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Market power and journalistic quality

Martin Leroch¹ 

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Abstract

The political news media play an important role in the successful working of democratic societies. In order to fulfill this role, a sufficient level of journalistic quality is required. Most Western societies rely on the market as means to assure this level of quality. This implies regulation of the media sector by competition law, which may take different attitudes towards market power. While it is undisputed that some aspects of competition between political news media firms yield beneficial social outcomes, empirical findings regarding the impact of changes in market power are less straightforward. In the present analysis, I aim to understand whether an increase in market power may lead to an increase in journalistic quality. To this end, I formally model a demand function for media outlets based on the empirically justified assumption that preferences for journalistic quality systematically differ among consumers according to their education. I refer to this finding as consumption capital in a wide sense. Using a model of monopolistic competition, I find that, if consumption capital is sufficiently high, an increase in market power is associated with an increase in journalistic quality.

Keywords Journalistic quality · Political news market · Monopolistic competition

JEL Classification K20 · L10 · L82

1 Introduction

The political news media play an important role in the successful working of democratic societies. They provide both news content and a forum for political discussion. Citizens are enabled to participate in the political discourse, which potentially enhances the quality of their political decisions (Siebert et al., 2000). The political news media thus also contribute to the political education of its readers, viewers or listeners. The political news media also serve a watchdog function by helping control the political system. Empirically, it has been shown that free media contribute

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to the achievement of several social desiderata, such as economic development (Leeson & Coyne, 2007), social capital (Dutta & Roy, 2013), government effectiveness (García-Sánchez et al., 2016), voter turnout and the number of candidates running for office Schulhofer-Wohl and Garrido (2012).

A crucial factor for the effective fulfillment of the democratic tasks of the political press is an adequate level of journalistic quality, which is defined via objective criteria in the relevant literature. Crudely summarized, these criteria relate to good and diverse information: truth and correctness, relevance, neutrality, impartiality, immediacy, and diversity (Westerdahl, 1983). Because such criteria are difficult to measure, empirical research dealing with quality of newspapers often refers to size of the newsroom or the average number of news pages as proxies to measure quality (see for instance Pattabhiramaiah et al., 2018, 102). For the sake of clarity, note that this definition of journalistic quality is silent regarding political positioning of the media outlet. Both liberal or conservative media can provide high levels of journalistic quality.¹ Accordingly, while media bias and reduced journalistic quality may often go hand in hand empirically, they are not necessarily related. The framework I employ in the following abstracts from different dimensions of quality such as media bias, slanting or fake news by design, and assumes that journalistic quality can be aggregated to a specific level, similar to an index.²

Assuring an environment in which firms or other players providing society with political news and background of high journalistic quality is of social importance. Such an environment most importantly includes an adequate legal and regulatory framework on which the actors can rely. Many societies, above all Western societies, tend to rely on the market as allocation mechanism. The uninterfered working of supply and demand should guarantee the provision of journalistic quality. This perspective leads to media firms being restricted by competition law, for instance in many EU countries or the USA.³

Regulation under competition law should help prevent anti-competitive deeds and market concentration (Garcia-Pires, 2017). In practice, this for instance implies that mergers among media firms have to be cleared by the authorities, who have to estimate the effects of these mergers on the competitive environment. Typically, if the market power of the merging firms would become too large (however defined by the authorities), mergers would be prohibited. Similarly, cooperation by media firms may be restricted if the firms involved share significant market power.⁴

Against this background, a recent German legislation appears as a crack in the prevailing dogma. With the ninth reform to the competition act, some forms of

¹ Note again that this definition relates to objective criteria, while the subjective perception of quality may vary. For instance, readers may perceive newspapers as offering higher quality if they cater their own political leaning (Mullainathan and Shleifer, 2005, 1032).

² This is not to say that aspects like media bias, slanting or fake news are not linked with journalistic quality. Quite the contrary. A media outlet with a political agenda might see less need for investigative journalism, for instance, and hence violate the criteria neutrality, impartiality and diversity.

³ See e.g. Garcia-Pires (2017) for a summary on how different European countries regulate their media markets. Gentzkow and Shapiro (2008) also provide a historical perspective on the evolution of the market-based approach the USA have implemented in regulating the media.

⁴ For the sake of precision, it should be stressed that competition law in general is silent on the evaluation of market power per se. Rather, the potential of exploiting market power makes it subject of scrutiny.

cooperation by media publishers were explicitly excluded from competition law. The new legislation allows press companies to market their titles jointly or coordinate prices. Further, the threshold of joint revenues beyond which mergers have to be approved by the Federal Cartel Office was more than doubled for broadcasters, from 25 million EUR to 62.5 million EUR. The extent of the exemption is admittedly rather restricted. Nevertheless, its introduction implies that the German legislature recognizes the press to provide a special market which calls for different treatment. This raises the question what exactly might be special about the market for political news media as compared to other industries.

