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Abstract: This paper provides an economic analysis of recent vertical and horizontal mergers in the U.S. industry for audiovisual media content, including the AT&T-Time Warner and the Disney-Fox mergers. Using a theory-driven approach, we examine economic effects of these types of mergers on market competition, focusing on digital media content distribution.

In doing so, we address three research questions: (i) Is the current development of analyzing industry with its recent merger activity concerning? (ii) Would vertical or horizontal integration be more preferable for overall welfare and competition in this industry? (iii) What are implications for antitrust policy?

We conclude from our analysis that in the already highly horizontally concentrated U.S. market for audiovisual content the process of further vertical integration creates concerns from a competition policy perspective. Moreover, even though horizontal concentration on some of the market stages may be anticompetitive as well, vertical integration is likely to be more harmful. As a consequence, we recommend a stricter approach to vertical merger control in this industry, as well as a more active abuse control against already vertically-integrated media companies.

Keywords: competition policy, antitrust, industrial economics, digitization, media economics, institutional economics, industrial organization, mergers, vertical integration, horizontal integration

JEL-Codes: L42, L41, K21, K23, L82, L86, L13, D43, L51, L96

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1. Introduction

The recent wave of mergers in the U.S. media industry has the potential to directly affect millions of consumers. However, the antitrust policy controlling the (anti-)competitive effects of these mergers is subject to debate. For instance, the failed attempt of the U.S. Department of Justice (DOJ) to block the vertical merger between AT&T and Time Warner caused considerable controversy both in academics and in antitrust policy (inter alia, Caffarra et al. 2018, Salop 2018a, 2018b, Wright & Rybnicek 2018). In addition, the horizontal merger between Walt Disney (Disney) and Twenty-First Century Fox (Fox) took place this year and increased concentration among producers of content. Since these cases may influence further dynamics of the U.S. media industry and are likely to fuel another wave of media mergers, both horizontal and vertical ones, these developments give rise to significant concerns for the workability and sustainability of the competitive process in the related markets.

It should be noted that the affected industry is already highly concentrated and the companies themselves represent holdings with many subsidiaries in different market segments. Furthermore, due to a specific characteristic of these segments, the question arises whether the general wisdom holds in this special case, that is, that vertical mergers are always less anticompetitive than horizontal mergers. Thus, important questions that we discuss in this contribution are: (i) Is the current state and development in the U.S. market for audiovisual content - regarding M&A activities - concerning? (ii) Would a development towards more vertical or more horizontal mergers be more preferable for overall welfare and competition? (iii) What are possible antitrust policy implications, given the current characteristics of the market? Should regulators rather accept false positives or false negatives?

In order to provide some background for this discussion, we consider the current state of U.S. production of audiovisual content and identify the main economic functions of industry players and their connections. We propose the concept of an aggregated value chain in order to make merger processes more visible and accessible for analysis. Along with traditional theories of merger analysis we consider some arguments, which were previously neglected in the courts' decisions (i.e., in-

terdependency of different regulations and relevance of data collection). We discuss effects of both horizontal and vertical integration and compare them. By adhering to this approach, we aim to combine insights from existing literature on both horizontal concentration and vertical integration, which are usually discussed separately (i.e. vertical mergers, inter alia, Riordan 2005, Salop & Culley 2016, Crawford et al. 2018 and horizontal mergers, inter alia, Ivaldi et al. 2003, Kovacic 2009).

We conclude from our analysis that the current development of the U.S. market for audiovisual content is a cause for concern and the process of further vertical integration in the already highly horizontally concentrated market should be considered as being very harmful from a competition policy perspective. The traditional rule of thumb that horizontal mergers create anticompetitive harm with higher probability than vertical ones and, therefore, their regulation should be stricter must be questioned in the U.S. media industry. By contrast, more horizontal concentration on some of the market stages – although being most probably anticompetitive as well – is likely to be less harmful than further vertical integration. Thus, we recommend a stricter merger control policy against vertical mergers: it is better to risk false positive decisions in this industry than to suffer (another) false negative. Additionally, a stricter abuse control of the already vertically-integrated companies, which have started to engage in blackout strategies against non-integrated rivals, is recommendable.

The paper is organized as follows: section 2 gives an overview of the U.S. market for audiovisual content and its current merger cases. Section 3 provides an analysis of economic theories applied to the merger cases. In section 4 the main research questions are discussed and our principal conclusions are presented.

2. The U.S. Industry for Audiovisual Content

2.1 Market Development and Structure

The U.S. production of audiovisual content and the respective market structure of media companies are deeply connected to the Hollywood studio system and its development in the 20th century. To show the degree of integration, collaboration

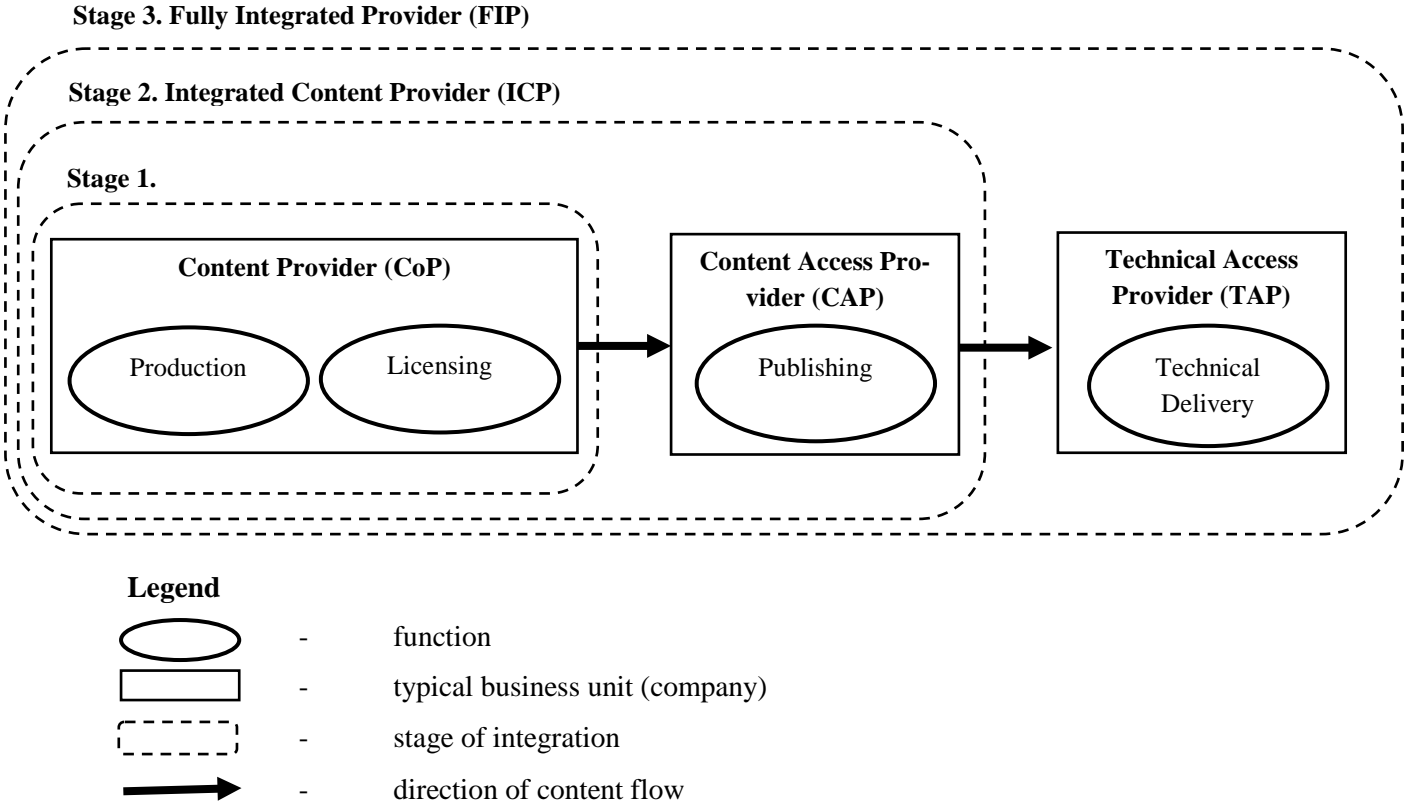
and dominance of the major media companies, we provide a brief overview of Hollywood's history and most notable antitrust cases. Moreover, we visualize the current state of the market and its structure to demonstrate the extent of integration and the dimensions of further (horizontal and vertical) integration.

