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## Newspaper and internet display advertising: Co-existence or substitution?

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**Newspaper and Internet Display Advertising –  
Co-Existence or Substitution?**

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## Abstract

Newspapers have been experiencing declining circulation figures and diminishing advertising revenues for several years – both effects might pose a threat to the continuing existence of (print) newspapers. In an earlier paper, Lindstädt & Budzinski (2011) argued from a theoretical viewpoint that industry-specific patterns exist that determine substitution or complementation effects between internet and newspaper advertising. It was argued that retail advertising, in particular, may offer a niche for regional/local newspapers that can be expected to present a sustainable segment of complementarity along with the otherwise mostly substitutional advertising markets. This paper empirically tests these hypotheses by analyzing advertising spending data for newspaper and internet display advertising of 13 different industries in the U.S. from 2001-2010. We find evidence for some of the hypotheses. Whereas some industries showed clear substitution effects between internet display and newspaper advertising, the majority of our hypotheses could be only partly rejected: newspaper substitution effects could be observed, however, in the direction to traditional media platforms instead of internet display advertising. For two retail-sub-industries, the hypotheses could not be rejected for the analyzed period.

**Keywords:** media economics, advertising, complementation, substitution, newspapers, internet

**JEL-Code:** L82, A20, L13, M21

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# 1. Introduction

Newspapers have been experiencing diminishing circulation figures and advertising revenues for several years with the recent recession further exacerbating this effect. Therefore, and much the same as has long been feared with regard to readership, there are concerns about online advertising substituting newspaper advertising. Both possible effects might pose a threat to the continuing existence of (print) newspapers. However, though the internet – compared to newspapers – offers certain advantages for advertising companies, substitution tendencies cannot be generalized. In an earlier paper, Lindstädt & Budzinski (2011) argue that there are reasons why newspapers may remain attractive as an advertising medium. Deriving from the economic theory of advertising, it was shown that newspapers are a predestined medium for informative advertising and that, in particular, retailers experience incentives to continue predominantly advertising in regional and local newspapers. As a result, the authors predicted that retail advertising offers a niche for newspapers that can be expected to present a sustainable segment of complementarity within the otherwise predominantly substitutional advertising markets.

It is the aim of this paper now to empirically test the theory driven conclusion from Lindstädt and Budzinski (2011). We pose hypotheses for the retail industry and closely related industries where a similar phenomenon could hold, which are subsequently tested. For doing so, we analyze advertising spending data of 13 different industries in the U.S. from 2001-2010 for newspaper and internet display advertising. The paper is structured as follows: Chapter 2 provides a brief literature review and highlights our contribution to the research field. Chapter 3 entails the empirical analysis. Chapter 4 subsequently concludes.



## 2. Literature Review

Offline as well as online media that are fully or partly financed by advertising revenues face a two-sided market situation (Anderson & Gabszewicz 2006; Budzinski & Lindstädt 2010; Dewenter 2003, 2006; Dewenter & Haucap 2009; Evans 2010; Lindstädt 2010). They sell their product to two distinct customer groups, interconnected by indirect network externalities: audience (e.g. readers) and advertisers. Due to the indirect network externalities, participation from both demand sides is necessary for a successful and sustainable business model. However, the question of substitution tendencies between newspapers and the internet has predominantly been addressed by analyses of the audience side so far.<sup>1</sup> A notable exception is Lindstädt & Budzinski (2011), who present a theoretical discussion of substitution effects between newspaper and online advertising based upon the economic theory of advertising. They derive the hypothesis that retail markets should present a sustainable niche for newspaper advertising, considerably protected against substitution forces. We build upon this paper and present an empirical test of their central hypothesis.

In contrast to theoretical studies, several empirical studies exist which deal with offline-to-online substitution tendencies in advertising markets. However, to the best of our knowledge, none of these studies

- (i) analyses industry-specific substitution effects of offline newspaper advertising with online advertising, and
- (ii) explicitly tests the hypotheses deriving from Lindstädt & Budzinski's (2011) theoretical reasoning.

Silk et al. (2001) present an early empirical study of substitution tendencies between offline media advertising and online media advertising, highlighting the

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<sup>1</sup> For research papers dealing with substitution tendencies on the user side see for example Chyi & Lasorsa (2002); De Waal & Schoenbach (2010); Flavián & Gurrea (2007a, 2007b); Gentzkow (2007); George (2008); Kaye & Johnson (2003); Muir (2009); Okazaki & Romero (2010).

at that time emerging impact of the internet as an advertising medium. In two more recent papers, Pérez-Latre (2007, 2009) discusses the implications of the ‘paradigm shift’ in advertising towards online media both for advertisers and media companies. Further, in his empirical paper, Zentner (2010) estimates how overall advertising expenditures as well as expenditures for different media types changed in the course of the emergence of the internet (1998-2008; sample of 87 countries). He finds that the emergence of the internet has negatively affected advertising expenditures for offline media while, at the same time, total advertising expenditures have not increased. Thus, he finds a clear substitution effect. Bergemann & Bonatti (2010) present a model of offline-online media competition for advertisers, finding a substitution of offline by online media due to the superior targeting ability of online media. In the same vein but with different models, Ratliff & Rubinfeld (2010) also arrive at an increasing substitution and discuss the implications for antitrust market definition. With the same focus, Goldfarb & Tucker (2011c) summarize two related empirical studies (Goldfarb & Tucker 2011a, 2011b) and find that online and offline advertising are increasingly substitutes. While this group of literature provides important insights about offline-online advertising substitution, it does not focus specifically on newspapers. Newspapers are only discussed, if at all, among and together with several other types of media. Consequently, the specific effects of online pressure on print newspapers advertising are not analyzed.

Several papers from media science, by contrast, explicitly discuss substitution tendencies between advertising revenues of print newspapers and their online competitors. Spurgeon (2003) empirically analyses the erosion of classified ads for newspapers due to internet competition in the Australian market. For U.S. markets, Ahlers (2006) finds that the internet is an imperfect substitute for newspapers on the advertising side (and a complement on the readers’ market side). Although not exclusively, he also highlights classified ads as Berte & De Bens (2008) do in their comparable analysis of the Belgium market. Seamans & Zhu (2010) present an empirical and economic study of changing pricing strategies regarding classified ads in U.S. local newspapers in the face of the market

entry by Craigslist (a website hosting classified ads), finding substitution tendencies. Different from the other studies in this branch of literature, Seamans & Zhu (2010) use the two-sided markets framework for their analysis. Although this literature does focus on newspaper versus online advertising, it does not take into account industry-specific patterns and effects on the advertisers' side.

Such types of industry-specific effects are discussed in the empirical papers by Swain & Sorce (2008) and Sorce (2008). The first paper is based upon a survey among leading U.S. national advertisers, finding, among other things, that cereal manufacturers, household cleaners and department stores increased their advertising expenditures in print newspapers (2003-2005). The second paper focuses on methods for how retailers can evaluate the effectiveness of insert advertising. Both studies provide valuable empirical information for our research. However, they do not focus on the special problems of newspapers. Décaudin & Lacoste (2010) empirically study industry-specific advertising strategies in the French magazine market. This study offers valuable insights as well; however, it differs from our research insofar as it neither focuses on online substitution, nor on newspapers.

### **3. Empirical Analysis**

#### ***3.1. Hypotheses***

Lindstädt & Budzinski (2011) argue that the (offline)<sup>2</sup> *Retail Industry* and closely related industries like *Department Stores* as well as *Shopping Centers* will continue advertising in newspapers – especially in regional and local ones. The authors name four reasons why newspapers represent a suitable medium for informative advertising: 1) reputation for trustworthiness, 2) fit with presentation limitations, 3) informative environment, and 4) comparatively low intru-

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<sup>2</sup> The line of reasoning does not necessarily hold for online retailers.

siveness. The paper furthermore argues that retail advertising is placed best in newspapers. Lindstädt & Budzinski (2011) argue that the advertising situation of retail companies is special since they oftentimes offer a variety of branded products. Retailers, thus, have an interest to promote the branded products they hold (if they hold branded products)<sup>3</sup> while at the same time having an incentive to also promote their own retail brands (e.g. private labels). For the latter, they might use a mix of informative, persuasive and complementary advertising elements. With reference to the branded products, however, retailers will focus on informative advertising only, due to three reasons: 1) an ambiguous interest in promoting the products' brand which can attract customers but at the same time can also cannibalize the attractiveness of the retailer's brand. 2) Having competing brands in the assortment, the retailers' incentive for brand promotion for a particular product is limited to not influence the competitive process among the brands. 3) The retailer would present a positive externality for the producers of the branded products by using brand promotion. As a result, according to Lindstädt & Budzinski (2011), retailers usually have an incentive to focus on informative advertising when advertising their assortment. This line of reasoning should also be applicable to Department Stores and Discount & Department & Variety Stores who also offer own retail brands.

The situation is somehow different for Shopping Centers that do not offer own retail brands. Nonetheless, this industry should have incentives to predominantly using informative advertising. In the same way as retailers depend on having competing product brands in their assortment, shopping centers have competing shops in their centers. This as well, limits their incentive to engage in brand promotion for some shops because it would influence the competitive process among the shops and provoke a respective reaction. Consequently, instead of focusing on single brand or shop promotions we assume that shopping centers

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3 Some retailers do not have branded products within their assortment but mainly offer own retail brands (e.g. *H&M*, *American Eagle Outfitters*, *IKEA*). These companies, however, have an incentive to focus on informative advertising since promotional offers (e.g. timely limited offers, price reductions etc.) play an essential role that can be advertised well with informative advertising.

focus on advertising their spectrum of shops and by doing so use informative advertising.

Following this line of reasoning, we set up three main hypotheses:

**H1: Retailers' Advertising** in newspapers has not been substituted by internet display advertising.

The retail industry is a broad area with a variety of different subcategories. We therefore further narrow it down and in particular concentrate on the following *offline retail areas*:<sup>4</sup> apparel retail stores (e.g. *H&M, Banana Republic*), grocery stores (e.g. *Wal-Mart, Carrefour, Lidl, Aldi*, local grocery stores), pharmacies/drug stores (e.g. *CVS, Boots, dm*), consumer electronic stores (e.g. *Best Buy, RadioShack, Media Markt, Saturn*), furniture stores (e.g. *Crate&Barrel, IKEA*), office supply stores (e.g. *Staples, Office DEPOT*), home improvement stores (*Home Depot, Max Bahr, OBI*).

In line with this, the following sub-hypotheses are presented:

- **H1.1: Apparel Retailers' Advertising** (e.g. *H&M, Ann Taylor, Brooks Bros, Banana Republic, American Eagle Outfitters*) in regional/local newspapers has not been substituted by internet display advertising.
- **H1.2: Business Retailers' Advertising** (e.g. *Office Depot, Office Max, CompUSA*) in regional/local newspapers has not been substituted by internet display advertising.
- **H1.3: Consumer Electronic, Sports, Toys, and Hobby Retailer Stores' Advertising** (e.g. *Best Buy, Toys R Us, Dicks Sporting Goods*) in regional/local newspapers has not been substituted by internet display advertising.

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4 These retail areas have been placing parts of their advertising in newspapers – either in the newspaper itself or through newspaper inserts.

- **H1.4: Food and Beverage Retailers' Advertising** (e.g. *Wal Mart, Weis Store, Whole Foods*, regional/local food and beverage stores) in regional/local newspapers has not been substituted by internet display advertising.
- **H1.5: Home & Building Retailers' Advertising** (e.g. *Home Depot, Ikea, Crate&Barrel, Bed Bath & Beyond*) in regional/local newspapers has not been substituted by internet display advertising.
- **H1.6: Pharmacies, Health & Beauty Supply Retailers' Advertising** (e.g. *CVS, RiteAid*) in regional/local newspapers has not been substituted by internet display advertising.

**H2: Department Stores, Discount & Department & Variety Stores' Advertising** (e.g. *Macy's, Sears, JC Penny, KMart*) has not been substituted by internet display advertising.

**H3: Shopping Centers & Catalog Showrooms' Advertising** (e.g. regional/local malls, shopping outlets) in newspapers has not been substituted by internet display advertising.

Our hypotheses are tested on the U.S. newspaper and online advertising market. The U.S. newspaper publishing market<sup>5</sup> is the largest among the OECD countries, according to the figures in 2009 (OECD 2010: 17) – thus we believe that it is a suitable market to analyze substitution effects from print to online. In addition to this, the U.S. market oftentimes leads the way for other countries in terms of new media – e.g. compared to markets in Europe. Siepmann (2009) in his article on convergences and divergences between the German and the U.S. newspaper market for instance, speaks of a so called „Americanization“ of the German Press – referring to media experts fearing that the developments on the U.S. market could also take place on the German market. Thus, the findings we

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5 This classification includes traditional newspaper publishers' offline and online circulation and advertising revenues (OECD 2010: 17).

derive from this analysis might give awareness and possibly even some guidance for media markets in other countries as well.

### 3.2. Data & Testing

In order to test our hypotheses we analyze advertising spending data in the U.S. for the years 2001-2010 for 61 different industries (see table 1 in the Appendix). The data is provided over the AdSpender™ database by *Kantar Media Intelligence* which contains advertising spending data for the media categories listed in table 2. The expenditures are provided in “Gross Dollars” and do not consider sales commissions or volume discounts (AdSpender™ 2011a: 10). This, however, does not present any problem for our analysis.

**Table 2: Media Coverage of the AdSpender™ database**

Media Coverage
Network TV
Spot TV
Spanish Language Network TV
Cable TV
Syndication
Magazines
Sunday Magazines
Local Magazines
Hispanic Magazines
B-to-B Magazines
National Newspapers
Newspapers
Hispanic Newspapers
Network Radio
National Spot Radio
Local Radio
US Internet
Outdoor

Source: AdSpender™ 2011a: i

Unfortunately, the data does not provide figures for Paid Search Advertising Spending on the internet. Instead, the media category U.S. Internet-Display<sup>6</sup> includes banners and buttons of all sizes and shapes as well as some rich media types (AdSpender™ 2011b, online). This fact will be taken into thorough consideration for this article. This is because according to the *Internet Advertising Revenue Report 2010* search advertising continues to be the largest online advertising revenue format (46 per cent of 2010 revenues) whereas Display-related advertising (incl. Display Banner Ads, Rich Media, Digital Video, and Sponsorship) accounted for only 38 per cent in 2010 (IAB 2011: 13).

Thus, if we find out that some industries do not seem to move their advertising from newspapers towards the internet this is – according to our analyzed data – true just for display advertising. We thereby cannot determine if and what amount a certain industry spends on search advertising. Although this might be construed as a drawback to our paper, we believe that the comparison of display advertising is even more suitable for the comparison of advertising with other media types (e.g. magazines, newspapers, radio, television, and outdoor). Search advertising is, on the whole, a fairly specific type of advertising that is hardly comparable to advertising within the other traditional media types.

We analyzed a ten year time frame of advertising spending data. This time period has been chosen because advertising spending data for U.S. Internet-Display has been only collected and reported within the *AdSpender™* database from 1 January 2001 (AdSpender™ 2011c, online). We moreover decided not to further narrow the time period since we believe that an analysis of ten years better reflects the developments of advertising spending within the industries and among the different media types – in particular internet display and newspapers – and accounts for a better opportunity to eliminate special effects that might occur in some years.

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6 Furthermore, it has to be noted that House Advertising is not included in the default expenditure estimates – i.e. if sites run self-promotional or house advertising, since they book no revenue for this (AdSpender™ 2011b, online).



