

# Tail or no Tail? Applicability of the Long Tail Theory to the German Online Media Market

**Céline Fabienne Kampes**

 ORCID: 0000-0002-9971-7321

UNIVERSITY OF APPLIED SCIENCES DÜSSELDORF, GERMANY

**ABSTRACT:** The Long Tail theory serves as an explanation for market change triggered through evolving online market conditions. However, it is often referred to without empirical validation, or with inconsistent findings on its applicability. Therefore, this paper analyses the applicability of the Long Tail theory to German online media offerings as of 2014 and 2016, focusing on offerings that serve information purposes (information offerings). Based on a unique dataset of commercially oriented online media offerings (*Longitudinal IntermediaPlus 2014–2016*), an analysis for three Long Tail characteristics (variety increase, opposing concentration between hit and niche offerings and niche market share increase) is conducted. By additionally distinguishing between political and entertainment-oriented information offerings as boundaries of democratized online market conditions the analysis reveals that the Long Tail theory is not fully applicable to any market sample, and especially not to politically oriented offerings.

**KEYWORDS:** Long Tail theory, online information offerings, politics, entertainment, Germany.

## INTRODUCTION

Society and its economic systems such as the media sector are undergoing a digital revolution (Roncallo-Dow & Arango-Forero, 2017; Wildman, 2020), leading to the rise of entirely new business models (Anderson, 2008). As a consequence, physical markets are transforming into (purely) digital models, in which not only the characteristics of provided goods, but also the entire market structure is revolutionized, thus challenging established theories. In the past, economic market structure analysis mainly relied on the Pareto distribution (Pareto 1964/1896), according to which 80 percent of total revenue is generated by just 20 percent of the total (media) product portfolio (Brynjolfsson et al., 2011; Koch, 2008). This corresponds to a ‘fat-tail’ distribution, with a small number of offerings holding the overwhelming share of proceeds (Anderson, 2008; Huang & Wang, 2014). However, in times of increasing digital business models,

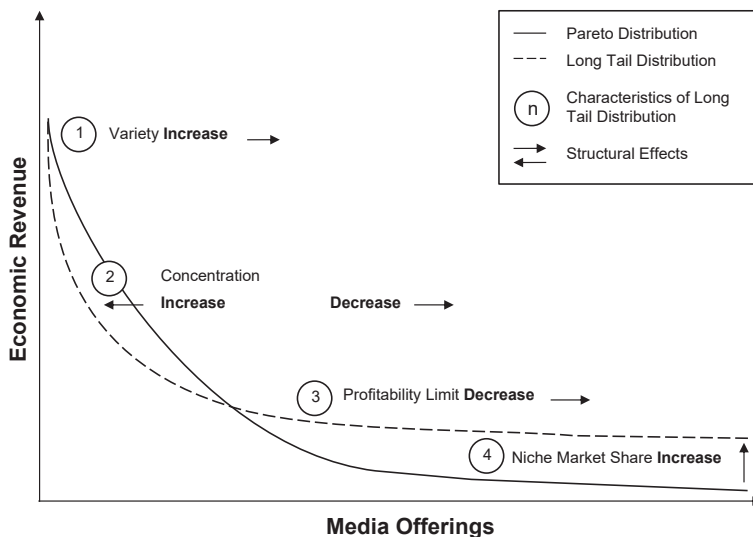
‘The Winner-Take-All Society’ might be outdated, thus requiring modification in online markets (Elberse, 2008; Hindman, 2009; Napoli, 2019; Webster & Ksiazek, 2012). Accordingly, Anderson states that online market structures may still provide hits, but equally provide niche offerings, which are gaining in importance in terms of their number and economic impact: “Hits are great, but niches are emerging as the big new market” (Anderson, 2008, p. 8). As the first ever example, Anderson invented the concept of the Long Tail for the online music industry: A growing tail of niche offerings possibly leading to increasing product variety is available and economically sustainable, and in sum constitutes a significant market share (Anderson, 2008). He attributes these supply – and demand-related market changes to the evolving online market environment.

However, although all industries are, to certain extent, affected by technology-induced online market conditions, the Long Tail theory is rather generalized and is used in an undifferentiated manner, without empirical examination of its underlying characteristics (Smyrnaio et al., 2010). Especially for online information offerings, contradictory perceptions of its applicability have been reported (Hinz et al., 2011; Huang & Wang, 2014; Napoli, 2019). Moreover, the Long Tail theory has not been verified at all in a genre-specific manner, resulting in a gap in the research (Napoli, 2019). Covering the market for online information offerings, the analysis is based on *Longitudinal IntermediaPlus 2014–2016*, for which the data was collected via survey and technical measures used by media providers and marketers to calculate advertising. The database provides an unprecedented data source for the German online media landscape, amongst others covering offerings that serve information purposes and are thus of particular importance for the integrity and collective values of society (Christians et al., 2009; Iversen & Knudsen, 2019). The study therefore analyses the applicability of the Long Tail theory to German online information offerings (2014 and 2016) at the level of individual websites. The paper is structured as follows: First, the introduction presents a discussion of the Long Tail theory, which is incorporated into hypotheses and an exploration of the online media market environment in Germany. The second part is the research design section, which includes the methodology. The third part presents the results of the analysis of the Long Tail characteristics for the overall market of German online information offerings as well as political and entertainment-oriented offerings. Finally, the results are discussed and conclusions for future research and society are drawn.

