**Paid news vs free news: evolution of the WSJ.com business model from a content perspective (2010-2012)**

*Pago de noticias vs noticias libres: la evolución del modelo de negocio WSJ.com desde una perspectiva de contenido (2010-2012)*

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**ABSTRACT: The present article analyses the development of the paid content published on the homepage of The Wall Street Journal's digital version (from 2010 to 2012) as well as the influence that the variables of type of subject matter, the section in which the content appear and the territorial scope have on the probability of certain contents being paid for. The authors of this article established that the WSJ.com strategy has been evolving from an open *paywall***

**model to a much more restrictive one. They also came to the conclusion that payment is closely linked to dissimilar and more specialized content with higher added value that is not easily imitated by the competition.**

*RESUMEN: El presente artículo analiza la evolución de los contenidos de pago publicados en la portada de la edición digital de The Wall Street Journal (2010 a 2012) y la influencia que tres variables –tipo de asunto, sección en la que se incluye el contenido, y ámbito geográfico– tienen en la probabilidad de que un contenido fuera de pago. Los autores demuestran que la estrategia del WSJ.com ha ido evolucionando desde un modelo paywall abierto a otro mucho más restrictivo. Asimismo demuestran que el cobro está estrechamente relacionado con contenidos diferenciados y especializados, de alto valor añadido y difícilmente imitables por la competencia.*

**Keywords: Paywalls, media business models, The Wall Street Journal, paid content, newspapers.**

*Palabras clave: paywall, modelos de negocio, The Wall Street Journal, periódicos.*

1. *Introduction*

Specific interest in the concept of a new media business model concept has been closely related to the rise and popular acceptance of the Internet since the mid-nineties[1]. The technological change brought about by the Internet, together with the enormous impact it has had on the global value chain of the traditional means of supplying content, has caused an increase in the amount of research converging on this new reality. The business model concept has emerged as a new unit for analysis in various scientific disciplines, as is confirmed by the increasing amount of research work focusing on this concept: between 1995 and 2009 a total of 1,177 peer-reviewed articles published in academic magazines have used the expression "business model"[2]. However, despite this important volume of scientific production, the concept of the media business model is today one of the most controversial and misinterpreted terms[3]. Such lack of maturity is clearly shown, for instance, by the lack of agreement about the concept of the business model itself, the various methods applied in research into it and the type of research carried out, as well as the origin, characteristics and study scope of the researchers who have dealt with this question[4].

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[1] In order to know more about the development and situation of the present research on business models cfr. WESTERLUND, Mika *et al.*, "Insights into the Dynamics of Business Models in the Media Industry"*, *nº 2011; OSTERWALDER, Alexander *et al.*, "Clarifying Business Models: Origins, Present, and Future of the Concept", *Communications of the Association for Information Systems,* vol. 16, nº 2005, pp. 1-25; ZOTT, Christoph *et al.*, "The Business Model: Recent Developments and Future Research", *Journal of Management,* vol. 37, nº 4, 2011, pp. 1019-1042.

[2] Cfr. ZOTT, Christoph *et al.*, *op. cit.*

[3] Cfr. FETSCHERIN, Marc & KNOLMAYER, Gerhard, "Business Models for Content Delivery: An Empirical Analysis of the Newspaper and Magazine Industry", *JMM: The International Journal on Media Management,* vol. 6, nº 1/2, 2004, p. 4.

[4] Cfr. CHESBROUGH, Henry & ROSENBLOOM, Richard S., "The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies", *Industrial and corporate change*, vol. 11, nº 3, 2002, pp. 529-555; ZOTT, Christoph *et al.*, *op. cit.*

Four key elements are recurrent in most definitions of a business model: the product or service, the intended consumer, the income model and the value proposal[5]. Rayport and Jaworski also included a resource system which will be an essential part of the development of the activity[6]. Considering all the elements that have been analysed, research into business models has been especially focused on income procedures or income models[7]. As a result there has been an immediate double consequence: on the one hand, we find that the business model and income model have become one thing, since one part has been identified with the whole; on the other hand, there is very little by way of unification with or a linked relationship with other studies focused on the new media, such as research on convergence questions[8], information consumption and payment intention[9], or on usages and bonuses applied to both printed and digital editions[10].

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[5] Cfr. ZOTT, Christoph *et al.*, *op. cit.*

[6] Cfr. RAYPORT, Jeffrey F. & JAWORSKI, Bernard, J., *Introduction to e-Commerce*, McGraw-Hill/Irwin, 2002.

[7] Cfr. ARAMPATZIS, Alexandros, "Online Business Models in Greece and the United Kingdom: A Case of Specialist Versus Generic and Public Versus Privately Owned Online News Media", *International Journal on Media Management,* vol. 6, nº 1, 2004, pp. 88-101; CASERO-RIPOLLÉS, Andreu, "Prensa en internet: nuevos modelos de negocio en el escenario de la convergencia", *El Profesional de la Informacion,* vol. 19, nº 6, 2010, pp. 595-601; CHYI, Hsiang Iris, "Willingness to Pay for Online News: An Empirical Study on the Viability of the Subscription Model", *Journal of Media Economics,* vol. 18, nº 2, 2005, p. 131; ESTOK, David M., "Paywalls", *Journal of Professional Communication,* vol. 1, nº 1, 2011, p. 3; GRAYBEAL, Geoffrey Michael & HAYES, Jameson Lee, "A Modified News Micropayment Model for Newspapers on the Social Web", *International Journal on Media Management,* vol. 13, nº 2, 2011, pp. 129-148; HA, Louisa & GANAHL, Richard, "Webcasting Business Models of Clicks-and-Bricks and Pure-Play Media: A Comparative Study of Leading Webcasters in South Korea and the United States", vol. 6, nº 1, 2004, pp. 74-87; HERBERT, Jack & THURMAN, Neil, "Paid content strategies for news websites", *Journalism Practice,* vol. 1, nº 2, 2007, pp. 208-226; MACNAMARA, Jim., "Remodelling Media: The Urgent Search for New Media Business Models", *Media International Australia,* vol. 137, nº 11, 2010, pp. 20-35; MENSING, Donica, "Online Revenue Business Model Has Changed Little Since 1996", *Newspaper Research Journal,* vol. 28, nº 2, 2007, pp. 22-37; PICARD, Robert G., *Evolution of Revenue Streams and the Business Model of Newspapers: The U.S Industry between 1950-2000,* Turku School of Economics and Business Administration, 2002, p. 34; HALBHEER, Daniel *et al.*, "Choosing a Digital Content Strategy: How Much Should be Free?", *Columbia Business School Research Paper,* nº 11-8, 2013; STAHL, Florian *et al.*, "Strategies for Selling Paid Content on Newspaper and Magazine Web Sites: An Empirical Analysis of Bundling and Splitting of News and Magazine Articles", *The International Journal on Media Management,* vol. 6, nº 1/2, 2004, p. 59.