After a brief period of thriving competition (around 1900) there was a strong tendency towards oligopoly structures in the U.S. film industry (McDonald 2000). The first antitrust suit against an alliance of equipment manufacturers, the Motion Picture Patents Company (MPPC), was launched in 1914 (Conant 1960, Gomery 1986). Thereafter, a few major players emerged and the trend towards a powerful few that dominate the market prevailed ever since. The biggest studios¹ of the so-called Golden Age (or Studio Era between 1930 and 1949) engaged in vertical integration, product differentiation and international distribution, which increased their bargaining power (Gomery 1986) and provoked more than one antitrust suit: (i) the 1946 decision against *block-booking* (forcing cinemas to buy film bundles rather than individual films) to reduce vertical market power and (ii) the 1948 *Paramount Decision*, prohibiting the studios to hold stakes in cinema chains (McDonald 2000). It was especially the latter that had severe impact on the market structure. Since the studios were cut off from direct audience access, they engaged in horizontal concentration and diversification. Moreover, the studios focused on the distribution of films, usually financing outsourced productions to subsequently distribute them (so-called "financer-distributor"). (iii) In 1985, the case *United States v. Capitol Service* superseded the Paramount Decision, which led to a wave of reinvestments in theatre chains and, moreover, TV networks and home video enterprises (Gomery 2004, Lewis 2008). Therefore, the Paramount Decision cut off vertical integration and led to horizontal extension, while the United States v. Capitol Service case reintroduced the option of vertical integration, which heavily contributes to the present opaque market structure overall: highly (horizontally and vertically) integrated conglomerates engaged in multiple media markets.

¹ Most of the top players are still well-known: the "Big Five" or "Majors", which include *Paramount*, *Loew's* (later *MGM - Metro-Goldwyn-Mayer*), *Warner Brothers*, *Twentieth Century Fox* and *Radio-Keith-Orpheum*, dominated the business, while *Universal*, *Columbia* and *United Artists (UA)* formed the "Little Three" or "Minors". Some independent producers, usually working with UA, remained in the market (Gomery 1986).

Today’s U.S. film industry (a network of holdings, parent companies, joint ventures, and subsidiaries) is very nontransparent and the role of the different players is not easy to determine. During the long history of media companies, different terms evolved to describe the various players in the market. In our paper, we want to focus on the most important economic roles to reduce complexity and shed light on the relevant aspects in terms of competition economics. Traditionally, there is a differentiation between content *production, distribution, and exhibition* (Litman 1998). Instead of using these traditional terms, we introduce a simplified model of content delivery to reduce complexity and highlight central economic roles (see figure 1). The term “distribution” is recently being employed in different ways – at times denoting the licensing part and at times referring to publication/exhibition (e.g., in cinemas or broadcasting) or even the technical provision of access (e.g., online access). See figure 1 for our differentiation and illustration of a vertical chain, including the levels of vertical integration (stages 1-3).

Figure 1 Vertical Chain of Content Delivery



Since most film companies typically control production (either as “financer-distributor” or by producing themselves) and distribution of content (here: licensing), we integrate these functions and call them *content providers* (CoP) (**stage 1** of vertical integration). The “publishers” of the content (inter alia, cinemas, TV channels or video on demand (VoD) platforms) are referred to as *content access providers* (CAP). **Stage 2** is the forward integration of CoPs and CAPs to *integrated content providers* (ICP), for instance, Warner owns the channel HBO or Disney the ABC network. The last **stage (3)** in the vertical chain are *technical access providers* (TAP), such as TV and internet cable providers, enabling the technical access for consumers. A fully integrated provider (FIP) covers all stages of the vertical chain.

The recent phenomenon of stage 3 integration, for instance, in the merger cases of Comcast-NBC Universal (NBCU) and AT&T-Time Warner, raised concerns that this level of vertical integration causes new competition problems. Table 1 provides an overview of the major U.S. media companies, which are relevant from antitrust perspective and, moreover, displays the level of integration among them.² Notably, in both cases of vertical integration (AT&T and Comcast), the mergers lead to complete coverage of the vertical chain, from the production of content to consumer access. The horizontal merger between Disney and Fox reduces the number of companies from six to a potential “Big Five” that dominate the U.S. audiovisual market.

² Only companies with considerable market shares of each stage are considered. Small subsidiaries and co-productions, which are irrelevant to competition concerns, are excluded.

Table 1 Overview of Biggest U.S. Media Companies (2019)

Parent Company	Main economic roles	
	ICP	TAP
Walt Disney	<ul style="list-style-type: none"> - Walt Disney Studios (incl. Pixar and Lucasfilm) - Fox Entertainment Group 	
Sony	<ul style="list-style-type: none"> - Sony Pictures Entertainment (incl. Columbia Pictures) 	
AT&T	<ul style="list-style-type: none"> - Time Warner (incl. HBO, Turner Broadcasting System, Warner Bros.) 	<ul style="list-style-type: none"> - AT&T Communications (incl. AT&T Internet (DSL), AT&T Internet (Fiber), AT&T Wireless (Wireless), DirecTV)
Viacom	<ul style="list-style-type: none"> - Paramount Network (incl. SPIKE) 	
Comcast	<ul style="list-style-type: none"> - NBC Universal (incl. Universal Pictures) 	<ul style="list-style-type: none"> - Comcast with its Cable Communication (XFINITY; cable internet) and Broadcast Television segments

Legend

Horizontally Merged ICP

Fully Integrated Provider (FIP)

