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Evaluating Strategic Approaches to Competitive Displacement: The Case of the U.S. Newspaper Industry

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ABSTRACT

The concept of competitive displacement is central to theories of media evolution, and the threat that the Internet has posed to printed newspapers provides an ongoing case study on the topic. In particular, this situation offers an opportunity to examine the strategic efforts of print newspapers to prevent competitive displacement, as well as the effectiveness of these strategies. This article addresses these issues through an analysis of a unique data set, constructed from 20 years of newspaper circulation data, as well as data on local market characteristics, newspaper staffing and content variety, and state-level Internet penetration. Specifically, this article examines whether, and to what extent, these competitive strategies impacted local print newspaper circulation trends over this 20-year time period. This analysis focuses on the following strategic responses: (a) newspapers' launching of online versions (a diversification strategy within the language of media evolution literature); and (b) newspapers' efforts to cover a greater variety of subject areas, as measured by the number of editors and special editorial sections produced. (The authors characterize these as a "mimicking" strategy from media evolution literature, as this strategy essentially represents an effort to simulate the much greater content variety that readers can find online). This article examines the relationships between these circulation, strategic, and Internet penetration variables over a 20-year time period, while also taking into account relevant characteristics of local newspaper markets.

The economic challenges facing print newspapers in the United States have been well documented (see, e.g., Fuller, 2010; McChesney & Nichols, 2011), especially after the emergence of online news offerings in the late 1990s and early 2000s. Circulation and advertising revenues for many newspapers have declined. Some have been forced to make significant cuts in editorial staffing; others have ceased operation completely or have gone to a purely online distribution model.

Most analyses of the decline of print newspapers identify the disruptive effects of the Internet as the primary explanation (see, e.g., Anderson, Bell & Shirky, 2013; Nielsen, 2012). According to this perspective, many newspaper readers have found free news and information online to be an adequate substitute for print journalism (particularly given that newspapers tended to make most of their content available for free online). Other studies have argued that online news consumption complements rather than cannibalizes traditional news sources (see, e.g., Chyi & Lasorsa, 2002; De Wal, Schonbach, 2005; Dutta-Bergman, 2004). Even if this is so, alternative online advertising

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platforms such as Craigslist, Monster, and Ebay have siphoned off significant advertising revenues (particularly in terms of classified advertising).

The concept of competitive displacement is central to theories of media evolution, and the threat that the Internet has posed to print newspapers provides an ongoing case study on the topic (see, e.g., Leghema-Wilzig & Cohen-Avigdor, 2004; Napoli, 1998; Scolari, 2013; Stober, 2004). In particular, this situation offers an opportunity to examine strategic responses used by print newspapers to prevent competitive displacement, as well as the effectiveness of these strategies.

In addressing these issues, the first section of this article outlines the relevant theoretical framework, reviewing literature on the process of media evolution and the means by which established media industries respond to competitive threats from new technologies. The second section describes the data gathered for this study and provides an overview of the methodological approach used. The third section presents the results of analyses: identifying the apparent core strategies of newspapers in response to the growth of the Internet as a competitor for news- and information-seeking audiences, and assessing the effectiveness of these strategic approaches. The concluding section summarizes the study's key findings, the practical and theoretical implications of these findings and offers suggestions for future research.

Media evolution

Scholars of media systems, as well as those working in strategy and policy in the media sector, have found it increasingly useful to use an “ecosystem” analogy when framing their observations on the effects of new technologies (see, e.g., Anderson, Bell, & Shirky, 2013; Friedland, Napoli, Weil, Ognayanova, & Wilson, 2012). It is unsurprising, therefore, that theoretical frameworks for studying the introduction of new technologies into a media ecosystem should rely on the concept of media evolution to explain their effects on established industry sectors, business models, and strategies (see, e.g., Napoli, 1998; Neuman, 2010; Stober, 2004; Scolari, 2013).

As Merrill and Lowenstein (1971) illustrated, the history of media evolution has, for the most part, been one in which individual media platforms follow an elite–mass–specialized evolutionary pattern. That is, in the early stages of a technology, the content primarily targets elite audiences (i.e., those with above average levels of education and/or income), due to factors such as high cost, complexity, or the need for specialized skills. The mass stage represents the point in a medium's evolution when costs and/or complexity have dropped sufficiently for content targeted at a broader audience base to be viable. Finally (and most relevant to this analysis), mature media tend to shed their mass audience orientation and become more specialized in terms of the audiences they serve and the content they provide. Most often, this stage in media evolution is precipitated by the introduction of a new, competing technology that forces the incumbent technology to evolve to remain viable.