## LONG TAIL THEORY

The Long Tail concept serves as a theory explaining structural market changes with optimized economic efficiency and business model innovations in the online market environment (Hindman, 2009). The Long Tail theory is almost exclusively associated with increasing product portfolios offered in digital markets, which lead, ranked by demand-induced economic indices like sales or media reach, to the visual idea of long tails of products (Hindman, 2009; Napoli, 2019). The lower-demanded niche offerings accumulate to form a significant amount of market demand and profit (Anderson, 2008; Hinz et al., 2011; Napoli, 2019). However, the Long Tail theory is not only about a shift from demand for hit offerings to niche offerings (Peltier et al., 2016). The theory manifests in four central characteristics, which are expressed differently according to whether the offerings are assigned to the long tail (niche offerings) or not (hit offerings). Figure 1 highlights the differences between the demand curve in markets dominated by a Pareto distribution (solid black line) and online markets characterized by the Long Tail (dashed black line). For the latter, the market structure differs from the Pareto distribution in four main facets, which form the characteristics of the Long Tail and are numerated in Figure 1.

Figure 1. Media Market Structure from Pareto - Long Tail Distribution



Source: Author

## **VARIETY INCREASE**

Variety, consisting of the total number of offerings, strongly increases (horizontal axis). A few hits that sell better than most of the other offered products dominate the market structure. However, the number of offerings with low economic returns (e.g. music downloads, sales of products, media reach for advertising-based websites) increases. Cumulatively, the long tail consists of a large number of products, which represent a low proportion of economic return individually, but together constitute a significant market (Hinz et al., 2011; Napoli, 2019). Although hits still dominate the market (Anderson, 2008), the online market environment transmits more (niche) products to a (larger) audience than do offline media (Smyrnaioi et al., 2010).

## **CONCURRENT CONCENTRATION INCREASE AND DECREASE**

Concentration between hit and niche offerings within the demand curve evolves in opposing directions: Based on the media reach per offering, the concentration of offerings amongst hits increases, whereas it decreases in the long tail (Eisenegger, 2017).

## **PROFITABILITY LIMIT DECREASE**

Within the online market environment, the costs involved in providing (niche) offerings invariably decrease (Anderson, 2008). Consequently, it is possible to capitalize in the long tail and receive an economic return from niche offerings. Economic scarcity shifts to the advantage of new media offerings through a falling profitability limit: The long tail is within economic reach (Hindman, 2009; Hinz et al., 2011).

## **NICHE MARKET SHARE INCREASE**

On an individual basis, niche offerings only account for a small amount of market demand. Nevertheless, their aggregated market share increases from a longitudinal perspective. Compared to the Pareto principle, the demand curve flattens: Whereas hits are becoming relatively less popular, the long tail is gaining relatively more popularity, so that on the aggregated level, niche offerings constitute a market rival (Anderson, 2008).

## **ONLINE MEDIA MARKET ENVIRONMENT**

None of the aforementioned Long Tail characteristics arise if the online market environment has not democratized in three ways referring to supply and demand: first, by easing the conditions of production, second, by democratizing distribution (costs), and third, by uniquely connecting supply and demand (Anderson,

2008; Brynjolfsson et al., 2011; Elberse, 2008; Huang & Wang, 2014; Stanyer, 2010). These affect market supply and demand in a manner comparable to the concealed underwater part of an iceberg. Market providers are encouraged to benefit from decreasing first-copy costs, reduced costs for reproduction (economies of scale) and product portfolio extension (economies of scope) by increasing their product portfolio of offerings in a market that no longer has any regional limitation (Huang & Wang, 2014; von Rimscha, 2020). For the online music industry, Anderson depicts a clear picture of production, distribution and search costs, all running against zero (Anderson, 2008). But is this democratized market environment equally applicable to online media offerings?

The online environment for media offerings can create new economic efficiencies in creation, distribution, and marketing (Huang & Wang, 2014). Diversifying, bundling and distributing online media product portfolios is more cost-effective than ever. However, there are major differences between the product characteristics in the music industry and media market for information offerings and within the latter, which influence the efficiency of its reduced online market barriers (Napoli, 2019). This prevents an undifferentiated transfer of the Long Tail theory, which can be brought down to one major denominator: first-copy costs. While additional content may be provided at little or no cost, which is beneficial for the variety of media offerings (Foust, 2017; Smyrnaiois et al., 2010), several conditions influence the supply-cost structure and thus the economic level of the democratized online media market environment.

First, the online media market is fast-moving in terms of the topicality and lifespan of online media offerings. Fixed costs of unit creation cannot depreciate over years, which would indeed reinforce the Long Tail effect horizontally (Smyrnaiois et al., 2010). The longevity of media offerings in the online environment is even shorter than that of offline media offerings like daily newspapers or daily evening newscasts, resulting in a race for topicality and an entirely new understanding of the term itself. However, the longevity varies with the thematic focus (genre), to the advantage of entertainment-oriented offerings having a longer lifespan than political offerings (Brekken et al., 2012; Lehman-Wilzig & Seletzky, 2010).

Second, the level of institutionalization of media providers affects the amount of first-copy costs. Innovative ways of content production have emerged which no longer necessarily require institutionalized media providers (Budzinski & Kuchinke, 2020). Self-publishing (user-generated content) exists in the online media market, as well as the secondary use of media offerings e.g. from the offline context or press agencies. Automated content production is also entering the online media market, especially in the sectors of sports, weather and the stock exchange (Langer, 2018), on which first-copy costs decrease to effectively nothing. In contrast, the exclusive provision of online media offerings through

formalized media institutions is still accompanied by high first-copy costs (Sjøvaag & Kvalheim, 2019), which reduce the potential Long Tail effect.