Since the goal of this article is to elaborate substitution and complementation tendencies in particular between the internet and the newspaper, we aggregated all other media to one category. Thus, we generated a query that provided us with advertising spending for the past ten years (2001-2010) for the media categories:

- ***U.S. Internet-Display***
- ***Newspapers*** (advertising space in Daily and Sunday Newspaper editions and Sunday Magazines is measured) (AdSpender™ 2011b, online).
- ***National Newspapers*** (incl. three national newspapers New York Times, USA Today, and Wall Street Journal – their national and regional editions are included) (AdSpender™ 2011b, online).
- ***Hispanic Newspapers***
- ***Other Media*** (incl. Network TV, Spot TV, Spanish Language Network TV, Cable TV, Syndication, Magazines, Sunday Magazines, Local Magazines, Hispanic Magazines, B-to-B Magazines, Network Radio, National Spot Radio, Local Radio, and Outdoor)

The three newspaper categories Newspapers, National Newspapers, and Hispanic Newspapers were furthermore aggregated to a category named ***Newspapers Total (own calculation)*** for the analysis.

In a first step, 61 different industries – generated from the *AdSpender*™ database – have been analyzed (see table 1 in the Appendix). We used inflation adjusted advertising data. We furthermore applied the *advertising data for each industry in percent* for our analysis. This means for every observed year (2001-2010) each industry had 100 per cent of total advertising spending to distribute among the different advertising types: US Internet-Display, Newspapers, National Newspapers, Hispanic Newspapers, Newspapers Total (aggregated category) and Other Media (aggregated category). This approach enabled us to ob-

serve which share of their advertising budgets each industry spends per year on- to which different media types. Thus, we can trace possible substitution effects between the different media types over the years. By using this percentage-based distribution of total advertising volumes, we furthermore excluded effects influencing total advertising spending behavior like economic up- or downward trends (e.g. recessions, crises) or seasonal fluctuations.

Finally, we selected 13 industries to be analyzed for this research article.<sup>7</sup> These industries have been thoroughly chosen for the following reasons: On the basis of the year 2010 this selection represents industries that are within the top ten industries regarding their proportion of advertising spending in the newspaper and/or on the internet. We could observe a high level of overlap within this consideration. Most of these industries represent both important industries in the newspaper as well as on the internet. This subsequently led to the selection of the following eight industries: *Financial; Communications; Insurance & Real Estate; Media & Advertising; Public Transportation, Hotels & Resorts; Misc. Services & Amusements*,<sup>8</sup> *Automotive, Automotive Access & Equipment; and Retail.*

The *Automotive Dealers & Services* industry represented an important industry for the newspapers whereas *Schools, Camps, Seminars, and Computers, Software, Internet NEC* are important industries on the internet. Subsequently, the industries *Department Stores, Discount & Department & Variety Stores* as well as *Shopping Centers & Catalog Showrooms* are included since they form two of our three hypotheses. Furthermore, these industries show a high percentage of

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7 All industries which have been selected also did not show any discrepancy in the data. We controlled for this by calculating the total advertising spending for each industry in our data sheet and compared it with the numbers for the total advertising spending provided by the *Ad\$ponder*<sup>TM</sup> database.

8 In the end, however, we decided to eliminate the industry *Misc. Services & Amusements* since this industry consists of very different sub-industries and as such findings would be not be fairly meaningful.

advertising spending in the newspaper. This results in the following sample of 13 industries:<sup>9</sup>

1. *Financial*
2. *Communications*
3. *Insurance and Real Estate*
4. *Media & Advertising*
5. *Public Transportation, Hotels & Resorts*
6. *Automotive, Automotive Access & Equipment*
7. ***Retail***
8. *Automotive Dealers & Services Total*
9. *Schools, Camps, Seminars*
10. ***Computers, Software, Internet NEC***
11. ***Department Stores***
12. ***Discount & Department Variety Stores***
13. ***Shopping Centers & Catalog Showrooms***

The AdSpender™ database allows looking at the Advertising spending data on the following levels: *Industry, Major, Categories, Subcategories, and Micro-categories* (AdSpender™ 2011a: 1). Since the industry level, however, already presents a suitable classification for our analysis we decided *not* to further narrow down the analysis to the subcategories. The only exception is the retail industry (see hypotheses H1 in section 3.1). This industry is fairly broad so that it is advisable to form sub-hypotheses (see H1.1 – H.1.6 in section 3.1).

Consequently, after analyzing the retail data on the main industry level we further narrowed it down to a major level to test our sub-hypotheses H1.1-H.1.6:

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<sup>9</sup> The boldly highlighted industries represent the industries directly connected to our hypotheses. The other industries serve as comparison industries.

- *Apparel Retailers*
- *Automotive Supply Retailers*<sup>10</sup>
- *Business Retailers*
- *Consumer Electronic, Sports, Toys, Hobby Retailers*
- *Food & Beverage Retailers*
- *Home & Building Retailers*
- Pharmacies, Health & Beauty Supply Retailers
- *Retail Comb Copy*<sup>11</sup>
- *Retailers NEC*<sup>12</sup>

### 3.3. Results

From the selected industries, the industries: Financial; Communications; Insurance and Real Estate; Media & Advertising; Public Transportation, Hotels & Resorts; Automotive, Automotive Access & Equipment; Automotive Dealers & Services; Schools, Camps, Seminars; Computers, Software, Internet NEC are aggregated to one category (Control Group) in order to construct a control group against which the retail industries from our hypotheses can be compared.<sup>13</sup> For these ‘control’ industries, we conjecture that they display the ‘normal’ substitution trend away from newspaper and towards internet display advertising. Therefore, we introduce a null-hypothesis H0 for this Control Group:

**H0:** The *Control Groups’ Advertising* in newspapers has been substituted by internet display advertising.

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10 In the following section, this particular major *Automotive Supply Retailers*, however, is not further considered for the analysis since it does not correspond to any of our sub-hypotheses.

11 In the following section, this particular major *Retail Comb Copy*, however, is not further considered for the analysis since it contains of many and considerably different industries.

12 In the following section, this particular major *Retailers NEC*, however, is not further considered for the analysis since it contains of many and considerably different majors.

13 The aggregation is further justified by these industries showing similar developments The developments of the single, disaggregated industries are on file with the authors.

Due to their similarity the industries *Department Stores* and *Discount & Department & Variety Stores* will be aggregated to one group. Therefore, we will subsequently compare the following categories: *Control Group*, *Retail Industry*, *Department Stores & Discount & Department Variety Stores* and *Shopping Centers and Catalog Showrooms* in order to test our hypotheses and ascertain where substitution and where complementation effects can be observed. For our main hypotheses H1-H3 we will analyze and compare the aggregated category *Newspaper Total* and *U.S. Internet-Display* with each other. The majority of newspaper advertising takes place in regional/local newspapers. However, whereas our hypotheses related industries: *Retail*, *Department Stores*, *Discount & Department & Variety Stores* as well as *Shopping Centers & Catalog Showrooms* each never invested more than 2.5 per cent in National Newspapers and even less than 0.6 per cent in Hispanic newspapers, each year the *Control Group* spent slightly more on national newspapers over the last ten years (up to 4 per cent in one year – though this number continuously decreased over the years). Therefore, we decided to analyze the total newspaper level for our main hypotheses and not solely focus on regional/local newspapers. Hispanic Newspapers on the other hand as well hardly play a role for the *Control Group* (less than 0.3 per cent each year).

For our sub-hypotheses H1.1-H1.6, however, we analyze (regional/local) newspapers exclusively (and *do not* analyze the *Newspaper Total* level). This is because at this point we do not further consider the *Control Group Industries* for a comparison but only focus on internet display and newspaper advertising spending for the sub-industry level – i.e. Apparel Retailers; Business Retailers; Consumer Electronic; Sport, Toys, and Hobby Retailers; Food and Beverage Retailers; Home & Building Retailers; and Pharmacies, Health & Beauty Supply Retailers – in order to test our sub-hypotheses formulated in section 3.1. And as stated in the previous paragraph, the majority of newspaper advertising takes place in regional/local newspapers anyway.

**Results H0: The Control Groups' Advertising in newspapers  
has been substituted by internet display advertising**

The *Control Group* (see figures 1 and 3) shows a clear trend away from newspapers. With the exception of the years 2001-2003 newspaper ad spending has been decreasing constantly. The trend line in figure 1 clearly supports the contention that the industries: *Financial; Communications; Insurance and Real Estate; Media & Advertising; Public Transportation, Hotels & Resorts; Automotive, Automotive Access & Equipment; Automotive Dealers & Services; Schools, Camps, Seminars; and Computers, Software, Internet NEC* have been withdrawing their ad spending from newspapers. Furthermore, when looking at figure 3 we observe that these industries have been, at the same time, increasing their spending for U.S. internet-display advertising, thus re-allocating advertising spending from newspaper towards internet display advertising. Consequently, we conclude a clear substitution effect wherefore ***H0 cannot be rejected.***

**Results H1: Retailers' Advertising in newspapers  
has not been substituted by internet display advertising**

For our first hypothesis we compare the developments of ad spending from the *Control Group* with those from the *Retail Industry*. By looking at the development of ad spending for both media types – newspapers and the internet – we can elaborate where substitution occurs and if this substitution is resulting from a re-allocation towards internet display advertising. We concluded in the previous paragraph that H0 cannot be rejected.

The development of ad spending for the *Retail Industry* presented in figures 2 and 4 also shows a certain withdrawing of ad spending from newspapers. However, compared to the sharp declines of the *Control Groups'* ad spending (-9.7 percentage points within ten years), the retail industry removed a smaller percentage. In 2010 they still spent about 29 per cent of their ad budget on newspapers (-7.0 percentage points within ten years). In addition to this, it is neces-

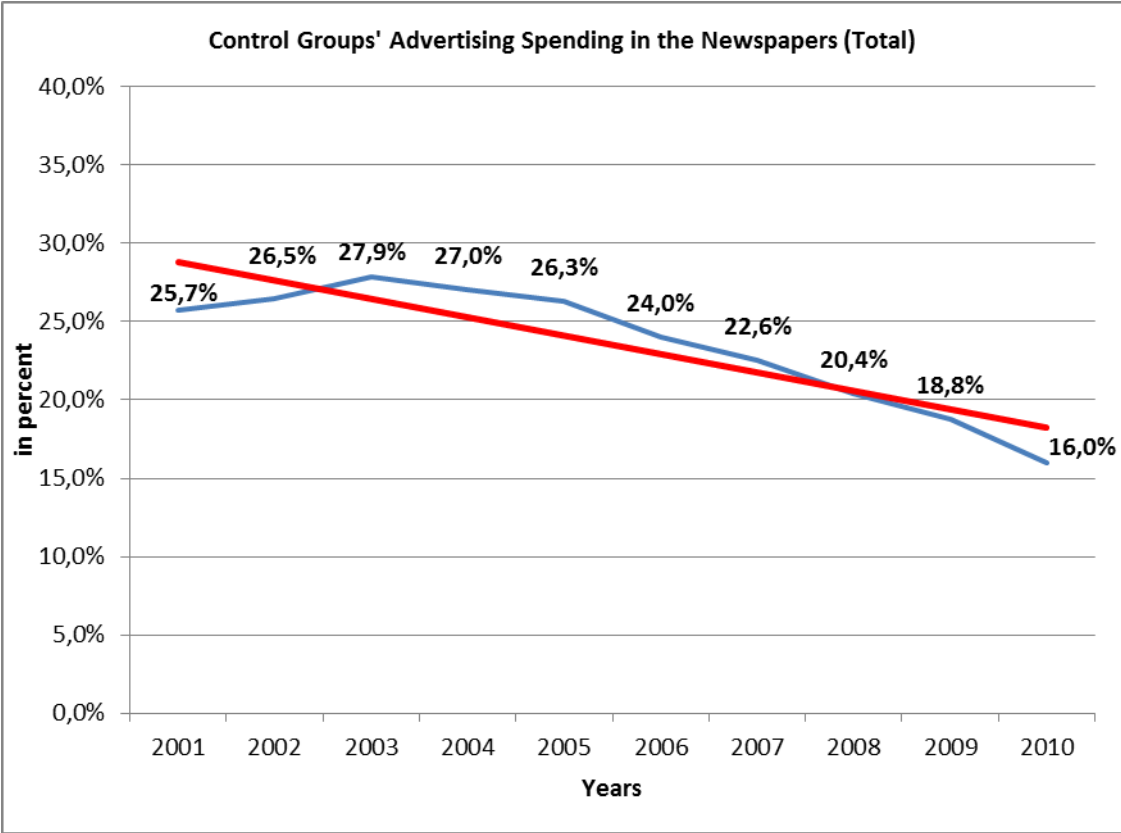
sary to take a look at figure 4 which shows how the *retail industries*' ad spending developed for internet display advertising. Here we can conclude that the internet only plays a minor role for the *Retail Industry*. Furthermore, the rather stable to even slightly decreasing investment in internet display advertising (see trend line) shows that even though this industry has been withdrawing some ad spending from newspapers, this spending has *not* been re-allocated to internet display advertising. Instead, it has been presumably moved to other traditional media.<sup>14</sup> Thus, we ***cannot completely reject H1***. Within the retail industry some substitution away from newspapers has taken place, however, the substitution has not been with internet display advertising.

Nevertheless, the decreasing ad spending figures on newspapers also show that *up to now* retail advertising in total does not present a market niche for newspapers. However, since the *Retail Industry* is a fairly broad one that covers different types of sub-industries it is necessary to look one level deeper in order to conclude if none or just some sub-industries show a market niche for newspapers. Consequently, we test our sub-hypotheses H1.1-H1.6 in the following.

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14 e.g. Network TV, Spot TV, Spanish Language Network TV, Cable TV, Syndication, Magazines, Sunday Magazines, Local Magazines, Hispanic Magazines, B-to-B Magazines, Network Radio, National Spot Radio, Local Radio, and Outdoor. Where exactly the *Retail Industry* has shifted its ad spending that has been withdrawn from newspapers will not be analyzed here but will be subject to another research paper since the focus is on online and newspaper substitution exclusively. This remark will also hold for the results of the following hypotheses und sub-hypotheses.