[8] Cfr. MCPHILLIPS, Simon & MERLO, Omar, "Media Convergence and the Evolving Media Business Model: An Overview and Strategic Opportunities", *Marketing Review,* vol. 8, nº 3, 2008, pp. 237-253; SALAVERRÍA, Ramón & NEGREDO, Samuel, *Periodismo integrado. Convergencia de medios y reorganización de redacciones*, Editorial Sol90, Barcelona, 2008, p. 187; VARA-MIGUEL, Alfonso, *Segundas partes pueden ser buenas: la convergencia redaccional de Expansión y expansion.com*, in LÓPEZ GRACÍA, Xosé & PEREIRA FARIÑA, Xosé: Convergencia Digital. Reconfiguración de los Medios de Comunicación en España, Universidad de Santiago de Compostela, Santiago de Compostela, 2010, pp. 269-279; VARA-MIGUEL, Alfonso *et al.*, *Interpretación de las estrategias multiplataforma por parte de los profesionales*, in CABRERA, María Ángeles, Evolución de los cibermedios. De la convergencia digital a la distribución multiplataforma, Fragua, Madrid, 2013, pp. 181-189.

[9] Cfr. CHYI, Hsiang Iris, "Willingness to Pay for Online News: An Empirical Study on the Viability of the Subscription Model", *Journal of Media Economics,* vol. 18, nº 2, 2005, p. 131; CHYI, Hsiang Iris et al., "A Matter of Life and Death?", *Journalism Studies,* vol. 13, nº 3, 2012, pp. 305-324; CHYI, Hsiang Iris & YANG, Mengchieh, "Is Online News an Inferior Good? Examining the Economic Nature of Online News among Users", *Journalism & Mass Communication Quarterly,* vol. 86, nº 3, 2009, pp. 594-612; CHYI, Hsiang Iris & SYLVIE, George, "Are Long-Distance Users an Inconvenient Truth? Profiling U.S. Newspapers' Online Readership in the Dual-Geographic Market", *The International Journal on Media Management,* vol. 12, nº 2, 2010, pp. 93-112; YANG, Mengchieh & CHYI, Hsiang Iris, "Competing With Whom? Where? And How? An Empirical Study of Online Newspaper Competition", *Conference*

In this context, we also do not find many studies that have looked into the media business models from the content perspective. Although it is true that quite a few of the surveys that have been carried out on intention of payment for information include questions related to the type of contents the public would be ready to pay for[11], there has hardly been any research into what specific types of information are more likely to be paid for or what type of news content is usually free[12].

Throughout the last 20 years editors have been looking into different forms of content distribution in order to enjoy some benefit in return. Some editors have decided on free distribution –financed by advertising– whereas others are keener on a model that charges the consumer depending on the type of content.

Finally, we find hybrid models in which a section of the contents is free but the rest of the contents are being paid for[13]. In the last two years increasing numbers of daily papers have chosen this income model and have begun to establish a system in which they charge the costumer to gain access to information. By 2012, approximately one in ten daily newspapers have erected a digital paywall or subscription plan. More than 250 papers are using a similar metered usage model to the one enacted by the New York Times in 2011[14]. The two main hybrid models charging by the type of content are the metered and the "freemium" models[15]. The metered model allows users to view a

*Papers – International Communication Association*; YANG, Mengchieh & CHYI, Hsiang Iris, "Competing with Whom? Where? And Why (Not)? An Empirical Study of U.S. Online Newspapers' Competition Dynamics", *Journal of Media Business Studies,* vol. 8, nº 4, 2011, pp. 59-74.

[10] Cfr. CHYI, Hsiang Iris & LASORSA, Dominic, "Access, Use and Preferences for Online Newspapers", *Newspaper Research Journal,* vol. 20, nº 4, 1999, p. 2; CHYI, Hsiang Iris & LASORSA, Dominic, "An Explorative Study on the Market Relation Between Online and Print Newspapers", *Journal of Media Economics,* vol. 15, nº 2, 2002, pp. 91-106; DIMMICK, John & ALBARRAN, Alan, "The Role of Gratification Opportunities in Determining Media Preference", *Mass Communication Review,* vol. 21, 1994, pp. 223-235; DIMMICK, John *et al.*, "Competition Between the Internet and Traditional News Media: The Gratification-Opportunities Niche Dimension", *Journal of Media Economics,* vol. 17, nº 1, 2004, p. 19; FLANAGIN, Andrew J. & METZGER, Miriam J., "Perceptions of Internet Information Credibility", *Journal and Mass Communication Quarterly,* vol. 77, nº 3, 2000, pp. 515-540; STEMPEL, G. Ill et al., "Relation of Growth of Use of the Internet to Changes in Media Use from 1995 to 1999", *Journalism & Mass Communication Quarterly,* vol. 77, nº 1, 2000, pp. 71-79; SUNDAR, S. Shyam, "Effect of Source Attribution on Perceptions of Online News Stories", *Journalism and Mass Communication Quarterly,* vol. 75, nº 1998, pp. 55-68; SUNDAR, S. Shyam, "Multimedia Effects on Processing and Perception of Online News: A Study of Picture, Audio, and Video Downloads", *Journalism & Mass Communication Quarterly,* vol. 77, nº 3, 2000, pp. 480-499.

