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**Strategy in the Era of Digitalization and Industry Convergence:  
The Case of the Media and Telecommunications Industries**

Euy Hyun Moon, 40962

A Project carried out on the Master in Management Program, under the supervision of

Afonso Almeida Costa

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# **Strategy in the Era of Digitalization and Industry Convergence: The Case of the Media and Telecommunications Industries**

## **Abstract**

The media and telecommunications industries have witnessed significant transformations due to digitalization. New players entered their market with over-the-top (OTT) services like WhatsApp disrupting the telecommunications industry and Netflix disrupting the media industry. But how did we get there? Strictly speaking, by means of industry convergence. Boundaries between industries are blurring, increasing the competition. An extensive research of the phenomenon is combined with practical examples from the media and telecommunications industries. Strategies chosen by companies from both industries point out the importance of staying competitive against OTT services.

**Keywords:** Digitalization, technology convergence, industry convergence, OTT, strategy, media, telecommunications

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**Abbreviations**

- B2B ..... Business to Business
- B2C ..... Business to Consumer
- FAANG ..... Facebook, Apple, Amazon, Netflix, Google
- IP ..... Internet Protocol
- IT ..... Information Technology
- M&A ..... Mergers and Acquisitions
- OTT ..... Over the top
- SMS ..... Short Message Service
- TV ..... Television
- US ..... United States

## **1. Introduction**

Today, many telecommunications companies are faced with revenue losses (Farooq & Raju, 2017). This results from the increasing usage of over-the-top (OTT) services for messaging and calling such as WhatsApp and Zoom, while mobile and fixed net calling minutes decrease (Farooq & Raju, 2017; Mohr & Meffert, 2017). Much like the telecommunications industry, companies in the media industry are also being disrupted by OTT services. In this case, YouTube and Netflix are examples of such services that offer video-on-demand services through the internet (Sujata et al., 2015). These recent examples are a testimony to the significant transformations that have occurred in both industries in response to digitalization.

As companies are spreading into each other's original spaces, media and telecommunication industries are converging into one (Gambardella & Torrisi, 1998). This phenomenon is driven by multiple factors, such as the emergence of OTT services (Arthofer et al., 2016). This convergence has led to increasingly blurred industry boundaries, allowing for a new information and communications industry to emerge. Therefore, traditional media and telecommunications companies face new competitors and changing consumer preferences, which create new challenges (Arthofer et al., 2016; Sujata et al., 2015).

By means of digitalization, industries are converging through increasingly merging technologies (Rachinger et al., 2018). In the past, both industries were defined by the technology they used. This is no longer the case, as technological applications that were not in contact before now overlap (Curran & Leker, 2011). Combining technologies from various application areas into a new unified technology allows new value creation opportunities.

AT&T and The Walt Disney Company are examples of companies with different starting points that now make up the media and telecommunications market. Diversifying through organic growth into broadband and TV and acquiring the media company, TimeWarner,

helped AT&T, the largest US telecommunications company, to develop from a landline telephone company to a multimedia company (Carlton et al., 2019). Similarly, the media and entertainment company The Walt Disney Company launched its video-on-demand platform (Sanson & Steirer, 2019).

Beyond companies originating in the media or the telecommunications industry, internet and technology giants are entering the same market space (Mohr & Meffert, 2017). Companies like Facebook, Apple, Amazon, Netflix, and Google (FAANG) and their OTT services are disrupting the existing businesses of traditional media and telecommunications companies. This results in a highly competitive market landscape within the converged media and telecommunications industry, with companies merging and acquiring another to consolidate, diversify, and broaden product offerings (Bamberger et al., 2016).

Companies from both industries have to react and adjust their strategies as they are facing declining revenues and increased competition. Practitioner research tackle the question of how companies should adapt their strategies in terms of digitalization. However, how do these strategies look like when faced with industry convergence? There is only little research on how companies are reacting to the phenomenon of industry convergence. To contribute to this research gap, I will answer the following research questions: How do these companies' strategies look like in the era of industry convergence in order to stay competitive and not get redundant? What are the advantages and disadvantages of firms using these strategies?

To answer these questions, I structured this thesis into two parts. First, the theoretical foundation is provided by reviewing the literature on digitalization, technology convergence, and industry convergence. I lay out how the convergence of industries is driven by digitalization and technology convergence. Second, I depict and analyze the challenges and strategies of selected media and telecommunications companies. Therefore, I analyzed multiple cases by examining research papers, practitioner reports, companies' postings, and blog posts. I lay out

which challenges traditional companies face due to industry convergence and explore traditional media and telecommunications companies' strategies to overcome them. Therefore, I focus on technology-based convergence and the effects of emerging OTT services on the strategies of the affected companies.

## **2. Theoretical Foundation**

Various factors influence the convergence of industries (Bettis & Hitt, 1995; Sampler, 1998). One of these factors has been the rise of digital technologies, significantly influencing the convergence process by transforming organizations and establishing new business models (Lee et al., 2010). Often these new business models result from the combination of technologies from different industries and, thus, from converging technologies. For this reason, it is essential to create an understanding of what drives technology convergence. Therefore, working definitions of the critical variables digitalization, technology, and industry convergence are provided. This in turn will help to understand the phenomenon of industry convergence. The review of prior literature on these topics will address the effect of digitalization on technology convergence and thus on industry convergence. In particular, industry convergence is covered by a substantial range of literature. However, the focus will lie on a technology-driven perspective.