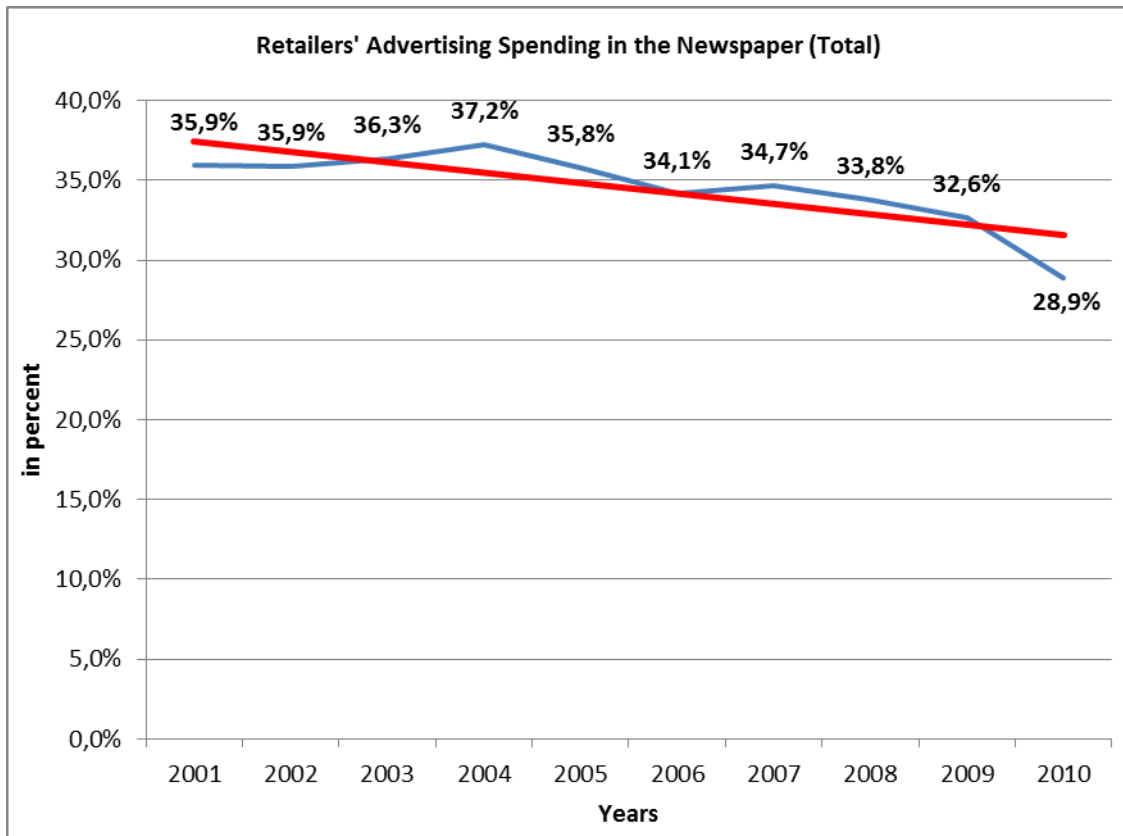
**Figure 1: Development Control Groups' Advertising Spending in Newspapers (Total)**



Source: own illustration with data from the AdSpender™ database

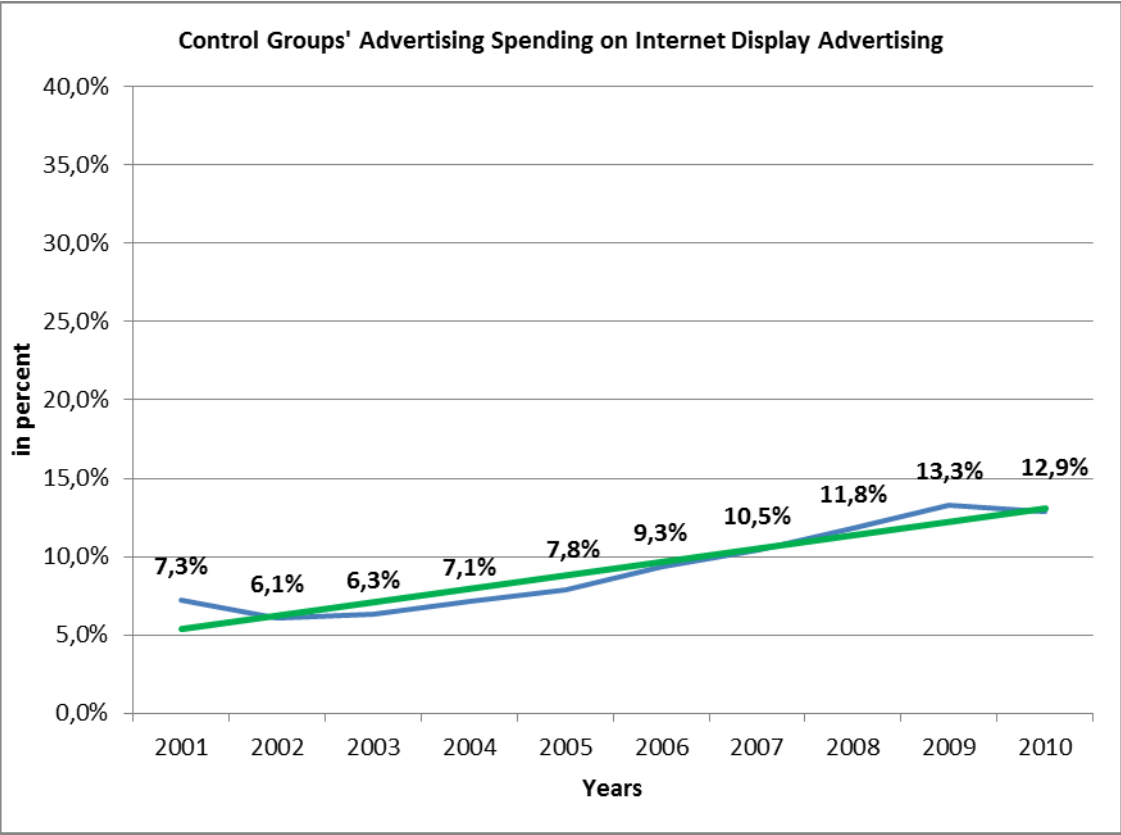


**Figure 2: Development Retailers' Advertising Spending in Newspapers (Total)**



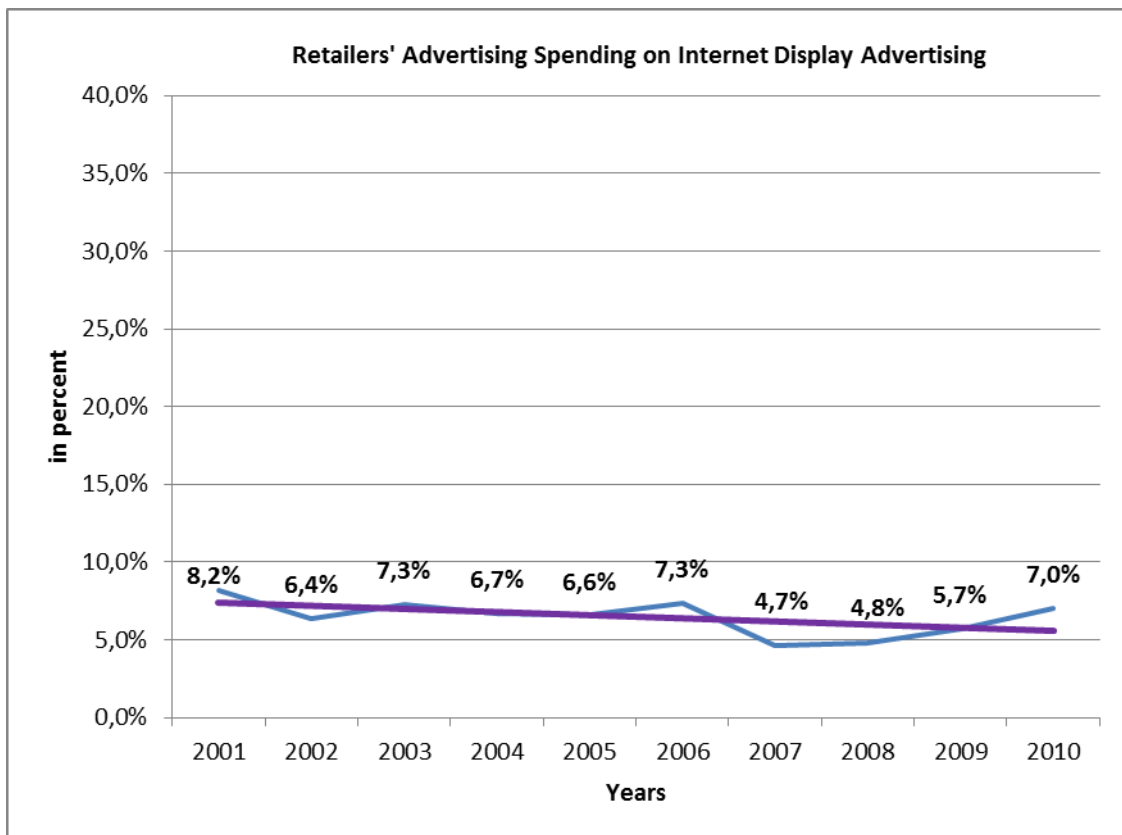
Source: own illustration with data from the AdSpender™ database

**Figure 3: Development Control Groups' Advertising Spending on Internet Display Advertising**



Source: own illustration with data from the AdSpender™ database

**Figure 4: Development Retailers' Advertising Spending on Internet Display Advertising**



Source: own illustration with data from the AdSpender™ database

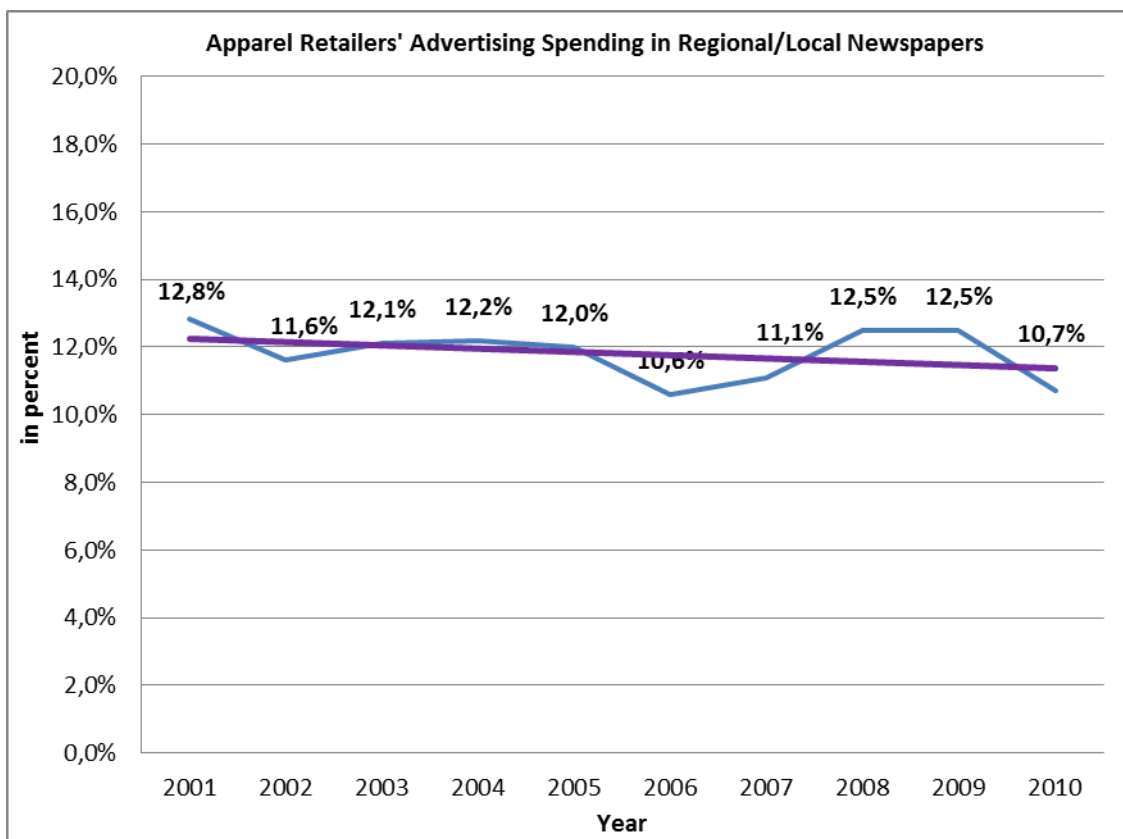
For testing our sub-hypotheses we focus solely on the comparison of the sub-industry (major level) ad spending between the internet and the newspaper without further comparing it to another industry. Thus, we focus on *regional/local newspapers exclusively*, not taking the National or Hispanic Newspapers into further consideration.

**Results H1.1: Apparel Retailers' Advertising in regional/local newspapers has not been substituted by internet display advertising**

Within the last ten years *Apparel Retailers* (see figures 5 and 6) have kept their advertising spending in (regional/local) newspapers nearly constant with only

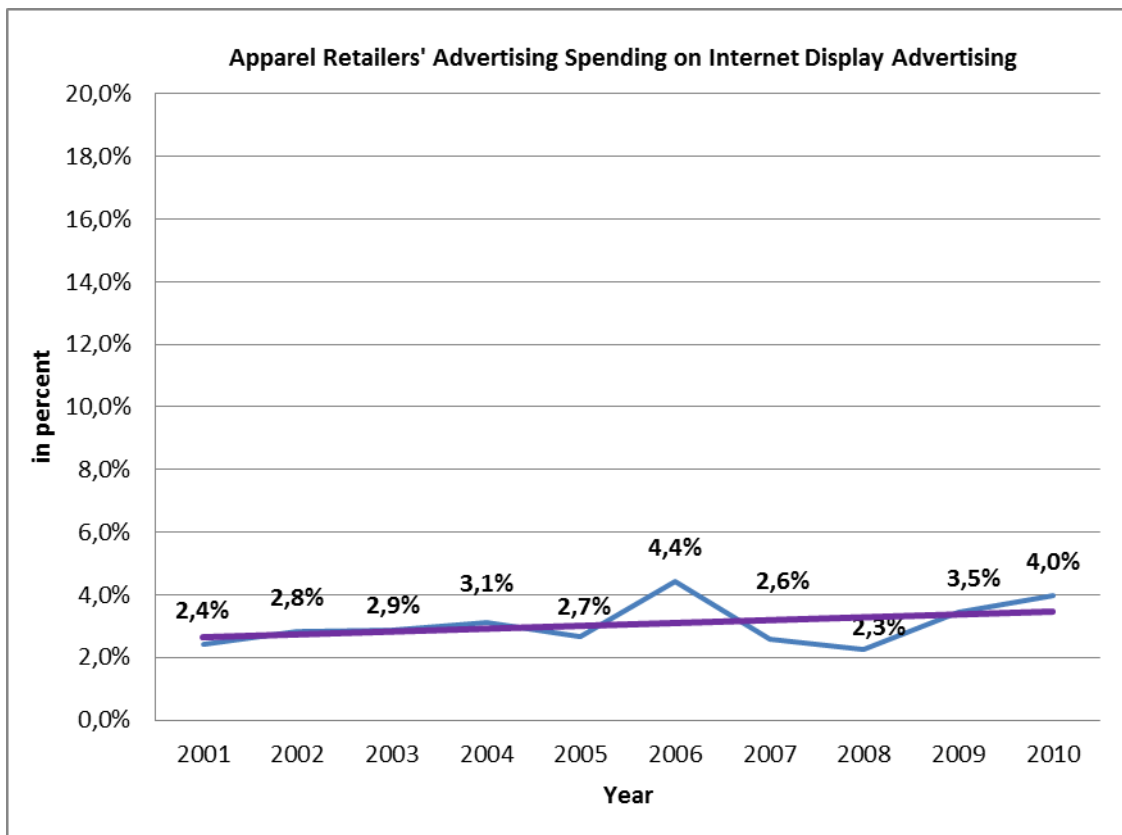
small decreases. It is similar for internet display advertising where the level is also fairly constant with slight increases over the last years. Thus, this industry has not been substituting (regional/local) newspaper advertising by internet display advertising but rather see both media types as complements. Therefore, *we cannot reject H1.1*. As a result, *Apparel Retailers* may represent a potential market niche for (regional/local) newspapers in the future.