The relatively little empirical evidence on the effect of market power on journalistic quality is less clear than it might appear. For instance, analyzing the US newspaper market in the years 1993, 1999 and 2004, George (2007) found that the number of topics covered per geographic region and the differentiation among papers has increased with ownership concentration. In the terms introduced above, this contributed to journalistic quality by offering more diversity. In contrast, Fan (2013) simulated negative effects on quality of a hypothetical merger between two newspapers in Minneapolis, which was actually blocked by the authorities. The simulation was based on data in the US market for daily newspapers between 1997 and 2005, which included a variety of information on newspaper characteristics.

In this paper, I offer a structural argument to address the question whether market power in the market for political news may have positive consequences for the media's provision of journalistic quality, as specified above. By design, the argument aims to understand how changes in market power may affect quality. In other words, it is silent regarding absolute values of journalistic quality. I suggest an answer based on the understanding that not all consumers share a preference for more journalistic quality.⁵ More specifically, based on the finding that demand for specific outlets correlates with educational attainment and political knowledge,⁶ I argue that demand for quality is characterised by what might be termed consumption capital in a wide sense. While consumption capital in the original sense, as introduced by Becker and Stigler (1977), describes cases where the utility deriving from consumption of a good increases when the same good has been consumed previously, the increase in utility in the case of political news media derives from an increase in knowledge of the wider environment of consumption in the case of political news.

Based on this understanding, I construct a demand function characterized by different tastes for journalistic quality.⁷ On the supply side, I assume the market for political news media is characterised by monopolistic competition. The major finding of this exercise is that, if consumers sufficiently value high quality, market power may be positively associated with the provision of journalistic quality. Hence, an

⁵ To the best of my knowledge, most economic analyses of the media market rely on more or less standard models of demand e.g. Gentzkow and Shapiro (2008), Garcia-Pires (2017) or Blair and Romano (1993).

⁶ It is beyond the scope of this paper to analyze the causes of this consumption pattern, or how it can be influenced, or how changes in this pattern will influence outcomes.

⁷ I here depart from classical literature such as Shaked and Sutton (1982) and Shaked and Sutton (1983) who assume an equal preference for quality.

increase in market power could raise the level of journalistic quality of each media firm. The logic underlying this result is the following: Consumers who have a sufficiently high willingness to pay for quality will not be deterred by price increases. Thus, an increase in market power gives firms a larger feasible price range. By increasing the level of quality, they may attract consumers with a large preference for quality and simultaneously increase their prices (beyond the cost increase induced by the change in quality), thereby increasing their profits.

To avoid misunderstandings, it appears helpful to clarify the terminology employed before proceeding. The term political news media is used synonymous for any firm offering political news to customers. While this understanding transcends several different markets, e.g. the market for newspapers, online media or TV stations, I implicitly consider these markets to be separate. Hence, my focus lies on the markets for (separate) media, not the market for information. Hence, while substitutes are admittedly relevant for the consumers' choice of a specific news outlet, e.g. online platforms or newspapers, the present argument starts from the assumption that consumers have chosen to read newspapers. It should further be stressed that the results do not imply that monopolies or market power per se are beneficial regarding their provision of journalistic quality. All that is shown is that, given a number of differentiated newspapers, an increase in market power *may* lead to an increase of quality. Whether the initial level of quality is high or low, a fact which might be explained by overly powerful firms, is not addressed.⁸

In the following Sect. 2, I support the hypothesis that the demand for political press is characterized by systematic differences in readership before formally modeling the market for political press in Sect. 3. A concluding discussion closes the paper.

2 Preferences for journalistic quality

Education matters regarding how likely people are to consume political news of high quality. As for instance data from Pew Research Center (2012) show, the educational background of consumers of different media outlets across different media types (TV, radio and print) differ systematically. The study asks regular consumers of selected outlets about their highest educational level. It finds that “[m]any regular news audiences have more education than the general public” (p. 37). Further, the study asks the respondents about current political affairs. The questions via which this political knowledge was tested do not relate to knowledge transmitted in the standard educational institutions. Hence, the educational level per se cannot explain how respondents fair in the test.

⁸ Monopolies may in fact lower the level of quality also due to non-structural factors. For instance, Bagdikian (1997) analyses how media monopolies have risen since the 1970s/80s, and how they managed to increase their hold over several outlets. He shows how a shortage in advertisement revenues has lead to a reduction in costs, which lead to a decrease in journalistic quality. Further, lobbying and partly illicit practices lead to a further increase of the power of few media conglomerates.