2.2 Landmark Cases

2.2.1 Comcast - NBCU

The Comcast-NBCU case began in January 2011 with a civil antitrust action to permanently enjoin the proposed vertical merger under Section 7 of the Clayton Act and a simultaneously issued Competitive Impact Statement. Both were issued by the United States Government and several single states. In February 2011, a Stipulation and Order that would allow the merger to take place was signed by the court. With that, defendants agreed to publish a newspaper notice of the merger, a summary of its terms, and a copy of the Proposed Final Judgement – at their expense (United States District Court for the District of Columbia 2011a). After publishing this information, there was a sixty-day notice in which public comments could be submitted. The eight public comments that were received strengthened the government’s opinion that the proposed Final Judgement would be an appropriate remedy for the antitrust violations, which resulted from the merger and were brought up in the complaint (United States District Court for the District of Columbia 2011c). In July 2011, the court held a fairness hearing, where the plaintiffs and the defendants had the opportunity to present their arguments. The Final Judgement was published in September 2011. With that, Comcast was allowed to acquire a 51 percent stake in NBC Universal from General Electric. To cope with potential uncertainties regarding the Final Judgement’s implementation, Judge Leon issued a Memorandum Order that should secure that the Final Judgement satisfies the public interest. Content of this Memorandum Order was the creation of an annual report that had to be published by the defendants for two years after the merger, indicating details on arbitrations of online video distributors (OVDs) under the FCC order³ (United States District Court for the District of Columbia 2011b). In 2013, Comcast bought the remaining 49 percent of NBCU from General Electric in order to take control over all aspects of the business. The possibility to buy the remaining stakes was provided by the agreement in 2011, even if it was not expected to happen so quickly. With the selling of the rest of NBCU, General Electric realized their plan to get out of the entertainment business, whereas Comcast gained com-

³ For deeper insights on the dual-track arbitration mechanism OVDs may use, see the Supplemental Statement (United States District Court for the District of Columbia 2011d).

plete control over the important businesses of broadcasting, cable networks, movie studios, and theme parks (Reuters 2013).

2.2.2 AT&T - Time Warner

In October 2016, AT&T and Time Warner announced their planned deal to merge. The U.S. Department of Justice's Antitrust Division started an investigation that lasted longer than a year - ending in November 2017, when the government filed a lawsuit against AT&T, DirecTV, and Time Warner in order to enjoin the proposed merger under Section 7 of the Clayton Act, 15 U.S.C. §18. The DOJ complained that the proposed merger would substantially lessen competition through the increased bargaining leverage of AT&T, because they could have incentives to use their power over Time Warner content in order to harm competitors. Shortly after the government's complaint, Time Warner sent a letter and a proposed arbitration agreement to about 1,000 video distributors where it guaranteed that no blackout of their content would occur once arbitration was invoked. With 23 days of proceeding, the trial started in March 2018. Judge Richard J. Leon (the same judge as in the Comcast-NBCU case) issued the ruling in June 2018, in which he concluded that the government had failed to meet its burden to show that the proposed merger is likely to substantially lessen competition in the manner the government had stated in its complaint (United States District Court for the District of Columbia 2018b). About one month later, the DOJ submitted an appeal against the decision (United States Court of Appeals for the District of Columbia Circuit 2018). In November 2018, first evidence for the anticompetitive behavior of AT&T was already showing; HBO (now under control of AT&T) went dark for DISH and DISH-Sling, who are two of the main competitors of AT&T's television services DirecTV and DirecTV Now (Wu 2018). However, in February 2019, the U.S. Court of Appeals backed the merger. This decision capped off the protracted legal battle between AT&T and the DOJ, which declared its intention to not appeal the ruling (United States Court of Appeals for the District of Columbia Circuit 2019).

2.2.3 Walt Disney - Fox

The most recent of the three cases is the horizontal merger of Disney and Fox. There was a bidding war between Disney and Comcast about the Fox assets for sale. With its highly profitable and valuable cable group (especially in terms of regional sports networks) and their stakes in the online video platform Hulu, the Fox assets were the target of negotiations between the two bidders. Comcast made the higher bid; yet, Fox decided to go for the Disney bid because it saw a higher probability of an approval by the DOJ (Reuters 2018). In fact, the proposed merger between Disney and Fox was approved by the DOJ in the summer of 2018 under a settlement that would potentially resolve the competitive harm emerging from the merger. Disney had to sell 22 regional sports networks to get the permission to buy the proposed Fox assets (DOJ 2018). The European Commission approved the acquisition in November 2018, albeit under certain conditions. In the European Economic Area (EEA), Disney has to divest all its interests in the five channels it controls in a joint venture with Hearst. With the selling of these interests, there would be no more overlap between the interests of Disney and Fox in the EEA, thus no more competition concerns (European Commission 2018). Nevertheless, the bidding war between Walt Disney and Comcast is by far from over. To increase their influence on the European markets, both companies are competing to buy Sky, which is already partly owned by Fox (Reuters 2018).

3. Economic Theories in Merger Analysis

When putting forward arguments against mergers in the media sector, there are several economic concepts and models used by the DOJ Antitrust Division. This chapter examines the ones used in the three above described cases, namely Comcast-NBCU, AT&T-Time Warner, and Walt Disney-Fox. It, furthermore, discusses the potentially missing arguments. As a result, we provide a broad overview of the economic reasoning, which speaks for or against a vertical or horizontal merger in this industry, and use it to answer our main research questions in chapter 4.

3.1 Foreclosure

The concept of foreclosure is commonly used when examining possible effects of a merger – both horizontal and vertical. In the cases of Comcast-NBCU and AT&T-Time Warner, the DOJ especially stressed the aspect of vertical foreclosure, whereas, in the Walt Disney-Fox case, horizontal foreclosure strategies⁴ were not mentioned as a possible anti-competitive effect of the merger. For this reason, the present paper will concentrate mainly on (i) vertical foreclosure and the potential welfare effects coming from this strategy. Nevertheless, (ii) horizontal market power is required for vertical foreclosure actions, such as blackout threats. As chapter 2 has shown, there is high horizontal market concentration in the market for audiovisual content. Therefore, preconditions for negative foreclosure effects of additional vertical mergers are given through the current market design.

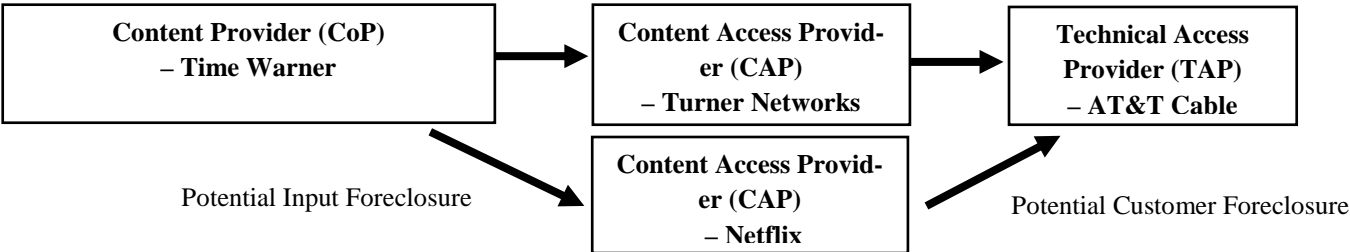
(i) Vertical foreclosure – partial or complete – after a merger is possible because of the different supply stages in this market. The increased market power after such a merger leads to an increased ability of the now vertically integrated firm to raise input and consumer prices, to deny downstream competitors access to important inputs or to decrease the quality of them or to exclude competitors by building barriers to market entry – which is what protects this market power in a long-term. Going hand in hand with increased market power is increased bargaining power that can occur for different reasons. For instance, it can occur through exclusive access to rights or other inputs (bottleneck-problem), a higher market share of the merged entity and overall less competition in the market or even by covering the entire value chain through a vertically integrated company and, therefore, being independent from competitors in up- and downstream markets. The overall incentives for exclusionary behavior in terms of pricing, marketing, or input and consumer foreclosure can be increased (Riordan & Salop 1995, Salop & Culley 2016).

