using (4) and (5), respectively. Next, we calculate the associated welfare by substituting a^* and θ^* in (6) and (7). Table 1 presents welfare results for different assumptions on the level of the nuisance cost γ.

The parameter values we have assumed are: $\beta = 6, \varepsilon = 2, m = 15, \omega = 0.03, \overline{\sigma} = 0.9, N = 100$. We have chosen these specific values in order to get a close approximation of reality. For instance, β is 6 because rental charges in video stores are about DEM 6 (€ 3). Similarly, m is 15, because 15 commercials per movie seems a reasonable number, the product $\omega\overline{\sigma}$ is 0.027, because the price to contact 1000 viewers in German television is about DEM 27 (€ 14) for a 10 second spot.[63] Only N has been chosen arbitrarily (which has no qualitative effects) such that numbers are kept small.[64]

The results indicate that a ban on IPP leads to a lower welfare level if viewers feel disturbed by advertisements, i.e., if $\gamma > 0$. Moreover, both viewer and producer/broadcaster welfare is higher where IPP is permitted and overall advertising levels are higher with IPP. Interestingly, audiences are better off, although we have assumed that viewers do *not* benefit from buying the products that are advertised and advertising levels are higher with IPP. The reason for this observation is that viewers prefer a situation where advertising spots can be substituted with IPP.

For $\gamma = 0$ we find no differences in welfare. If viewers do not care about advertisements, broadcasters offer monopoly advertising quantities to producers. These quantities are $m/2$ if there is only interruptive advertising and $m/4$ in the case where IPP can also be sold to advertisers (see Figures 2 and 3).

To sum up, our analysis shows that toleration of IPP has the potential to enhance economic welfare.

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[62]This is a simplification of $B(a^{\circ *}, z^*) = 2N(\beta - \frac{1}{2}\gamma(a^{\circ *2} + z^{*2})) + 2N \int_0^{a^{\circ *}} \omega\sigma(1 - \frac{2\alpha}{m})d\alpha + 2N \int_0^{z^*} \omega\sigma(1 - \frac{2c}{m})dc$, which accounts for viewers' welfare from watching the two programs and for producers' welfare.

[63]Source: IP Deutschland GmbH, 2000, TV-Werbung für Einsteiger, p. 24.

[64]Many calculations with alternative parameter values gave us the same qualitative results.

	Nuisance cost level γ			
	0	0.01	0.025	0.05
Ban on IPP:				
Total welfare $B(a^*)$	1230.40	1175.50	1099.30	986.66
Advertising level a^*	7.5	7.39	7.22	6.96
Viewers' welfare	1200.00	1145.40	1069.70	957.79
Producers' & broadcasters' welfare	30.40	30.10	29.60	28.87
No ban on IPP:				
Total welfare $B(\theta^*)$	1230.40	1202.70	1163.80	1104.50
Advertising level θ^*	3.75	3.70	3.63	3.53
Advertising level $2\theta^*$	7.5	7.40	7.26	7.06
Viewers' welfare	1200.00	1172.60	1134.10	1075.40
Producers' & broadcasters' welfare	30.40	30.10	29.70	29.10

Table 1: Parametric Welfare Comparisons Ban vs. No Ban on IPP for Different Nuisance Cost Levels

5 Conclusion

Our analysis suggests that valid arguments can be made against the application of the principle of separation to IPP. The essential objectives of the principle of separation – the protection of the "market for opinions" and the avoidance of "viewer deception" – are not at risk if IPP is introduced, provided the utilization of IPP is announced. This statement is supported by several arguments.

With respect to the protection of the "market for opinions," a bias towards broadcasting motion pictures with IPP in the sense of Aklerof's (1970) "market for lemons" may easily be prevented by compelling broadcasters to announce IPP. Moreover, broadcast motion pictures are only part of the "market for opinions." Further, competition for fastidious audiences, can be expected to provide a variety of movies and opinions especially, because competition is supported by numerous television broadcasting provisions that supplement general competition law. Finally, public broadcasters, which reach the largest share of viewers in Germany, are committed to present a diversity of opinions.

Moreover, given the number of legal and illegal possibilities of achieving product placement on the TV-screen, we suspect that the separation principle actually confuses viewers and is, therefore, counterproductive.

Our critical review of the legal framework of IPP has shown that a ban

may generate cost-inefficiencies in technological choices and create dynamic inefficiencies. In addition, a ban may establish an international competitive disadvantage. Our theoretical model on the effects of a ban provides welfare economic arguments that indicate IPP has the potential to enhance economic welfare.

Summarizing, we would suggest that lawmakers should carefully consider the application of the separation principle in the case of IPP. An obligation to announce whether a program contains IPP seems sufficient to prevent deception of viewers and helps advertisers to gain the benefits of IPP. At the very least, flexible regulations such as the permission of IPP for private broadcasters or specific channels should be considered.

With respect to the economic model we have proposed, it would be interesting to explore a number of extensions in future work. Above all, an analysis of the effects of banning IPP on program diversity would be rewarding. Further, the impact of informational benefits to viewers, asymmetric nuisance costs and benefits, asymmetric group size, and asymmetric values of different groups to advertisers could be addressed.