Third, first-copy costs differ depending on the journalistic demands, which vary not only according to the media provider's institutionalization, but mainly according to the thematic focus of information offerings. Due to intensive investigations and journalistic expertise needed, online information offerings covering research-intensive media genres (e.g. economics or politics) tend to have higher first-copy costs than service – or amusement-oriented offerings (Sjøvaag & Kvalheim, 2019; see also Hindman, 2009). Especially political and entertainment-oriented offerings are perceived as contradictory in terms of their journalistic ambition (Arlt et al., 2017; Gentzkow & Shapiro, 2008; Hindman, 2009) with the two genres often being judged as boundaries of the normative journalism function (Brekken et al., 2012; Reinemann et al., 2012).

In sum, information offerings covering political issues cannot profit from the efficiency of the online market environment in the way that entertainment-oriented offerings do (Hindman, 2009). This is attributable not only to the cost structure of production but equally to the commercial usability. Entertainment-oriented offerings benefit from decreased production costs and characteristically high media reach like no other thematic genre. Thus, both genres constitute the extremes of (non-)democratized online media market conditions. In consequence, the Long Tail might rather be applicable to offerings that cover entertainment-related rather than political issues.

## RESEARCH DESIGN

Despite its popularity, few empirical studies have so far, tested the applicability of the Long Tail characteristics to online media offerings (Napoli, 2019; Smyrnaiois et al., 2010). Instead, past studies have focused on the book, video and music industries, often covering only one online provider (e.g. Amazon) and with geographical reference to the US or France (Elberse, 2008; Peltier et al., 2016). However, the online media market is increasingly fulfilling a central information function for society (Hölig & Hasebrink, 2019; Mancini, 2013; Robinson et al., 2015) with online information offerings being of particularly importance for the integrity and collective values of society (Christians et al., 2009; Iversen & Knudsen, 2019; Mancini, 2013). Testing the applicability of the Long Tail theory to German online information offerings can therefore serve as a starting point for an important debate on their integrative potential for German society (Iversen & Knudsen, 2019; von Rimscha, 2020). As the online market conditions are considered to vary depending on the genre focus, the present study analyses not only the applicability of the Long Tail theory on a cross-genre level but also

genre-specifically for political and entertainment-oriented offerings forming the extremes of (non-)democratized online media market conditions.

For 2014 and 2016, the market structure is analysed and compared on the level of individual websites for the overall market perspective as well as for political and entertainment-oriented offerings. The analysis focuses on the following main research question: Is the Long Tail theory applicable to German online information offerings i) in general and ii) for the genres of politics and entertainment in particular? The question of whether a Long Tail market structure exists is examined based on its identified four characteristics. As there are no available data regarding the revenue/profit line, which is expected to be highly volatile amongst media providers and presumably influenced by several preconditions (e.g. product portfolio within the online and possibly offline media market or content creation), it is not considered in this study. Thus, three Long Tail characteristics serve as hypotheses for the analysis:

*H1: The variety of information offerings has increased.*

*H2: There is an opposing development of concentration between the hit offerings (increasing concentration) and niche offerings (decreasing concentration).*

*H3: The market share of niche offerings has increased.*

## DATA

The online bundle of commercially oriented German media offerings forms the empirical database, which was made accessible for academic use by Brentel et al. (2020) and augmented with supply-sided primary data (see Kampes, 2020) as *Longitudinal IntermediaPlus (2014–2016)*. It provides demand-related variables which describe, among other things, the demographic, social or economic metrics of media use(rs) for different media offerings. Although the *Longitudinal IntermediaPlus* principally focuses on the demand side, it further portrays the media market supply in Germany and its media reach per offering in a longitudinal dataset. The online bundle includes any online media offering that contains advertising space and whose providers are institutionally connected to the media analysis agencies. Consequently, exclusively private, commercially oriented (in contrast to public service) media offerings are considered whose media providers have established corporate structures. Their media offerings are included on the level of individual websites (e.g. FAZ.de/politics) and on a media brand level (e.g. FAZ.de) including its corresponding individual websites. As a joint venture dataset from Germany's leading media analysis agencies, the data and the underlying data collection method is highly esteemed amongst media providers, marketers and media agencies, serving as a key data source for media planning. It provides an unprecedented, representative and extensive

foundation of the online media market in order to examine the applicability of the Long Tail theory.

This study focuses on the information offerings from the online bundle and their average daily page impressions from an artificial three-month period<sup>1</sup> provided in the code plan of the dataset. The online bundle is further enriched with data variables in order to delimitate those media offerings that are collected on the level of individual websites. Given the research focus on information offerings, these are further delimited by identifying their underlying business model following the classification of Wirtz (2018). As a result, the population consists of German (website-) individual information offerings belonging to the content business model: They enable a thematic allocation based on the information provided, with the name of each media offering similar to a website URL (FAZ.de/politics). The respective thematic genre per individual information offering (e.g. politics and entertainment) was employed and assigned in earlier empirical research based on 28 thematic (assigned to e.g. digital, health, news, politics or sports) and non-thematic (e.g. homepage or video) genres (Kampes, 2020).

Consequently, the form of media offering (individual website), its underlying business model (content model providing information) and thematic genre (politics and entertainment) were included as additional variables to delimitate the samples of political and entertainment-oriented as well as cross-genre individual information offerings with their respective media reach. The supply-related data variables add economic meaningfulness and perspectives to the dataset and concurrently render it an incomparable new dataset that enables holistic supply-side market analysis of the German online media market. The sample of individual information offerings consists of nearly 3 500 offerings from almost 200 different media providers, of which 1 422 are from 2014 and 2 072 from 2016. Of these, 22 individual information offerings (1.55 % of the cross-genre sample) are assigned to the genre of politics for 2014 and 17 (0.82 %) for 2016. The second genre-specific sample consists of 69 entertainment-oriented offerings (4.85 %) for 2014 and 78 (3.76 %) for 2016.