### **2.1 Digitalization**

An essential part of defining digitalization is to differentiate it from digitization. Digitization refers to converting information from the analogue to the digital world (Negroponte et al., 1997). For instance, creating a digital news website to make news and information always readily available and accessible. Digitalization provides changes to organizations and their business models due to their increasing usage of digital technologies (Westerman et al., 2011). Organizations can reanalyze their entire value chain in the context of digitalization to identify new value creating opportunities (Doerner & Edelmann, 2015). Organizations can create value



by leveraging customer experience, operational processes, and new digital business models (Legner et al., 2017; Westerman et al., 2011). Being the foundation for newly developing disruptive technologies and business models replacing traditional ones, it is considered both a threat and an opportunity for those organizations (Rachinger et al., 2018).

The rationales behind organizations engaging in digitalization processes can be narrowed down to the pressure from competitors and industry, growing customer expectations, and employees' expectations (Westerman et al., 2011). Due to the decrease in IT solutions costs, more companies can engage in digitalization and pressure traditional companies with new business models (Iansiti & Lakhani, 2014). Digitalization lowers the entry barriers and encourages new players to enter the market with fast scaled IT structures and lower cost structures than the legacy companies (Hirt & Willmott, 2014). Essentially this means these new competitors are changing the whole business environment by offering new products and services that aim at providing better user experiences to customers (Westerman et al., 2011). This leads to the self-reinforcing cycle of growing customer expectations and preferences. As they expect a more personalized treatment, traditional companies must think and act in a more customer-centric way to stay competitive (Abraham et al., 2017; Berridge, 2016). Apart from the external drivers of growing competition and customer expectations, employees' expectations pressure organizations internally (Westerman et al., 2011). They are demanding IT and collaboration tools as they know them from their personal practices. Along with these insights, the study of Kane et al. (2015) underlines the importance of employee's expectations. On average, 80% of employees want to work for companies considered digital leaders. They want to be part of these digital leaders and grow their digital skillset.

Despite the impact digitalization can have on organizations, it is not only about disrupting and replacing existing business models (Peppard & Ward, 2016). It is more about connecting and recombining existing assets with new technologies. Hence, digitalization focuses more on driving change than the explicit content of the shift (Westerman et al., 2011).

## 2.2 Technology Convergence

Digitalization and technological change have significantly influenced organizational transformations and the way they operate (Rachinger et al., 2018). These transformations are driven by increasingly merged technologies that allow organizations to generate new opportunities for value creation (Jeong & Lee, 2015). Technology convergence combines technologies from different application areas across previously distinct disciplines into a new unified technology (Hacklin, 2008; Curran & Leker, 2011). The closer technologies are linked, the more likely they are to converge (Caviggioli, 2016).

Based on the underlying technology newness of the combined technologies, three different types of technology convergence come about (Figure 1) (Hacklin et al., 2004). The first, *application convergence*, combines two or more known technologies and results in a new value-add solution like wireless mouse devices. The second type, *lateral convergence*, merges a known with a new technology. The new technology can amend the known one, creating new features and growing their appeal to customers tremendously. The integration of digital photography into mobile phones enabled it to enter a new era of phones. Lastly, the combination of two or more new technologies results in *potential convergence*. This newly combined technology can facilitate innovative solutions and accelerated technology growth. Communication has been revolutionized by combining smartphones with communication service applications like WhatsApp, enabling a new way of voice calls and messaging.

	Known Technology	New Technology
Known Technology	Application convergence	Lateral convergence
New Technology		Potential convergence

Figure 1. Types of technology convergence based on underlying technology newness

The convergence of technologies results in new product-market combinations linked to the utilization of new technologies. These new products and services are offered across the industries of the formerly independent technologies and start substituting each other (Sick et al., 2019). As a consequence of technology-driven converged products, a new unified market emerges.

### **2.3 Industry Convergence**

The emergence of new unified markets and technology clusters drives industry convergence (Katz, 1996). Firms that compete in an industry typically share some common traits. Beyond serving similar customer needs with similar product types and facing the same environment, they have similar core capabilities and technologies (Chiasson & Davidson, 2005; Hannan & Freeman, 1977; Scott, 2001). Industry convergence unites companies with separate technologies, application areas, and target audiences into a new unified industry (Curran & Leker, 2011). This results in blurring boundaries between formerly clearly defined sectors and changes the competitive environment (Adner & Levinthal, 2004; Bally 2005).

One of the most salient present examples is the convergence of telecommunications, media, and information technology industries into a common industry (Gambardella & Torrisi, 1998). In this case, the drivers of industry convergence can be categorized into technological drivers, deregulation, and the change of user preferences (Wirtz, 2001). First, digitalization enabled media to be offered in a unified format and increased transmission speed and capacity. Technological convergence merged different media channels and technologies such as TV and Computers into a versatile media platform. Second, deregulation and liberalization of the media and telecommunications markets led to cross-sector competition by transforming the business environment. Third, a significant shift in user preferences increased the demand for cross-sector information and communication products and services.

Furthermore, it is essential to highlight that these different industry convergence drivers do not only push the multimedia convergence but also initiate it in a feedback loop (Figure 2) (Wirtz, 2001). Herewith, technological innovations lead to industry convergence, while at the same time changing the preferences of users. The demand for more opportunities in the media and telecommunications industries lead to deregulation. Therefore, drivers of industry convergence are continually reinforcing the convergence of industries.