[11] Cfr. AIMC, *La prensa: digital vs papel,* Asociación para la Investigación de Medios de Comunicación, 2011, p. 30; NIELSEN, *Changing Models: A Global Perspective on Paying for Content Online.* The Nielsen Company, 2010, pp. 12, WAN-IFRA, *New Revenue Models for Newspapers Companies,* World Association of Newspapers and News Publishers, 2010, pp. 82; VOGEL, Judy *et al.*, *Online Print Publications and the Viability of Charging for Online Content,* PHD & Ipsos Mendelshon, 2010, p. 17.

[12] Cfr. VARA-MIGUEL, Alfonso & DÍAZ-ESPINA, Carolina, "Modelos de negocio y estrategia editorial: el caso del WSJ.com", *Revista de Comunicación,* vol. 11, nº 2012, pp. 110-128.

[13] Cfr. HALBHEER, Daniel *et al.*, "Choosing a Digital Content Strategy: How Much Should be Free?", *Columbia Business School Research Paper,* 11-8, 2013; MENSING, Donica, "Online Revenue Business Model Has Changed Little Since 1996", *Newspaper Research Journal,* vol. 28, nº 2, 2007, pp. 22-37.

[14] Cfr. BOYER CLARK, Tracy, *Wall Street Journal's Digital Strategy Amidst the Digital Revolution,* in Innovative Interactivity: http://innovativeinteractivity.com/2012/05/14/wall-street-journals-digital-strategy-amidst-the-digital-revolution/ [Last accessed 19 September 2013]; VARA-MIGUEL, Alfonso, "Modelos de pago en el sector de la prensa: una estrategia defensiva", in (AEDE), Asociación de Editores de Diarios Españoles: *El Libro Blanco de la prensa diaria 2013*, AEDE, Madrid, 2012, pp. 407-422.

[15] Cfr. LEIVA, Ricardo & VARA MIGUEL, Alfonso, "La estrategia 'freemium': Una alternativa para crear valor y cobrar por los contenidos periodísticos especializados en Internet", in QUESADA PÉREZ, Montserrat: *Internet como fuente generadora de contenidos especializados*, IECE & Universitat Pompeu Fabra, Barcelona, 2010, pp. 338-354.

specific number of news items per month without charge; after that, a subscription will be necessary. In the freemium model it is up to the newspaper's editors to decide upon the relevance of the information and to establish a charge to gain access to it. The first daily paper to apply this kind of model was The Wall Street Journal (WSJ) in 1997. The paper's online version had been launched one year earlier, in 1996[16].

## 2. *Objectives*

The purpose of the present article is to analyse the business model of the WSJ digital edition by looking at it from a contents perspective. Firstly, this study will deal with the development of the homepage of the European WSJ digital edition, which is divided into paid news or free news. Secondly, it will look into the relative influence that three variables may have had on whether a news item is paid for or not:

V1: Section – the section within the WSJ.com where the news item is being included.

V2: Topic – the main topic the item of news refers to.

V3: Territorial scope – the place the news item refers to and where it is defined.

The paid model is usually associated with contents that are unique, exclusive and different from the rest. If this is true, it should be the case that the information included in more specialized sections of the online paper is more likely to be paid for. Furthermore, news items that deal with more individualized topics will also be more likely to be paid news. We can therefore present the first two hypotheses:

      $H_1$ *Section* positively predicts paywall.

      $H_2$ *Topic* positively predicts paywall.

Regarding *territorial scope*, this study aimed to establish whether this variable could have an influence on the fact that a specific news item is paid for or free of charge. This variable has been a constant worry within the economy of the media, since the degree of shortage of a news service or product depends on it to a large extent, and therefore it conditions the value that can be created with the public[17]. With the arrival of the Internet, it seems that market frontiers have disappeared. However, the territorial dimension has not lost its relevance because content is always being created that bears in mind a specific geographical context. Thus, a piece of news can have a more informative value to the citizens of one particular territory than for citizens of a territory where the information offer is less or where interest in news items is greater. In such cases, it is right to think that the news which provides greater informative value will be more likely to be paid news. Considering the specific case of the WSJ, we can see that its condition as a global publication with different editions worldwide can help us to understand why the information value of a news item dealing with a particular place may be different in each of those editions. Thus, a news item from the USA may have a greater information value for readers of the American edition than for readers of the European edition; therefore, such news is more likely to be paid for in the USA edition than in the European one. Thus, the third hypothesis is:

      $H_3$ *Territorial scope* positively predicts paywall.

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[16] In order to understand more about enforcement process in the WSJ payment model, you may consult STEINBOCK, Dan, "Building Dynamic Capabilities: The Wall Street Journal Interactive Edition – A Successful Online Subscription Model (1993-2000)", *International Journal on Media Management,* vol. 2, nº 3, 2000, pp. 178-194.

[17] Cfr. CHYI, Hsiang Iris, "Online Readers Geographically More Dispersed Than Print Readers", *Newspaper Research Journal,* vol. 32, nº 3, 2011, pp. 97-111; CHYI, Hsiang Iris & SYLVIE, George, "Are Long-Distance Users an Inconvenient Truth? Profiling U.S. Newspapers' Online Readership in the Dual-Geographic Market", *The International Journal on Media Management,* vol. 12, nº 2, 2010, pp. 93-112.

3. *Method*

3.1. *Samples*

Samples were collected from the webpage of the European edition of The Wall Street Journal (WSJ) in three different periods: 4-17 October 2010, 4-19 October 2011 and 7-21 October 2012. In total, the dataset used in the analysis comprised 2,312 news items collected from 45 screen captures, one on each day.