## METHOD

To test the first hypothesis, the methodological approach of frequency counting is applied to all three samples. The second hypothesis centers on the concept of market concentration. Concentration is measured using several statistical methods, with the Herfindahl Hirschman Index (HHI) dominating in economic studies (Chambers & Howard, 2006; Webster & Ksiazek, 2012). Applied to the samples, the HHI takes into account the number of offerings and their disparity

---

<sup>1</sup> The artificial three-month period is constructed as an average from the last calendar quarter of the previous year and the first calendar quarter of the current year (Brentel et al., 2020).



when summing the squared proportional market shares (Doyle & Frith, 2006; Just, 2020) for each information offering in the samples. To measure the market share, the average daily page impressions are used. The resulting concentration indices range from 1 as the upper boundary, with one information offering covering all of the media share in a monopoly market situation, and  $1/n$  as the lower boundary ( $n$  as the number of information offerings) ( $1/n \leq \text{HHI} \leq 1$ ) (Doyle & Frith, 2006). The latter corresponds to a market structure with equal market shares for each of the information offerings. As the HHI takes the absolute number of offerings into account when measuring the market concentration, a longitudinal comparison of concentration indices is only interpretable if a potential numerical change in considered information offerings is normalized ( $\text{HHI}n$ ) (Eckrich, 2015; Just, 2020). To test the second hypothesis, the normalized  $\text{HHI}n$  is applied to both hit and niche offerings, resulting in a comparable concentration bound from  $0 \leq \text{HHI}n \leq 1$  (Eckrich, 2015). Any score under .1 is interpreted as unconcentrated, whereas concentration scores up to .18 indicate a moderate concentration (Horwitz, 2005; Just, 2020).

Categorizing hits and niches is a major methodological step and crucial precondition in order to test the second hypothesis. In the literature, the categorization is based on the distinction of product popularity ranks of offers, with the top ranks defined as hits and the bottom ranks as niches (Anderson, 2008; Brynjolfsson et al., 2010). However, the distinction between hits and niches is not drawn consistently (Wharton University of Pennsylvania, 2009). For instance, whereas Anderson refers to absolute numbers of offers (e.g. the top 1 000 or top 100) (2008), others refer to relative numbers (e.g. the top 1, 10 or 20 percent) (Tan et al., 2017), thus linking the operationalization more closely to the conceptual approach of the Pareto distribution. Equally inconsistent is the use of either the absolute or relative number of media reach or alternatively the ordinal rank of media offerings used as concentration ratio (Brynjolfsson et al., 2010).

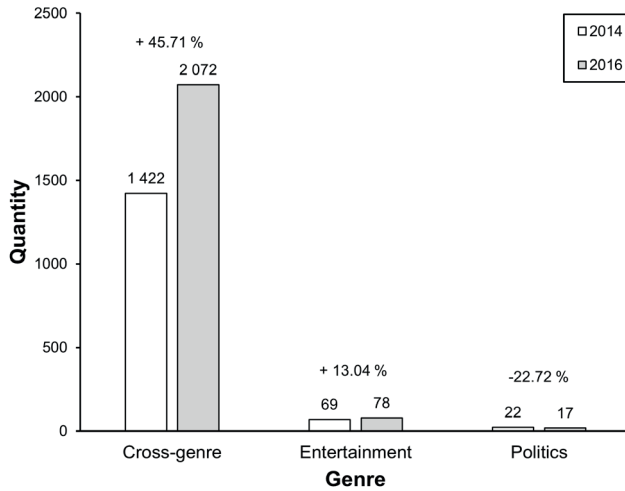
To distinguish between hit and niche offerings in this study, a combined approach is applied: The Pareto distribution, which defines the top 20 percent of offerings as hits, serves as the starting point. Furthermore, to define a relative span of offerings, we consider the Long Tail characteristic of increasing concentration of high-reach offerings and the limited temporal and cognitive capacity of the audience (Budzinski & Kuchinke, 2020; Hinz et al., 2011; Webster & Ksiazek, 2012) and their effect of decreasing the number of hits the more offerings exist. Anderson further characterizes the distinction between hits and niches based on a media reach that “fell off steeply” (Anderson, 2008, p. 10). As a result, the top 20 percent (including a range of +/-10 percentage points) of offerings (ranked with decreasing media reach) are used to define an absolute number of hit offerings based on the media reach-related threshold. Consequently, eight hits are defined for the sample of entertainment-oriented offerings for 2014, which

are dominated by individual entertainment websites from the media providers BILD (examples of individual websites: BILD Entertainment (People/Boulevard/TV) and T-Online (T-Online Entertainment (Boulevard/TV)). The political hits are characterized by six political offerings from the providers SPIEGEL ONLINE, BILD.de (Politics/National Politics), FAZ.NET and FOCUS Online. Hit offerings for both genre-specific samples have a media reach of more than 200 000 page impressions in 2014. As there is no clear drop in media reach for the overall information offerings, the numerical delimitation of 200 000 page impressions is followed, such that 144 media offerings are identified across genres as hits for 2014. These absolute numbers of hits are equally applied to the samples for 2016 in order to analyse the level of concentration between hits and niches, as solely relying on a relative delimitation of hits and niches seems paradoxical in a market with a potentially unlimited offer (Wharton University of Pennsylvania, 2009). As the concentration analyses in 2014 and 2016 as well as the genres are based on different numbers of information offerings, the normalized HHI is used to ensure longitudinal comparability. To test the third hypothesis, the relative market shares of hit and niche offerings are compared for 2014 and 2016.