⁴ Such as tying bottleneck goods from different markets and other kinds of raising-rivals-cost-behavior, as well as building entry barriers and other deterrence practices (for deeper insights see inter alia: Rey & Tirole 2007)

Firms have to negotiate for different contracts, which may be incomplete⁵, and this may raise post-merger incentives for the integrated firm to discriminate competitors in terms of prices, quality, etc. (see Riordan 2005). The higher the bargaining power on one side of the negotiations, the “better” the outcomes are for this side, for instance, in terms of profits. Depending on the exact reason for the higher bargaining power, the more powerful negotiation side could use this power in different ways.

In a supply chain without vertically integrated companies, CAPs have to negotiate with CoPs and TAPs separately and the respective bargaining power between them is likely to be more balanced compared to a market situation including at least one FIP. After a vertical merger, a dynamic development can be expected: in the short term, the bargaining power of a CAP (compared to the power of the newly build FIP) is likely to remain the same – e.g., because of existing subscription contracts and other lock-in effects. But in long-term, due to their potentially increased bargaining power as described above, the FIP has the power and potential incentive to discriminate up- and downstream competitors, such as Netflix in figure 2. This may be especially true for a strong CAP with significant market shares and market power, such as the here described example of Netflix, whereas smaller CAPs with less subscribers and market power may suffer from the discrimination through the FIP immediately (see, e.g., the blackout of HBO content for DISH right after the AT&T-Time Warner merger in November 2018).

Figure 2 Foreclosure threats for CAPs



⁵ Meaning, these contracts do not have enough “power” to control behavior and especially prevent opportunistic behavior of (at least one of) the contracting partners (see Riordan 2005 for more insights and further literature).

A main aspect in the two highlighted cases was the possible threat of so-called “blackouts”, arising from the post-merger higher bargaining power of the vertically integrated firms (United States District Court for the District of Columbia 2011b, United States District Court for the District of Columbia 2018b). These blackouts can occur in two ways (see Salop 2018a): (a) *input foreclosure*, where the CoP (for example, Time Warner’s subsidiary Turner Networks) holds back valuable, so-called “must-have-content”⁶ from CAPs that are competing with their own TV channels and VoD-platforms. One main input foreclosure concern in the AT&T-Time Warner case was that the merged entity would gain market and, therefore, bargaining power to raise the prices for Time Warner content (United States District Court of the District of Columbia 2018b). If OVDs or other CAPs would refuse to pay these higher prices, the FIP could withhold the must-have-content – “go black” on the CAPs – and, therefore, force them to pay the higher prices in order to stay competitive. Generally speaking, the upstream part of the merged entity could restrict supply, decrease quality, or raise input prices for downstream competitors. Clearly, such a blackout would cause monetary losses for both the upstream firm and the downstream competitors. Nevertheless, the post-merger improved bargaining position of the FIP decreases these losses for the upstream division compared to a blackout-situation without the vertical integration - the FIP covers all stages of the supply-chain and is, therefore, able to reach consumers without having to collaborate with other CAPs or TAPs than their integrated divisions (Salop & Culley 2016). Concerning input foreclosure, the overall welfare effects from vertical integration in the programming sector can differ, depending on whether regulation in terms of program access rules (e.g., of the FCC) is working. If there are rules that ensure that competitors still have access to valuable content, welfare effects can be seen as mostly positive. If there are no such rules, welfare effects tend to be negative (Crawford et al. 2018).

⁶ Time Warner, with its three units Warner Bros., Turner, and HBO, produces famous TV shows like Game of Thrones, as well as live news, and it holds the broadcasting rights for big sports events. These content types face a high consumer demand. Therefore, the DOJ argued that CAPs have to include at least some of these Time Warner “must-have-contents” into their offers to stay competitive in the market (United States District Court for the District of Columbia 2018a: 30-36).

The other way a blackout could occur is (b) *customer foreclosure*, when a TAP (like AT&T cable) decides to go dark on a CAP. This means they throttle or completely block content from specific CAPs, which leads to a lower quality of the stream or no accessibility of the content at all. In general, customer foreclosure can occur after a vertical merger, when the downstream part of the merger refuses to buy inputs from other upstream firms than the one it is merging with (Salop & Culley 2016). Even if it was not part of the DOJ's argumentation in the AT&T-Time Warner case (in contrast to the Comcast-NBCU merger case), customer foreclosure is one major concern in terms of vertical mergers in the media sector overall (Salop 2018a, Caffarra et al. 2018). In terms of the online and offline video supply chain (see figure 2), the now vertically integrated TAP could choose to only broadcast content from its now merged upstream entity. This potentially leads to losses (in terms of fewer subscribers and, consequentially, monetary losses) for the upstream divisions' competitors (non-integrated CAPs) because of a lower quality stream/signal or even a lack of technical access to their consumers.

Both foreclosure methods can be seen as a form of raising rivals' costs – in either the upstream or the downstream market targeted by the FIP – by restricting key input factors, such as must-have content (Krattenmaker & Salop 1986), or by restricting the distribution of content in terms of access to the audience. These blackouts potentially lead to subscriber/viewer losses for the FIPs' competitors in the online (VoD) and offline (TV channels) markets. In the end, these raising rivals' costs approaches can lead to competitors decreasing their investments or even exiting the market – with negative effects for competition and overall welfare (Salop & Culley 2016). To demonstrate potential costs for competitors and consumers in the AT&T-Time Warner case, the DOJ and their economic expert Carl Shapiro used a Nash bargaining model, similar to the model used in the Comcast-NBCU case. Using the general assumptions of the Nash bargaining model, Shapiro demonstrated that an increased minimum price the sellers are willing to accept (due to price increases post a vertical merger) leads to an overall higher negotiated input price (the price that CAPs have to pay for Turner content), which eventually leads to higher consumer prices (Nash 1950, United States District Court for the District of Columbia 2018b).