3.1. *Reasons for choosing WSJ*

1. *A large and global audience:* According to the Audit Bureau of Circulations[18], the Wall Street Journal had a total average circulation on 30 September 2012 of 2,293,798 readers. This represented a 9.4% increase over the same period of the previous year[19]. To this number of readers, we must add almost 800,000 subscribers to the online version. According to the data of the WSJ.com Audience Profile[20], the website has 13,971,000 unique visitors who spend 10.3 minutes on the Web (Table I, Appendix). There are several reasons that explain why there is such a large newspaper audience. The online version of the Wall Street Journal has great potential on a global scale. Newspapers audiences depend mainly on the nature of the newspaper and on the characteristics of the audience: "The long distance information market, the target audiences may include businessmen needing first-hand information from another country, or travellers who are seeking news of native lands"[21].

2. *A stable online strategy*: The second reason for choosing WSJ is its stable online strategy. According to Neil Budde, founder of WSJ.com, they started planning in 1993 and assumed that they had to deliver value to customers or they would not survive[22]. They also assumed that people would pay for quality, depth and breadth of information, and for the product that met their needs. According to Mensing, "the success of the Wall Street Journal online has been attributed to its proven brand name in a specific niche market of business news, a situation that differentiates it from most general-interest newspapers"[23].
The WSJ.com project was the result of a major investigation, from the prototype development of the interface to audience research. Although it began in 1993, the launch took place in July 1995 and the first paywalls on WSJ.com. were established in 1996. In less than thirty days, more than 30,000 users signed up[24]. The launch was a revolution in counting and distributing news online. While many national and

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[18] Cfr. *Top 25 U.S. Newspapers for September 2012,* in Alliance for Audited Media: http://www.auditedmedia.com/news/research-and-data/top-25-us-newspapers-for-september-2012.aspx [Last accessed 19 September 2013].

[19] Cfr. *Top 25 U.S. Newspapers for September 2011,* in Alliance for Audited Media: http://www.auditedmedia.com/news/research-and-data/top-25-us-newspapers-for-september-2011.aspx [Last accessed 19 September 2013].

[20] DOW JONES, *WSJ.com Audience Profile*: http://www.wsjmediakit.com/downloads/WSJcom_Audience_Profile.pdf?130408041054 [Last accessed 19 September 2013].

[21] CHYI, Hsiang Iris & SYLVIE, George, "Competing With Whom? Where? And How? A Structural Analysis of the Electronic Newspaper Market", *Journal of Media Economics,* vol. 11, nº 2, 1998, p. 1.

[22] STEINBOCK, Dan, *op. cit.*

[23] MENSING, Donica, *op. cit.*

[24] Cfr. STEINBOCK, Dan, *op. cit.*

international online newspapers reproduce their paper contents online or confine their contents exclusively to subscribers, WSJ.com worked towards a development that was in harmony with the environment, its audiences and its content. From the beginning, WSJ.com was adamant about its need to differentiate the digital product from the product on paper; it also wanted its readers to pay only for what they considered to be valuable and relevant information. Although the distribution channel for the journal had changed, it still had a value in itself due to the consolidation of the Wall Street Journal brand.

Today, approximately 800,000 users pay between €19 and €238 to gain access to WSJ.com news. In 2012, digital subscribers increased by 32.4% over the number in the same period of the previous year[25] (Table II, Appendix).

All the sample items for our study were subject to content analysis[26] with regard to the following eight variables: number of items, date, time of day, section on the web homepage, topic, title, free or paid news, and territorial scope of the news items (Table 1). Cover section, topic, charge, and territorial scope were the most singular elements to be developed in the analysis. The variable *section* was divided into nineteen categories following the names of each of the sections. The variable *topic* consisted of seventeen categories, which refer to the main issues on the news.

**Table 1. List of variables and categories applied**

| No. item | Date ddmmyyyy | Time of Day hhmm | Cover sections | Topic | Charge | Territorial Scope |
|---|---|---|---|---|---|---|
| | | | 1.  What's News | 1.  Politics/Elections/Terrorism | 1.  Free | 1.  US |
| | | | 2.  Markets | 2.  Life & style/Art/Culture | 2. Paid | 2.  EU |
| | | | 3.  World | 3.  Sports | | 3.  UK |
| | | | 4.  UK | 4.  Deals/Mergers/Acquisitions | | 4.  Japan |
| | | | 5.  Tech. | 5.  Stocks/Finances | | 5.  China |
| | | | 6.  Business | 6.  Specific Markets | | 6.  Latin America |
| | | | 7.  Opinion | 7.  Personal Tech | | 7.  No mention |
| | | | 8. Life & Style | 8.  e-Business | | 8.  Middle East |
| | | | 9.  Sports | 9.  European and Asian firms | | 9.  Asia |
| | | | 10.  Politics | 10. Earnings/Profits/Losses | | 10.  Africa |
| | | | 11.Main News | 11. Economy | | 11. Other |
| | | | 12. Art & Culture | 12. Health/Auto/Media Companies. | | |
| | | | 13.  Asia | 13. Law | | |
| | | | 14.  Autos | 14. Central Banks | | |
| | | | 15.  Editor's Pick | 15. Trial/Managers | | |
| | | | 16.  Europe | 16. Other | | |
| | | | 17.  US | 17. Homes | | |
| | | | 18.  Health | | | |
| | | | 19. Other | | | |

The topic *section* was constructed from a pre-test. Even though some of the topics may seem very different (i.e. Health, Auto, Media Co.) a similar behavioural pattern was used as a basis for the organization of all of them.

### 3.2. *Data analysis*

In order to become acquainted with the evolution of the payment or cost-free status of the content, several contingency tables were produced by combining the main variables for each year. A non-parametric test (Mann–Whitney) was carried out with the aim of

establishing whether or not the WSJ.com modified its criterion for each one of the three variables throughout the three years analysed. The researchers questioned the influence of any of the three independent variables on the business strategy of WSJ.com: *section*, *topic* and *territorial scope*. A first analysis was carried out in order to determine whether or not the behavioural pattern for each of the three variables had changed over time.

In the case of variable *section*, the application of a non-parametric test (Mann–Whitney) shows that there was a change in the pattern of behaviour in 2011 compared to that of 2010 (bilateral asymptotical significance = 0.000); it also shows that the pattern remained constant in 2012 (= 0.765), as shown in Figure 1.