## RESULTS

Based on 3 494 German individual information offerings for 2014 and 2016, the first analysis focused on a potential quantitative increase of information offerings between 2014 and 2016. Nowadays, a growing number of media offerings in the online media market is consistently found in research (Doyle, 2020; Hendrickx, 2020; Hinz et al., 2011; Mancini, 2013; Napoli, 2019; Sjøvaag & Kvalheim, 2019). This growth, as the first characteristic of the Long Tail, can be confirmed cross-genre (see Figure 2): While 1 422 information offerings are included in the respective sample for 2014, there are even 2 072 such offerings for 2016. The market for information offerings increased by 45.71 percent in two years. From a genre-specific perspective, the first Long Tail characteristic is applicable to entertainment offerings, which increased by 13.04 percent in the two-year period (from 69 offerings in 2014 to 78 in 2016). In contrast, the number of political offerings decreased from 22 offerings in 2014 to 17 offerings in 2016 (a decrease of 22.72 %). Consequently, the increased variety as a quantitative characteristic can be confirmed cross-genre and for entertainment offerings but cannot be attested to for political information offerings.

Figure 2. Quantity of German Online Information Offerings for 2014 and 2016



Source: Author

By applying the above-described combined method to distinguish hit and niche offerings, for 2014, 144 media offerings (10.13 % of the cross-genre sample in 2014) across all genres are defined as hits accountable for the highest media reach. In descending order, the remaining 1 278 information offerings in 2014 and 1 928 information offerings in 2016 are assigned as niche offerings. From a genre-specific perspective, the hits for 2014 are defined by six political offerings (27.27 %) and eight entertainment offerings (11.59 %) and equally applied to the samples for 2016. To validate the second hypothesis, two conditions have to be met: The concentration within hit offerings needs to have increased, whereas the concentration within niche offerings needs to have decreased. The analysis results in two concentration matrices with a longitudinal perspective comparing 2014 and 2016 for hit offerings (Table 1) and niche offerings (Table 2).

Table 1. (Normalized) HHI Applied to Hit Information Offerings

Hit offerings	2014			2016		
	HHI	Range	HHI <sub>n</sub>	HHI	Range	HHI <sub>n</sub>
Cross-genre	.033	1-.007	.027	.036	1-.007	.029
Entertainment	.185	1-.125	.068	.171	1-.125	.053
Politics	.211	1-.167	.054	.269	1-.167	.122

Source: Author

Table 2. (Normalized) HHI Applied to Niche Information Offerings

Niche offerings	2014			2016		
	HHI	Range	HHIn	HHI	Range	HHIn
Cross-genre	.003	1-.001	.002	.002	1-.001	.002
Entertainment	.038	1-.016	.022	.034	1-.014	.020
Politics	.117	1-.063	.050	.166	1-.091	.083

Source: Author

Based on the HHI*n* index theoretically ranging from 0 (lowest concentration) to 1 (highest concentration equal to a monopoly market situation) (Eckrich, 2015), the concentration of hits increased cross-genre as well as with regard to politically oriented offerings. When comparing 2014 and 2016, it is apparent that the political genre in particular became further concentrated. Whereas in 2014, the index for hits of all three samples was below .1, with the HHIn being considered as showing a low concentration, there is a moderate concentration for leading politically oriented offerings in 2016. It appears that the political and entertainment genres have developed in an opposing manner: Whereas the concentration has strongly increased in the political genre, the entertainment offerings have further diversified (from .068 HHIn to .053 HHIn). The entertainment offerings are the only sample that does not meet the first condition of the second Long Tail hypothesis. Overall, the concentration on the level of hit offerings is rather low, with the need to further trace especially the concentration developments within the sample of politically oriented offerings.

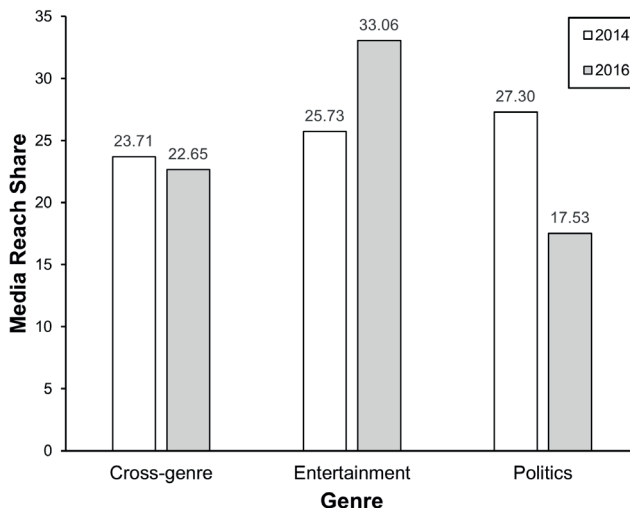
With respect to the defined niche offerings, the average concentration index is lower compared to the hits. From a longitudinal perspective, the concentration index remained stable over the two-year period across all genres. In contrast, entertainment-oriented information offerings diversified slightly, from .022 HHIn in 2014 to .020 HHIn in 2016, thus confirming the presupposed Long Tail characteristic. This does not apply to the sample of political offerings, however, where the concentration of niche information offerings increased. Still with a low level of concentration, it increased from .050 HHIn in 2014 to .083 HHIn in 2016. An increasing concentration can thus be observed for both political hit and niche offerings. Based on the analysis, it is particularly the concentration decrease in the niche sector that could not be confirmed as stated in the Long Tail theory to any but the entertainment-oriented information offerings.