**Figure 5: Development Apparel Retailers' Advertising Spending in Regional/Local Newspapers**



Source: own illustration with data from the AdSpender™ database

**Figure 6: Development Apparel Retailers' Advertising Spending on Internet Display Advertising**



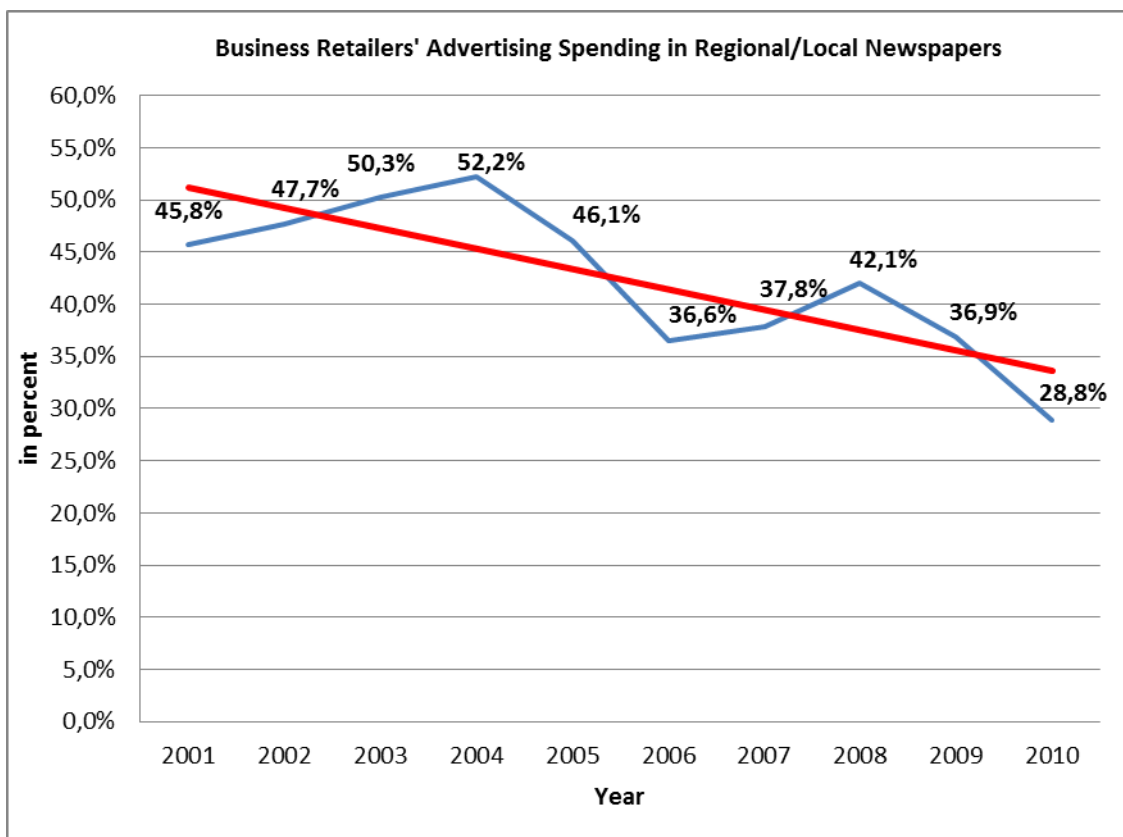
Source: own illustration with data from the AdSpender™ database

**Results H1.2: Business Retailers' Advertising in regional/local newspapers has not been substituted by internet display advertising**

The development of the *Business Retailers' ad spending* level (see figures 7 and 8) shows clear substitution effects. Whereas this sub-industry has been withdrawing large parts of their advertising spending from (regional/local) newspapers, it has in turn increased its advertising investment for display advertising on the internet (re-allocation of ad spending). In addition to substituting newspaper advertising through internet display advertising some spending also has shifted towards other traditional media since the decrease in newspapers advertising spending has been larger than the increase for internet display advertising.

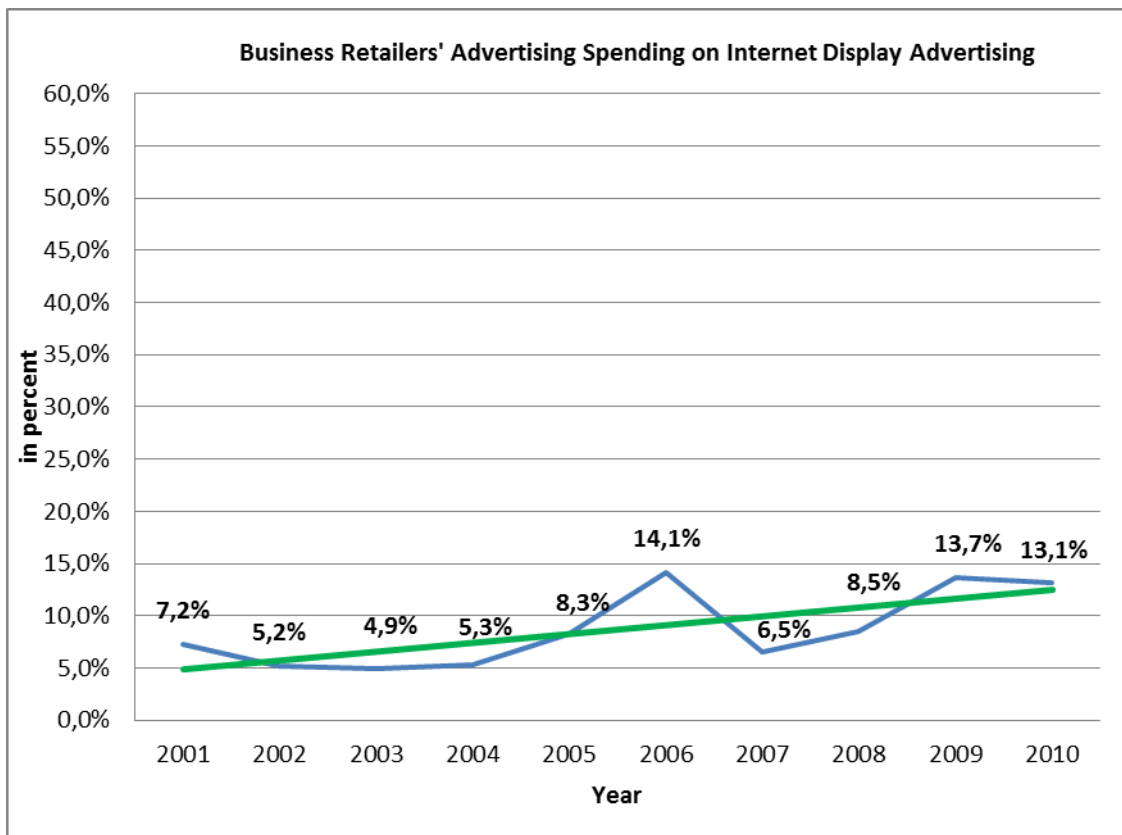
ing. Though newspaper advertising with 28.8 per cent in 2010 still accounts for the larger share of advertising spending compared to 13.1 per cent for internet display advertising, newspaper advertising shows a clear downward trend while internet display advertising continues to rise. Thus, **H1.2 has to be rejected**, i.e. the sub-industry *Business Retailers* has been substituting (regional/local) newspaper advertising (partly) through internet display advertising.

**Figure 7: Development Business Retailers' Advertising Spending in Regional/Local Newspapers**



Source: own illustration with data from the AdSpender™ database

**Figure 8: Development Business Retailers' Advertising Spending on Internet Display Advertising**



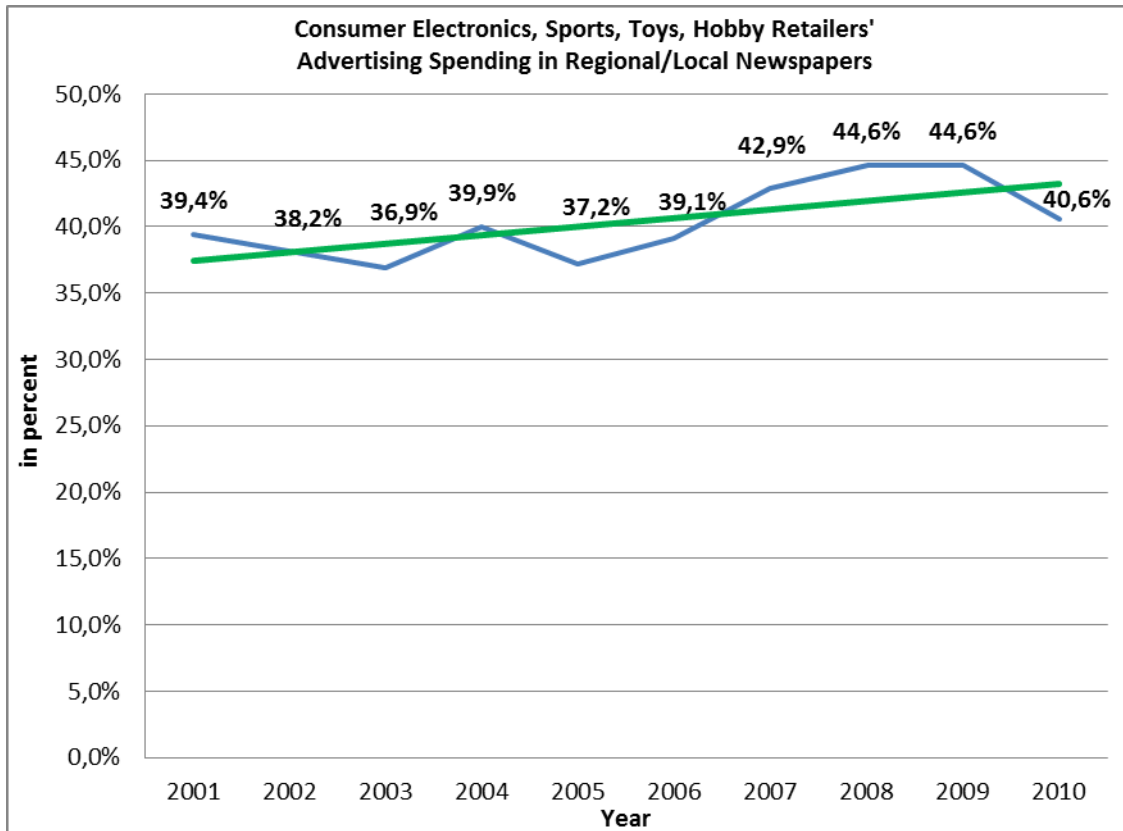
Source: own illustration with data from the AdSpender™ database

**Results H1.3: Consumer Electronic, Sports, Toys, and Hobby Retailer Stores' Advertising in regional/local newspapers has not been substituted by internet display advertising**

The sub-industry *Consumer Electronics, Sports, Toys and Hobby Retailers* shows a different development (see figures 9 and 10). Despite the ongoing trend of many industries to re-allocate their advertising spending towards the internet, this sub-industry did the opposite. Within the last ten years they have been increasing their spending on (regional/local) newspapers. At the same time they seem to have withdrawn parts of their advertising spending from display internet advertising. Concluding from the developments within the last ten years

**H1.3 cannot be rejected.** If these developments continue, companies within the *Consumer Electronics, Sports, Toys and Hobby Retail Industry* seem to represent a suitable market niche for (regional/local) newspapers on the advertising side.

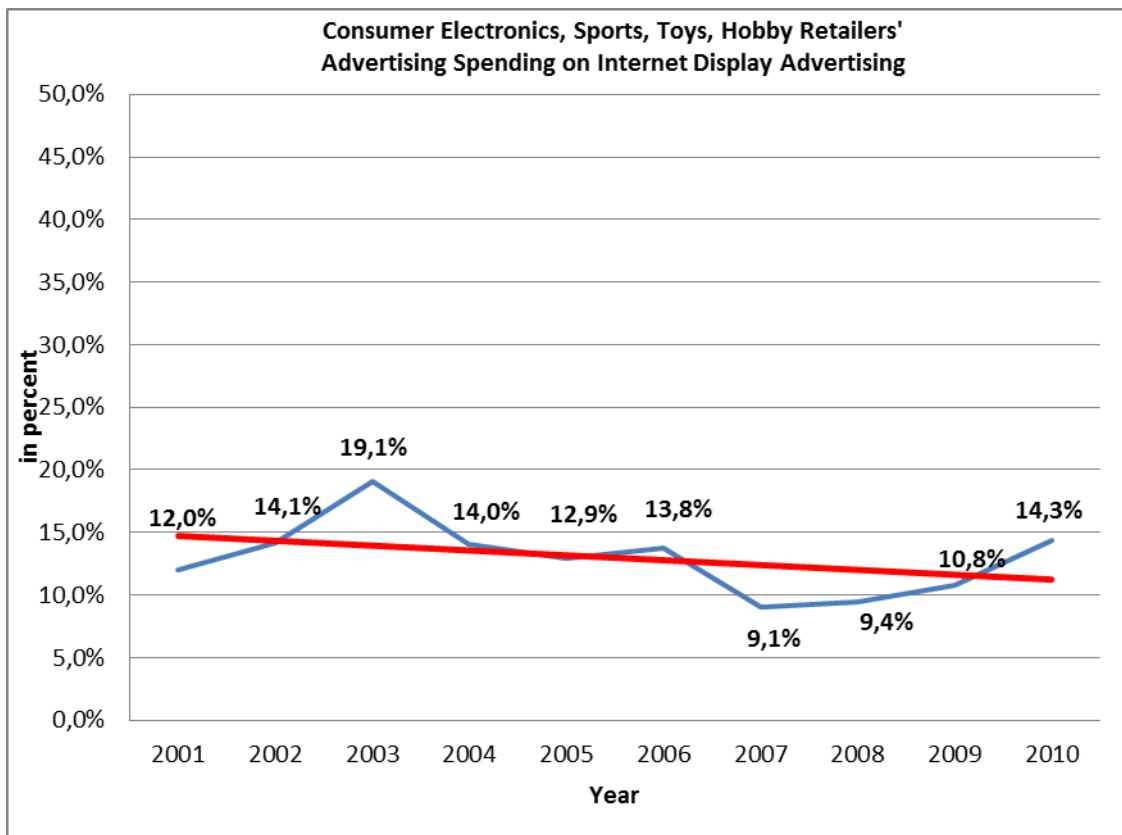
**Figure 9: Development Consumer Electronics, Sports, Toys, Hobby Retailers' Advertising Spending in Regional/Local Newspapers**



Source: own illustration with data from the AdSpender™ database



**Figure 10: Development Consumer Electronics, Sports, Toys, Hobby Retailers' Advertising Spending on Internet Display Advertising**