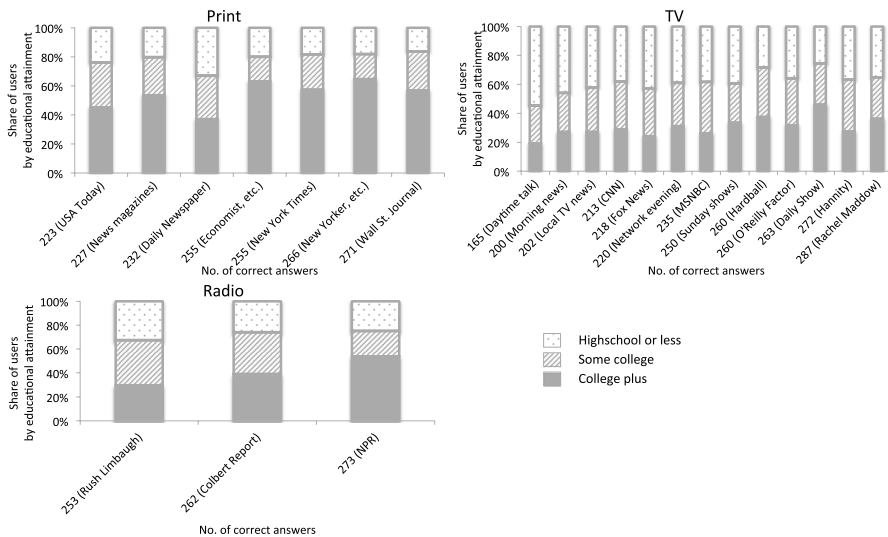


Fig. 1 Educational attainment and demand for media with journalistic quality

Figure 1 illustrates a consistent pattern regarding the relationship between consumers of different outlets and their choice of media. It distinguishes the three different media types TV, radio and print. For each outlet considered in the survey, it depicts the share of regular consumers with either college or higher education, some college education or high school education or less. Further, the outlets of each media type are ordered according to the number of correct answers to the questions on political knowledge their readers reached on average, running from low (left) to high (right).⁹ Across different media types, the following pattern consistently evolves: consumers with high educational attainment are more likely to select those outlets, the consumers of which answer more questions correctly.

While this exercise cannot prove that responders gather the information which is relevant to answer the questions about political knowledge correctly in the outlets they consume most, it nevertheless is suggestive. Apparently, the more educated are more willing to invest their time and resources in consuming media which provide them with more political knowledge or, in the terms of this paper, more journalistic quality. Toff and Kalogeropoulos (2020) have also shown that some people actively avoid “hard” news.¹⁰ Further, individual-level factors, such as a preference for “soft”

⁹ The absolute number of correct answers is not provided in the study. Rather, for each possible number of correct replies, it indicates the share of respondents per educational background, which give this number of correct replies. To yield the numbers indicated in the graphic, I multiplied this percentage with the corresponding number of correct answers and summed these numbers over all possible numbers of correct answers.

¹⁰ The website “dictionary.com” defines hard news as follows: “news of widespread import, concerning politics, foreign affairs, or the like, as distinguished from routine news items, feature stories, or human-interest stories.”

news or entertainment, are statistically significant predictors for news avoidance. Also, some people avoid news specifically because “the content was too focused on politics” (Palmer & Toff, 2019, p. 1641).

Analyzing the causes of this consumption pattern, or how it can be influenced, is beyond the scope of this paper. One reasonable explanation could for instance be that educational attainment nurtures a taste for journalistic quality. Once acquainted with political people, procedures, and recent events, additional information gathered from the political news media turn more “productive”, i.e. consumers can better understand the information and place them in context. Knowledge about current political events thus becomes more attractive to readers who know more about the political system and are already well-informed about (other) current political events. Hence, the marginal utility from consuming relevant news increases the higher the consumers’ knowledge about politics, including current events. Call this knowledge consumption capital in a wide sense.¹¹

Hence, I consider it safe to at least assume that the demand for journalistic quality is not distributed equally across society. Rather, some consumers may positively evaluate journalistic quality while others may even dislike it. In the following section, I turn to a formal analysis of the consequences of this finding regarding the provision of journalistic quality.

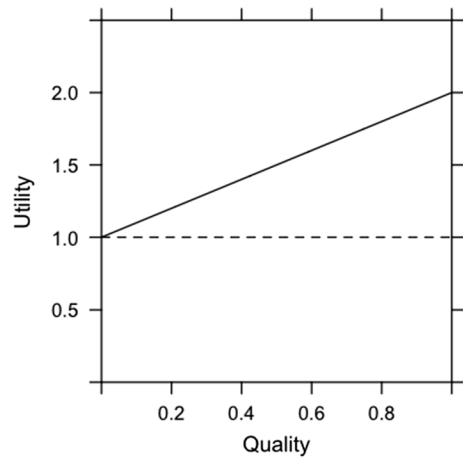
3 The market for journalistic quality

The essence of the previous section was the finding that the demand for journalistic quality provided by the political press is characterized by an unequal distribution of a taste for quality across society. In the following subsections, I formalize this argument and model market demand via an amended Hotelling model. In the subsequent subsection, I turn to the question how market power affects the firms’ choices of journalistic quality. For the sake of illustration, I refer to newspapers as running example.