(ii) Regarding horizontal media mergers, foreclosure is less likely to occur. The incentives to foreclose for a strictly non-vertically-integrated company (i.e. no commercial activity on the other market stages of figure 1) on every level of the supply chain – even in case of a monopoly on that market level – are lower than they are for vertically integrated firms. If, for instance, a CAP like Netflix would be a monopolist on the market, there would be low incentives to blackout upstream or downstream competitors – either they would decrease their content variety (by foreclosing upstream CoPs) or they would have less direct access to end-consumers (by foreclosing downstream TAPs). Both practices would decrease consumer satisfaction and, therefore, profits for the CAP; a wider variety of content and better technical accessibility potentially lead to more subscribers and the possibility to raise monopoly prices even more. The only conceivable situation in which a monopolistic CAP could have incentives to foreclose upstream firms (CoPs) is if they try to promote their own self-produced content by providing less content from other CoPs – which requires an internal vertical integration of said monopolistic CAP. Nevertheless, this would again potentially lead to less heterogeneity of content and, therefore, a worse meeting of their consumers' preferences.

This kind of argumentation can be applied to the two other market stages as well, showing that foreclosure incentives depend on the vertical dimension and start to be present with any vertical involvement. By contrast, strictly horizontal companies on any market level have little to no incentives to blackout up- or downstream firms.

3.2 Pricing Strategies, Bundling, and Elimination of Double Marginalization

In order to investigate the effects of vertical and horizontal mergers on pricing strategies, the nature of interactions between firms in a supply chain should be taken into account. Within the framework of the vertical chain of content distribution, illustrated in figure 1, there is only one level of setting prices between companies, i.e., CoPs and CAPs, and two levels with final prices for consumers – CAPs setting the prices for content access, and TAPs setting the prices for technical access.

It is possible to consider several alternative pricing strategies for merged firms: (i) raising prices due to non-coordinated (unilateral) effects, (ii) raising prices due to

coordinated effects, and (iii) reducing prices as a result of gained efficiencies. These strategies can be applied both as a consequence of horizontal and vertical mergers; however, the underlying reasoning differs:

- (i) Horizontal mergers, by definition, lead to at least marginal increase of the merged company's power in the relevant market due to the elimination of competition between the merging parties. Thus, if company enjoys post-merger market power, then possibility of its abuse arises. This always has a negative impact on market competition and consumers.

Vertical mergers can enable two alternative strategies: (a) raising-rivals' costs; (b) bundling of services.

(a) Price discrimination towards competitors of their own subsidiaries represents a variant of a raising-rivals' costs strategy. In the analyzed industry, this is possible in the case of the FIP level of integration (Comcast-NBCU, AT&T-Time Warner) and in the ICP level. If the input price for non-integrated downstream competitors (CAPs) will rise (but not for the FIPs own CAP), then prices for their consumers will also increase. This may lead to reduction in the demand for their goods (Church 2008). At the same time the downstream CAP owned by the FIP or ICP gains benefits due to the possibility to offer a comparably lower consumer price and could, therefore, be in the position to attract more consumers at the expense of the independent CAPs. This scenario mirrors the blackout foreclosure scenario from the preceding section, albeit with different means.

(b) Since services from CAP and TAP are complements, they can be offered as a bundle. The company has the ability to set up different prices of such a bundle (Fang & Norman 2006). First, the price of the bundle may be lower compared to separate offers. In ordinary markets, this may represent the strategy of using the bundle as a promotion tool. However, as in the case of the analyzed vertical mergers, in concentrated markets with low competition and existence of dominant products, the bundle may be sold at a lower price in order to deter fringe competitors on one of the market stages. For instance, in a region where AT&T dominates the TAP market, it may decide to price the bundle of its TAP and its CAP substantially below the separate

units, so that consumers are lured into the bundle at the expense of an independent CAP competitor, like Netflix: the AT&T-TAP with Netflix will always be at a higher price than the AT&T-bundle, irrespective of what Netflix can do. This strategy effectively compares to anticompetitive forced bundling. Notwithstanding, however, in such markets, there are also incentives to price the bundle higher than the separate offers in order to reap market power rents from locked-in consumers (Fang & Norman 2006: 951). Combining the strategies, it is possible to identify such incentives: first, the FIPs TAP/CAP-bundle will be sold cheaper than the competitors can price in order to drive consumers away from independent competitors and towards the FIP. Thus, the FIP will grow and reach a more powerful position in market. Once the market power of the FIP is sufficiently high (i.e., competitive pressure from remaining fringe competitors is sufficiently low), it can profitably increase the bundle's price and switch to the high price strategy. Additionally, firms on the CAP-level gain benefits from network effects and can create lock-in effects (that decrease probability of switching), so they are primarily interested in reaching high amount of consumers and, only after period of time, price increasing strategies could be applied with higher outcome. Scenarios of market foreclosure (see section 3.1) could support higher market power in both types of mergers.

- (ii) If horizontal or vertical merger influences the ability and willingness for cooperation with direct competitors in order to achieve higher revenues, then another possibility to raising price strategy occurs. Discussion of specific conditions and difference of horizontal and vertical integration in this regard is provided in section 3.5.
- (iii) This pricing strategy is based on the idea of transferring parts of the company's benefits, reached through the merger, to consumers. In horizontal mergers, achievement of merger specific efficiencies seems to be easier to access since companies have many similarities in business structure and strategies. Of course, the range of possible efficiencies gained is usually wide and companies-specific, but we can highlight some examples from different market stages. On the CoP stage, economies of scope may be achieved due to the

ability to produce different types of content by using common equipment; also R&D synergies in exchange of technological solutions and developing new ones may be achieved. Merged firms on the CAP stage may strengthen network effects and have synergies in R&D. The TAP stage, as a result of the horizontal merger, may reduce overlaps on the technical level, and therefore decrease companies' costs.

In case of vertical mergers, specific effect is elimination of double marginalization (EDM). The main idea is that a margin in price, set by the merged company, will be lower than in the case of two separate companies within one supply chain. The traditional condition for analyzing this effect is a situation in which two companies have vertical supplier-customer relationships and each of them is a monopolist in its market. However, this analysis can be expanded for imperfect competition, as well (Hausman et al. 2002: 483-484). In the case of AT&T-Time Warner merger, EDM could take place as follows: before the vertical integration, the price that AT&T paid to broadcast Time Warner's Turner content included Time Warner's profit margin. After the merger, AT&T's marginal cost of licensing Turner content will be lower due to the assumption that the combined entity will take care of common profit. With these savings, AT&T will have the possibility and incentives to attract consumers by price decreasing or by higher quality goods. Thus, positive effects for consumers will occur. According to the government's expert, Shapiro, EDM would result in savings for AT&T's customers that add up to \$352 million annually (United States District Court for the District of Columbia 2018a: 67). These lower prices together with a better allocation of resources are traditional arguments of welfare gains through vertical integration (Spengler 1950: 352). However, the existence of EDM itself does not prove that the merger is procompetitive, and that EDM will result in substantial savings for consumers (Salop 2018). EDM may be overcompensated by incentives which lead to raise prices (strategies i-ii, see also Salinger 1988). Additionally, the problem of double marginalization could be solved without integration, for example, by setting mutually beneficial contracts (Church 2008: 1468).