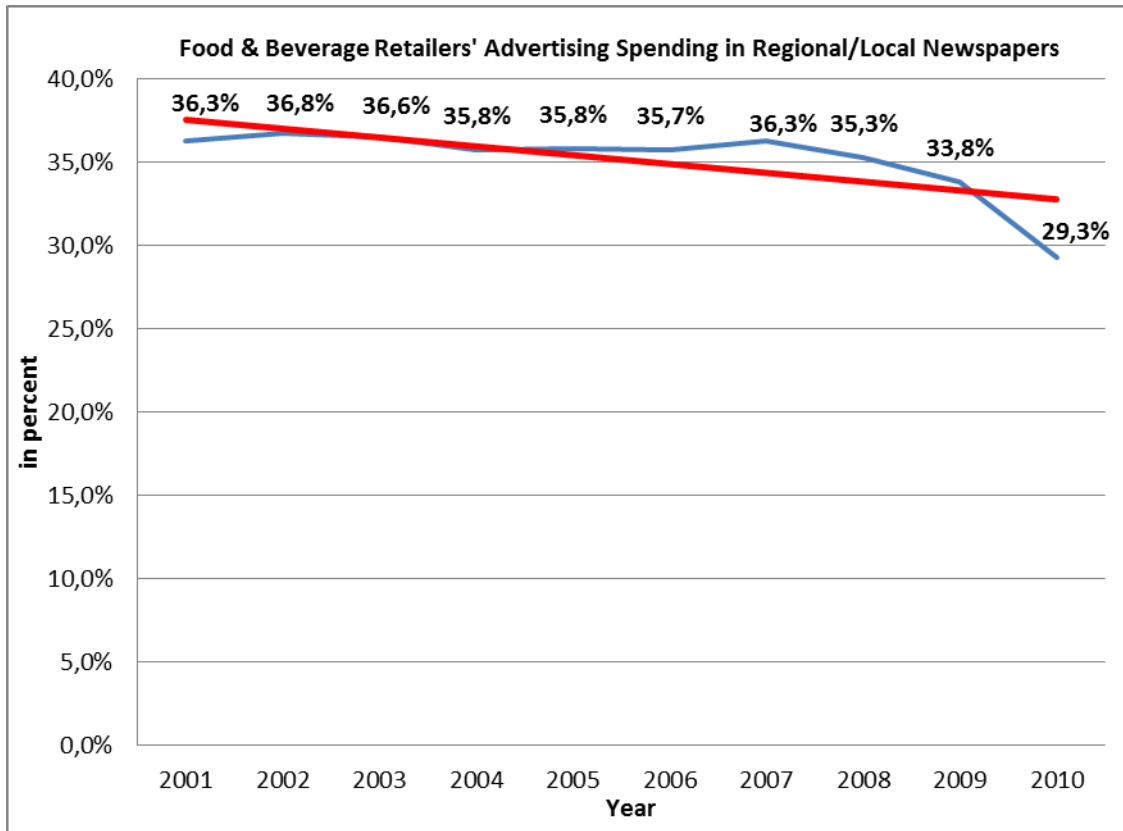
Source: own illustration with data from the AdSpender™ database

**Results H1.4: Food and Beverage Retailers' Advertising in regional/local newspapers**  
has not been substituted by internet display advertising

*Food and Beverage Retailers* (see figures 11 and 12) have been withdrawing advertising spending from (regional/local) newspapers. Compared to 2001 they allocated 7.0 percentage points less of their advertising spending to newspapers in 2010. This shows a substitution tendency away from the (regional/local) newspapers. However, the withdrawn advertising spending has hardly been invested in internet display advertising. According to figure 12 the expenditures on the internet have barely increased (+1.7 percentage points from 2001 to

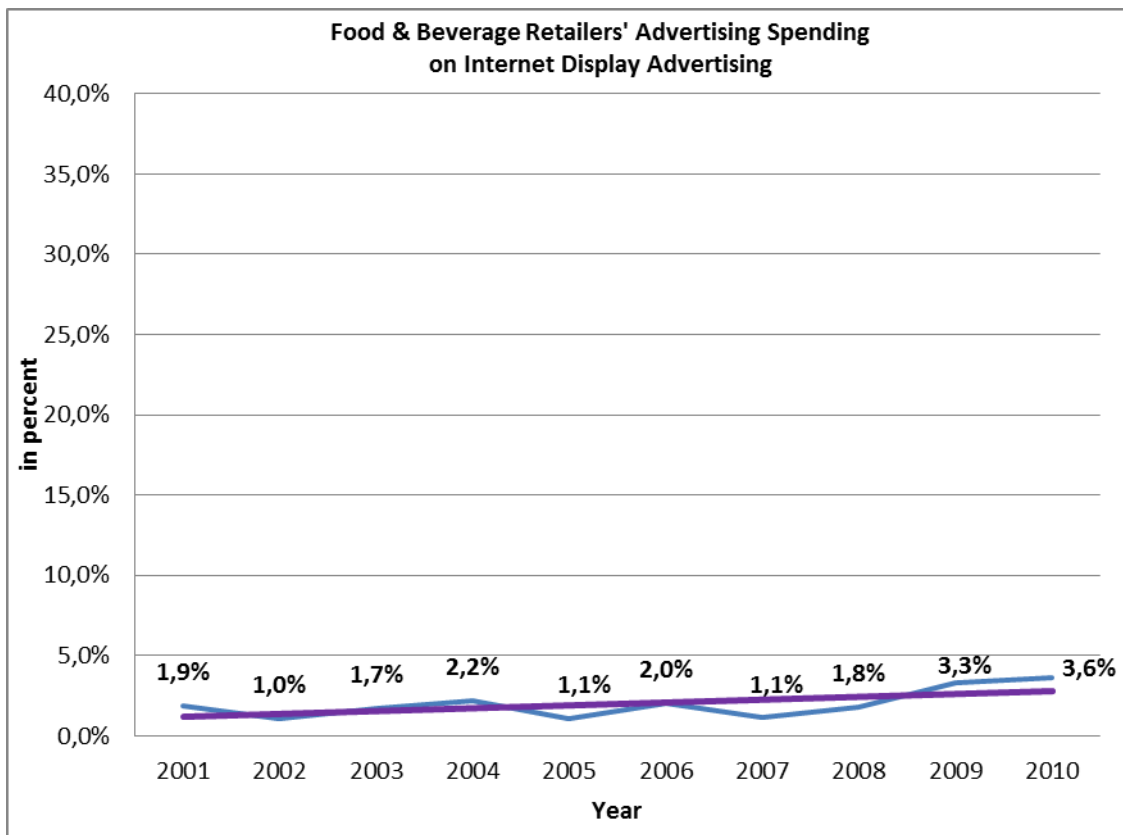
2010). Thus, the substitution has presumably been taken place between (regional/local) newspapers and other traditional media types. Consequently, *we cannot completely reject H1.4* – a substitution has been taken place, however not towards internet display advertising.

**Figure 11: Development Food & Beverage Retailers' Advertising Spending in Regional/Local Newspapers**



Source: own illustration with data from the AdSpender™ database

**Figure 12: Development Food & Beverage Retailers' Advertising on Internet Display Advertising**



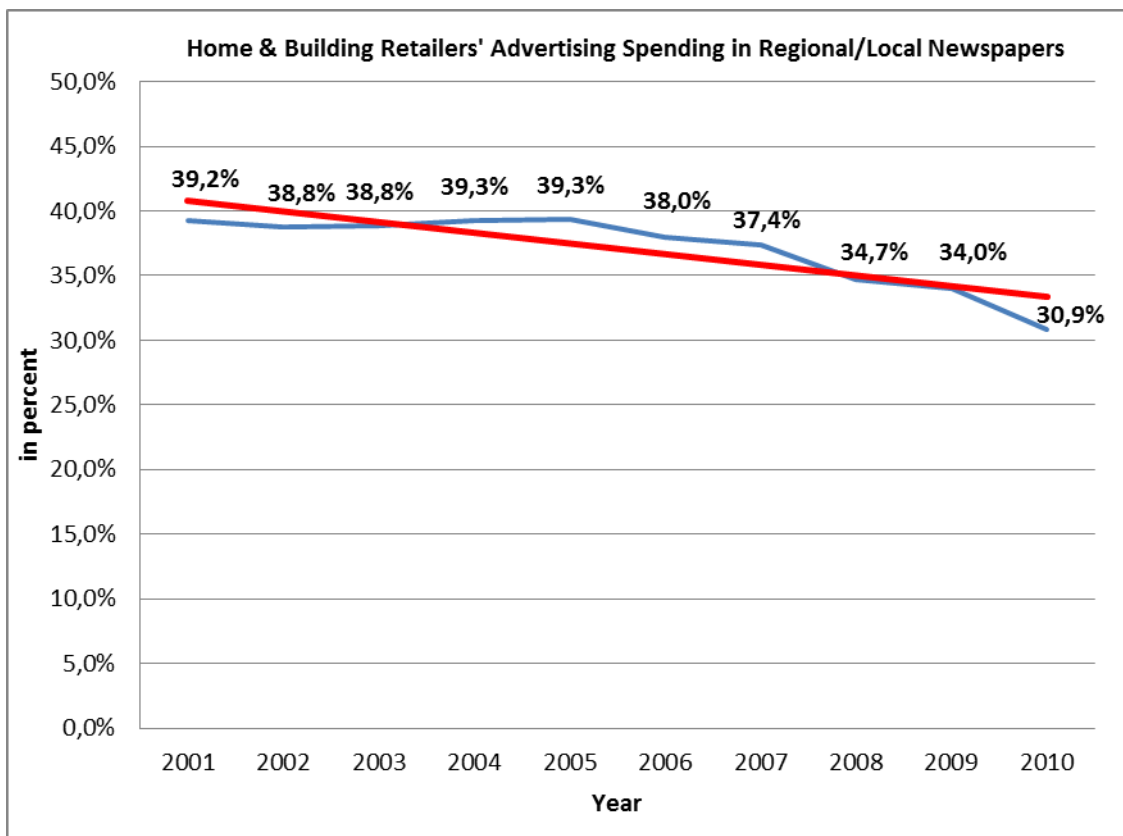
Source: own illustration with data from the AdSpender™ database

**Results H1.5: Home & Building Retailers' Advertising in regional/local newspapers**  
has not been substituted by internet display advertising

*Home & Building Retailers* show a similar development as *Food and Beverage Retailers*. Companies from this sub-industry have been almost continuously reducing their advertising spending in (regional/local) newspapers over the last ten years. In 2010 they spent only 30.9 per cent on regional/local newspapers compared with 39.2 per cent in 2001 (see figure 13). This shows a clear substitution effect away from (regional/local) newspapers. However, as with *Food and Beverage Retailers* the *Home & Building Retailers* have not re-allocated

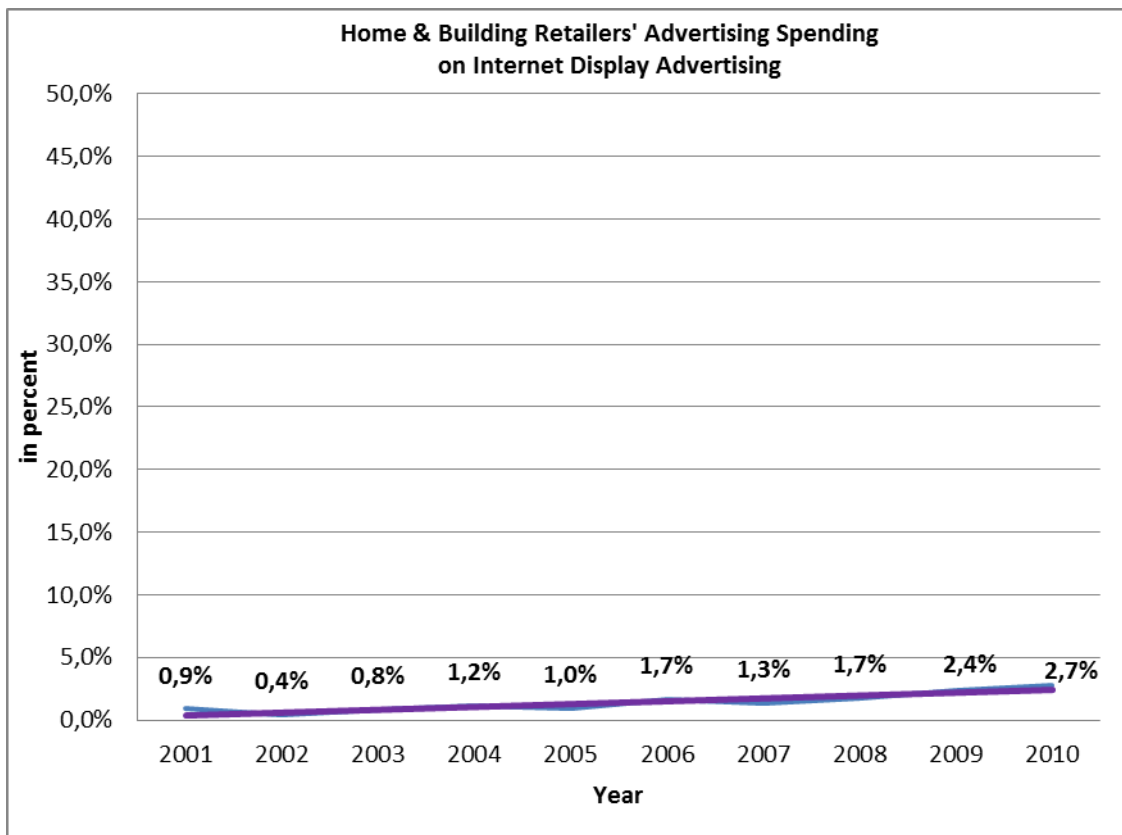
this spending towards internet display advertising. According to figure 14 internet display advertising shows an almost constant level of advertising expenditures for this sub-industry (+1.8 percentage points within ten years). Again, substitution presumably has been taken place between (regional/local) newspapers and other traditional media types. Therefore, *H1.5 cannot completely be rejected* since *Home & Building Retailers* do not keep advertising in regional/local newspapers during the analyzed period of time but have been moving their advertising spending presumably towards other media types.

**Figure 13: Development Home & Building Retailers' Advertising Spending in Regional/Local Newspapers**



Source: own illustration with data from the AdSpender™ database

**Figure 14: Development Home & Building Retailers' Advertising Spending on Internet Display Advertising**



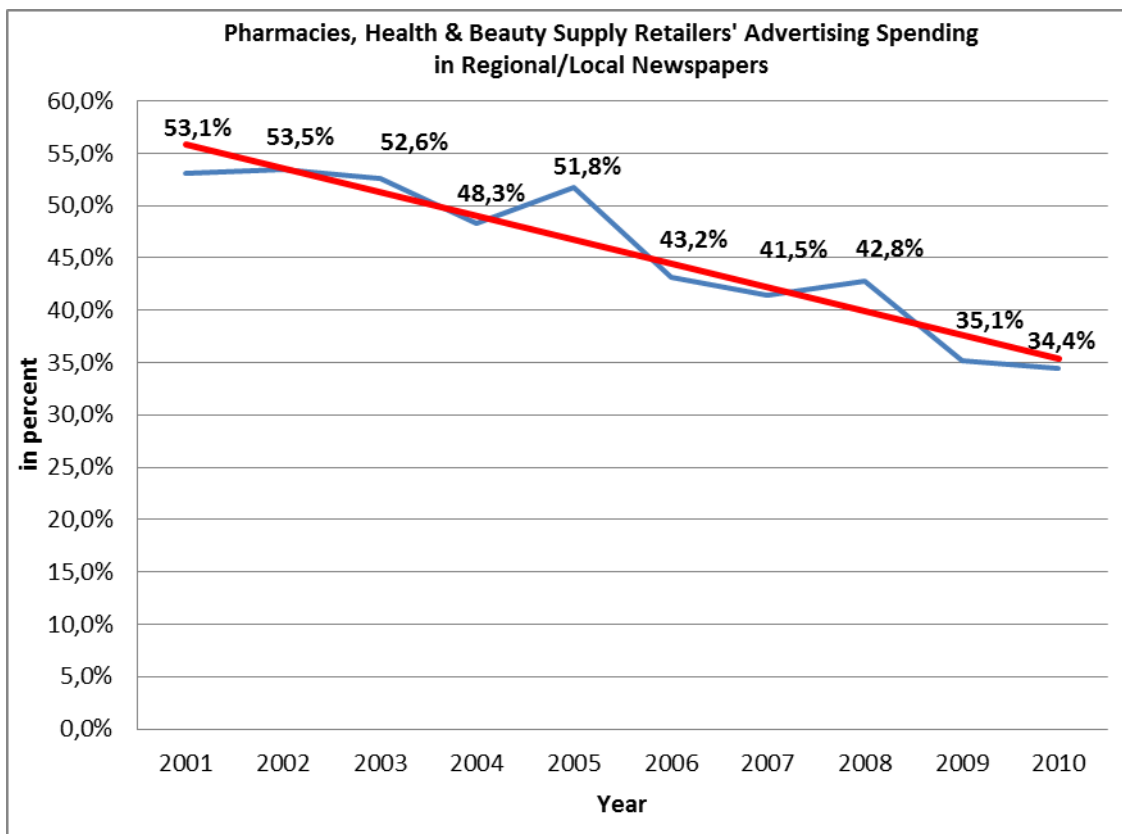
Source: own illustration with data from the AdSpender™ database