3.1 Market demand

In the following, I assume that consumers differ according to their taste for journalistic quality. In line with the standard Hotelling model, I assume that consumers can be allocated on a continuum between “no” journalistic quality and “full” journalistic quality. The former case might be illustrated as people only reading newspapers without any journalistic content or at least none that satisfies the criteria identified in the introduction. One might think of a comic or sports magazine as examples. Less

¹¹ Recall that consumption capital as originally introduced by Becker and Stigler (1977) refers to the increase in utility deriving from consumption of a good when having consumed the same good previously. In the case analyzed here, the increase in utility derives from an increase in knowledge of the wider environment of consuming the specific good.

Fig. 2 Hotelling model with consumption capital

extreme examples include tabloids with a strong focus on gossip and tittle-tattle about the high society. Papers offering “full” journalistic quality, on the other hand, only include (high) journalistic quality, including diverse presentation of topics. It hence addresses readers with a strong interest in (and knowledge about) politics.

I further assume that each level of journalistic quality is the most preferred by one reader, and one reader only. Also, I assume that every consumer can afford to buy one unit of the corresponding outlet, thereby excluding income-effects. Figure 2 illustrates the corresponding maximum willingness to pay for different levels of journalistic quality by different consumers. In contrast to the standard Hotelling model, readers are not only allocated on the unit interval. Additionally, the maximum willingness to pay for higher quality outlets increases the more consumption capital readers have acquired. Hence, while the “price line” in standard Hotelling model is horizontal (dashed line), with maximum willingness to pay by customers unchanged when moving from left to right on the continuum, this model introduces a price line “tilted upwards” around the maximum willingness to pay of the consumer who most prefers no quality (solid line).

One way to formalize the above relationship is the following. An individual $n \in [0, N]$ derives utility from reading a single copy¹² of a newspaper of price p which provides a level of journalistic quality $q \in [0, 1]$ according to:¹³

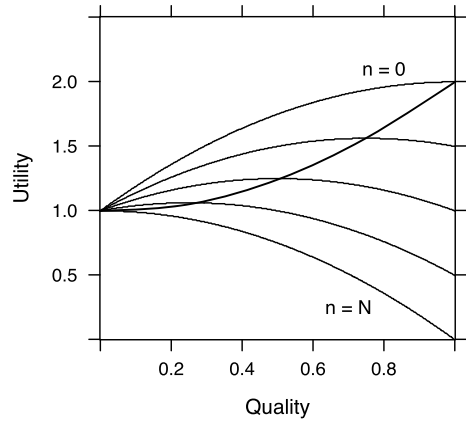
$$u_n(p, q) = a + g(q) - nh(q) - p. \quad (1)$$

The parameter a defines the level of utility a newspaper without any journalistic (quality) contents. For the sake of simplicity, I assume that all consumers enjoy the

¹² I assume that consumers may buy only one copy of one newspaper.

¹³ This utility function has been used in Leroch and Wellbrock (2011), where an analysis of a newspaper monopolist facing public subsidies is presented. Using the same utility function, Battagion and Vaglio (2017) extend the analysis to duopolies. Both publications state the utility function to reflect consumption capital.

Fig. 3 Consumption capital and willingness to pay for journalistic quality



same level of utility from such a newspaper, independent of their consumption capital. The function $g(q)$ represents the utility the consumer with the highest amount of consumption capital derives from different levels of quality. Without loss of generality, I assume $g(q)$ to be globally increasing in q , at decreasing rate. Consumption capital enters the utility function via the term $nh(q)$, where $h(q)$ is a non-concave increasing function in q . I assume that consumers are ordered according to their individual consumption capital, with $n = 0$ implying the *largest* level of consumption capital, and $n = N$ the *lowest*. Compared to the case of $n = 0$, reductions in consumption capital hence imply a reduction of utility for any given level of journalistic quality. Further, the lower the consumption capital, the greater this loss in utility.