**Figure 1. Contrast statistics (Mann–Whitney test); value: bilateral asymptotical significance; variable: section**
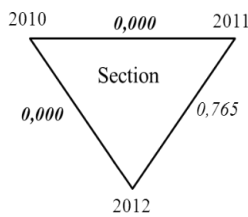


The analysis of any influence that *topic* may have on the payment or free status of a news item also allows for the evolution of the behavioural pattern in WSJ.com throughout the three years analysed. The non-parametric test shows that such a pattern changed in 2011 compared to that for 2010 (= 0.005) and that it also changed in 2012 in comparison to that for 2011 (= 0.000), as shown in Figure 2.

**Figure 2. Contrast statistics (Mann–Whitney test); value: bilateral asymptotical significance; variable: topic**
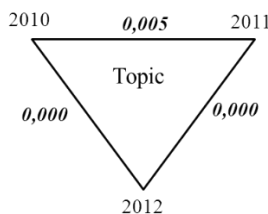


Regarding the variable *territorial scope*, the non-parametric test confirms that WSJ.com did not modify its charging policy in 2011 (= 0.257), but did so in 2012 (= 0.000).

**Figure 3: Contrast statistics (Mann–Whitney test); value: bilateral asymptotical significance; variable: territorial scope**
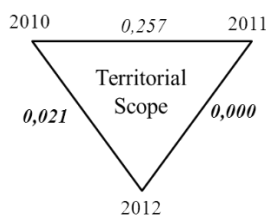


Finally, and with the aim of checking the validity of the model in which the three variables predict the payment or cost-free status of information, a binary regression test was conducted. This type of multivariate analysis allows for the prediction or evaluation

of the relationship between the dichotomous depending variable (payment or no payment) and another or other independent and control variables. We analysed the likelihood that any news item would be paid for (Y = 1) by considering it as a function of the three independent variables (X1: section; X2: topic; X3: territorial scope).

The general equation (logistic function) applied to each of the three years analysed (2010, 2011, 2012) is the following:

$$P(Y=1) = \frac{1}{1 + \exp(-\beta_o - \beta_1 \cdot X_1 - \beta_2 \cdot X_2 \cdot -\beta_3 \cdot X_3)}$$

## 4. *Results*

### 4.1. *General Results*

Firstly, data show (Figure 4) that over the three periods analysed the strategy of WSJ.com has become more restrictive and an increasing amount of news has been exclusively limited to subscribers of the online edition. If in 2010 free information abounded on the cover of WSJ.com (73.8% of the total), this percentage had fallen to 43.7% in 2012; in other words, most of the information (56.3%) was paid for by 2012.

**Figure 4: Evolution of paid news vs free news at WSJ.com. 2010-2012**
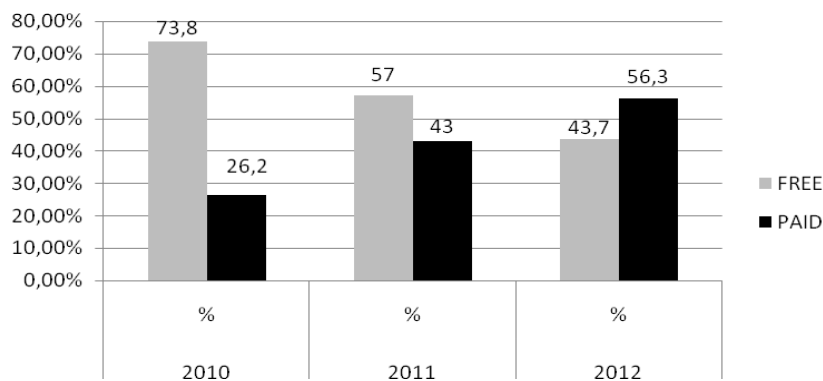


For this reason, we can say that the online strategy has been evolving over the last three years. What was at first a flexible strategy about paywalls, given that most of the news items were free of charge, changed over the years with paywalls becoming more frequent, at least on the newspaper's homepage.

In 2010 (Table III, Appendix) more than 50% of the news from the Business and Opinion sections was paid news. One year later, five additional sections (What's News, UK, Technology, US, Health) had 50% of paid news too. Finally, we found that in 2012 a total of nine sections on the homepage had most of their contents behind a paywall (What's News, World, UK, Technology, Business, Opinion, Politics, US, Health).

This increase in the amount of paid news is also shown very clearly in the analysis of topics. In 2010 (Table IV, Appendix) most paid news was related to issues such as deals, mergers and acquisitions (83.9%), earnings in companies (65.6%), and health, media and auto companies (54.5%), followed by topics like specific markets (40%), central banks and monetary policy (46.7%) and news about trials and managers (41.7%). H1 suggests that *topic* positively predicts paywall, and the data show that there

has been an increase in the number of topics behind the paywall. In 2011 there were eight topics in which half of the news were behind a paywall as follows: deals, mergers and acquisitions; earnings,; health, media and auto companies; news related to specific markets; personal technology; European and Asian firms; central banks and monetary policy; and trials and managers. This growth was more noticeable in 2012 when 12 of the 17 topics analysed were paid news; thus, the majority of them were paid news.

Among the topics that were mostly free of charge we find life & style, art and culture, as well as issues related to sports and homes. Even in the case of issues considered to be not so specific (i.e. politics, elections and terrorism; stocks; economy) almost 50% of the news items were paid news[27].

Finally, the analysis carried out with reference to *territorial scope* (Table V, Appendix) also revealed an increase in the amount of paid news, especially since 2012. The behavioural pattern, however, differs somewhat from the variables *section* and *topic*, since none of the geographical references in 2010 showed that there was a majority of paid news. A year later, we find that there is a slight increase in paid news regarding the information focused on the USA (55.5%), UK (58.5%) and Japan (50%). However, it is not until the following year that we find almost all of the territorial areas providing their information behind a paywall.