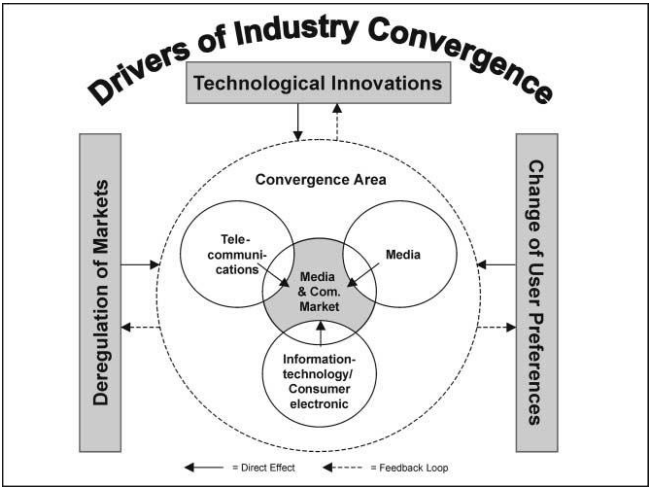


Figure 2. Drivers of Industry Convergence

When technologies and products from different industries merge, the resulting industry convergence can be divided into two different types thereof (Stieglitz, 2003). A model developed by Niels Stieglitz (2003) helps to understand these dimensions of industry convergence. The 2x2 matrix categorizes technology and product-based convergence into the dimensions of “substitutes” and “complements” (Figure 3). The product features from one sector are taken over and integrated into another industry’s product by product substitution. On the other hand, product complementary creates complements from two previously separate products (Stieglitz, 2003).

The first perspective of technology-based convergence takes into account different output-producing industries that have similar technological competencies. The convergence of industries through technology substitution involves replacing old technologies with new ones

(Stieglitz, 2003). On the other hand, technology integration integrates previously separated technologies from different industries and creates complementing technologies. This can even lead to the creation of new industries (Kodama, 1992; Iansiti & West, 1997; Fidler, 1997).

	Substitutes	Complements
Technology-based convergence	Technology substitution	Technology integration
Product-based convergence	Product substitution	Product complementarity

*Figure 3. Types of industry convergence*

This matrix illustrates the role of technology in the process of industry convergence. New converged industries are established through technology-based convergence, thus, creating technology substitutions or integrations. This leads to an increase in the size of the market and competition for traditional companies (Greenstein & Khanna, 1997; Borés et al., 2001). To remain competitive under the new conditions, they must reassess their current resources, capabilities, and competencies (Lei, 2000, Stieglitz, 2003). In the next step, I will analyze how traditional companies react to the media and telecommunications industries' ongoing convergence to remain competitive.

**3. The convergence of media and telecommunications industries**

Following the definitions of the most important determinants, I will analyze how the boundaries of distinct industries are affected by industry convergence. First of all, I lay out the evolution of the media and telecommunications industries. Second, a detailed description of the challenges media and telecommunications companies face due to industry convergence is provided. Lastly, strategies used by companies from both industries will be analyzed to elucidate how companies are reacting to these challenges in order to overcome them.

### 3.1 Media Industry

#### 3.1.1 The current evolution of the media industry

The media industry has multiple segments that in combination result in one broad industry. There are sub-segments like print and publishing, broadcast, internet, entertainment, and advertising within that industry. The whole industry is affected by digital technologies changing the way they create and distribute their content (Chon et al., 2003).

The print industry saw their core business under threat when information started to be easily accessible online. Therefore, they had to digitize their product and offer it through computer network infrastructures, the internet (Krause & Pellens, 2018). The broadcast industry faced similar challenges when new technologies started to disrupt the TV business. Hence, they had to add new business models such as online games or content platforms (e.g., video-on-demand) to their product portfolio to secure revenues (Hess et al., 2016). These examples show how the media industry is transforming by offering its content using the computer industry’s technologies. Thus, by means of technologies, different media industry sub-segments and the computer industry converge into one new industry. As a result of this transformation, some authors refer to it as the information industry (Figure 4) (Chon et al., 2003).

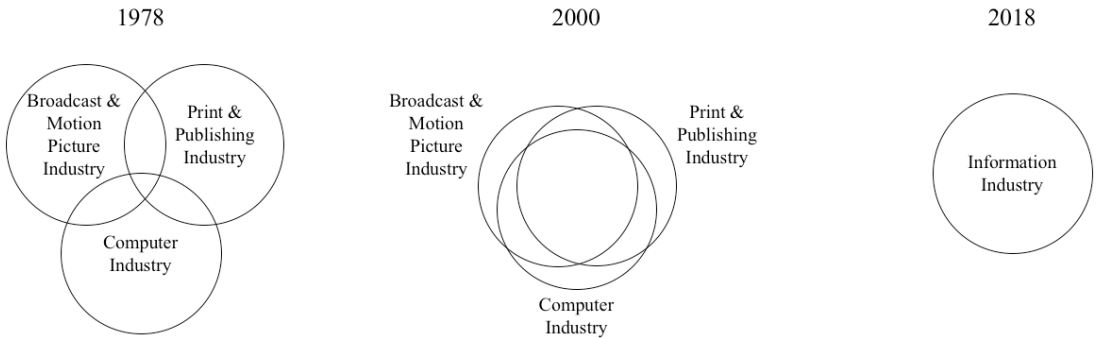


Figure 4. Industry convergence resulting in information industry

**3.1.2 Challenges media companies face due to industry convergence**

The influx and growth of technology has dramatically changed the public’s expectations of the media industry. Furthermore, it has enabled greater access to live and on-demand coverage. The media industry's whole value chain (Figure 5) has been affected by digitalization and industry convergence. The way media companies produce, process, and distribute their content, and how audiences consume it has fundamentally changed. Today, media and news are not just consumed on TV but on all devices across various platforms in various formats (Bamberger et al., 2016). Due to the changing environment in the media industry and the convergence of industries, traditional media companies face multiple challenges.