**Results H1.6: Pharmacies, Health & Beauty Supply Retailers' Advertising in regional/local newspapers has not been substituted by internet display advertising**

The last hypothesis to test within the sub-level of the retail industry is *Pharmacies, Health & Beauty Retailers*. This sub-industry has obviously been substituting their advertising from (regional/local) newspapers. Allocating more than half (53.1 per cent) of their total advertising expenditure on (regional/local) newspapers in 2001 companies within this industry have been withdrawing their ad spending from this media type since then (see figure 15). In 2010 they only spent 34.4 per cent of their total advertising expenditure on (regional/local)

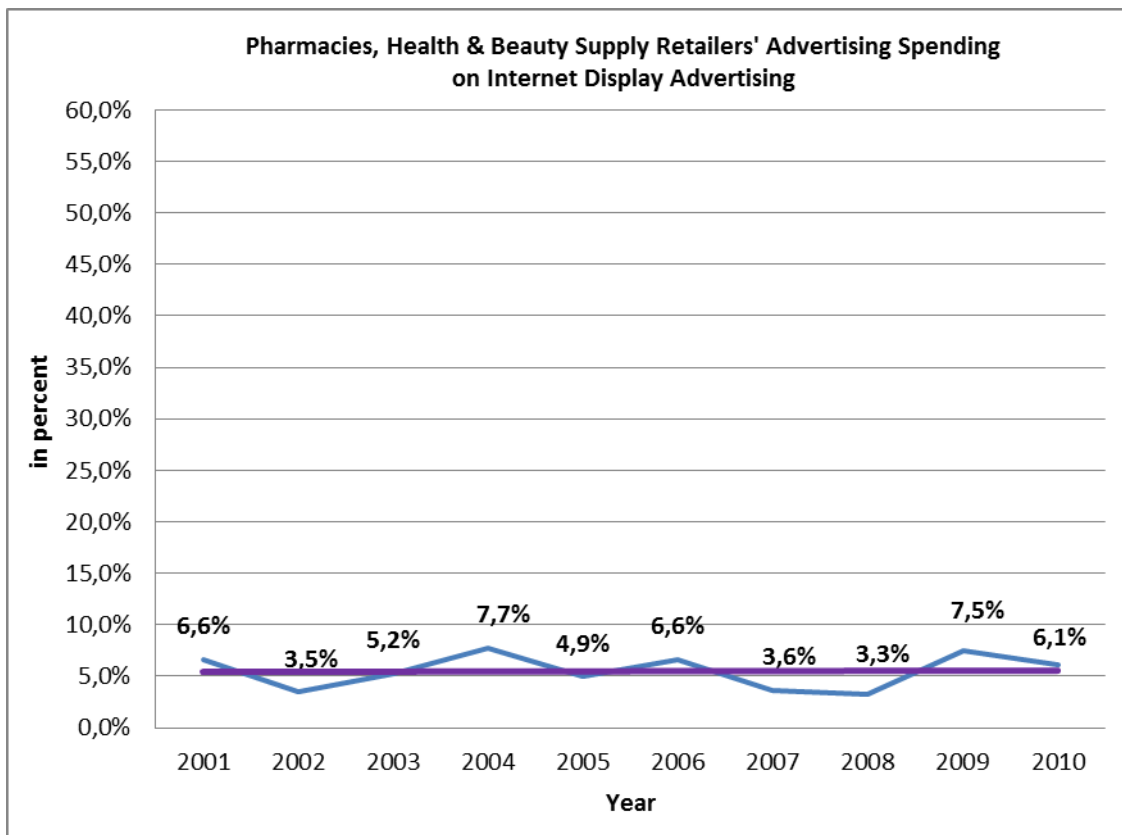
newspapers. However, once more, this spending has not been re-allocated towards internet display advertising. As with *Food & Beverage Retailers* as well as *Home & Building Retailers* internet display advertising plays a minor role for *Pharmacies, Health & Beauty Retailers*. However, with 6.1 per cent of total advertising spending in 2010 (see figure 16) this spending is higher than that of the two other mentioned sub-industries. Concluding from the developments shown in figure 15 and 16 ***we cannot completely reject H1.6***. Though the substitution effect did not occur between (regional/local) newspapers and internet display advertising we observe clear substitution effects, presumably with other traditional media types.

***Figure 15: Development Pharmacies, Health & Beauty Supply Retailers' Advertising Spending in Regional/Local Newspapers***



Source: own illustration with data from the AdSpender™ database

**Figure 16: Development Pharmacies, Health & Beauty Supply Retailers' Advertising Spending on Internet Display Advertising**



Source: own illustration with data from the AdSpender™ database

**Results H2: Department Stores, Discount & Department & Variety Stores' Advertising has not been substituted by internet display advertising**

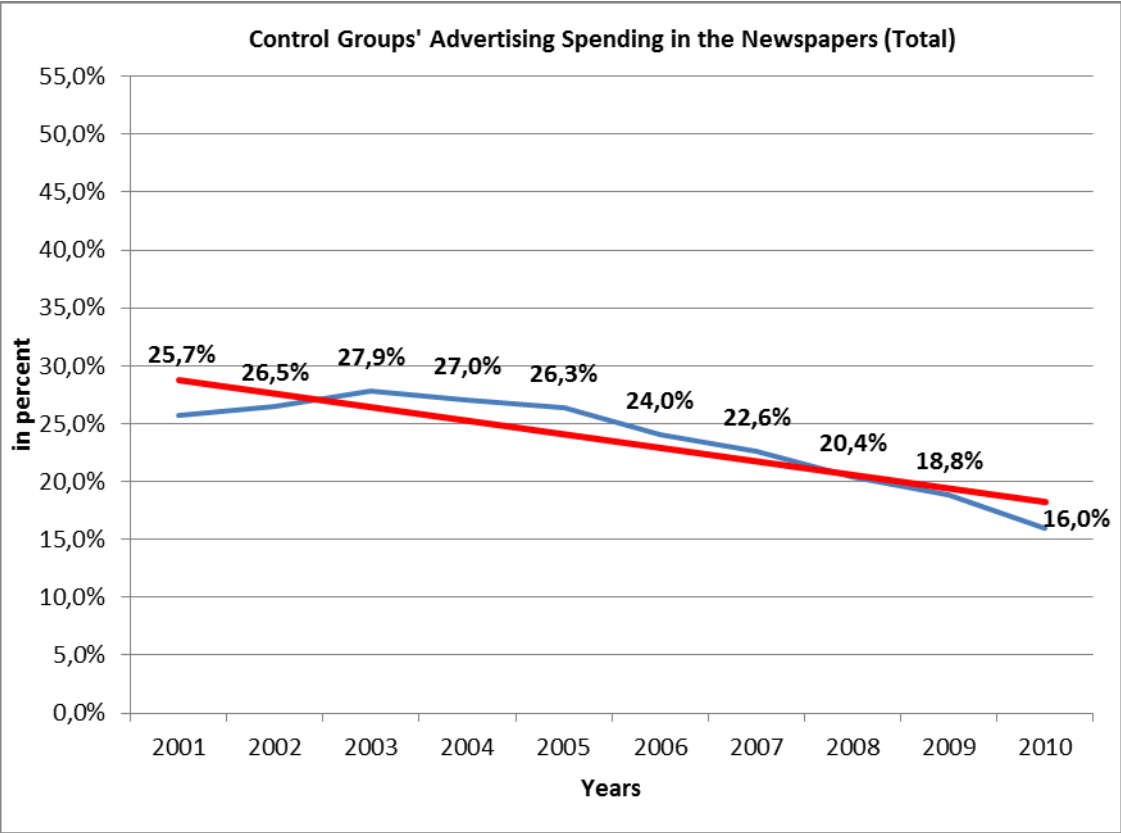
In order to test hypothesis H2 we compare the developments of ad spending from the *Control Group* with those from the *Department Stores, Discount & Department & Variety Stores*. As already indicated when testing hypothesis H0, the *Control Group* shows a clear trend away from newspapers (see figure 17). With the exception of the years 2001-2003 ad spending has been decreasing constantly. In turn, advertising spending for internet display advertising has moved upwards (see figure 19). In 2010 almost 13 per cent of total advertising spending was invested in internet display advertising, drawing closer to the in-

vestments in newspapers which accounted for 16 per cent in the same year. Thus, we conclude a clear substitution effect between newspaper and internet display advertising and therefore cannot reject  $H_0$ .

The development of ad spending for *Department Stores, Discount & Department & Variety Stores* is presented in figures 18 and 20. This industry shows an even steeper decline in newspaper advertising spending than that of the *Control Group*. In 2001 more than half (51.3 per cent) of total advertising spending from this industry was invested in newspaper advertising. This share almost continuously declined throughout the following nine years resulting in a newspaper advertising share of only 28.6 per cent in 2010. This indicates a clear substitution effect for the analyzed period, even more severe than with the *Control Group*. However, the withdrawn spending from the newspapers was not re-allocated to internet display advertising. Figure 20 shows that throughout the last ten years the internet display ad spending of *Department Stores, Discount & Department & Variety Stores* remained almost stable and, furthermore, rests on a very low level – 3.6 per cent of total ad spending in 2010. Thus, by withdrawing advertising spending from newspapers this industry has presumably re-allocated this spending towards other traditional media types. Consequently, ***we cannot completely reject H2*** for the analyzed period of time.

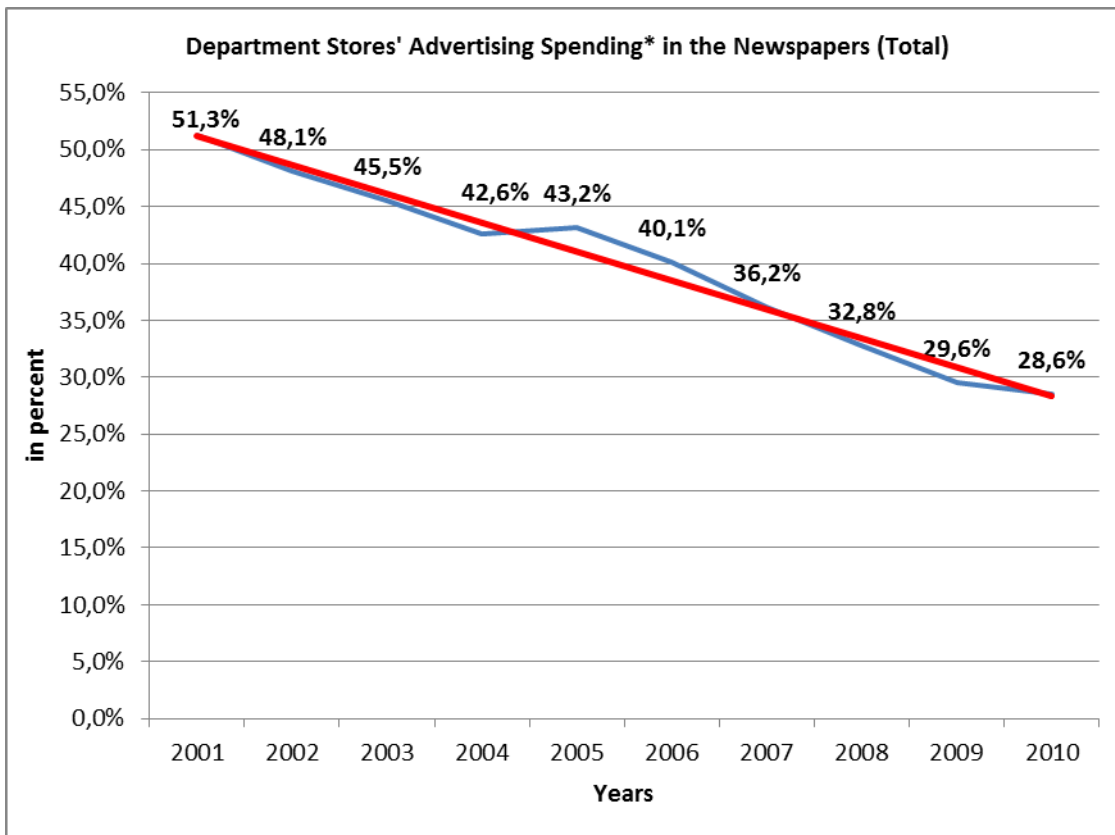


**Figure 17: Development Control Groups' Advertising Spending in Newspapers (Total)**



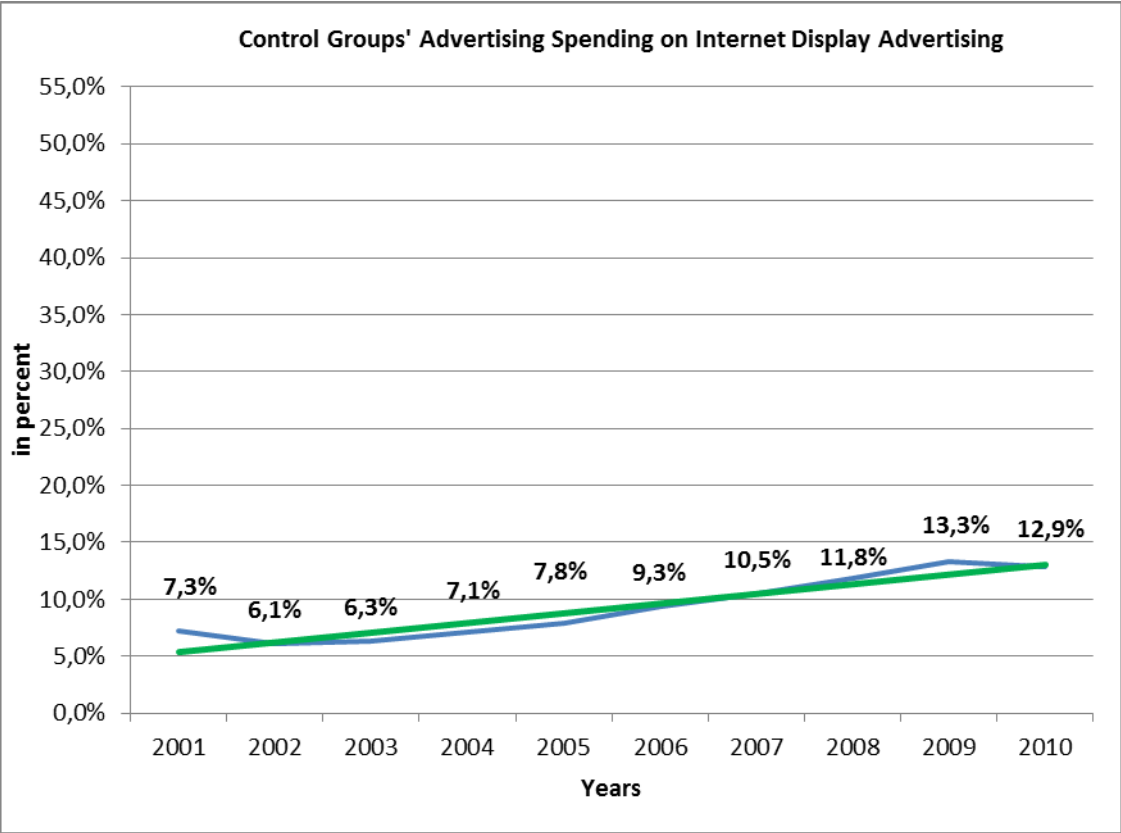
Source: own illustration with data from the AdSpender™ database