Moreover, the dynamic approach for firm development could be taken into account. Thus, it is possible to suggest a combination of strategies. For instance, a probable profit maximizing strategy for Disney-Fox may be to attract more consumers (firms on the CAP level) in the short term via applying price strategy (iii). If during this time the company can strengthen its position in the market, gain a dominant position and reduce competitive pressure, then incentives may change. So, in long-term, pricing strategies (i) or (ii) may be applied and a rise of prices can be expected. For the AT&T – Time Warner case, similar incentives may appear: as presented in strategy (i(b)), that is, there are conditions under which switching between strategies becomes profitable. Unfortunately, the given situation in the media industry does not favor application of price reducing strategy (iii), and provides incentives for strategies (i) or (ii).

Thus, there are similarities in incentives to apply different pricing strategies. However, increasing prices in the case of vertical mergers is expected to appear earlier than in horizontal ones.

3.3 Barriers to Entry

Due to short-term first-copy-cost effects and economies of scale in the long run, media markets are never perfectly contestable. However, the aim of this section is not to analyze classic entry barriers to media markets, but, instead, to show limitations for newcomers attempting to challenge the highly (horizontally and vertically) integrated companies in this specific market.

Vertical foreclosure (section 3.1) represents a barrier to entry, as the same strategies to combat, deter and predate non-integrated competitors can also be employed to frustrate the entry of new (non-integrated) competitors on any of the market stages (CoP, CAP, TAP). Thus, to successfully compete with powerful market incumbents, entry requires a business model covering all three stages, which considerably increases the costs of entry. In the online world, market entry on the stages of (i) TAPs and (ii) CAPs is already difficult due network effects, lock-in effects and one-stop-shop preferences, all favoring incumbents with strong market positions.

- (i) Established TAPs are able to tie in customers to (long-term) internet and mobile contracts. Thus, they have to stick with one provider in the long run, not being able to easily switch to a competitor. Moreover, if they are vertically integrated FIPs, they are able to offer bundles, e.g., internet *and* content access. Consequently, FIP customers have one-stop-shop advantages, can reduce transaction costs and stay with familiar contracts and companies. This eventually leads to lock-in effects and path dependency.
- (ii) Similar effects can be observed on the CAP-level. Consumers do not want to tediously search which platforms offers the movie they are interested in, but prefer one platform for all contents. A horizontally integrated one-stop-shop reduces search costs and requires only one contract with a single (extensive) provider. Additionally, online platforms collect and analyze personal data and adjust content suggestions accordingly (Budzinski & Lindstädt-Dreusicke 2018). Superior recommender systems can lead to lock-in effects on the consumer side and advantages (horizontally and vertically) for market incumbents in possession of the respective information. Integrated firms, as FIPs or ICPs, can use the data collection to enhance product quality on the CoP-level (see chapter 3.5). Lastly, commonality effects should not be underestimated, since consumers maximize utility by information exchange and sharing. Exclusive contents, which are subject to joint discussion (for instance, “Netflix Originals” or major sports events) can draw attention and enhance direct network effects in favor of incumbents.

The resulting lock-in effects and network effects can all be used by incumbents to strengthen their position and fight new entry. Powerful FIPs may strategically increase these structural barriers to entry (next to blackout threats discussed in 3.1) by artificially creating incompatibilities and rising switching costs.

3.4 Effects on Innovation

The degree of competition in a market has an effect on its dynamic efficiency (Arrow 1972). When it comes to horizontal mergers, like in the case of Walt Disney-Fox, innovation incentives are lower than in a competitive environment since it

tightens the market structure (Reinganum 2008). Horizontal mergers can facilitate innovation by allowing firms to combine their knowledge as well as financial resources (Hollenbeck 2018). However, cost efficiencies and knowledge spillovers usually do not compensate for the lack of innovation incentives from a welfare perspective (Federico et al. 2017, 2018). Therefore, horizontal mergers are generally not desirable for innovation, especially on the CoP-level in this industry, since the CoP-level is the level that innovates in terms of actual media content. With the current market structure, less competition between CoPs leads to lower content diversity, and hence, social welfare losses (Ivaldi et al. 2003), which are higher than the negative effects on innovation and welfare caused by horizontal mergers on any other level of the value chain. On the contrary, vertical integration also has an impact on the innovation behavior of that firm and its competitors.

The innovation incentives of a vertically integrated enterprise (FIP), like AT&T-Time Warner, differ from non-integrated competitors, since firms' incentives to innovate also depend on the possibility of appropriating the results of the investments (Arrow 1972). The possibility of appropriating investments in R&D is higher the lower the competition (as less knowledge spillovers occur). Therefore, single investment decisions in innovation for a FIP are more likely to be profitable. However, even though low levels of competition cause higher appropriability, overall welfare is still higher with a considerable amount of competition as competitive pressure, including when imitation of prior innovations forces firms to keep innovating (Clark 1961, Dasgupta & Stiglitz 1980). According to some parts of the literature, an optimal degree of competition from innovation perspective is neither found under high market concentration nor perfect competition (Schumpeter 1934, Aghion et al. 2005). Furthermore, vertical integration may actually provide a gain in efficiency of innovative processes. It eliminates transactional dilemmas of knowledge like insufficient pre-contract information (asymmetric information) between separate stages of the value chain (Armour & Teece 1980). Relating to the market for audiovisual content, one specific form of content innovation is more likely if the enterprise is vertically integrated because of better coordination of upstream and downstream firms or lower costs of informational exchange (Salop 2018a). Consider the example of Netflix using user data from its CAP activity as an input for developing

“House of Cards”, acting in the case of their original productions as a CoP.

In the case of FIPs, innovation is not equally relevant on all levels of the value chain. If the downstream CAP as part of a vertically integrated enterprise is forced to distribute any content of any quality that is produced upstream, the incentive to innovate on the CoP level is diminished. Since the upstream supplier does not face any negative consequences of not innovating, the incentive for this firm to invest in R&D is lower than it would be without the merger, reducing post-merger dynamic market efficiency (Kuhn 2004).

On TAP-level, through the possibility of customer foreclosure by AT&T’s position as TAP, the incentives for innovation on the CAP-level are lower than they would be if no vertical integration had occurred. FIPs can, therefore, choose between two alternative strategies: compete on the merits through innovation or handicap competition through the possibility of customer foreclosure of competing CoPs and CAPs through the FIPs TAP.

The FIP is in a position where it can provide a disadvantage to competitors on the CAP-level and, therefore, has a smaller incentive to gain a competitive advantage through innovation. For instance, Time Warner is less likely to invest in the development of a new streaming platform, since, due to the merger with the TAP, AT&T obtains the power to discriminate against its competitors, e.g., DISH (blackout of DISH & DISH-Sling in November 2018). The incentives are specifically strong if the independent, non-integrated competitor is a maverick that challenges the media industry incumbents with creative and innovative business models – like, for instance, Netflix is challenging the CAP markets. If the incumbents succeed in deterring the maverick, the negative effects on innovation must be expected to be particularly severe. If the clearance of the AT&T-Time Warner merger serves as a motivation for a pursuit wave of vertical mergers in the industry, incentives to innovate may suffer considerably.