## 4.2. *Hypotheses Validity*

The previous data allow us to establish that the number of paid news items included on the cover of WSJ.com has increased over the three years analysed. This increase has neither been linear nor has it influenced all the news items, sections or informative topics of the newspaper in the same way. By taking the data for the three years and through the use of logistic regression techniques we can establish which sections, topics or territorial areas are more likely to include paid news. The purpose of using this technique was to state the likelihood of a piece of news being paid for as a function of the three variables deemed relevant or influential (the closer to 0 the value Sig. is, the more likely a variable is to be paid for).

The data for 2010 show that the status of a news item as paid for or free of charge explains between 39.3% (Cox and Snell's R square) and 57.5% (Nagelkerke's R square) of the model established with the three variables, which is considered an acceptable percentage as regards the model's accuracy. By looking at the data, we can perceive that the specific sections, topics or territorial scope explains that a piece of news has been paid for (Table 2).

**Table 2. Sections, topics and territorial scope with a positive influence on likelihood of payment (2010)**

| TOPIC | B | E.T. | Wald | gl | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| Deals/M&A | 3.216 | 0.825 | 15.187 | 1.000 | *0.000* | 24.934 |
| Earnings, Profits and Losses | 2.242 | 0.755 | 8.810 | 1.000 | *0.003* | 9.408 |
| Health/Auto/Media Companies | 1.953 | 0.718 | 7.394 | 1.000 | *0.007* | 7.048 |
| Trials and Managers | 1.419 | 0.728 | 3.801 | 1.000 | *0.051* | 4.131 |

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[27] Politics was especially relevant during the 2012 data collection when the US presidential campaign was taking place. Most of the news items published on the homepage of WSJ.com were behind the paywall. In total, the percentage of paid news related to politics, elections or terrorism was 60.4% in 2012.

It can be observed that in 2010 neither the variable *section* nor *territorial scope* predicted if a news item was being paid for or not. But as regards the variable *topic*, four topics had a strong influence on the likelihood of a piece of news being paid news: deal, mergers and acquisitions (Sig. = 0.000); earnings, profits and losses (0.003); health, auto and media companies (0.007); and trials & managers (0.051). The fact that a news item could be related to any of these topics made its likelihood of being paid for much greater than if it had been related to any other informative area.

 In 2011 we find that the established model accuracy is more moderate, since it explains the likelihood of a news item being paid for or not by between 34.9% (Cox and Snell's R square) and 46.9% (Nagelkerke's R square). The analysis of the influence of each variable shows a significant change within the paid news pattern. We can see (Table 3) that in 2011 there were six sections that had a great influence on a news item being or not being paid for: UK (Sig. = 0.000), Business (0.000), USA (0.000), What´s News (0.001), Opinion (0.001) and Technology (0.018).  If we are to associate payment with exclusive and dissimilar topics, then these items would have been the newspaper sections that included information with the greatest quality in 2011.

As regards topics, no substantial changes can be observed in 2011 in relation to the topics that were more likely to be paid for in 2010: earnings, profits and losses (0.007); deal, mergers and acquisitions (0.012); health, auto and media news companies (0.012); and, trials and managers (0.013).

We will finish by saying that variable *territorial scope* had hardly any influence on whether a piece of news was paid for in 2011, except for those news items located in the USA (0.018), which did indeed have a strong likelihood of being charged at that time.

**Table 3. Sections, topics and territorial scope with a positive influence on likelihood of payment (2011)**

| SECTION | B | E.T. | Wald | Gl | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| UK | 4.441 | 1.170 | 14.407 | 1.000 | *0.000* | 84.849 |
| Business | 2.056 | 0.554 | 13.763 | 1.000 | *0.000* | 7.814 |
| US | 2.088 | 0.534 | 15.277 | 1.000 | *0.000* | 8.071 |
| What's News | 1.553 | 0.449 | 11.948 | 1.000 | *0.001* | 4.725 |
| Opinion | 1.864 | 0.554 | 11.326 | 1.000 | *0.001* | 6.451 |
| Technology | 1.358 | 0.575 | 5.584 | 1.000 | *0.018* | 3.889 |
| **TOPIC** | **B** | **E.T.** | **Wald** | **Gl** | **Sig.** | **Exp(B)** |
| Earnings, Profits and losses | 2.476 | 0.920 | 7.241 | 1.000 | *0.007* | 11.898 |
| Dealings/M&A | 2.197 | 0.872 | 6.341 | 1.000 | *0.012* | 8.997 |
| Health, Auto and Media | 2.270 | 0.898 | 6.386 | 1.000 | *0.012* | 9.677 |
| Trials and Managers | 2.117 | 0.851 | 6.184 | 1.000 | *0.013* | 8.307 |
| **GEOGRAPHICAL SCOPE** | **B** | **E.T.** | **Wald** | **Gl** | **Sig.** | **Exp(B)** |
| USA | 1.454 | 0.613 | 5.620 | 1.000 | *0.018* | 4.280 |

Finally, data in 2012 (Table 4) show that the accuracy of the predictive model put forward is very low, with values between 23.1% (Cox and Snell's R square) and 30.95% (Nagelkerke's R square). Regression analysis for each variable shows that the most likely sections to contain paid news were: What's News (0.001), UK (0.002), Business (0.003), Opinion (0.005), USA (0.015) and World (0.029).

As regards *topics*, just as happened both in 2010 and 2011, news items focusing on earnings, profits and losses, and deals, mergers and acquisitions continued to be the more likely ones to be paid for.  We find, on the other hand, that information related to

Asian or European Business was also very likely to be paid for. On the other hand, the results for whether news centred on trials and managers and health, auto and media were behind a paywall ceased to be conclusive.

Lastly, as regards variable *territorial scope*, the data reveal that this variable does not have any significant relevance to whether a news item is paid for or not, just as happened in 2010.