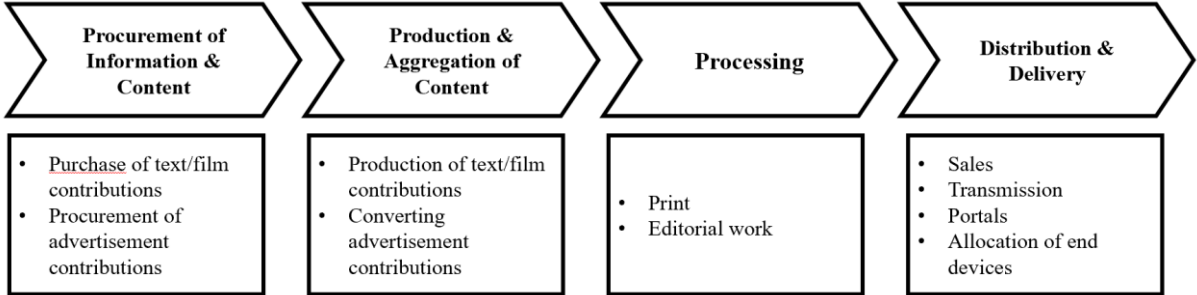


Figure 5. The value chain of the media industry (aligned with Bamberger et al., 2016)

The entry of new players, especially OTT companies, has caused fundamental and disruptive value creation by these internet companies. OTT services include the distribution of content “over the top” of traditional distribution technologies (Arthofer et al., 2016). It is delivered through the internet bypassing traditional distribution technologies such as cable, broadcast TV, or satellite networks. For example, Netflix brings their content directly to the consumers, bypassing the broadcasting and cable companies. Another core business of media companies, the advertisement market, is today controlled by Google. Google controls the automated advertising market through their search engine. The duopoly Google and Facebook accounted for 70% of the US digital advertising spending, while all other media companies had to fight for the remaining 30% (Perrin, 2019).

Companies such as Netflix, Google, Facebook, and Amazon are platforms with a global reach, transforming the media industry into a worldwide, rather than national or regional, business (Bamberger et al., 2016). This shift to OTT media services is radically changing the whole environment. Traditional broadcast TV is being transformed through the rapidly growing incursion of the OTT video platforms Netflix, Amazon Prime Video and YouTube. OTT services are competing in the production, distribution, and delivery steps in traditional media companies' value chain. Besides offering video-on-demand platforms, companies like Netflix also started to produce their own content (Netflix Originals).

Besides the entry of new players, a shift in content creation and consumption can be observed due to changing consumer behaviors (Arthofer et al., 2016). There is a major shift towards media consumption through mobile devices, social networks, and videos (Bamberger et al., 2016). Pew Research Center's survey reported that 55% of US adults use social media as a source of news (Perrin & Anderson, 2019). As these mobile, social, and video channels evolve, traditional media companies face challenges regarding their profitability and brand identity (Bamberger et al., 2016). These changing consumer behaviors are attributable to generational shifts (from gen X to Y and Z) in media consumers' mass (Bamberger et al., 2016). Whereas generation X experienced the transition from analogue to digital media, generation Y experienced digitalization and the internet boom to the fullest. Generation Z is considered digital natives, the first generation born into the digital world, growing up with smartphones and social media platforms (Wood, 2013).

The streaming of live events is becoming more popular and accounts for enormous audiences. Even though the traditional TV viewership is decreasing, 100 million users streamed NBC's Rio Olympics online in 2014 (NBC, 2016). Broadcasters in the top five European football leagues have to pay more for exclusive broadcasting rights than ever before (KPMG, 2019). Here, media companies face greater competition as telecommunications companies are



moving into the media space. BT Group, a British telecommunications company, owns exclusive live streaming rights to all Premier League matches. In 2019, Amazon got into Bundesliga broadcasting by partnering with Eurosport. Therefore, Amazon Prime Video is the first OTT service to enter this market by offering eleven matches live in full at no extra charge on their platform. In the future, more global platform companies like Amazon will compete with broadcasters by bidding for these rights.

To stay competitive in the changing media environment, companies need to build knowledge and capabilities to personalize advertising, marketing, and content (Bamberger et al., 2016). Facebook, Google, and Netflix have their core competencies in analyzing user data, which gives them the ability to understand and address consumer preferences much more effectively (Zuckerman et al., 2019). This results in additional major challenges for legacy companies competing with new entrants.

## **3.2 Telecommunications Industry**

### **3.2.1 The current evolution of the telecommunications industry**

Like the media industry, the telecommunications industry was affected heavily by the convergence of different communication technologies (Fidler, 1997). The industry can be divided into telephone, cable TV, wireless, and satellite TV companies (McShane, 2012). In the past, these companies operated independently without interfering each other. Technological changes such as the emergence of the internet combined with digitalization, deregulation, liberalization, and globalization changed the playing field and formed the current telecommunications industry and its structure (Borés et al., 2001; Lee et al., 2010). Today, an overlap of services prevails as companies steal each other's customers by moving into new product categories and offer product substitutes (McShane, 2012).