Figure 3 illustrates the introduced utility function.¹⁴ The concave curves represent examples of the family of curves depicting the willingness to pay for different levels of journalistic quality of different consumers, depending on their consumption capital. The highest curve depicts the willingness to pay by the consumer with the highest level of consumption capital, the lowest curve that of the consumer with the lowest level of consumption capital. In line with the above formalization, the former is labeled $n = 0$, the latter $n = N$. The lines in-between these two polar consumers represent examples of consumers with intermediate consumption capital. The points of maximum willingness to pay of each consumer are connected by the convex curve. It can readily be seen by inspection of the figure that this “price line” is globally upward sloping, thus taking up the essential feature of Fig. (2).¹⁵

It follows that the size of the *de facto* market is defined by the “marginal consumer” - the consumer who is indifferent between buying a copy and not buying it.¹⁶ His rank in consumption capital constitutes the number of copies sold because

¹⁴ For the sake of interpretation, I use the terms utility and willingness to pay synonymously.

¹⁵ The fact that the price line is non-linear should indicate that the consumption capital need not have a “linear effect”, i.e. that every unit of consumption capital has the same marginal effect on the evaluation of journalistic quality. The following analysis allows for, but is not restricted to, these linear effects.

¹⁶ Note that this does not prohibit the extreme cases of either no consumer buying a copy or all N potential consumers buying a copy.

all consumers with higher rank will have a larger willingness to pay, and hence consume the newspaper, too. All other consumers have a lower willingness to pay, rendering newspapers too expensive according to their preferences. Hence, the market demand function is defined as:

$$n = \frac{a + g(q) - p}{h(q)}. \quad (2)$$

3.2 Market supply

The market for newspapers is characterized by several features. First, newspaper firms typically have market power. For instance, regional newspaper markets are dominated by monopolists (see Blair & Romano, 1993; Dewenter, 2003; Tag, 2009). Newspaper markets in urban regions are predominantly characterized by two major players, rendering this market duopolistic. Nation-wide newspaper markets are often divided among a small group of suppliers (Schütz, 2012). As Pattabhiramaiah et al. (2018) argue, local newspapers nevertheless face competition from (the relatively few) national newspapers. Second, newspapers are differentiated products (George, 2007). For instance, newspapers may focus on different stories and present the same stories in different styles of writing, or even slanting.¹⁷ Third, as Pattabhiramaiah et al. (2018, 98) argue, the pricing-strategy towards readers is “driven solely by the newspaper’s decision to increase its price-cost margins on the reader side.” Hence, the choice of price is not primarily a strategic response to competitors’ prices.

In light of these features, I employ a static model of monopolistic competition. While this choice of market structure captures some of the relevant aspects of media markets, it certainly doesn’t capture all. For instance, it has been argued that media markets are two-sided markets (see e.g. Anderson & Gabszewicz, 2005), a fact which cannot be addressed in the current framework. For the sake of the argument, I assume an exogenous number of firms setting their prices and quality levels.¹⁸ The profit function of a firm i is then defined as follows:

$$\pi_i = n_i p(n_i) + n_i r(n_i) - k(n_i) - c(q_i). \quad (3)$$

Profits depend on the number of sold copies, n_i , the price per copy, $p(n_i)$, and revenues from advertisement, $r(n_i)$. Revenues from advertisement are assumed to be paid per copy. Further, because a wider audience makes the outlet more attractive to

¹⁷ Slanting is defined as “the process of selecting details that are favorable or unfavorable to the subject being described” (Mullainathan & Shleifer, 2005, 1032). It is thus an essential feature of political bias and, by definition, reduces the journalistic quality as understood in this article because it includes the conscious omission of facts. An analysis of the impact of political beliefs of the readers or the political leaning of the newspaper is beyond the scope of this paper. It should be noted, however, that the results provided here share a certain resemblance with those of Mullainathan and Shleifer (2005) who find that competition among newspapers results in common slanting toward extreme positions.

¹⁸ Free entry and exit would primarily change the market power of the existing firms. The results obtained below are thus applicable to the case of firms either entering or exiting the market.

advertisers, revenues per copy are assumed to be increasing in the number of copies, i.e. $r' > 0$. Two forms of cost occur: First, costs for serving more consumers (e.g. printing copies), $k(n_i)$, with $k' > 0$ and $k'' > 0$. Second, costs for providing journalistic quality, $c(q_i)$, where $c' > 0$ and $c'' \leq 0$. Solving the first-order condition with respect to quantity yields the familiar Lerner-condition stating that prices entail a markup over marginal costs:

$$p = \frac{k' - r - nr'}{1 + \frac{1}{\epsilon}}, \quad (4)$$

where $\epsilon = \frac{dn}{dp} \frac{p}{n}$ is the price elasticity of demand.

With slight abuse of interpretation, I in the following treat ϵ as exogenous. That is, I assume that for instance a merger between newspaper firms will exogenously increase market power as measured by ϵ . The main question I aim to address is how such a change in market power affects the provision of journalistic quality.