Niche theory focuses on this process of competitive displacement of older media by newer media (Dimmick, 2002). This theoretical framework emphasizes the importance of niche overlap and niche superiority to understanding—and perhaps even anticipating—patterns of competitive displacement that take place in the media sector. *Niche overlap* refers to the extent to which two media technologies serve the same needs (for consumers and/or advertisers). *Niche superiority* refers to the extent to which one of these technologies is perceived by users as superior to the other in serving these needs. Competitive displacement occurs in those instances in which two technologies exhibit a high degree of niche overlap, and in which the new technology is superior to the incumbent in terms of serving those overlapping needs.

Niche theory analyses have been used in a variety of contexts, including mobile versus PC-based Internet use (Okazaki & Hirose, 2009); competition between cable and broadcast television (Dimmick, Patterson & Albarran, 1992); and, most relevant to this analysis, print versus online news consumption (Dimmick, Chen, & Li, 2004; Li, 2001). Within the context of news consumption, the findings of this line of research clearly signal that many news consumers perceive online news

platforms as a superior means of obtaining the kind of information that has traditionally been provided by print newspapers—a strong indicator of a competitive displacement scenario. It is important to recognize, however, that other studies have suggested online news sources serve in a more complementary role relative to traditional print sources (e.g., Chyi & Lasorsa, 2002; Dutta-Bergman, 2004; Lee & Chyi, 2015).

Media evolution theoretical frameworks also emphasize that there are a variety of ways that media industries can respond to the threat of competitive displacement. Napoli (1998), for instance, highlights processes of resistance, diversification, and differentiation. *Resistance* refers to efforts—typically through legal and public policy channels—by incumbent media to undermine the development of new media (i.e., efforts by established companies to have the VCR and file sharing services declared illegal; or efforts by the broadcast industry to lobby for more restrictive regulations to be placed on cable television or satellite radio).

Diversification refers to efforts by established media to expand into the new media platform. Diversification processes are well-illustrated historically: that is, the motion picture industry's eventual move into TV production; the broadcast industry's launching of multiple cable networks; and, most relevant to this analysis, the newspaper industry's migration online (see Napoli, 1998). Unlike the motion picture industry leading and eventually retaining its dominance in the transition, the newspaper industry rapidly diversified online in the 1990s without much success. For instance, the transition process has been critiqued as both defensive (Nguyen, 2008) and haphazard (Saksena & Hollifield, 2002). Further, as many analyses have illustrated, the primary motivation for this diversification was to preserve and promote the printed paper and its associated business model (Krumsvik, 2006; Rothman & Koch, 2013; Saaksjarvi & Santonen, 2003) under the logic that print and online news sources could operate under a complementary relationship (see Dutta-Bergman, 2004). For these reasons, perhaps it is not surprising that the newspaper industry's efforts to diversify online have been critiqued for failing to meaningfully take advantage of the distinguishing characteristics of the new medium, and to instead largely replicate the printed paper in the online context (see, e.g., van der Wurff, et al., 2008).

Differentiation refers to efforts by content providers facing the threat of competitive displacement to revise their content offerings in ways that distinguish them from the new medium. Thus, for instance, radio moved to a focus on music, talk, and news in response to television's successful incursion into genres like serialized drama, comedy, and variety programming (Napoli, 1998). The motion picture industry similarly responded to the threat of television by focusing on content forms (big screen spectacle, greater sex and violence, 3-D, etc.) that could not be as effectively provided by early television programmers (Napoli, 1998). The newspaper industry has struggled with the question of how to clearly and effectively differentiate print from online content forms (Anderson, Bell, & Shirky, 2013).

It is also important to note, however, the flip side to differentiation as a strategic response to the threat of competitive displacement. Some scholars of media evolution have emphasized instances in which the response to a competitive threat has involved efforts to adopt certain characteristics of the encroaching medium—what has been termed a “mimicry” (Lehman-Wilzig & Cohen-Avigdor, 2004) or “simulation” (Scolari, 2013). Under this approach, the older, threatened medium responds by attempting to adopt or simulate one or more of the key characteristics of the new, threatening medium. So, for instance, television is, in many ways, becoming more interactive and nonlinear in an effort to simulate key characteristics of the Internet (Scolari, 2013).