Telecommunications companies originally moved from telephone lines to the internet. First, by means of analogue modems, then transmitting voice and data services over the internet (Borés et al., 2001). Hence, telecommunications companies saw chances in digitizing all types of signals. The decrease in the cost of voice and data transmission was a major driving force for technological convergence (Borés et al., 2001). One aspect that led governments to decide to reform the monopolistic structure of public telecommunications providers was the improved efficiency of data transmission, resulting in a worldwide process of liberalization of markets (Cave et al., 2019).

While the network remains the core asset, their customers might not perceive it as a significant differentiating feature anymore. What matters for differentiation is the content that flows through their networks. Therefore, telecommunications companies transform into software companies, operating a software-defined network offering services on top of it (Farooq & Raju, 2019). There is a revenue shift from network connectivity services related to voice, data, and broadcast to higher-level services delivered through their networks. In this digital service provider role, they compete with any similar service provider with an internet connection. Therefore, telecommunications companies face intense competition and have little opportunity for differentiation. Furthermore, the market is moving towards a consolidation phase, where the number of players is decreasing while the quality and content of products and services are improving (Kulkarni et al., 2017).

### **3.2.2 Challenges telecommunications companies face due to industry convergence**

Similar to media companies, traditional telecommunications companies encounter turbulent challenges due to the influx of digital technologies, intense competition, and changing consumer expectations (Sujata et al., 2015). Besides the increasing competition between traditional telco, cable, and mobile network operators, new entrants disrupt the traditional business with OTT services (Farooq & Raju, 2019). Internet companies and tech giants like

Google, Microsoft, Amazon, IBM, and Huawei are moving into the traditional telecommunications terrain. They encroach into telecommunications companies’ value chain by offering innovative products and technologies reaching from devices and operating systems to applications and services (Figure 6) (Mohr & Meffert, 2017).

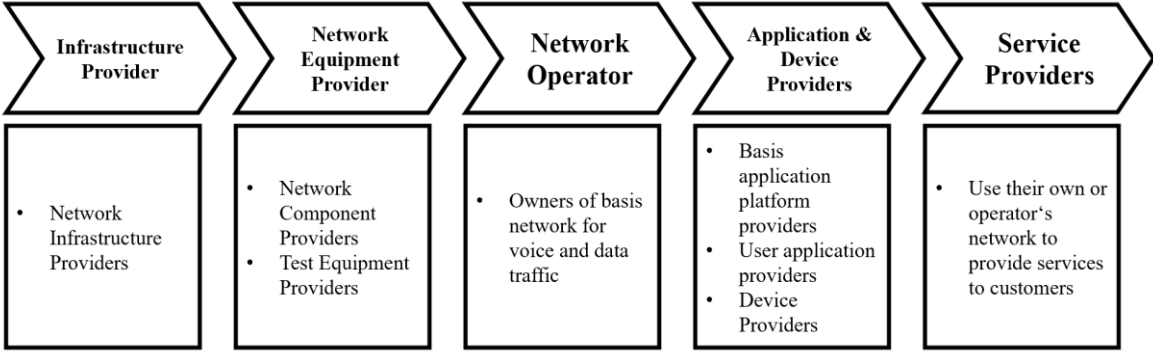


Figure 6. Telecommunications industry value chain (aligned with Constance & Gower, 2001)

WhatsApp, Zoom and Facebook reach their customers directly utilizing telecommunications companies’ network infrastructure, without having to pay any platform fees (Farooq & Raju, 2019). Facilitated by advancing technologies, increasing smartphone penetration, fast IP networks, and shift in consumer preferences, OTT services have been widely adopted across telecommunications landscape (Ross & Erasmus, 2013). Today, telecommunications companies experience revenue losses as these services replace the usage of long-distance calls and SMS (Farooq & Raju, 2019). Due to their global availability, OTT service providers have a significant advantage compared to telecommunications companies who only operate in particular countries (Sujata et al., 2015). In relying on existing telecommunications infrastructures, they are not hindered by regulatory barriers. Global economies of scale enable most OTT services to employ a ‘freemium’ business model in which the basic product is offered free of charge, while additional features require a subscription fee (Farooq & Raju, 2019). OTT companies provide consumers with unlimited messaging or voice minutes in exchange for a subscription fee (Sujata et al., 2015).

The increasing adoption of OTT services influences consumer preferences and thus has a negative impact on telecommunications companies' revenues (Dickgreber & Grabowski, 2015; Caylar & Ménard, 2016). Consumers place a higher value on personalized experiences and better access to services (Sujata et al., 2015). As smartphone usage is a major part of everyday life, consumers want to have a unique experience and accessibility from anywhere at all times. Furthermore, the rise of social media and the consumers' need to share pictures, videos, and audio instantly have significantly increased mobile data traffic. Cisco forecasts the worldwide mobile data traffic to grow from 12 exabytes per month to 77 exabytes per month in five years. (Cisco, 2017). The emergence of OTT applications and wide-ranging adoption of social networks like Instagram, Snapchat, TikTok, etc., further underlines the importance of social media for consumer behavior and data usage.

The increase in video traffic and higher bit rates of videos relative to other content drives the demand for better networks. To avoid network congestion, degradation of service quality, and poor customer experience a network expansion must support the increased traffic (Sujata et al., 2015). Hence, telecommunications operators see themselves in a position where they will have to invest significantly in upgrading their existing infrastructure even though networks are no longer the primary source of differentiation.