3.5 Coordinated Effects

Coordinated effects are more likely to occur among equals in terms of cost structure, production capacities, and product variety because it is easier for symmetric

competitors to reach a common understanding of the terms of coordination (European Commission 2008, Fabra & Motta 2013). Other factors influencing the probability of the occurrence of coordinated behavior are the number of competitors, (degree of) homogeneity of goods, and the probability and cost of detection of deviation from coordinated behavior (Ivaldi et al. 2003, Aigner et al. 2006).

Several conditions under which anticompetitive coordinated effects after horizontal mergers are likely, are observable in the U.S. media industry. A lower number of competitors with somewhat symmetrical market power, as well as the existence of entry barriers with relatively stable demand and regularities in the market, especially raises the probability of coordinated behavior on the horizontal level of CoP and TAP. This is different on the CAP-level, where the market situation is less stable since new competitors are entering due to the relatively young and still dynamic video-on-demand market.

With the high likelihood of their occurrence, coordinated effects are more often considered in horizontal media mergers. However, we argue that coordinated behavior is equally important in the evaluation of vertical merger cases. In the case of AT&T-Time Warner, there is a strong symmetry in structure with the other FIP Comcast, after their aforementioned 2011 merger with NBCU. Considerable market shares on all levels of the value chain after these mergers make coordinated effects more likely since there are now two symmetric competitors with parallel levels of vertical integration. The resulting danger of coordinated effects includes coordinated anticompetitive foreclosure strategies, i.e. coordinated boycotts of independent competitors (Salop 2018a, see chapter 3.1). Comcast and AT&T both have an incentive to foreclose competing non-integrated CAPs, like DISH or Netflix, and have the means to do so in owning highly valuable ("must-have") content for CAPs to deter competition and then divide the market among the symmetric FIPs.

The probability of the occurrence of coordinated effects is high. Therefore, it must be considered when evaluating vertical mergers (United States District Court for the District of Columbia 2018b, Salop 2018a). Furthermore, vertical integration disallows foreclosed downstream firms from disrupting upstream coordination, leading to a higher probability of the coordinated effects (Salop 2018a). The existence of

high innovation dynamics would lower the danger of coordinated effects because they render collusive behavior harder to sustain as they lower the punishment if market participants decide to deter from the coordinated behavior (pay-off from deviation). However, the discussed merger overall deteriorates innovation incentives (see section 3.4), since the innovation incentive for a vertically integrated firm is only prevalent, as long as other firms do not vertically integrate as well (Liu 2016). The symmetry of vertically integrated firms reduces innovation incentives by promoting and facilitating coordination among the symmetric FIPs. Additionally, the multimarket contacts of the FIPs, which exist manifold in the U.S. media industry, further facilitate and stabilize coordinated behavior (Salop 2018a).

The dominance of a coordinated oligopoly equilibrium of few powerful FIPs may also create umbrella effects for smaller fringe competitors to raise prices just below the level of the dominant firm - a specific version of a coordinated effect leading to lower consumer welfare.

In summary, in the vertical setting of the current development in the U.S. media industry, symmetry and the possibility of foreclosure make a coordination equilibrium between the FIPs highly likely to occur and a loss of overall welfare very probable. Since the level of vertical integration in the media industry is indeed high, it is more useful for competition policy to consider coordinated effects of horizontal mergers in the context of its vertical counterparts.

3.6 Institutional Economics: Interdependency of Different Regulations

An issue that is often neglected in modern economics, as well as in contemporary antitrust discussions, is the interdependency of different institutional frameworks and regulations (Eucken 2006). Media companies are not only subject to general competition laws, but they are also targeted by special regulation. In the case of the U.S., the Federal Communications Commission (FCC) and the rules they enforce are relevant. Focusing on online-related effects of the concentration and integration tendencies, the FCC's net neutrality regulation is particularly interesting. The scope for anticompetitive behavior by (powerful) FIPs and ICPs is co-determined by

net neutrality rules, so that the effects of competition rules and net neutrality rules are intertwined.

Corresponding to the different black-out scenarios discussed in section 3.1, net neutrality regulation deals, inter alia, with three potentially anticompetitive strategies of internet service providers (inter alia, Faulhaber 2011, Krämer et al. 2013, Dewenter & Rösch 2016, Greenstein et al. 2016).

- (i) *Throttling* refers to an artificial and deliberate delay of processing data from specific services, for instance, from a competing streaming service. A FIP, like AT&T-Time Warner, may use its internet intersections to artificially slow down the streaming of Netflix contents, while duly processing the streaming of their own content. As a consequence, consumers will perceive a lower quality of Netflix streaming (i.e., buffering and interruptions during the stream) compared to the FIP streaming – although this difference in quality was artificially created by the FIP.
- (ii) *Blocking* represents an extreme variant of throttling as the contents of the competitors are not processed at all – and, thus, not available to the consumer (black-out).
- (iii) *Zero-rating* in combination with data caps is a more indirect way to artificially disadvantage competitors. Many consumer contracts include data caps, i.e. if consumers exceed a defined amount of data transfer per month, either extra prices have to be paid or further internet access is artificially slowed down. In this scenario, zero-rating means that a streaming service of the vertically-integrated ISP (internet service provider) does not count towards the data cap. For instance, AT&T customers may be able to stream HBO without any data limits according to standard internet access contracts (as this data transfer is exempted from the data cap), whereas Netflix streaming contributes to exhausting the data cap. Consequently, consumers experience incentives to focus their consumption on the FIPs streaming service and limit their consumption of competing services.

From an economic perspective, all of these strategies represent anticompetitive raising-rivals-costs strategies.

Throttling and blocking were prohibited by FCC net neutrality regulation in the U.S., whereas zero-rating was regulated and, at the least, required to be made transparent to consumers (Federal Communications Commission 2015). However, this regulation was repealed in June 2018, so that all three strategies are now principally legal under media-specific regulation (Pai et al. 2017). Note, however, that they may still be illegal under competition law if they represent an abuse of market power.

Notwithstanding, there is an important difference between net neutrality regulation and competition law with respect to throttling, blocking and zero-rating: while the enforcement of competition law largely depends on the market structure, i.e., a dominant position (at least in effect), net neutrality rules apply irrespective of the underlying market structure. Economic theory shows that anticompetitive, welfare-decreasing effects are well possible in oligopoly situations. However, competition law is notoriously difficult to enforce in oligopoly markets (without legally-unambiguously identifiable market power). Thus, changes in net neutrality rules (like in this case from prohibiting to allowing throttling and blocking) influence the (anti-)competitive effects of both vertical and horizontal mergers – but are not subject to merger control decisions. In the case of AT&T Time Warner, the prospects of anticompetitive effects have been escalated by the 2018 change in FCC net neutrality rules, taking place in parallel to but independent from the merger control trial: the scope for conducting anticompetitive strategies has been enhanced because of an increased probability of getting away with it. The same is true for further (vertical and horizontal) concentrations since – unfortunately from an economics perspective – U.S. competition law and policy usually do not pay attention to effects originating in the interdependency of different regulations.

4. Discussion and Conclusion

In this chapter, we answer our main research questions, as stated previously:

- (i) Is the current state and development in the U.S. market for audiovisual content - regarding M&A activities - concerning?