**Figure 18: Development Department Stores' Advertising Spending in Newspapers (Total)**



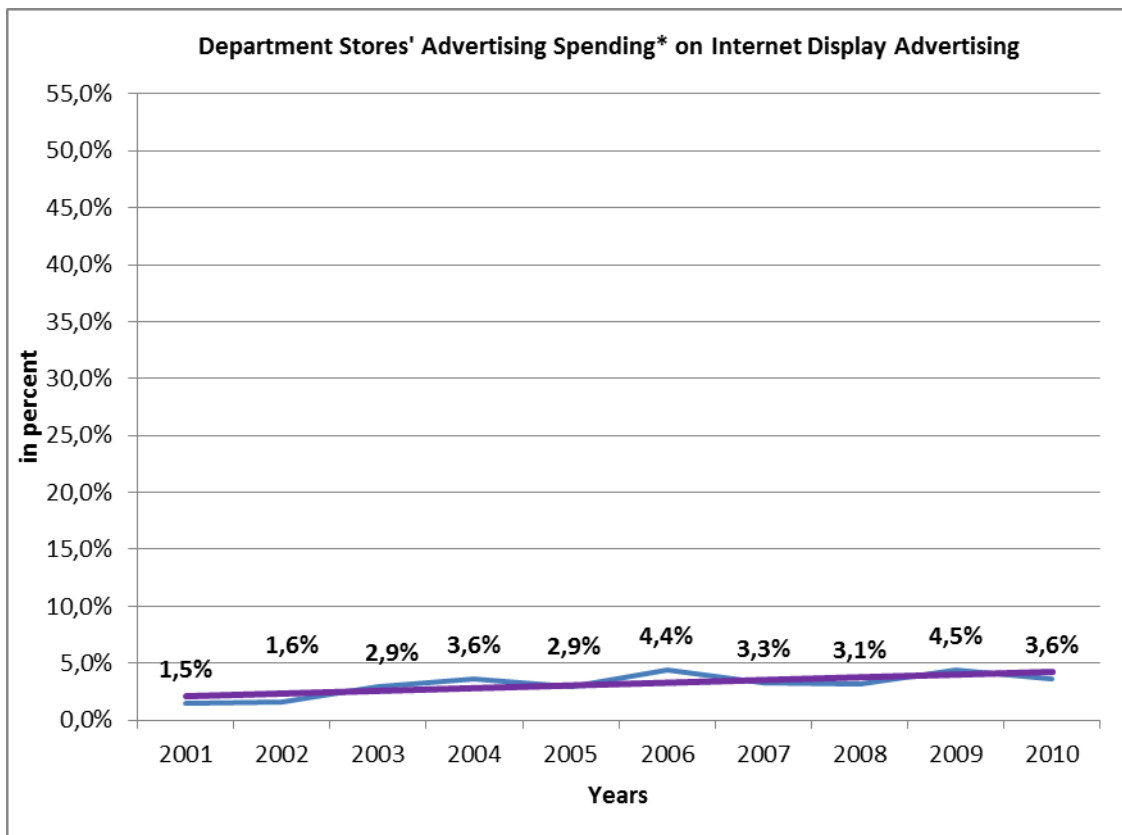
\*Note: Department Stores include Department Stores and Discount & Department & Variety Stores  
Source: own illustration with data from the AdSpender™ database

**Figure 19: Development Control Groups' Advertising Spending on Internet Display Advertising**



Source: own illustration with data from the AdSpender™ database

**Figure 20: Development Department Stores' Advertising Spending on Internet Display Advertising**



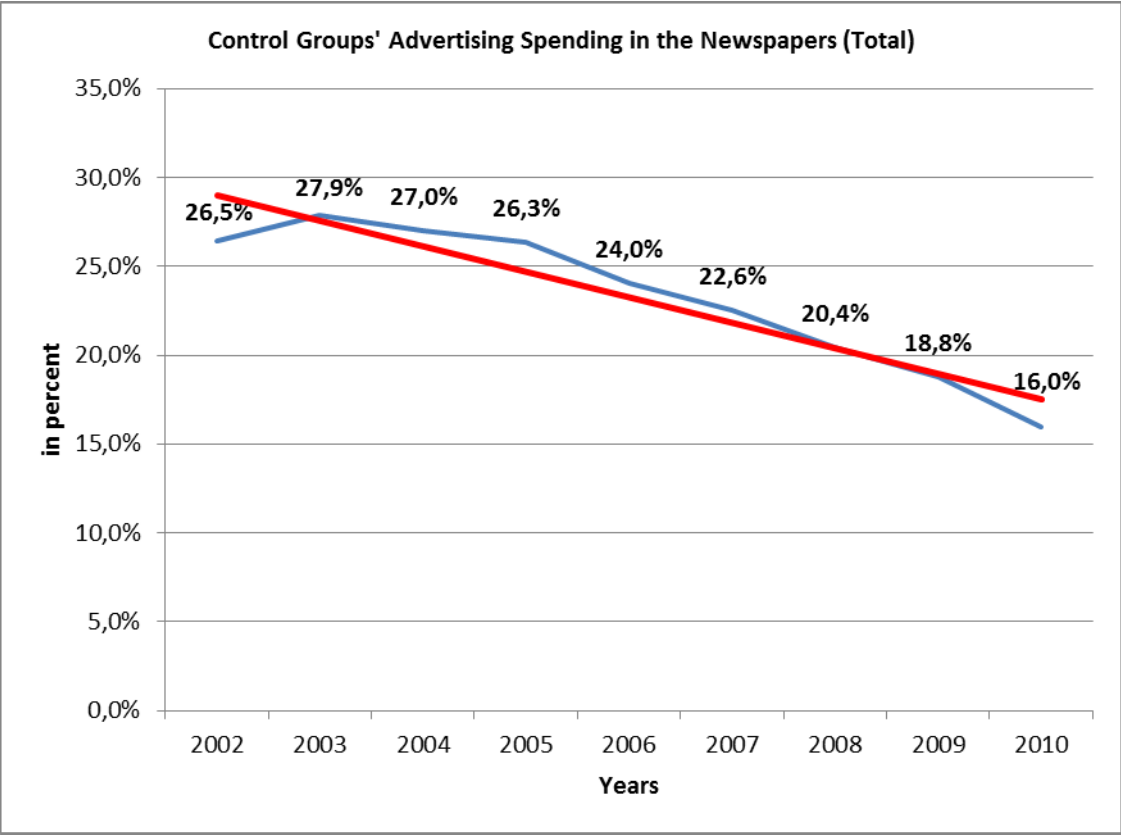
\*Note: Department Stores include Department Stores and Discount & Department & Variety Stores  
 Source: own illustration with data from the AdSpender™ database

**Results H3: Shopping Centers & Catalog Showrooms' Advertising in newspapers has not been substituted by internet display advertising**

We again compare the developments of ad spending from the *Control Group* with those from – in this case – *Shopping Center & Catalog Showrooms* in order to test H3. Our findings for the *Control Group* still hold – i.e. we conclude clear substitution effects between newspaper and internet display advertising for this group and, thus, cannot reject H0. Spending withdrawn from newspapers has, in turn, been re-allocated towards internet display advertising (see figures 21 and 23).

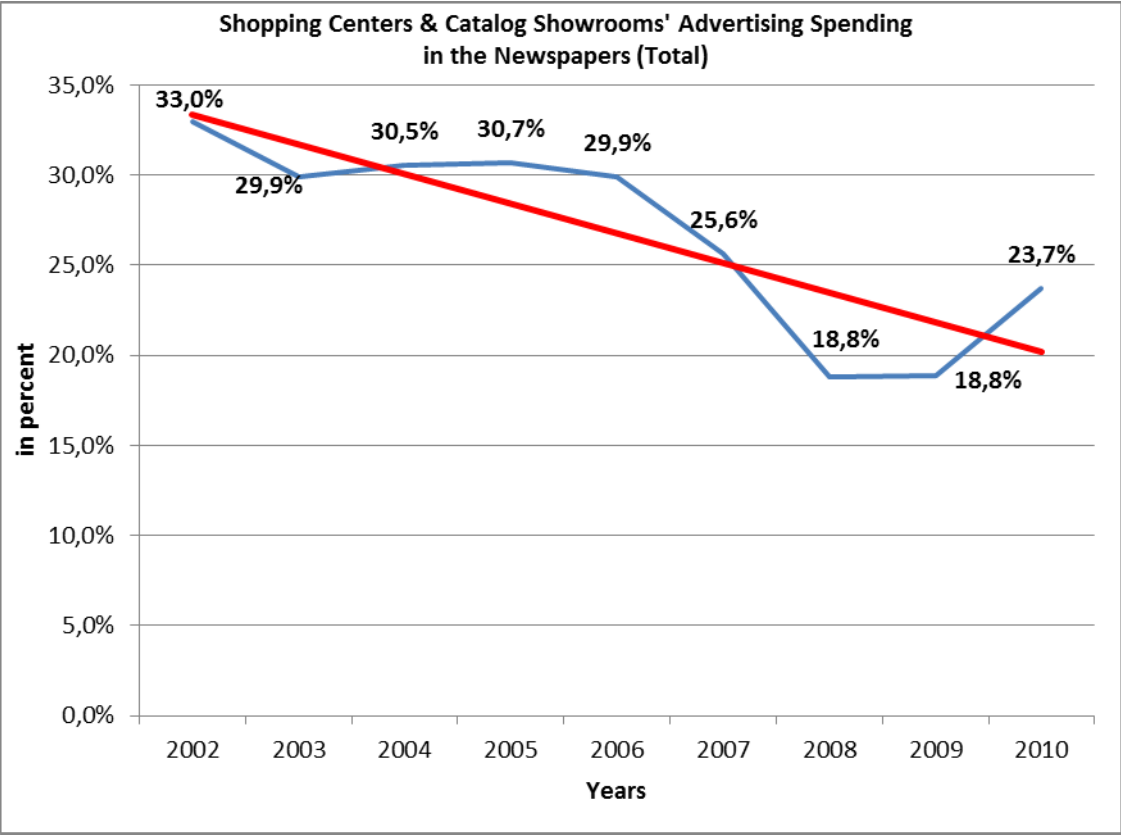
The *Shopping Centers & Catalog Showrooms* show a trend out of the newspapers as well. Since the developments for both internet display and newspaper advertising within this category showed some abnormal development in the year 2001 we assume a data problem in this year. We, thus, only examine a nine year time frame for this industry from 2002 – 2010. We can observe a fairly stable spending on newspapers from 2003-2006 before conspicuously dropping in the following two years (see figure 22). Although the spending in 2009-2010 went up by almost 5 percentage points, when considering the development over the entire nine years the trend line shows an obvious downward trend out of newspapers. When taking a look at the internet display ad spending of the *Shopping Centers & Catalog Showrooms* (see figure 24) spending rose slightly over the past nine years. In 2010 *Shopping Centers & Catalog Showrooms* were spending 6.2 per cent of their total ad spending for internet display advertising compared to 23.7 per cent spent on newspaper advertising. Thus, internet display advertising up to now still plays a rather minor role for *Shopping Centers & Catalog Showrooms*. Nevertheless, from the trend line developments of the past nine years ***we have to reject H3*** since we observe a clear substitution of newspaper advertising that has been (partly) caused by internet display advertising. However, it should be noted that within this industry, some withdrawn advertising spending from newspapers must have been re-allocated to other traditional media types as well. A last remark to this industry: After *Shopping Centers & Catalog Showrooms* increased their newspaper advertising share by almost 5 percentage points from 2009-2010, it will be interesting to see what the developments in the next years bring and whether the hypothesis still has to be rejected.

**Figure 21: Development Control Groups' Advertising Spending in Newspapers (Total)**



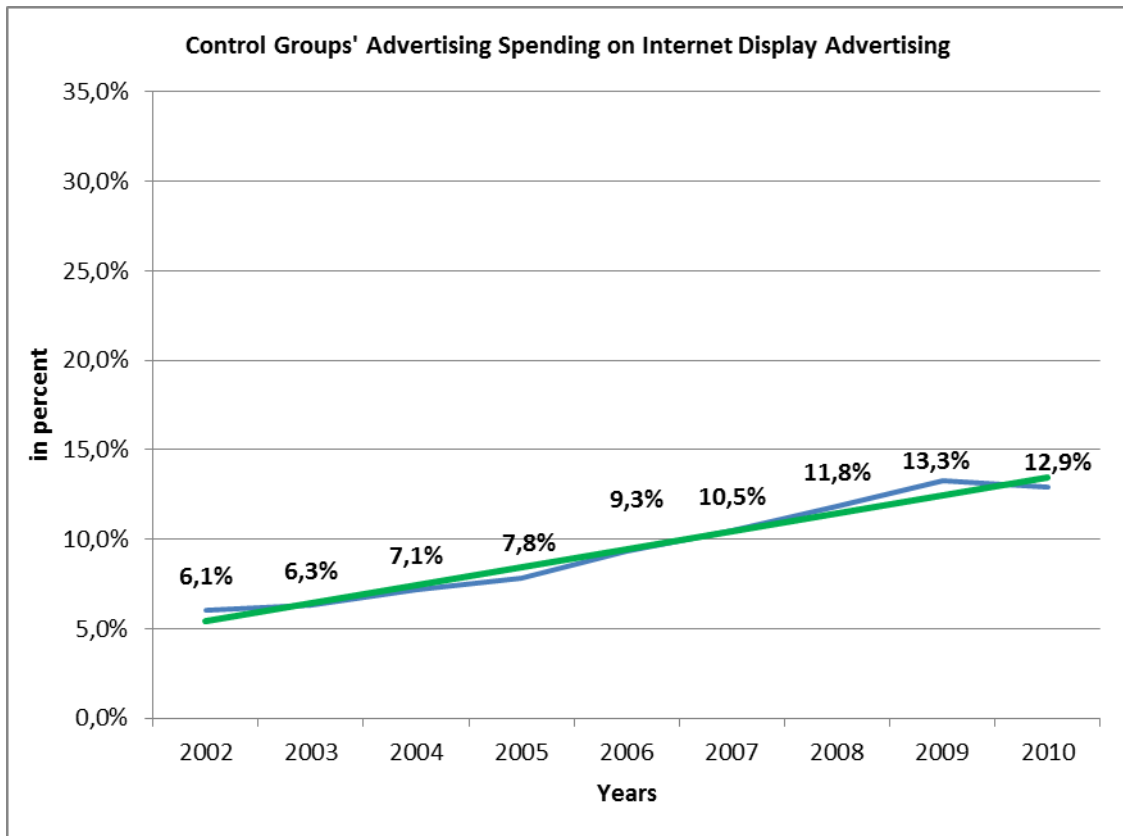
Source: own illustration with data from the AdSpender™ database