The third hypothesis provides a similarly differentiated result to the first and second hypotheses of the Long Tail theory. For the overall market of online information offerings, the relative market share of niche offerings did not increase, but rather slightly decreased, from 23.71 percent in 2014 to 22.65 percent in 2016. An even clearer decrease emerges in the sample of politically oriented offerings,

in which niche offerings, once responsible for almost a third of the overall media reach (27.30 %), decreased to only 17.53 percent in 2016, which directly relates to the decreased variety of political offerings. In contrast, and thus in line with the hypothesis, the media reach of niche offerings increased for entertainment offerings, from 25.73 percent in 2014 to 33.06 percent in 2016 (see Figure 3).

The present analysis of the Long Tail's applicability to the German online media market yielded mixed results, varying across the samples and thus across thematic genres. Whereas across all genres, only the first and partly the second hypothesis were confirmed, the sample of entertainment offerings followed Anderson's assumptions regarding the numerical increase of offerings, pro rata niche media reach (first and third hypotheses) and niche concentration decrease (second hypothesis in parts). However, the politically oriented offerings in particular developed in contrast to the assumption of the Long Tail theory: The number of information offerings in general decreased, followed by an increasing concentration both for hit and niche offerings and a strong media reach shift from niche to hit offerings. This being said, none of the three Long Tail characteristics can be confirmed for the sample of political online information offerings. This raises the question of how the online media market environment for political offerings has evolved between 2014 and 2016 and why it differs from other genres.

Figure 3. Share of Niche Market Offerings for 2014 and 2016 (in percent)



Source: Author

Note: The media reach share refers to the share of niche offerings compared to the cumulated media reach of both hit and niche offerings per genre category

## DISCUSSION

This study contributes an empirical description of the evolving market structure for online information offerings in general and additionally for political and entertainment-oriented offerings between 2014 and 2016. Given the differing findings on the applicability of the Long Tail theory, it provides indications for the existence of different conditions for the economic market competition amongst thematic genres and their providers. This suggests that market conditions cannot be applied across all genres for information offerings online, but rather need to be inspected critically and individually: None of the theoretically assigned online market characteristics of the Long Tail theory apply to the sample of politically oriented online offerings. They have not increased numerically over time; the concentration has increased in both hit and niche offerings, with the latter decreasing in its media reach over time. As political information offerings are of particular importance for the integrity and collective values of society, the findings raise the question of their economic and social consequences.

Initially, political information offerings still set higher requirements of content production and distribution, which influence the economic appeal for new market entrants. They set higher standards of journalistic expertise than do other genres, and their production is therefore more cost-intensive – even in the online media market (Arlt et al., 2017; Gentzkow & Shapiro, 2008; Hindman, 2009). They further mainly require a grown and established organizational structure and institutional autonomy to ensure credibility (Iversen & Kndusen, 2019; Sjøvaag & Kvalheim, 2019). Furthermore, monetarization of such offerings is made difficult by their very short-lived journalistic product nature (e.g. political debates often show intraday volatility), which is even shorter compared to entertainment-oriented offerings (Lehman-Wilzig & Seletzky, 2010). Moreover, in the offline media markets, the monetarization of political offerings benefitted from their product-bundling character, which is outdated in the online media market, where each individual website generates its own media reach and thus commercial attractiveness (Sjøvaag & Kvalheim, 2019). At the same time, the advertising possibilities are more limited: Native advertising or product placement have evolved into promising sources of capitalization which, however, are assumed to negatively affect credibility and audience trust (Kienzler, 2020; Singer, 2015), meaning that they are barely used within political online information offerings.

While it can be assumed that the online environment for political offerings did not experience any major changes between 2014 and 2016, its disadvantageous character is intensified by the opposing development for entertainment-oriented offerings. They benefitted from recent innovations such as increasingly automated content production and innovative advertising formats (e.g. with native advertising having increased between 2014 and 2016 and beyond (An et al., 2019; Campbell

& Grimm, 2019)). Thus, the gap with political online media market conditions and its business model attractiveness has broadened. The increasing gap is not only empirically supported by the concurrent numerical decrease in politically oriented offerings and increase in entertainment-oriented offerings between 2014 and 2016, but also by the increased concentration for both political hit and niche offerings concurrently indicating a numerical decline of media providers.

New online-born media providers have potentially been more attracted to enter the market for entertainment-oriented offerings rather than for political offerings or even encouraged to exit the market of the latter further adjusting their product portfolio to rather amusement (e.g. entertainment)-oriented online offerings. The economic unattractiveness of the political online media market for online-born provider is further supported by the increased importance of and trust in established, credible media brands in society (Chan-Olmsted & Wang, 2020; von Rimscha, 2020) especially for socially important information offerings such as politics. It results from the increased number of information offerings made available to audiences (as documented for the cross-genre sample between 2014 and 2016) challenging their capacity in terms of time and cognition (Budzinski & Kuchinke, 2020; Hinz et al., 2011; Webster & Ksiazek, 2012). Its demand thus concentrates on fewer, well-known political offerings from media providers that mostly originate from offline media markets (Sjøvaag & Kvalheim, 2019). This cannot only be confirmed with the increased (hit and niche)-concentration within the political sample, but also with respect to their respective media providers: For 2014, 18.18 % of political offerings originate from new online-born media providers but only 5.89 % do so for 2016, corresponding to a decrease from four to only one online-born media provider of political information.

The present analysis and the results thereof are only applicable to German online information offerings, covering a time span of three years. Thus, the findings are limited in terms of time and geography, and further solely refer to commercially oriented media offerings. Further, the database used has a natural cut-off for non-listed information offerings potentially cutting the long tail, which may provide an explanation for the results concerning niche offerings (second and third hypotheses) mainly not confirming the Long Tail characteristics. However, the developed dataset is unique for the German online media market, enabling a holistic approach to analyzing the German online media market structure from a longitudinal perspective as well as genre-specifically for the first time. Nevertheless, further research needs to be conducted especially regarding the methodological approach used to distinguish between hits and niches as well as with respect to a time-related extension of the empirical database.