3.3 The role of market power

Under the assumption of profit maximization, an exogenous change in market power ϵ will induce firms to adjust both price and quality levels, such that the following Hessian system is satisfied:¹⁹

$$\begin{pmatrix} \pi_{pp} & \pi_{pq} \\ \pi_{pq} & \pi_{qq} \end{pmatrix} \begin{pmatrix} \frac{dp}{d\epsilon} \\ \frac{dq}{d\epsilon} \end{pmatrix} = \begin{pmatrix} -\pi_{ps} \\ -\pi_{q\epsilon} \end{pmatrix}. \quad (5)$$

To simplify notation, define the Hessian matrix as H , where

$$H := \begin{pmatrix} \pi_{pp} & \pi_{pq} \\ \pi_{pq} & \pi_{qq} \end{pmatrix}.$$

Because firms will maximize their profits, $\det H > 0$. Applying Cramer's Rule, we may then solve for $\frac{dq}{d\epsilon}$, which is:

$$\frac{dq}{d\epsilon} = \frac{\pi_{pp}\pi_{q\epsilon} - \pi_{pq}(-\pi_{p\epsilon})}{\det H}. \quad (6)$$

From the inspection of (6), the following proposition follows:

Proposition *If consumers value quality sufficiently, an increase in market power induces an increase in journalistic quality - otherwise it will lead to a reduction of quality.*

¹⁹ Note that because π is at least twice differentiable by assumption, Young's theorem holds and hence $\pi_{pq} = \pi_{qp}$.

Before proceeding with a formal proof of the proposition, note that the necessary condition separating the cases where an increase or a decrease of quality follows from an increase in market power is dependent on the sign of $\pi_{pp}\pi_{qe} - \pi_{pq}(-\pi_{pe})$. If it is positive, (6) is positive, and hence an increase in market power will induce an increase in quality. If it is negative, the opposite holds.

Because the necessary condition is cumbersome to analyze and hard to interpret analytically without making further assumptions regarding the functional form, it may seem insightful to focus on two sufficient conditions instead, before providing a numeric example of the necessary condition.

Proof It is sufficient for $\frac{dq}{de}$ to be positive if both products, $\pi_{pp}\pi_{qe}$ and $\pi_{pq}\pi_{pe}$, are positive.

From the first-order condition of profit maximization with respect to prices, it can readily be seen that $\pi_{pp} = -\frac{2}{h(q)} < 0$. Further:

$$\pi_{qe} = n_{qe}p + n_{qe}(np_n - k_n) + n_q p_e + n_e p_n n_q \quad (7)$$

The first two terms on the right-hand side depict the marginal gains and costs from changes in quantity induced by a change in market power, respectively. In optimum, these terms are equal and hence cancel out. Thus, $\pi_{qe} > 0$ iff:

$$p_e > n_e p_n. \quad (8)$$

Substituting $n_e = -\frac{p_e}{h(q)}$, inequality (8) can be reformulated to

$$h(q) > -p_n, \quad (9)$$

where $p_n < 0$.²⁰

Hence, if the evaluation of quality $h(q)$ is sufficiently high, more specifically if $h(q) > |p_n|$, the product $\pi_{pp}\pi_{qe}$ will be positive.

Further, $\pi_{pe} = -\frac{2}{h(q)} \frac{\partial p}{\partial e} < 0$, because $\frac{\partial p}{\partial e} > 0$. π_{pq} will also be negative iff:

$$\frac{\partial n}{\partial q} = \frac{\frac{\partial g}{\partial q} h(q) - \frac{\partial h}{\partial q} (a + g(q) - p)}{h(q)^2} < 0 \quad (10)$$

Because $h(q)$ was assumed to increase non-concavely, and $g(q)$ to increase concavely, the larger q is, the more likely the term will be negative and hence the product $\pi_{pq}\pi_{pe} > 0$. \square

Inequality (9) illustrates that the existence of consumption capital is a necessary condition for the result that an increase in market power may lead to more journalistic quality being provided. Setting $h(q) = 0$ will never satisfy (9), at least for normal goods. Note, however, that consumption capital has to be sufficiently high for this result to hold.

²⁰ In the special case that every unit of consumption capital has the same effect on people's willingness to pay for journalistic quality, $h(q)$ will be a constant.

The intuition underlying this result is the following. Changes in the number of sold copies can be achieved via two levers, price and quality. However, a price-reduction alone might not suffice in order to sell more copies, as the quality-level could still be perceived as “too high” for the (new) price by the marginal consumer. Inequality (9) now tells us that if the consumption-capital induced evaluation of quality by the marginal consumer is higher than her price-evaluation, this will indeed be the case and the copy will not be bought.