Research by Schoenbach (2004) suggested that the newspaper industry has used both differentiation and mimicking strategies in response to the Internet's competitive threat. As he illustrated, successful newspapers have used a stronger emphasis on visual presentation in an effort to reflect the nature of content found online; while at the same time placing a greater emphasis on distinguishing characteristics such as in-depth substantive information and a strong orientation around the local community (Schoenbach, 2004).

As this review indicates, there has been a substantial amount of research identifying the various ways in which established media—including newspapers—respond to competitive threats posed by new media. What have been lacking to this point, however, are efforts to examine the *effectiveness* of different strategic approaches. This analysis examines the effectiveness of diversification and simulation strategies used by the newspaper industry to determine what effects (if any) they may have had on the rate at which the Internet undermined print circulation.

Data and methods

To assess the interaction between Internet penetration into U.S. households and strategic responses by the newspaper industry to this competitive threat, we built a unique dataset from a number of sources (refer to [Table 1](#) for the list of variables and descriptions). We collected longitudinal data over the twenty-year period between 1988–2012, in 4-year intervals, from the *Editor and Publisher's International Yearbook (E&P)*, an established journal covering all aspects of the North American newspaper industry. The data set includes all the newspapers that have chosen to submit an audit report each year. From this list, we have selected 2,063 newspapers that remained in print during the sampling period.

Only daily newspapers were considered to capture more complete data compared to Sunday newspapers. We have chosen total daily circulation (CIRCD) reported by newspapers as a representative measure for industry decline to test our hypotheses about the two strategic approaches to the competitive threat that the Internet posed to print newspapers. We log-transformed this variable to reduce skewness.

One of the first strategic responses undertaken by print newspapers was to develop web sites of their own. This, of course, is a prime example of the diversification strategy (i.e., traditional media expanding into new media technologies) that occurs in the process of media evolution (see, e.g., Napoli, 1998). The first major U.S. newspaper to offer online news was the *San Jose Mercury News* in 1993. By 1996, the majority of newspapers had an online presence. In the early days of this strategic response, some within the industry contended that online versions could serve as a promotional tool to increase print newspaper circulation (see, e.g., Krumsvik, 2006). However, it is more likely that the introduction of online versions of print newspapers further undermined print circulation. The *E&P* included a newspaper's website information, which we used to determine when a newspaper offered an online presence. We then operationalized newspapers' diversification efforts in terms of availability of online version of the print newspaper accordingly.

Next, we gathered data from *E&P* to determine if, and to what extent, newspapers responded to competitive threats by altering their content offerings. A common bundling strategy used by newspapers for news content production has been purchasing readily accessible breaking news and other mainstream content through cooperatives such as the Associate Press, United Press International,

Table 1. Description of variables.

Variable	Description
Circulation	Total circulation
WEB	Online presence of newspaper
SE	Total special edition count
EC	Total editor count
LARGE	Whether circulation exceeds 30000
FEMALE	Female (% of population)
WHITE	White (% of population)
HISP	Hispanic (% of population)
YOUNG	Age group 18 or younger (% of population)
RETIRED	Age group 65 or older (% of population)
EDUC	High school or higher (% of population)
POP	County population
ADRATE	Ad rate (per inch-column)

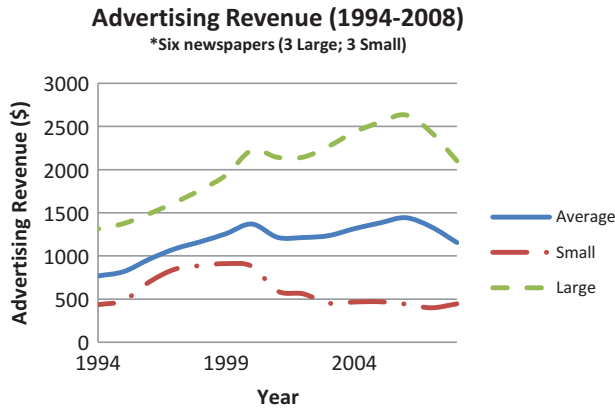


Figure 1. Advertising revenue 1994–2008 (in millions USD).