## CONCLUSIONS

The democratized online media conditions, which Anderson ascribes to online markets in general, do not generate economic incentives for producing political niche content for online-born media provider (Napoli, 2019). In the light of growing economic pressure, the economic environment of disadvantageous market conditions for political offerings compared to other (especially entertainment-oriented) genres discourages new market entrants from providing political online information offerings. Political offline-media providers stay amongst themselves also in the online media market, which results in a de-politicization: Political offerings are a niche market (Hindman, 2009), being numerically one of the least represented thematic genres both in 2014 and 2016 and even declining. Online offerings with a specific collective value for society seem to benefit least economically from the online media environment. This ultimately leads to rather critical market preconditions for the democratically desired diversity of political offerings and presumably further genres with similar conditions, e.g. economics. This underlines the necessity for developing innovative revenue models (that have already been developed for entertainment-oriented offerings e.g. with the rise of Native Advertising). Further, these findings may serve as a starting point of regulatory approaches aiming to increase the supply of democratically desired offerings that however warrant further research.

## ACKNOWLEDGMENTS

This research was supported by the Digital Society research program funded by the Ministry of Culture and Science of the German State of North Rhine-Westphalia.

## REFERENCES

- An, S., Kerr, G., & Jin, H. S. (2019). Recognizing native ads as advertising: Attitudinal and behavioral consequences. *Journal of Consumer Affairs*, 53(4), 1421–1442.
- Anderson, C. (2008). *The Long Tail. Why the future of business is selling less of more*. Adfo Books.
- Arlt, H. J., Mühl-Benninghaus, W., & Schulz, J. (2017). *Medienvielfalt = Meinungsvielfalt? Historische, systematische und digitale Perspektiven auf Meinungsbildung und öffentliche Meinung* [Media diversity = Diversity of opinion? Historical, systematic and digital perspectives on the public opinion]. Organisation der Mediaagenturen (OMG e.V.), ZDF Werbefernsehen GmbH.
- Brekken, T., Thorbjørnsrud, K., & Aalberg, T. (2012). News substance: The relative importance of soft and de-contextualized news. In T. Aalberg, & J. Curran (Eds.), *How media inform democracy* (pp. 64–80). Taylor & Francis.



- Brentel, I., Kampes, C. F., & Jandura, O. (2020). *Media analysis data: Sample of the longitudinal IntermediaPlus from 2014 to 2016 (Longitudinal MA-IntermediaPlus Sample)*. GESIS SowiDataNet, Cologne. Data file version 1.0.0.
- Brynjolfsson, E., Hu, Y. (Jeffrey), & Smith, M. D. (2010). Research commentary – Long Tails vs. superstars: The effect of information technology on product variety and sales concentration patterns. *Information Systems Research*, 21(4), 736–747.
- Brynjolfsson, E., Hu, Y. (Jeffrey), & Simester, D. (2011). Goodbye Pareto principle, hello Long Tail: The effect of search costs on the concentration of product sales. *Management Science*, 57(8), 1373–1386.
- Budzinski, O., & Kuchinke, B. A. (2020). Industrial organization of media markets and competition policy. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and Economics of Communication* (pp. 21–46). De Gruyter Mouton.
- Campbell, C., & Grimm, P. E. (2019). The challenges native advertising poses: Exploring potential Federal Trade Commission responses and identifying research needs. *Journal of Public Policy & Marketing*, 38(1), 110–123.
- Chambers, T., & Howard, H. (2006). The economics of media consolidation. In A. Albarran, S. M. Chan-Olmsted, & M. Wirth (Eds.), *Handbook of media management and economics (Media Management and Economics Series)* (1st ed., pp. 363–386). L. Erlbaum Associates.
- Chan-Olmsted, S. M., & Wang, R. (2020). Branding: Media brands and brands as media. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and economics of communication* (pp. 311–332). De Gruyter Mouton.
- Christians, C. G., Glasser, T., McQuail, D., Nordenstreng, K., & White, R. A. (2009). *Normative theories of the media. Journalism in democratic societies*. Amsterdam University Press.
- Doyle, G., & Frith, S. (2006). Methodological approaches in media management and media economics research. In A. Albarran, S. M. Chan-Olmsted, & M. Wirth (Eds.), *Handbook of media management and economics (Media Management and Economics Series)* (1st ed., pp. 553–572). L. Erlbaum Associates.
- Doyle, G. (2020). Convergence. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and economics of communication* (pp. 151–168). De Gruyter Mouton.
- Eckrich, M. (2015). *Identifikation und Analyse von Softwareclustern* [Identification and analysis of software cluster]. Springer Publishing.
- Eisenegger, M. (2017). Digitaler Strukturwandel der Öffentlichkeit – professionelle Informationsmedien nötiger denn je! [Digitally induced structural change of the public – professional information offerings needed more than ever!] In fög Forschungsinstitut Öffentlichkeit und Gesellschaft (Ed.), *Jahrbuch Qualität der Medien* (pp. 7–16). Beltz Verlag.
- Elberse, A. (2008). Should you invest in the Long Tail? *Harvard Business Review*, 86(7–8), 88–96.
- Foust, J. (2017). *Online journalism. Principles and practices of news for the web*. Taylor & Francis.
- Gentzkow, M., & Shapiro, J. M. (2008). Competition and truth in the market for news. *Journal of Economic Perspectives*, 22(2), 133–154.
- Hendrickx, J. (2020). Trying to survive while eroding news diversity: Legacy news media's Catch-22. *Journalism Studies*, 21(5), 598–614.
- Hindman, M. (2009). *The myth of digital democracy*. Amsterdam University Press.