Inspection of (10) reveals that changes in price, *ceteris paribus*, will decrease the likelihood of an increase in market power leading to an increase in quality. It can easily be seen from (10) that the first-order derivative of the left-hand side of the inequality with respect to price is positive. Because the left-hand side of (10) has to be negative for the results to hold, it will then be less likely to be the case as prices increase.

Intuitively, an increase in price will deter readers with relatively low levels of consumption capital. This is of particular relevance in light of recent findings. As Pattabhiramaiah et al. (2018) observe, newspapers are confronted with declining demand for newspaper advertising,²¹ leading to a reduced incentive to subsidize readers at the expense of advertisers. Consequently, prices per copy tend to rise. The same holds true when readers dislike advertisement. To hold their readers, newspapers have to reduce the amount of advertising. To offset the reduction in advertisement revenues, they have to increase prices.

3.4 A numeric example

A simple example may be instructive to further clarify the results. For the derivation of Fig. 3 the functional forms $g = 2q - q^2$ and $h = \frac{1}{N}2q$ were used, yielding the following utility function: $u(n) = a + 2q - q^2 - n(\frac{1}{N}2q) - p$. Assume that $a = 1$, $k = n^2$, $r = n^2$, $c = q^{0.5}$ and that market size is 200,000 copies. Picking up these functional forms, Fig. 4 depicts the region in the price and quality space for which an increase in market power will lead to an increase in quality. Those points satisfying the necessary condition with equality yield a convex, upward sloping line, the exact location of which further depends on the price elasticity. All points to the north of the corresponding line are associated with positive values of the necessary condition, meaning that an increase in market power will lead to an increase in quality. The feasible combinations of price and quality are limited by the consumers' preferences, which are depicted as the concave lines. All points to the south of the line corresponding to the marginal consumer would be feasible. Consequently, the feasible points for which an increase in market power would lead to an increase in quality is demarcated by both the necessary condition and the willingness to pay curve of the marginal consumer.

²¹ Interestingly, the ninth reform to the German competition act was officially motivated primarily to counter the challenges deriving from this decline in demand for newspaper advertising (see Podszun, 2017).

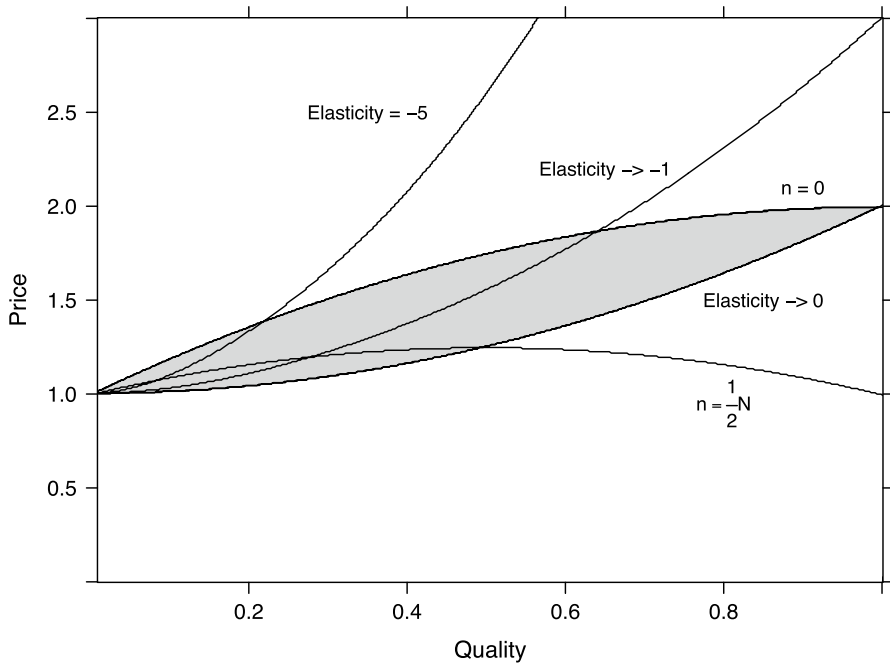


Fig. 4 An increase in market power may lead to higher quality

Highlighted as grey shaded area in Fig. 4 is the limiting case where consumers do not react to price changes at all (elasticity $\rightarrow 0$), and the marginal consumer is the one with the highest consumption capital ($n = 0$). For the given levels of consumption capital, the region where an increase in market power leads to an increase in quality is maximized in this case. As price elasticity increases, the lower limit of the region will tilt upwards, as indicated by the exemplary cases of elasticities -1 and -5 , respectively. Similarly, the more consumers the firm will serve, i.e. the lower will be the consumption capital of the marginal consumer, the further downwards will the upper limit of the region be tilted. This dynamic is depicted for the alternative case where half of the market is served by the newspaper ($n = \frac{1}{2}N$).