and Reuters, and sourcing local content with their own budget. In addition, newspapers have increasingly offered a content feature called “special editions” on various topics such as weddings, arts and leisure, and restaurant reviews, thus engaging local audiences in a manner that wire service-delivered content cannot match. Thus, we operationalized newspapers’ differentiation efforts in terms of the number of special editions (SEs) produced by individual papers. More specifically, the SE measure is the number of subject-specific SEs that a print paper produces, and it captures the bundling strategy undertaken by newspapers to either reach peripheral audiences, or long-tail segment to their current audience. In addition, the number of editors (EC) measure is defined as the number of editors in major departments—executive, advertising, marketing, content, and production. EC captures the resources assigned by newspapers to oversee and improve audience engagement with content offerings. Lastly, we also added a variable to capture the role of newspaper size (LARGE),¹ as the Internet may present a different threat to a given newspaper depending on its size. To test this conjecture, we compiled advertising revenues for six of the top 30 publicly-owned newspapers that report their financial results in detail. Figure 1 shows advertising rates and revenue for this sample; the results suggest that larger newspapers fared better than smaller ones.

Thus, we use this variable to test the moderating role of newspaper size on content offerings.

Within the context of theories of media evolution, such efforts to diversify the range of content available in print newspapers can perhaps best be understood as efforts to mimic or simulate the diverse and customized content that defines online news and information providers (Saaksjarvi & Santonen, 2003). In contrast, choosing to move away from a diversification strategy through reductions in special editions or editorial staff can be seen as efforts to become more narrowly focused and specialized around those subject areas where print newspapers could perform well relative to online information sources.

For control variables, we obtained data from U.S. Census general demographic characteristics that have been known to affect circulation, such as population, gender, race, education, and age group distribution (Stone et al., 1981). Although the *E&P* data lists target readership estimates in reporting circulation, each newspaper may choose different designations of geographical area in deriving this estimate. Typically, a newspaper has a *designated market area*, which is defined as a geographical region that can receive the newspaper. When reporting circulation and penetration rate, calculated by dividing total circulation with population in a designated market area, a newspaper may choose to use a different definition of market area. For example, *newspaper designated market* covers residential areas, whereas *retail trading zone* may extend the region to include commercial areas such as

¹We created a dummy variable LARGE by setting its value as one for newspapers with circulation exceeding 30,000. We chose this point by visually inspecting the histogram, where there is greatest drop in circulation. We have also tried other break points with similar results.

business centers. Choosing one or the other unit can increase circulation, penetration rate, or both. Therefore, we use a conservative estimate of the target audience by collecting demographic characteristics at the county level from the U.S. Census Bureau.

Methods and analysis

To capture the effect of the Internet on the newspaper industry and its response, we specify the following equation:

$$\ln(CIRCD)_{it} = \alpha_0 + \beta X_{it} + \gamma Z_{it} + \varepsilon \quad (1)$$

The empirical model consists of the dependent variable, yearly circulation of print newspapers, and a vector of main variables of interest, represented by symbol X , and a set of control variables, represented by symbol Z . We chose county level as the unit of analysis and aggregated all variables in the empirical model accordingly, given that our sample of newspapers is representative of the population. After removing samples with insufficient observations, our final sample size consists of 1,290 counties, representing approximately 41% of all U. S. counties.

First, our main variables of interest to better understand the effect of diversification and differentiation strategies are online presence of newspaper, content offerings (SE and EC, respectively), with newspaper size (LARGE) serving as the moderating variable. In addition to specifying direct effects of the main variables of interest, we also add moderating effects of online presence of newspaper and newspaper size on content offerings, as well as a three-way interaction effect.

Second, to be consistent with past research in predicting circulation, we control for demographic characteristics. We specify a log-transformed county population, percentage of population with different gender (FEMALE), race (WHITE and HISP), educational attainment (EDUC), and age groups (YOUNG, RETIRED)—and year dummies to account for economic conditions that could affect the disposable income of readers. Last, we added advertising rate, which is based on the size of ads in units of line-inch rate or line of text per column, as a proxy for advertising revenue.