- Hinz, O., Eckert, J., & Skiera, B. (2011). Drivers of the Long Tail phenomenon: An empirical analysis. *Journal of Management Information Systems*, 27(4), 43–70.
- Hölig, S., & Hasebrink, U. (2019). *Reuters Institute digital news report 2019: Ergebnisse für Deutschland* [Reuters Institute Digital News Report 2019: Results for Germany]. Verlag Hans-Bredow-Institut.
- Horwitz, R. B. (2005). On media concentration and the diversity question. *The Information Society*, 21(3), 181–204.
- Huang, J. S., & Wang, W.-C. (2014). Application of the Long Tail economy to the online news market: examining predictors of market performance. *Journal of Media Economics*, 27(3), 158–176.
- Iversen, M. H., & Knudsen, E. (2019). When politicians go native: The consequences of political native advertising for citizens' trust in news. *Journalism*, 20(7), 961–978.
- Just, N. (2020). Media concentration. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and economics of communication* (pp. 187–202). De Gruyter Mouton.
- Kampes, C. F. (2020). Welche Genres existieren für Online-Medienangebote? Eine Analyse der Themenstruktur aus Anbietersicht [What genres exist for online media offerings? An analysis of the thematic structure from the perspective of media providers]. In W. Deiters, S. Geisler, F. Hörner, & A. K. Knaup (Eds.), *Die Kommunikation und ihre Technologien. Interdisziplinäre Perspektiven auf Digitalisierung* (pp. 13–44). transcript.
- Kienzler, S. (2020). Media and the economic cycle. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and economics of communication* (pp. 261–280). De Gruyter Mouton.
- Koch, R. (2008). *The 80/20 principle. The secret of achieving more with less*. Doubleday.
- Langer, U. (2018, October 25). Daten wissen, was läuft [Data knows, what's going on]. *Horizont*, 38.
- Lehman-Wilzig, S. N., & Seletzky, M. (2010). Hard news, soft news, 'general' news: The necessity and utility of an intermediate classification. *Journalism: Theory, Practice & Criticism*, 11(1), 37–56.
- Mancini, P. (2013). Media fragmentation, party system, and democracy. *The International Journal of Press/Politics*, 18(1), 43–60.
- Napoli, P. M. (2019). Re-evaluation the Long Tail. Implications for audiovisual diversity on the internet. In L. Albornoz, & M. Trinidad Garcia Leiva (Eds.), *Audio-visual industries and diversity. Economics and policies in the digital era* (pp. 85–99). Routledge.
- Pareto, V. (1964/1896). Cours d'économie Politique [Course of political economy]. In G. Bousquet & G. Busino (Eds.), *Oevres completes de Vilfredo Pareto*, 1. Librairie Droz.
- Peltier, S., Benhamou, F., & Touré, M. (2016). Does the long tail really favor small publishers? *Journal of Cultural Economics*, 40(4), 393–412.
- Reinemann, C., Stanyer, J., Scherr, S., & Legnante, G. (2012). Hard and soft news: A review of concepts, operationalizations and key findings. *Journalism: Theory, Practice & Criticism*, 13(2), 221–239.
- Robinson, L., Cotten, S. R., Ono, H., Quan-Haase, A., Mesch, G., Chen, W., Schulz, J., Hale, T. M., & Stern, M. J. (2015). Digital inequalities and why they matter. *Information, Communication & Society*, 18(5), 569–582.
- Roncallo-Dow, S., & Arango-Forero, G. A. (2017). Introducing three dimensions of audience fragmentation. *Signo y Pensamiento*, 36(70), 74–90.
- Singer, J. (2015). Out of bounds: Professional norms as boundary markets. In M. Carlson, & S. C. Lewis (Eds.), *Boundaries of Journalism: Professionalism, Practices and Participation* (pp. 21–36). Routledge.

- Sjøvaag, H., & Kvalheim, N. (2019). Eventless news: Blindspots in journalism and the “long tail” of news content. *Journal of Applied Journalism & Media Studies*, 8(3), 291–310.
- Smyrniotis, N., Marty, E., & Rebillard, F. (2010). Does the Long Tail apply to online news? A quantitative study of French-speaking news websites. *New Media & Society*, 12(8), 1244–1261.
- Stanyer, J. (2010). Web 2.0 and the transformation of news and journalism. In A. Chadwick, & P. N. Howard (Eds.), *Routledge handbook of internet politics* (pp. 201–213). Routledge.
- Tan, T. F., Netessine, S., & Hitt, L. (2017). Is Tom Cruise threatened? An empirical study of the impact of product variety on demand concentration. *Information Systems Research*, 28(3), 643–660.
- von Rimscha, M. B. (2020). Management and economics of media and communication – History and definition of the field. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and economics of Communication* (pp. 1–20). De Gruyter Mouton.
- Webster, J. G., & Ksiazek, T. B. (2012). The dynamics of audience fragmentation: Public attention in an age of digital media. *Journal of Communication*, 62(1), 39–56.
- Wharton University of Pennsylvania (2009, September 16). *Rethinking the Long Tail Theory: How to define ‘hits’ and ‘niches’*. <https://knowledge.wharton.upenn.edu/article/rethinking-the-long-tail-theory-how-to-define-hits-and-niches/>
- Wildman, S. S. (2020). New media and the need for new analytical frameworks: Dual challenges to media economics and policy analysis. In M. B. von Rimscha (Ed.), & S. Kienzler, *Management and economics of communication* (pp. 485–496). De Gruyter Mouton.
- Wirtz, B. (2018). *Electronic business*. Springer Publishing.