The changing consumer preferences towards OTT services cannot only be observed in the business-to-consumer (B2C) market but also in the business-to-business (B2B) market (Sujata et al., 2015). Many enterprise customers use OTT services such as Skype for Business, Microsoft Teams, and Zoom and prefer these services over enterprise telecommunications offerings. Especially as they foster collaborative work of enterprise customers (Sujata et al., 2015). For example, Microsoft Teams' userbase grew from 0 to 115 million daily active users from its launch in 2016 to 2020 (Microsoft, 2020). In contrast, the core telecommunication solutions lose relevance seen in the continuous decline of voice minutes and fixed-line B2B

revenues (Bundesnetzagentur, 2019). Consequently, given the growing presence in the cloud business area, technology and internet companies are increasingly competing with telecommunications companies for enterprise customers (Maurer, 2018). They are locking their customers into their ecosystem, whereas traditional telecommunications companies become easily replaceable. (Mohr & Meffert, 2017).

Considering the principle of net neutrality, telecommunications companies cannot block OTT services on their networks. They must provide their customers equal access to all information and internet services (Meese, 2020; Sujata et al., 2015). Hence, this principle has worked in favor of the OTT services as the operators can neither limit resources it provides nor force OTT service providers to excessively pay for the resources they use.

#### **4. Strategies used by firms in the era of industry convergence**

After providing an overview of current challenges of traditional media and telecommunications companies, I will go on to analyze firm strategies responding to these challenges. First, the focus will lie on the strategies used by media companies, followed by strategies employed by telecommunications companies. Lastly, the advantages and disadvantages of media and telecommunications companies and their strategies to overcome these challenges are analyzed.

##### **4.1 Strategies used by firms coming from the media industry**

Traditional media has been disrupted profoundly by the rise of digital media. The wide availability of OTT services has changed consumer preferences (Arthofer et al., 2016). In this tumultuous environment, media companies cannot solely rely on their historical success. To avoid being swept off the face of the earth, they need to choose the right strategies and make changes in their growth strategy and business portfolios. They need to engage in M&A, partnerships, and other strategies that integrate them into a broader innovation ecosystem (Bamberger et al., 2016).

As OTT players are serving a global market, regional players need to go global and move out of their comfort zone. Axel Springer, Germany's largest newspaper publisher, is an example of a successful digital transition. As they were facing declining ad revenues of their print business, Axel Springer invested in online content, online marketplaces, and digital marketing (Bamberger et al., 2016). One new revenue stream was offering their online tabloid BILD as a new freemium model. Besides the free access to BILD, the new subscription-based product BILDplus offers exclusive content on their website for subscribers.

Other strategic investments can be seen in the acquisitions of Business Insider, eMarketer, and a minority stake in Thrillist Media. With the acquisition of the US online news outlet, Business Insider, Axel Springer made a major step towards internationalization (Axel Springer, 2015a). Business Insider is a leading digital business newspaper website in the US. The acquisition is an important part of Axel Springer's strategy to extend its global presence and to expand into English-speaking regions. It also helps Axel Springer to be among the worldwide leading digital publishers (Axel Springer, 2015a).

To follow their strategy to expand their digital business into the English-speaking world and broaden the portfolio of innovative paid content offerings, Axel Springer acquired eMarketer (Axel Springer, 2016). eMarketer is a media analytics firm and a leading provider of analyses, reports, digital market data for companies and institutions. The new service complements Axel Springer's paid subscription-based research and information services portfolio consisting of Business Insider's BI Intelligence and POLITICO Pro. It strengthens Axel Springer's position in business-related news and content, provides additional revenue streams (Axel Springer, 2016).

Another part of Axel Springer's internationalization strategy to invest in a minority stake in Thrillist Media (Axel Springer, 2015b). Thrillist is a leading digital media company and operates a popular lifestyle portal focusing on millennial men. Therefore, Axel Springer is

consistent in its strategy to broaden global reach and attract millennial audiences. The company aims to work closely with Thrillist to help them develop new, targeted content verticals and expand its video and social resources (Axel Springer, 2015b). Furthermore, Axel Springer deepened its knowledge and capabilities using predictive analytics to control costs and manage sales risk (Bamberger et al., 2016).

Another strategy used by media companies is to launch OTT services on their own. The Walt Disney Company is an example of this. They launched the video-on-demand service Hulu in 2007 and followed by the subscription video-on-demand platform Disney+ in 2020 (Schwartzel, 2019; Sanson & Steirer, 2019). Hulu was originally created as a joint venture of 21st Century Fox, The Walt Disney Company, and NBCUniversal (Sanson & Steirer, 2019). Hulu originally served as a media library of recent TV series episodes from various television networks. The acquisition of 21st Century Fox, Time Warner's stake in Hulu, and the agreement of acquiring the remaining shares of Comcast by 2024 results in the full control over Hulu. With these acquisitions Disney established the third pillar of its direct-to-consumer-strategy, complementing its sports streaming service ESPN+ and its family friendly video-on-demand platform Disney+ (Whitten, 2019). Hulu targets mature audiences with its general entertainment and content. Therefore, Disney can offer its products in a bundle. Hulu's service offering was extended when Hulu + Live TV was launched. The service includes live streams of multiple television channels like ABC, CBS, NBC, and Fox.