**Figure 22: Development Shopping Centers & Catalog Showrooms' Advertising Spending in Newspapers (Total)**



Source: own illustration with data from the AdSpender™ database

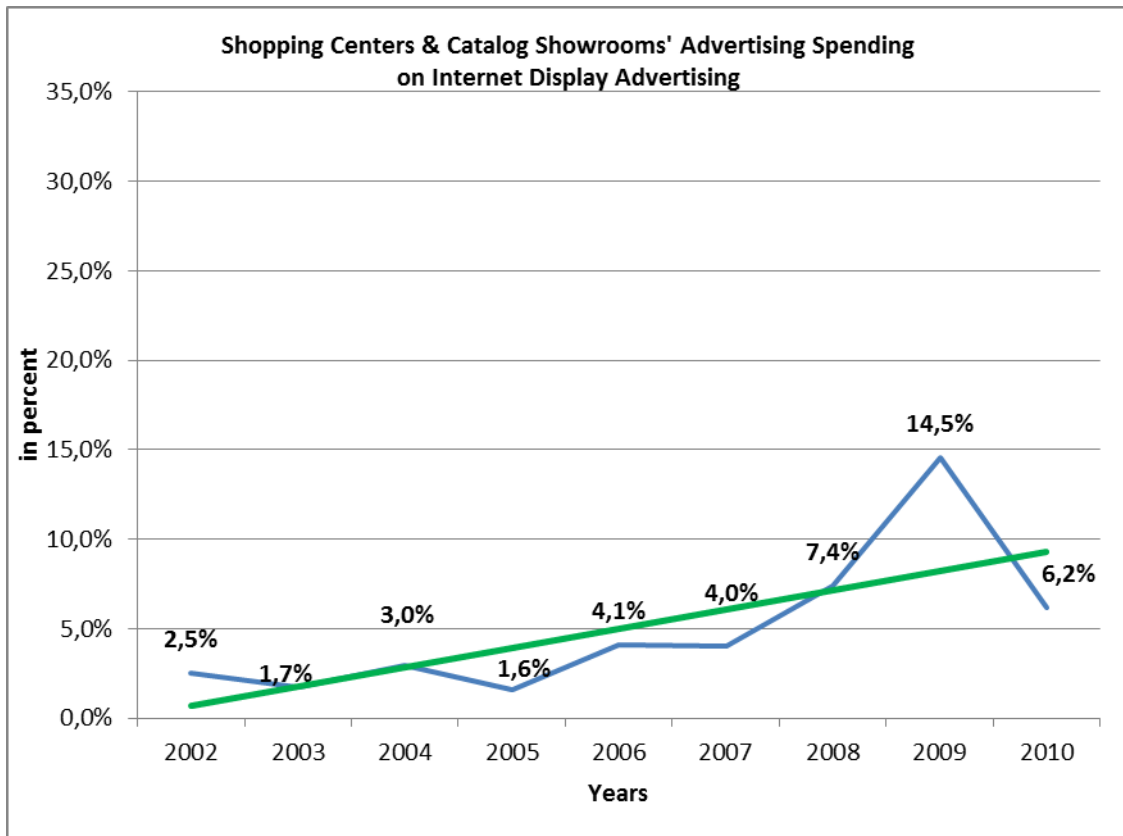
**Figure 23: Development Control Groups' Advertising Spending on Internet Display Advertising**



Source: own illustration with data from the AdSpender™ database



**Figure 24: Development Shopping Centers & Catalog Showrooms' Advertising Spending on Internet Display Advertising**



Source: own illustration with data from the AdSpender™ database

### 3.4. Discussion

**Table 3: Results of the Hypotheses**

Hypotheses:		Results:
<b>H0</b>	The <i>Control Groups' Advertising</i> in newspapers has been substituted by internet display advertising	<b>Cannot be rejected</b>
<b>H1</b>	<i>Retailers' Advertising</i> in newspapers has not been substituted by internet display advertising	<b>Not completely rejected</b>
<b>H1.1</b>	<i>Apparel Retailers' Advertising</i> in newspapers has not been substituted by internet display advertising	<b>Cannot be rejected</b>
<b>H1.2</b>	<i>Business Retailers' Advertising</i> in regional/local newspapers has not been substituted by internet display advertising	<b>Rejected</b>
<b>H1.3</b>	<i>Consumer Electronic, Sports, Toys, and Hobby Retailer Stores' Advertising</i> in regional/local newspapers has not been substituted by internet display advertising	<b>Cannot be rejected</b>
<b>H1.4</b>	<i>Food and Beverage Retailers' Advertising</i> in regional/local newspapers has not been substituted by internet display advertising	<b>Not completely rejected</b>
<b>H1.5</b>	<i>Home &amp; Building Retailers' Advertising</i> in regional/local newspapers has not been substituted by internet display advertising	<b>Not completely rejected</b>
<b>H1.6</b>	<i>Pharmacies, Health &amp; Beauty Supply Retailers' Advertising</i> in regional/local newspapers has not been substituted by internet display advertising	<b>Not completely rejected</b>
<b>H2</b>	<i>Department Stores, Discount &amp; Department &amp; Variety Stores' Advertising</i> has not been substituted by internet display advertising	<b>Not completely rejected</b>
<b>H3</b>	<i>Shopping Centers &amp; Catalog Showrooms' Advertising</i> in newspapers has not been substituted by internet display advertising	<b>Rejected</b>

Table 3 summarizes all results from the previous section. Our hypotheses-related industries do *not all* show clear substitution tendencies between newspaper and internet display advertising. Within the main hypotheses, only **H3 must be rejected**: Shopping Centers in the same way as the *Control Group* have been substituting newspaper advertising through internet display advertising. However, for our other two main hypotheses H1 and H2 the results are not that obvious. Within these areas, we could not observe tendencies for the industries to remain advertising in newspapers. Insofar, the niche theory does not appear to be supported by the empirical picture. However, at the same time these in-

dustries have not been shifting their advertising spending from newspaper towards internet display advertising. Thus, the hypotheses were correct to the extent that the retailers and department stores<sup>15</sup> – in contrast to the control group – do not substitute newspaper advertising *with* internet display advertising. Consequently, ***hypotheses H1 and H2 cannot be completely rejected***. Presumably, Retail Companies and Department Stores, Discount & Department & Variety Stores substitute newspaper advertising with other traditional media types.

Regarding the sub-hypotheses level, only ***H1.2 must be rejected*** – *Business Retailers* show clear substitution effects between (regional/local) newspapers and internet display advertising in the analyzed time period. *Apparel Retailers* and *Consumer Electronic, Sports, Toys, and Hobby Retailers*, by contrast, display completely different developments. The latter industry has even been increasing its advertising spending in (regional/local) newspapers while keeping its spending on internet display advertising rather constant – the trend line even indicates a slightly decreasing tendency. Therefore, here we cannot observe substitution effects from newspapers towards internet display advertising.<sup>16</sup> The *Apparel Retailers* kept their newspaper and internet display advertising levels rather constant and, thus, indicate complementation effects within the analyzed period. According to these developments, ***H1.1 and H1.3 cannot be rejected***.

Sub-hypotheses ***H1.4, H1.5 and H1.6 cannot be completely rejected***. Food and Beverage Retailers, Home & Building Retailers and Pharmacies, Health & Beauty Supply Retailers have been withdrawing advertising spending from (regional/local) newspapers within the last 10 years. However, hardly any spending has been moved towards internet display advertising in turn. Thus, a substitution from newspapers has presumably been taking place towards other traditional media for the analyzed period of time.

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15 Including Department Stores and Discount & Department & Variety Stores.

16 According to the trend lines, the substitution could at some point have even occurred the other way round, i.e. a comeback of newspapers at the expense of internet display advertising. This conclusion is somewhat speculative, though.

Concluding from the empirical results, firstly, it can be observed that clear substitution effects between internet display and newspaper advertising do not apply to *all* industries. In contrast to parts of the literature, thus, Lindstädt & Budzinski's (2011) emphasis on industry-specific patterns that determine if newspaper advertising is substituted by internet advertising or not *is supported* by the empirical analysis.<sup>17</sup>

In spite of this, however, secondly the empirical analysis does reveal a substitution effect for several industries: instead of being directed towards internet display advertising, however, the observed substitution runs towards other traditional media platforms (e.g. *Network TV, Spot TV, Spanish Language Network TV, Cable TV, Syndication, Magazines, Sunday Magazines, Local Magazines, Hispanic Magazines, B-to-B Magazines, Network Radio, National Spot Radio, Local Radio, and Outdoor*).<sup>18</sup> Lindstädt & Budzinski (2011) did not account for this development in their framework, which can be viewed to be a shortcoming. As far as these industries are considered, the postulated niche effect for newspapers advertising cannot be supported by the development of the U.S. market during the last decade.

Thirdly, we find support for the niche effect regarding the advertising behavior of the *Apparel Industry* as well as the *Consumer Electronics, Sports, Toys and Hobby Retailers* in the U.S. They have not been withdrawing (substituting) advertising spending from the (regional/local) newspapers but either kept their advertising spending constant or even increased it. Thus, these industries could indeed represent suitable niches for (regional/local) newspapers on the advertising side.

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17 In this analysis internet display advertising.

18 Following the theoretical framework by Lindstädt & Budzinski (2011), we treated these traditional media platforms as *one category* in our analysis (see section 3.2). Thus, we cannot demonstrate to which exact media platform the industries re-allocated their spending – this would go beyond the scope of this paper and requires further research.

Two limitations of the empirical research presented in this paper must be recognized when interpreting the results, though. On the one hand, caution must apply when transferring the results from the U.S. market to other geographical markets, as well as when extrapolating the observed trends into the future. If substitution by internet display advertising cannot be observed for now, it is always possible that this actually means ‘not yet’. However, in the following paragraph two lines of reasoning are outlined that may indicate that the other way around – observed substitution tendencies may come to a stop or may even be reversed in the future – cannot be ruled out, either. All results are naturally interim by nature. On the other hand, our analysis is limited to internet display advertising.<sup>19</sup> Thus, even if we cannot show substitution effects between internet and newspaper advertising, this only concerns the area of *display advertising*. It would require further research to find and analyze suitable database sources that include search advertising in order to come to more significant conclusions with respect to the question of substitution between internet and newspaper advertising.

It is interesting to address the phenomenon of newspaper advertising being substituted by other traditional media advertising. One question might be, whether this substitution effect between newspaper and other traditional media platforms represents a permanent substitution or whether movements back to the newspaper can be expected in the future. In Germany, for instance, some retailers currently appear to be experimenting with traditional alternatives to their advertising spending on the newspapers (e.g. *Aldi*, *Media Saturn Holding*, *Lidl*) (Horizont 2011, online). Some retailers are for the first time entering the television market with commercials, for instance *Penny* and *Schlecker*. The latter announced to be focusing on television as the leading medium and not further considering newspapers (Handelsjournal 2011, online; Horizont 2011, online). This anecdotal incidence from Germany additionally highlights that it is not necessarily the internet that attracts retailers as an advertising platform. Retail-

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19 The *AdSpender*<sup>TM</sup> database did not include search advertising data.

ers are looking for alternatives presumably as a consequence of decreasing newspaper readership. However, they may still be in a trial and error phase. As a result, movements back to the newspaper cannot be ruled out, in particular for those newspapers which manage to create and implement successful strategies to keep readers and offer attractive concepts for advertisers emphasizing the competitive advantage of printed newspapers vis-à-vis competition with other media platforms.<sup>20</sup> In this context, the empirical picture may be seen as being supportive of the competitive advantage potentials derived from the framework of Lindstädt & Budzinski (2011).

Another interesting issue deserving further research relates to the famous “Riepl’s Law”. According to Riepl’s law (1913), once established, ‘traditional’ media are not completely replaced by new, more advanced media. Although some substitution occurs, this law claims that such types of substitution processes are not complete. Instead, traditional media either might defend a viable niche or might be forced to take over other tasks and areas of utilization, and, thus, find a new niche (Bakker & Sádaba 2008: 88; De Waal & Schoenbach 2010: 479; Hagen 1999). Certainly, the emergence of the internet has brought movement within the advertising side of media markets since advertisers received another media platform to advertise on.<sup>21</sup> However, if Riepl’s law still applies in the Age of the internet and a niche for newspapers survives and co-exists with the internet (much the same as the co-existence with radio and television), this may have important implications for the substitution process. Then the typical pattern would be that first a considerable substitution process is observed for a limited period of time (the substitution phase). After that, however, substitution slows down, stops and may even be partly reversed, so that a stable

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20 Due to the two-sidedness of media markets and the interdependencies of the demand sides (i.e. audience and advertisers) this requires actions on both these demand sides. Please refer to Lindstädt (forthcoming) for managerial implications for newspaper publishing houses in the digital media landscape.

21 In the same way such developments could be observed on the audience side since it had another media platform for consuming content.

niche can be observed (the niche phase). Our empirical analysis is not suitable to detect such a Riepl's law-type of development because the time period of our data might very well only capture the first phase of the process (the substitution phase). Therefore, we must be careful to conclude from rejecting some of the hypotheses based on the available data that no sustainable, industry-specific market niche for newspaper advertising exists. Further research is necessary.

## 4. Conclusion

Building upon the theoretically driven research article by Lindstädt & Budzinski (2011) we have empirically tested hypotheses that newspaper advertising of the *Retail Industry* and related ones like *Shopping Centers & Catalog Showrooms, and Department Stores, Discount & Department & Variety Stores* has not been substituted by internet display advertising. This research article confirms the reasoning of Lindstädt & Budzinski (2011) that there are industry-specific patterns that determine if newspaper advertising is substituted by internet (display) advertising. Furthermore, we found supportive evidence that some retail industries indeed maintain their level of newspaper advertising as predicted by the theoretical framework. However, for several industries, we actually find a substitution effect. However, in the majority of retail industries newspaper advertising is not substituted by internet display advertising but instead by other traditional media platforms. We sketch possible explanations for this phenomenon and outline demand for further research.

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## 6. Appendix

*Table 1: Industries within the AdSpender™ database*

<b>Industries</b>
Ready-to-Wear, Formalwear & Bridalwear
Underclothing & Hosiery
Footwear
Apparel Accessories
Jewelry & Watches
Apparel NEC
Financial
Communications
Government, Politics & Organizations
Insurance & Real Estate
Computers, Software, Internet NEC
Media & Advertising
Office Machines, Furniture & Supplies
Manufacturing: Mtrls & Equip/Freight/Ind Dev
Business & Technology NEC
Cosmetics & Beauty Aids
Personal Hygiene & Health-Wmn, M&W, Unisex
Hair Products & Access-Wmn, M&W, Unisex
Toiletries, Hygienic Gds & Skin Care-Men
Medicines & Proprietary Remedies
Eye Glasses, Medical Equip & Supplies
Pharmaceutical Houses
Fitness & Diet Programs & Spas
Drugs, Toiletries & Fitness: Comb & NEC
Ingredients, Mixes & Seasonings
Prepared Foods
Dairy, Produce, Meat & Bakery Goods
Beverages
Confectionery & Snacks
Beer & Wine

Liquor
Food & Beverages: Comb Copy & NEC
Misc. Merchandise
Cigarettes, Tobacco & Accessories
Restaurants
Sporting Goods
Games, Toys & Hobbycraft
Pets, Pet Foods & Supplies
Horticulture & Farming
Schools, Camps, Seminars
General NEC
Household Furnishings & Accessories
Household Appliances, Equip & Utensils
Household Supplies
Household Soaps, Cleansers & Polishes
Audio & Video Equipment & Supplies
Building Materials, Equipment & Fixtures
Home & Building: Comb Copy & NEC
Automotive, Automotive Access & Equip
Gasoline, Lubricants (Trans) & Fuels
Aviation (Excl Freight)
Public Transportation, Hotels & Resorts
Transportation & Travel NEC
Misc. Services & Amusements
Automotive Dealers & Services
Retail
Department Stores
Discount & Department & Variety Stores
Shopping Centers & Catalog Showrooms
Direct Response Companies
Misc. Svc. Amuse, Retail, Direct Resp: Comb & NEC

Source: AdSpender™ 2011d, online

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