- (ii) Would a development towards more vertical or more horizontal mergers be more concerning in terms of overall welfare and competition?
- (iii) What are possible antitrust policy implications, given the current characteristics of the market? Should regulators rather accept false positives or false negatives?

Question (i) can be answered with the help of our analysis of the industry in chapters 2 and 3. There is an ongoing development of the U.S. market for audiovisual content, which tends to lead onto more vertical mergers – partly because there are already only few big media companies due to horizontal merger activities. This high horizontal concentration of the market is a problem that is getting even worse with vertical mergers, such as AT&T-Time Warner⁷ and Comcast-NBCU. Therefore, ongoing integration in this industry – vertical or horizontal – should be seen as concerning in terms of negative effects on quality, innovation, prices, and access.

Question (iii) can be answered using the so-called error cost framework (inter alia, Easterbrook 1984, Christiansen & Kerber 2006). Including all potential costs (e.g., welfare effects, expenses for the enforcement of antitrust policy, etc.) of possible decision errors, it is used to decide what kind of error would be more or less harmful overall. These two potential errors are: prohibiting a merger that in fact has no negative effects on competition (Type I - false positive) or erroneously allowing an anti-competitive merger (Type II - false negative). The concept can be used to review (merger) decisions ex-post and, therefore, help redesign competition and anti-trust policy towards better decisions and more efficiency (inter alia, Kovacic 2009, Sokol 2010, Budzinski 2013, Budzinski & Stöhr 2018a). If it would be less harmful for overall welfare to have Type I decision errors rather than Type II errors, a strict merger policy would be advantageous. A more lenient policy would be appropriate if the error cost analysis concludes a benefit of more Type II and less Type I errors.

The previous chapters have shown that vertical mergers – especially in the media industry with strong network effects and high barriers to entry – are a potential

⁷ In the most recent development of this case, The New Yorker uncovered how strongly President Trump wanted the merger to be blocked and tried to influence regulators (Mayer 2019). Although we – like Shapiro (United States District Court for the District of Columbia 2018b) and Salop (2018a) – also come to the conclusion that such a vertical merger should be regulated more strictly and this particular merger may have been blocked, we want to dissociate from Trumps “argumentation” and way of (antitrust) policymaking.

threat for competition and welfare. We come to the conclusion that a stricter control of vertical mergers in this industry would be advantageous in terms of overall welfare and costs. Our analysis has shown that merger control in the U.S. is wrong in terms of expecting vertical mergers to cause less welfare losses and negatives effects for competition than it is expected to occur post a horizontal merger. In the past decades, U.S. antitrust policy commonly acted this way and did not enforce vertical mergers in a strong enough manner. This should be changed, especially in markets where strong network effects and economies of scale occur (inter alia, Salop 2018a). Although the enforcement of stricter merger policies is potentially more expensive (e.g., due to a probably wider monitoring of the market, more frequent interventions of antitrust agencies, etc.), positive welfare effects (respectively decreased negative effects) offset them in the long run. Under real-world conditions, where it is impossible to decrease decision errors of both types at the same time, in this industry it would be potentially less harmful to increase the number of Type I decision errors, whereas the number of Type II errors could be decreased – to eventually form a stricter control of vertical mergers and decrease negative post-merger effects (as, for example, already observed shortly after the AT&T-Time Warner merger with the DISH blackout). Besides this stricter merger control, a stricter abuse control of already vertically integrated companies would also be recommendable to prevent anticompetitive behavior, like the described blackout strategies.

The analysis eventually results in the answer to the question (ii), whether vertical or horizontal mergers in this specific market are worse. Overall, with the special features of the market for audiovisual content given, vertical mergers should be viewed as even more alarming than horizontal mergers. Through the high market concentration, due to the ongoing process of horizontal mergers (with the latest case of Walt Disney-Fox), companies on the market already have high horizontal market and bargaining power. Without vertical integration, other companies could possibly countervail this power on different market stages. However, this compensation is impossible, if the horizontally powerful firms expand to other market stages and use their bargaining power there to carry out foreclosure strategies (as described in chapter 3.1) and/or raise barriers to entry (see chapter 3.4), for instance. The market development in terms of merger activities should, therefore, be

considered as two-staged: in the first period, horizontal market power is built through merger activities on one market stage. This process can be seen as nearly completed in the market for audiovisual content – there are only few big companies with high market shares and, therefore, market and bargaining power left to rule the whole market (see table 1). In the second period, these horizontally powerful firms engage in vertical mergers to now cover the whole value chain – eventually they build a FIP. A main problem with these vertical mergers is that once there is such a FIP – leading to vertical bargaining power through the different market stages – there is also horizontal market power on each of these stages, due to the potential blackout threats, entry barriers, and else going out from the upstream part of the now merged entity. The other way round, horizontal market power on single market levels does not directly lead to vertical market power but can often be seen as countervailing power on these different stages. Whereas horizontal bargaining power (e.g., through horizontal mergers) on the CoP-, CAP-, and TAP-levels can have various negative effects (like price increases, innovation decreases, etc.), horizontal mergers on each of these single market stages do not bear a high risk of market foreclosure, as it has been observed in vertical mergers (see chapter 3.1). This underlines the fact that vertical mergers in this concrete market should be considered worse – in terms of welfare and competition effects – than horizontal mergers (without arguing that further horizontal concentration would be procompetitive).

Another special feature of the market that should be taken into account is the relevance of a rich dataset. Through both types of mergers, horizontal and vertical, firms are able to combine their complete market datasets or data about individual customers. If firms merge vertically, not only can the data of one single market stage be combined, but besides the data concerning, for instance, content preferences of single consumers, companies can now combine this data with information about internet or mobile access packages this consumer is using or even individual motion and time profiles. With these extensive records, companies are in a better position for price discrimination, excluding smaller competitors with less data from the market, building barriers to enter the market, among other things (inter alia, Stucke & Grunes 2016). Besides these rather negative effects, FIPs, through their

wide complementary dataset, can also have positive impact on the quality of the overall service. For example, in terms of content, by meeting consumer preferences more accurate (see Netflix' "House of Cards"-example) or in terms of offering consumers complete bundles of audiovisual content and required technical access that meet their preferences better and are often lower in price. Nevertheless, these positive effects cannot outweigh the above-mentioned negative ones. The usage of (combined) personalized data as a means of payment, for price discrimination, or to adapt services to consumer preferences has ambivalent effects and the evaluation of welfare effects depends strongly on assumptions about consumer behavior. In general, under the assumption of bounded-rational ("naïve") consumers, incentives for abusive strategies (in terms of pricing, anticompetitive conduct, etc.) are increasing with a wider dataset (inter alia, Budzinski & Stöhr 2018b).

The current development of the U.S. market for audiovisual content is concerning in terms of antitrust and merger control aspects. We conclude that an ongoing process of vertical mergers in the horizontally already highly concentrated market should be considered much more harmful for competition and welfare than it has been until now. Based on our findings, we recommend a much stricter control of vertical mergers – especially in markets with special features, like strong network effects and high barriers for market entry, such as the one analyzed here.

5. References

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