With the launch of Disney+ in 2019, Disney made another major move into the OTT video-on-demand platform market, risking cannibalization of its own business Hulu. The service competes with other subscription video-on-demand platforms like Netflix. However, it differentiates its product by offering exclusive Disney and Marvel content. Therefore, Disney uses product differentiation as its strategy for competitive advantage. The platform is mainly targeting younger audiences, involving families, resulting in a large target group for Disney+.

AT&T's WarnerMedia (previously TimeWarner) made a similar step when they launched their subscription video-on-demand streaming service HBO Max (Kovach, 2020). It is based on WarnerMedia's HBO pay television network and offers all its content in addition to third-party content. The firm's goal is to grow its customer base as fast as possible by releasing all Warner Bros. Entertainment movies simultaneously on HBO Max (Kovach, 2020). However, this also means they risk cannibalizing one of their main businesses.

These three cases illustrate how traditional media companies react to the challenge of new OTT services by launching their own OTT services, expanding into international markets, and building knowledge and capabilities to compete. These strategic moves are often performed through mergers, acquisitions, or partnerships.

#### **4.2 Strategies used by firms coming from the telecommunications industry**

Telecommunications companies face similar challenges to those of the media industry. Emerging OTT services especially threaten the core businesses, namely voice and data. As a consequence, revenues are declining (Mohr & Meffert, 2017). Companies need to identify new growth areas that combine the opportunities of digitalization and their core competencies. Telecommunications companies digitalize customer experience by offering unlimited voice, and message contracts, and modernizing the network to increase retention rate and revenues (Farooq & Raju, 2019; Mohr & Meffert, 2017; Bamberger et al., 2016). Given the challenge of net neutrality and rising OTT competitors, telecommunications companies can leverage their network for the purpose of differentiation. Thereby, they implement four different strategies: (1) Multi-sided platform (2) Digital mobile-only (3) Vertical integration (4) Connected industry.

With a (1) Multi-sided platform strategy, telecommunications companies aim to maximize their scope via an ecosystem of partners, customers, and developers. Xfinity, a leading telecommunications company, and a Comcast Corporation subsidiary launched X1



platform in 2012 (Evans, 2013). X1 is a TV and entertainment platform set up through a set-top-box. It combines customized apps, social media features, TV, and video-on-demand services. Furthermore, it offers voice control features, an individual recommendation algorithm, and the ability to connect to the home security system. The open platform allows partners like Netflix, Amazon, Hulu, YouTube, Spotify, etc., to connect to the platform and offer their content. Besides maximizing their customer reach with this integrated platform strategy, Comcast is also cannibalizing its services by bundling 3<sup>rd</sup> party products and services of their direct competitors (Vassileva, 2020). Furthermore, they generate value and revenue by analyzing customer data to turn personalization and customer insights into a tradable asset. With this strategy, Comcast entered the OTT market and directly competes with Apple TV.

Telecommunications companies following a (2) Digital mobile-only strategy pursue an aggressive expansion of their customer base by prioritizing wireless over fixed capabilities and offerings. Driven by the increased demand of digital-savvy and connected consumers for more data and the rising number of smartphone users, the Indian telecommunications company Jio chose this strategy (Figure 6) (Statista, 2020). Jio disrupted the Indian market by providing free data services and shifted their monetization model from voice and data to digital services such as music, TV, and movie applications (Bamberger et al., 2016).

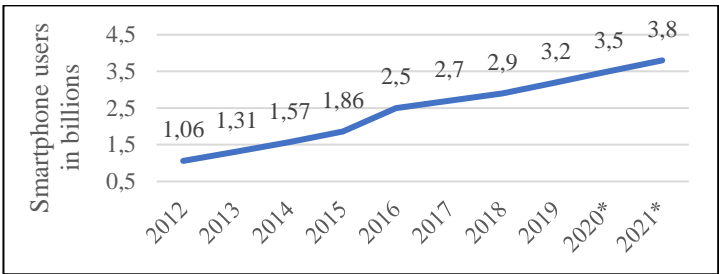


Figure 7. Number of smartphone users worldwide from 2016 to 2021

Telecommunications companies are also (3) vertically integrating within their value chain (Gilo & Spiegel, 2011; Dai & Tang, 2009). With this strategy, telecommunications companies can offer a superior bundling of self-owned services and acquired services. An

example of this strategy can be seen at AT&T, a telecommunications company. In 2018, they acquired WarnerMedia, a media and entertainment company (AT&T, 2018a). With this acquisition, AT&T can combine its strength in direct-to-consumer distribution across mobile, video, and broadband with WarnerMedia's massive pool of content and creative talent to offer customers a differentiated entertainment experience. The launch of HBO Max is part of their strategy to compete with OTT players like Netflix. Furthermore, the company also aims to analyze data usage of their viewership to develop a digital advertising business to challenge the market leaders Google and Facebook (AT&T, 2018b).

Another strategy to differentiate from OTT competitors by leveraging networks is to focus on the B2B segment by (4) enabling connected industries. The world is connecting through augmented data knowledge, and the volume of enterprise-generated data is increasing (George & Hatt, 2017). New business opportunities for industry 4.0 and the increased connectivity of objects demand for better network infrastructures. Therefore, telecommunications companies can become new key players by providing premium infrastructures and enhancing cooperation with partners. By investing in their networks and focusing on quality, features, and coverage of their networks, they can provide low latency, security, and customization (Bamberger et al., 2016; Mohr & Meffert, 2017). The emergence of the next-generation wireless access, 5G, is significantly advancing communications and connectivity and will enable innovation and new services (Andrews et al., 2014).