Before we discuss the results, our findings do not necessarily imply causal effects, given potential endogeneity issues associated with some of our variables. For instance, advertising revenue is believed to play a major role in newspaper circulation (Meyer, 2009), and a larger circulation implies higher advertising rates. This potential reciprocal relationship between advertising and circulation introduces an endogeneity problem from simultaneity, which can weaken the findings of our empirical model.

Another source of endogeneity is due to bias arising from omitted variables. It is possible that our specification did not adequately control for variables that can influence either the main variables of interest, or affect both the independent and dependent variables. To illustrate how unobserved variables correlated with main variables of interest can influence our model, changing tastes of overall population unrelated to demographics may be responsible for both Internet growth and decline in circulation. This unobserved or latent variable affecting both Internet use and circulation could lead to bias in our results.

A common approach to address such issues is the use of an instrumental variable, but it is often difficult to find one. We use the Arellano-Bover/Blundell-Bond system estimator (Arellano & Bond, 1991; Blundell & Bond, 1998) to address these issues. These are gaining popularity as dynamic panel data estimators, and the main idea is to use the lag of the dependent variable using the generalized method of moments as an instrument to address endogeneity issues. By taking a difference between two successive time periods for both dependent and independent variables, the difference estimator removes omitted variables bias in the error terms. In addition, the differenced dependent variable as an instrument addresses potential endogeneity due to reverse causality.

There are two versions of the Arellano-Bond estimator. The original version, often called “difference” estimator, may suffer from potential endogeneity with the instrumented lag variable with idiosyncratic shocks in the error terms. An improved version of the original Arellano-Bond estimator, called “system” estimator, adds orthogonality deviations, including all available lags in the instrument.

Although we have done our best to remove any variables that are likely to affect Internet use and circulation, as well as employ estimation techniques using lagged dependent variables as instruments, our findings must be interpreted with caution, not necessarily drawing a causal implication.

Results

We discuss the results obtained from the model specified in Equation (1). Table 2 and 3 show summary statistics and the correlation results of the variables used in our model. The earliest newspaper went online in 1993 (the *San Jose Mercury News*), but most newspapers took a wait-and-see approach for a few years before deciding to launch an online news site. Table 2 reflects the fact that the newspapers in our data set established an online presence post-1996.²

How did newspapers respond to the rise of online news? We observe that our strategic response measures show noticeable differences before and after the Internet. That is, the number of special editions has increased significantly from approximately 20 to 33 after the Internet, indicating that newspapers initially attempted to offer a greater diversity of content to attract readership in response to the competitive threat posed by the Internet. In terms of the number of editors, there is a slight increase in the number of editors (EC) prior to 1996 followed by the first decline in 1997 and a more precipitous drop in 2004, as shown in Figure 2.

Table 2. Descriptive statistics.

Variable	M	SD	Min.	Max.
Circulation	4,0099	131,702.3	1120	4,774,801
WEB	0.67	0.47	0	1
SE	3.09	15.50	1	317
EC	13.08	14.38	1	162
LARGE	0.26	0.44	0	1
FEMALE	50.80	1.49	39	56
WHITE	86.07	13.94	21	100
HISP	7.45	11.89	0	95
YOUNG	24.60	3.20	13	39
RETIRED	14.13	3.70	3	38
EDUC	80.77	8.20	45	99
POP	202,532.7	503,953.4	5471	10,116,705
ADRATE	36.55	67.42	1	841

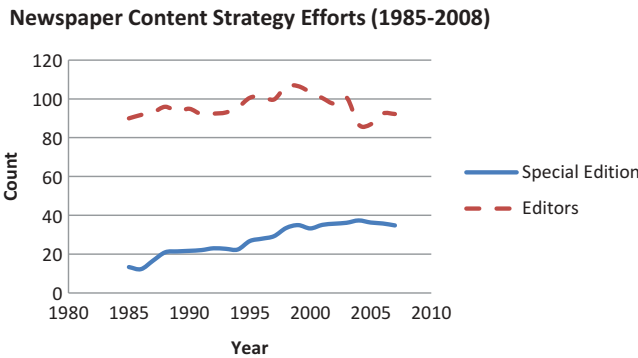


Figure 2. Newspaper content strategy efforts (1985–2008).

²We used a dummy variable to operationalize the onset of an online version of a print newspaper; however, as we have reported above, high-correlation coefficient with Internet use variable led to dropping this variable from the model.