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Appendix

Determination of Broadcasters' Profit Functions

I. Commercials Only:

For the sake of simplicity, assume that Broadcaster A has chosen the type-1 program and B has chosen the type-2 program. Then the viewer's choice will depend on the number of advertisements on each channel:

- Assume broadcaster A has fewer advertisements:

If A has the lower advertising level, all type-1 viewers will choose A. Further, those viewers of type 2 for whom

$$(1-\lambda)\beta < \frac{1}{2}\gamma(a_B^2 - a_A^2)$$

$$\Leftrightarrow 1-\lambda < \frac{\gamma(a_B^2 - a_A^2)}{2\beta}$$

will choose A, too. The fraction of the N type-2 viewers that choose broadcaster A can be calculated by dividing the right hand side of the above expression through the length of the interval of λ, which is $1+\varepsilon$. Therefore, that fraction is:

$$\frac{\gamma(a_B^2 - a_A^2)}{2\beta(1+\varepsilon)}$$

- Assume broadcaster A has more advertisements:

If A has the higher advertising level, then its program is chosen by all type-1 viewers except those for whom (note that the right hand side is negative in this case)

$$(1-\lambda)\beta < \frac{1}{2}\gamma(a_B^2 - a_A^2)$$

$$\Leftrightarrow 1-\lambda < \frac{\gamma(a_B^2 - a_A^2)}{2\beta}$$

The fraction of the N type-1 viewers that broadcaster A loses can be calculated by dividing the right hand side of the above expression through the length of the interval of λ, which is $1+\varepsilon$. Therefore, that fraction is again:

$$\frac{\gamma(a_B^2 - a_A^2)}{2\beta(1+\varepsilon)}$$

- Assume broadcasters have the same advertising levels:

All type-1 viewers for whom

$$\beta > \frac{1}{2}\gamma(a_A^2)$$

will watch A and all type-2 viewers for whom

$$\beta > \frac{1}{2}\gamma(a_B^2)$$

will watch B. All viewers who do not watch their preferred program switch off because of the excessive advertising.

We can use the information from above to determine the broadcasters' profit functions, i.e.,

$$\pi_A = N[1 + \frac{\gamma(a_B^2 - a_A^2)}{2\beta(1+\varepsilon)}]R(a_A) - C$$

with $R(a_A) = p(a_A)a_A$ and

$$\pi_B = N[1 + \frac{\gamma(a_A^2 - a_B^2)}{2\beta(1+\varepsilon)}]R(a_B) - C$$

with $R(a_B) = p(a_B)a_B$.

II Commercials and IPP:

- Assume broadcaster A has fewer advertisements:

If A has the lower overall advertising level, all type-1 viewers will choose A. Further, those viewers of type 2 for whom

$$(1-\lambda)\beta < \frac{1}{2}\gamma[(a_B^2 - a_A^2) + (z_B^2 - z_A^2)]$$

$$\Leftrightarrow 1-\lambda < \frac{\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]}{2\beta}$$

will choose A, too. The fraction of the N type-2 viewers that broadcaster A gains can be calculated by dividing the right hand side of the above expression through the length of the interval of λ, which is $1+\varepsilon$. Therefore, that fraction is:

$$\frac{\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]}{2\beta(1+\varepsilon)}$$

- Assume broadcaster A has more advertisements:

If A has more advertising, then its program is watched by all type-1 viewers except those for whom (note that the right hand side is negative in this case)

$$(1-\lambda)\beta < \frac{1}{2}\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]$$

$$\Leftrightarrow 1-\lambda < \frac{\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]}{2\beta}$$

The fraction of the N type-1 viewers that broadcaster A loses can be calculated by dividing the right hand side of the above expression through the length of the interval of λ, which is $1+\varepsilon$. Therefore, that fraction is:

$$\frac{\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]}{2\beta(1+\varepsilon)}$$

- Assume broadcasters have the same advertising levels:

All type-1 viewers for whom

$$\beta > \frac{1}{2}\gamma(a_A^2 + z_A^2)$$

will watch A and all type-2 viewers for whom

$$\beta > \frac{1}{2}\gamma(a_B^2 + z_B^2)$$

will watch B. All viewers who do not watch their preferred program switch off because of excessive advertising.

We can use the information from above to determine the broadcasters' profit functions, i.e.,

$$\pi_A^\circ = N\left[1 + \frac{\gamma[(a_B^2 + z_B^2) - (a_A^2 + z_A^2)]}{2\beta(1+\varepsilon)}\right][R^\circ(a_A) + R(z_A)] - C$$

with $R^\circ(a_A) = p^\circ(a_A)a_A$, $R(z_A) = q(z_A)z_A$ and

$$\pi_B^\circ = N\left[1 + \frac{\gamma[(a_A^2 + z_A^2) - (a_B^2 + z_B^2)]}{2\beta(1+\varepsilon)}\right][R^\circ(a_B) + R(z_B)] - C$$

with $R^\circ(a_B) = p^\circ(a_B)a_B$, $R(z_B) = q(z_B)z_B$. Note that the profit functions necessarily include both types of revenues, $R^\circ(a_B)$ and $R(z_B)$, because broadcasters' sell the same amount of a and z.