The telecommunications companies Vodafone and Ericson launched a 5G car manufacturing factory with the German electric car manufacturer e.GO (Ericsson, 2019). This involves digitally optimizing the production plan of e.GO equipped with 5G technologies provided by Vodafone and Ericson. The automotive 5G manufacturing process delivers secure and real-time data transmission across the production chain. The 5G network facilitates faster and more reliable data transmission for manufacturing with constant access to relevant

information (Andrews et al., 2014). With this strategy, telecommunications companies like Vodafone use their differentiating capabilities ahead of the competition by targeting quality and secure network demanding customers.

These different strategies and cases of telecommunications companies demonstrate how firms are reacting to the growing challenges caused by new OTT competitors and declining revenues in their core businesses. Thereby launching competing services to OTT competitors is the focus of telecommunications companies. They rely on their core strength of networks and combine network and content by offering the latter exclusively and partnering with competitors to provide an open platform to the customer. As each strategy focuses on leveraging networks and the content that flows through them, telecommunications companies need to invest in their networks and infrastructures in order to ensure and deliver quality.

#### **4.3 Reflection on advantages and disadvantages of firm types**

Given the different challenges each industry faces, companies use different strategies and, thus, benefit from varying success factors. Both industries' challenges are mainly related to the rise of OTT services as these are changing consumer preferences and thereby further strengthen the demand for OTT services and a better customer experience. Even though net neutrality is a specific challenge for telecommunications companies, it is related to OTT services as telecommunications companies cannot discriminate against competitors using their networks. Due to the convergence of these industries, the same OTT services are challenging both industries simultaneously.

Media and telecommunications companies react with different strategies to the challenges by focusing on different aspects. On the one hand, media companies focus on extending their global reach by investing in English-speaking content. They generate new revenue streams by launching their own OTT services and compete directly with established

OTT players by differentiating through exclusive content on a global scale. On the other hand, telecommunications companies are focusing on leveraging their networks. They develop their own OTT platforms by offering a wide variety of entertainment, including live broadcasts, sports, and even complementary services of their competitors. Moreover, as data transmissions are increasing and the world is becoming more connected, the demand for faster and better-quality networks ensuring security and privacy is growing. Therefore, telecommunications companies invest in networks to be the enabler for optimizing and creating business models.

Neither the media nor telecommunications companies will be redundant any time. But as these industries converge more and more over time, this analysis implies that media companies are more substitutable than telecommunications firms. The key asset of media companies is content, whereas telecommunications networks are the required basis of any OTT service. Even content distributed through TV and cable is switching to online distribution in the form of live streaming. The growing demand for high-speed internet connections to deliver content through the telecommunications growing bandwidth requirements result in a dependency on telecommunications companies and their networks. Nonetheless, telecommunications companies see themselves confronted with the challenge to invest in their networks while facing with declining revenues in their core businesses. This conflict affects media and OTT companies and their need to distribute their content through these channels.

## **5. Conclusion**

The thesis' purpose was to examine the link between industry convergence and practical cases of strategies used by media and telecommunications companies. I first investigated the implications of digitalization and technology convergence on industry convergence. From the literature synthesis, I identified that the different drivers do not only push industry convergence but also initiate a feedback loop.

The second part focused on identifying industry-specific challenges and strategies used by these firms in the context of industry convergence in practice. Seven cases were presented, representing industry-specific strategies to overcome new challenges such as OTT services and changing consumer preferences.

The results indicate that companies from both industries choose strategies that focus on leveraging their core competencies. Some media companies like Axel Springer engage in strategies to grow their core business and drive international growth. Others like The Walt Disney Company and WarnerMedia launch their own OTT services to compete with other OTT players. By focusing on exclusivity of their content through their platforms, they differentiate from other competitors.

Even though customers do not consider networks as a differentiator anymore, telecommunications companies focus on leveraging their network and the content offered in it. Driving revenue through additional services, vertically integrating, launching an own OTT platform, and offering B2B customers the best networks are the different telecommunications companies' strategies. Lastly, I conclude by reflecting on the advantages and disadvantages of these media and telecommunications companies' chosen strategies. Even though neither media nor telecommunications companies will be redundant in the near future, telecommunications companies can be considered more indispensable than media companies. The telecommunications networks are fundamental for other businesses like OTT services to be distributed and can even enable new business models.

## **5.1 Limitations & Future Research**

This paper should serve as the first step in understanding which strategies media and telecommunications companies use today. However, the research presents some limitations related to using qualitative literature and analyzing multiple practical cases, which can be

affected by biases and subjectivity. The selection of different cases does not represent a diverse spectrum regarding for instance company size, as mainly big multinational companies were analyzed. Furthermore, the convergence of the media and telecommunications industries is strongly related to the overlap of technologies and business areas. Therefore, the finding cannot be generalized for any other industries without these prerequisites.

It could be useful to validate the findings through empirical research on a broad sample of companies and cases or business practitioners' interviews in order to minimize bias. For instance, researchers could evaluate the success of particular strategies by observing a more extensive time period. The paper considered different cases from the media and telecommunications industries. Future investigations could focus on different industries, where similar challenges like the entry of OTT services are observed. The strategies chosen by these companies could create interesting new perspectives on competition in the era of industry convergence across different industries. Lastly, future research could focus on the role of corporate culture and talent recruitment and development. Changing and developing corporate cultures and attracting new talents to stay competitive might significantly influence the right execution of these strategies.

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