**Table 4. Sections, topics and territorial scope with a positive influence on likelihood of payment (2012)**

| SECTION | B | E.T. | Wald | gl | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| What's News | 1.173 | 0.367 | 10.215 | 1.000 | *0.001* | 3.233 |
| UK | 2.669 | 0.883 | 9.132 | 1.000 | *0.003* | 14.431 |
| Business | 1.500 | 0.497 | 9.099 | 1.000 | *0.003* | 4.483 |
| Opinion | 1.368 | 0.486 | 7.921 | 1.000 | *0.005* | 3.928 |
| USA | 1.137 | 0.469 | 5.881 | 1.000 | *0.015* | 3.118 |
| World | 0.963 | 0.441 | 4.770 | 1.000 | *0.029* | 2.619 |
| **TOPIC** | **B** | **E.T.** | **Wald** | **gl** | **Sig.** | **Exp(B)** |
| Earnings, Profits and Losses | 2.031 | 0.768 | 7.001 | 1.000 | *0.008* | 7.621 |
| Business Asia or Europe | 1.805 | 0.747 | 5.841 | 1.000 | *0.016* | 6.079 |
| Deals, M&A | 1.839 | 0.794 | 5.362 | 1.000 | *0.021* | 6.290 |

By considering all these data it is possible to establish that the influence of the three variables analysed on the basis of the likelihood of a piece of information being or not being paid for was different for each of the three years studied. The degree of fulfilment of the three hypotheses in the present investigation has thus been ascertained as follows (Table 5):

**Table 5. Summary of findings for the three hypotheses**

| | 2010 | 2011 | 2012 |
|---|---|---|---|
| $H_1$ Section positively predicts paywall | Rejected | Accepted | Accepted |
| $H_2$ Topic positively predicts paywall | Accepted | Accepted | Accepted |
| $H_3$ Territorial scope positively predicts paywall | Rejected | Accepted | Rejected |

5. *Conclusions, shortcomings and further research*

The present research shows that The Wall Street Journal digital strategy has been evolving over the last three years from a more flexible paywall model, in which most of the contents offered on the newspaper's homepage were free (73.8%), to a more restrictive one in which more than half of the news published on the homepage was paid for. The research that the authors of this article are currently carrying out regarding 2013 will help to confirm whether or not this tendency towards more restricted access becomes established.

The research shows that over the three years analysed, the increase in the number of news items on the WSJ.com homepage that are behind the paywall has neither been linear nor has it affected all the paper's news items, sections or informative topics in the same way. In the evolution towards a payment model there may have been elements that

have had some influence on whether or not a piece of information should be paid for or be free of charge. It can be stated that contents focusing on topics such as deals, mergers and acquisitions; the earnings, profits and losses of companies; trials and managers; and content about health, media and auto companies are more likely to have been behind a paywall than other contents that deal with more general issues. The data helped confirm the hypothesis that charging for news is closely linked to dissimilar and specialized contents that, apart from having a high added value, cannot be easily imitated by the competition, as in the case of the examples already mentioned. On the other hand, contents dealing with less specific issues such as sport, life & style, politics, economics and markets –all of them considered in broad terms– are usually free of charge. It is thus possible to establish that the nature of topics can indeed positively predict whether a piece of news is being paid for or it is free ($H_2$).

The same can be said regarding variable *section* ($H_1$), although in this case the statement that it positively predicts paywall is only partially true. The data show that there has been some development in this sense from 2011. However, during the first year analysed, the particular part of the newspaper where a piece of news was included did not have any influence on its being paid for or not. However, over the following two years, *section* had a significant influence on whether a news item was paid for or free of charge. Out of the 18 sections analysed, there were five which showed an important positive relationship with paid contents: UK, USA, Business, What's News and Opinion. Both in 2011 and 2012, there was a greater probability that a piece of news included in any of these five sections was paid for.

What are the common features of those five sections that make them different from the rest? On the one hand, they rely upon a high degree of specialization and have their own particular content that makes them different from the contents of competing media. This is especially true of the sections: What's News, Business and Opinion. In What's News we found a summary of what the newspaper's editors considered the most outstanding news items, the must-read for all decision-makers and businessmen. Business is the section that includes news items related to the most distinctive and exclusive topics in the newspaper –deals, mergers and acquisitions and earnings, profits and losses. Finally, the contents of the Opinion section are also exclusive to the WSJ.com and not repeatable elsewhere; hence, it will be hard to find them in competing media.

With respect to the contents included in the USA and UK sections, we must bear in mind that the edition we analysed was the European one, not the American, and therefore it is mainly aimed at the European public investor or decision-maker, usually concentrated in the London area. The data show that both in 2011 and 2012 the content included under the UK section was the most likely content to be paid for. In 2011, for instance, a piece of information included in that section had 10 times more probability of being behind the paywall than a piece of news included in the USA section. We could contemplate whether or not this behavioural pattern would be the same in other editions, such as the American one. To this effect, some informal testing was performed after the data collection period, showing that the behavioural pattern is different in the American edition. Comparing behaviour in both editions would be an interesting field for further research. Finally, the variable *territorial scope* does not positively predict paywall and it is irrelevant regarding payment or no payment for contents, other than the information focusing on the USA in 2011.

It is important to remark that a limitation of this study is that The Wall Street Journal is a very specialized medium per se –not just a newspaper with some specialists articles– and most of its content is related to business and finance. Political, economic and financial decision-makers can and will pay for information, so this is an elite sector. The

WSJ is perhaps the leading information brand in the world in the business and finance sector, so trends evident in this media may not apply to other media. Research has shown that paywalls might work for prestigious media in specific sectors such as finance, but will they work in the same way for a general news publication? It would be interesting to see the same analysis done on other less specialized media.

The present research has a few shortcomings, in so much as its objective is to analyse what happens over a period of time, not why something happens. It confines itself to the study of some of the external elements of a hypothetical internal strategy within WSJ.com.  Even if the tendencies are solid enough to allow us to think that they do not come about by chance, it is also true that the data provided may not be enough to decide whether or not the newspaper editors deliberately followed that strategy or if it simply happened fortuitously. In order to answer these questions it would be necessary for the people in charge of the online edition to be interviewed in-depth. Then, it would be possible to establish if charging for certain news content was a response to market research and the analysis of the use and consumption of news by newspaper readers, and so forth.