Table 3. Pairwise correlation.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
Circulation	1												
WEB	-0.04	1											
SE	0.37	0.00	1										
EC	0.31	0.13	0.15	1									
LARGE	0.80	-0.04	0.22	0.26	1								
FEMALE	0.17	-0.17	0.05	0.06	0.15	1							
WHITE	-0.25	-0.07	-0.17	-0.06	-0.21	-0.19	1						
HISP	0.17	0.16	0.12	-0.02	0.16	-0.20	-0.07	1					
YOUNG	-0.06	-0.31	-0.03	-0.08	-0.03	0.07	-0.15	0.31	1				
RETIRED	-0.21	0.04	-0.08	-0.07	-0.15	0.26	0.27	-0.20	-0.44	1			
EDUC	0.12	0.54	-0.01	0.15	0.12	-0.26	0.19	-0.16	-0.44	-0.04	1		
POP	0.86	0.08	0.34	0.30	0.70	0.07	-0.28	0.28	0.00	-0.32	0.17	1	
ADRATE	0.63	0.18	0.44	0.28	0.51	0.09	-0.28	0.17	-0.12	-0.10	0.18	0.58	1

Figure 1 shows a small decline in newspaper circulation just after the Internet became available for profit-making use in 1995, and then an upturn through 1997. In subsequent years, the plot shows a steep decline; from 2005, average circulation for the top 30 newspapers dropped about 5% per year. As a quick diagnostic test of our model, we computed a linear regression as a diagnostic based on our specified model for each time period as well as for the original combined data set to see if there is a statistical difference. We removed 1995–1996 observations to address potential boundary issues in testing structural difference between two time periods. The Chow test (1960) determines whether coefficients obtained from specified model predicting circulation statistically differ before and after the Internet. Using the residuals obtained from each of the three regressions—before, after, and total observations—the resulting Chow statistic of 23.18 is greater than the $F(19, 623)$ at the .01 level, so we reject the null hypothesis that two periods under the specified model are the same. The Chow test result suggests that the newspaper industry experienced a significant change before and after the Internet, so we tested the full panel and two subsets as described below.

Next, we used linear regression to explore the extent to which the Internet and online news and defensive newspaper strategies are associated with print circulation above and beyond demographic and news characteristics. In order to account for potential bias in longitudinal analysis, such as the structure of unexplained variances (Cameron & Trivedi 2005), we ran a panel data regression with dynamic panel data estimators—specifically, Arellano-Bond system estimators. Briefly stated, this model specification allows individual newspapers to have different intercepts that capture unobserved heterogeneity, as well as using lagged dependent variables as instruments. We used the Sargan test to determine if the instruments are suitable for over-identifying restrictions. Our test statistic ($\chi^2=167.27, p < 0.0000$) suggests that our assumption is reasonable, and we report the results in Table 4.

Results from the regression show that the growth of household Internet use is negatively associated with newspaper circulation. Diversification strategy of offering online edition is responsible for 32.5% decline in circulation, or approximately 13,032 less in circulation per year, on average, for our data sample. Thus, our hypothesis on diversification strategy having a negative impact on circulation is supported.

Second, the coefficients on the content offerings show that differentiation through increasing special editions influenced circulation, whereas increasing editorial staff did not. The nature of relationships between special editions and circulation, however, varied according to newspaper size. For instance, increasing special editions negatively impacted circulation for small newspapers, but for larger newspapers, this strategy seemed to work, with a 4.6% increase in circulation for ten percent increase in the number of special editions.

Table 4. Regressions on newspaper circulation.

DV: CIRCULATION (log-transformed)	Coefficient
L1	-0.072 (0.053)
WEB	-0.325** (0.163)
SE	-0.458*** (0.175)
EC	0.000 (0.005)
LARGE	0.437*** (0.049)
WEB × SE	0.422** (0.175)
WEB × EC	-0.001 (0.005)
SE × LARGE	0.456*** (0.175)
EC × LARGE	-0.007 (0.007)
WEB × SE × LARGE	-0.418** (0.175)
WEB × EC × LARGE	0.007 (0.007)
FEMALE	-0.010 (0.023)
WHITE	0.001 (0.007)
HISP	-0.023*** (0.008)
YOUNG	-0.010 (0.012)
RETIRED	-0.008 (0.012)
EDUC	0.010 (0.007)
POP (log-transformed)	1.106*** (0.134)
ADRATE	0.001*** (0.000)
Constant	-2.139 (2.031)
Wald chi-square test	6,232.5***
Sargan's test	167.27***

* $p < 0.1$. ** $p < 0.05$. *** $p < 0.01$.