Changes in consumption capital will change the location of the willingness to pay curve of the consumers, which constitute the upper limit of the region under consideration. An increase in consumption capital will tilt the upper limit upwards, thereby increasing the region of interest. A reduction of consumption capital will tilt this upper limit downwards, thereby diminishing this region.

Higher market power, i.e. higher elasticity, hence increases the size of the region where further increases of market power increase quality. The reason underlying this result is that consumers who have a positive willingness to pay for quality will not be deterred by price increases. Thus, a more powerful firm will choose to increase the level of quality it provides in order to attract new customers, and charge higher prices (above costs of quality), thereby increasing its profits.

4 Conclusion

Although there is relatively little empirical work explicitly analyzing the link between markets for news and journalistic quality, some of the existing empirical literature has questioned market competition as allocation mechanism for the provision of journalistic quality. For instance, McManus (1994) argues that market competition, which implies low levels of market power, is detrimental for the media's ability to provide qualitative content. Comparing different media over time, Zaller (1999) finds that in the USA periods with higher levels of market competition (and hence lower levels of market power) are associated with lower levels of journalistic quality. Yet, it is undisputed that the existence of several players in the different media markets is preferential over monopolies. Consequently, understanding the specific mechanisms underlying the market for news is crucial to comprehend how market power affects the provision of desirable outcomes such as the provision of journalistic quality.

The analysis presented above focuses on one specificity of the market for news which has, to the best of my knowledge, been treated as side-remark, namely that consumers value journalistic quality differently. It was then demonstrated that an increase in market power of private media firms *may* lead to an increase in journalistic quality. It should be noted, however, that this neither implies that the result holds universally, nor that a media monopoly is beneficial over the existence of a multitude of firms. Media monopolies may have extremely detrimental effects. To give but two examples: As Bagdikian (1997) has shown, they may unduly influence politics. As Besley and Prat (2006) have argued, the reverse may also hold: Political agents may capture the media, thwarting the media's watchdog function. This is especially easy when there is only a limited number of firms to capture. One might add that media with market power may also affect the consumers' preferences, for instance by actively distorting or manipulating the information consumers receive, and upon which they form their preferences.²² In terms of the present analysis, such political biases would constitute reductions in the level of journalistic quality. While the model presented does not distinguish between different components of journalistic quality, it has shown that indeed a reduction in quality might be a reasonable strategy for media outlets, if this contributes to their readership. If readers' preferences would indeed adapt to the biased opinion offered by the media consumed, outlets could additionally limit the competition over their readers by "locking them in". However, the analysis of such long-term effects is beyond the scope of this paper.

The result that a perfectly competitive market, in which firms hold no market power, might yield inferior outcomes in the media market is especially important also in light of the increasing number of media substitutes, especially in the internet. From a standard economic perspective, such substitutes, which limit the market power of newspapers, would be beneficial as they force newspapers to offer

²² In fact, not only autocratic regimes seem to exploit their ownership of (powerful) media to foster their position. See Djankov et al. (2003) for an analysis of the effects of state ownership of media on political and economic freedom.

sufficiently attractive content such that consumers still choose to read them. According to the logic presented above, however, this could come at the cost of having to lower the level of journalistic quality.

Such results rings familiar to those found by others. Gentzkow and Shapiro (2008, 146), for instance, find that “when it comes to the kind of information that the First Amendment is most concerned with, there may be large social gains that consumers do not internalize. Consumers will prefer to free-ride and let others invest in casting informed votes. A first-best outcome might require encouraging consumption of news over entertainment, and politically relevant ‘hard news’ over ‘soft news’ about car chases and celebrity scandals.” Despite the similarities in conclusion, both perspectives nevertheless highlight different aspects. While the perspective of lacking internalization of social effects implies that it is costly to consume “hard news”, the perspective of consumption capital (in the wide interpretation embraced here) implies that this need not be the case. Rather, it pushes the limiting factor to the development of consumption capital, i.e. the interest to read about politics.²³

However, both perspectives allow for at least a certain degree of skepticism regarding the role of the market, understood as the call to eradicate market power entirely, in assuring journalistic quality in the political press. In this respect, the recent reform to the competition act in Germany may appear promising.

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²³ Note also that I did not refer to social welfare at all. The reason for not digging deeper into this issue is that I find it hard to construct a meaningful welfare function based on the general functional forms specified above. Similarly, the parameters chosen for this theoretical exercise remain too abstract for a meaningful quantitative analysis. Note, however, that Spence (1975) comes to the conclusion that a monopolist may “under-” or “over-provide” quality from a somewhat welfaristic perspective, depending on the sign of the cross-derivative of the price function with respect to quantity and quality.

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