In addition to the direct impact of Internet use on circulation decline, the coefficients on the interaction variables show different effects on the moderating role of Internet use on differentiation efforts by newspapers. First, we found that Internet use negatively moderates special editions. In other words, the availability of multiple sources as well as subjects on the Internet directly competes with the content offerings of print newspapers. Although the coefficient of interaction terms between special editions and online presence for small and large newspapers was positive (0.422) and negative (-0.418), respectively, the overall combined effect was negative for both, supporting the hypothesis that the Internet negatively moderated the content offerings.

Thus, this result might explain an increase in the number of special editions after the Internet, but this strategy was less successful during the Internet era, especially for larger newspapers. Meanwhile, editorial diversity (EC) was not statistically significant either before or after the Internet. Together, these results suggest that newspapers were not successful in defending their print product by establishing online presence or by increasing content diversity.

Conclusion

This article has examined a 20-year period to assess how the diffusion of the Internet has affected the print newspaper industry, how the industry responded to this new platform, and the impact of these responses. The results document the magnitude of the negative effect that Internet penetration had on print newspaper circulation, while also illustrating how strategic responses such as establishing online editions and/or diversifying print content offerings failed to counter this trend (and, in the case of the establishment of online editions, exacerbated it). These results help us to get a clearer understanding of evolutionary dynamics in the news “ecosystem,” in terms of how one category of information provider (print newspapers) attempted to position itself in response to competitive threats posed by new technologies, and how these strategic responses, alongside the ongoing competitive threat, impacted readership levels.

From a media evolution standpoint, these findings suggest the ineffectiveness of mimicking or simulation strategies in response to competitive threats posed by new media platforms. Given that, historically, the more common strategic response to competitive threats posed by new media has been one of differentiation rather than mimicking (Napoli, 1998), these findings provide further support that, for legacy media to remain viable, they are likely better off seeking to differentiate themselves from the new medium, rather than seeking to emulate its core characteristics.

One could argue that the contemporary print newspaper industry is essentially still in search of a path of differentiation to insure its survival. When we consider how previous media such as radio and the motion pictures dramatically transformed themselves (in terms of content and revenue models) in response to the competitive threat posed by television (see Napoli, 1998), it is in many ways striking how similar print newspapers of today are to print newspapers of 20 years ago. It seems reasonable to conclude that the industry as a whole has failed to develop and implement viable differentiation strategies.

These findings also have implications for the process of diversification that often characterizes established media’s response to new media. In this case, newspapers responded to the diffusion of the Internet by establishing online versions—a strategic response that quickly proved harmful as online circulation cannibalized print circulation (without, as is well known, accompanying, proportional subscription and advertising revenues). Would printed newspapers be in a better position today had they resisted the early impulse to make their content available for free online, as recent research has suggested (see Chyi & Tenenboim, 2016)? Perhaps marginally, as these content providers still would have been affected by the widespread availability of free content from other online sources. But, in any case, the results here do suggest that the industry hastened its own decline (at least in terms of circulation figures) via the establishment of free online versions of their printed product.

When we consider this pattern relative to the historical record on such diversification strategies, a key point of differentiation in this case is that newspapers diversified in a way that made essentially the same content available at the same time across multiple platforms, rather than engaging in intertemporal “windowing” of content across platforms. Such windowing characterized the diversification strategies of the motion picture industry in response to television, and the broadcast television industry in response to cable. This is, of course, a reflection of the fundamentally different content characteristics of news versus various forms of entertainment in terms of their shelf life. This is perhaps one of the most significant handicaps that has affected the newspaper industry’s ability to adapt to the changing media ecosystem. The relatively short shelf life of the industry’s content has given it less flexibility in terms of sequentially distributing its content across multiple platforms in ways that facilitate greater price discrimination and revenue generation.

Future research should delve further into these evolutionary dynamics by expanding the data set to include newspapers in smaller markets to empirically examine whether their strategic efforts might have fared better. For instance, we can hypothesize that a newspaper in a niche market could better appropriate its resources by offering highly localized content only and eliminate national news coverage.

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