## *Appendix*

### Table I. Traffic of WSJ.com (2012)

| | |
|---|---|
| Unique Visitors (000) | 13,971 |
| Page Views (000) | 133,370 |
| Page Views per Person | 10 |
| Time per Person | 10.3 |

Source: WSJ: Audience Profile

### Table II. Average circulation of WSJ.com

| Year | Digital Subscribers | % Change | Total average circulation | % Change |
|---|---|---|---|---|
| 2009 | 407,002 | - | 2,024,269 | - |
| 2010 | 449,139 | 10% | 2,061,142 | 1.82% |
| 2011 | 537,469 | 19% | 2,096,169 | 1.67% |
| 2012 | 794,594 | 32.36% | 2,293,798 | 9.4% |
| | | | | |

Source: Audit Bureau of Circulations

**Table III. Paid news included in Section (2010-2012)**

| SECTION | 2010 | 2011 | 2012 |
|---|---|---|---|
| 1  What's News | 71 | 95 | 122 |
|  | 49.30% | 62.10% | 72.20% |
| 2  Markets | 30 | 20 | 18 |
|  | 46.20% | 44.40% | 40.00% |
| 3  World | 4 | 10 | 57 |
|  | 3.90% | 9.50% | 60.60% |
| 4  U.K. | 11 | 25 | 42 |
|  | 45.80% | 96.20% | 95.50% |
| 5  Tech | 12 | 31 | 40 |
|  | 21.80% | 56.40% | 66.70% |
| 6  Business | 25 | 37 | 36 |
|  | 59.50% | 75.50% | 78.30% |
| 7  Opinion | 25 | 18 | 26 |
|  | 73.50% | 51.40% | 61.90% |
| 8  Life & Style | 0 | 4 | 10 |
|  | 0.00% | 17.40% | 23.80% |
| 9  Sports | 0 | 0 | 0 |
|  | 0.00% | 0.00% | 0.00% |
| 10  Politics | 0 | 0 | 13 |
|  | 0.00% | 0.00% | 56.50% |
| 11  Main News | 2 | 13 | 27 |
|  | 3.30% | 31.70% | 45.00% |
| 12  Art & Culture | 0 | 1 | 0 |
|  | 0.00% | 11.10% | 0.00% |
| 15  Editor's Pick | 2 | 8 | 30 |
|  | 5.90% | 25.00% | 35.70% |
| 16  Europe | 0 | 2 | 5 |
|  | 0.00% | 6.10% | 35.70% |
| 17  US | 0 | 42 | 28 |
|  | 0.00% | 66.70% | 62.20% |
| 18  Health | 0 | 7 | 9 |
|  | 0.00% | 77.80% | 81.80% |

**Table IV. Evolution of paid news by topic (2010-2012)**

| TOPIC | 2010 | 2011 | 2012 |
|---|---|---|---|
| 1  Politics / Elections / Terrorism | 6 | 46 | 139 |
|  | 4.10% | 25.60% | 60.40% |
| 2  Life Style / Art / Culture | 1 | 19 | 22 |
|  | 1.30% | 19.00% | 20.40% |
| 3  Sports | 0 | 2 | 3 |
|  | 0.00% | 11.10% | 20.00% |
| 4  Dealings, M&A | 26 | 30 | 28 |
|  | 83.90% | 78.90% | 84.80% |
| 5  Stocks & general finances | 3 | 22 | 26 |
|  | 15.00% | 37.30% | 44.10% |
| 6  Specialized Markets | 24 | 26 | 36 |
|  | 40.00% | 54.20% | 63.20% |
| 7  Personal Technology | 6 | 18 | 11 |
|  | 20.00% | 56.30% | 68.80% |
| 8  Online Business | 2 | 5 | 26 |
|  | 16.70% | 41.70% | 70.30% |
| 9  Asia & Europa Business | 7 | 4 | 30 |
|  | 30.40% | 100.00% | 83.30% |
| 10  Profits & losses, Earnings | 21 | 23 | 30 |
|  | 65.60% | 82.10% | 85.70% |
| 11  General Economy | 23 | 29 | 37 |
|  | 26.40% | 46.80% | 50.00% |
| 12  Health / Auto / Media | 24 | 28 | 47 |
|  | 54.50% | 80.00% | 70.10% |
| 13  Law | 6 | 1 | 8 |
|  | 28.60% | 33.30% | 66.70% |
| 14  Central Banks & monetary policy | 7 | 19 | 12 |
|  | 46.70% | 61.30% | 48.00% |
| 15  Trials / Managers | 16 | 26 | 13 |
|  | 47.10% | 70.30% | 68.40% |
| 16  Others | 6 | 21 | 12 |
|  | 27.30% | 40.40% | 57.10% |
| 17  Housing | 4 | 3 | 7 |
|  | 20.00% | 25.00% | 33.30% |
| Total | 182 | 323 | 487 |
|  | 26.20% | 43% | 56.30% |

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**Table V. Evolution of paid news by geographical scope (2010-2012)**

| Geographical Scope | **2010** | **2011** | **2012** |
|---|---|---|---|
| 1  US | 73 | 156 | 159 |
|  | 29.80% | 55.50% | 52.00% |
| 2  EU countries | 38 | 44 | 78 |
|  | 33.00% | 31.20% | 43.80% |
| 3  United Kingdom | 19 | 30 | 70 |
|  | 27.50% | 58.80% | 86.40% |
| 4  Japan | 4 | 4 | 15 |
|  | 44.40% | 50.00% | 71.40% |
| 5  China | 4 | 10 | 16 |
|  | 14.30% | 41.70% | 50.00% |
| 6  LatAm | 3 | 0 | 7 |
|  | 13.00% | 0.00% | 58.30% |
| 8  None | 26 | 65 | 92 |
|  | 22.60% | 47.10% | 59.00% |
| 9  Middle East | 3 | 3 | 30 |
|  | 7.90% | 10.00% | 55.60% |
| 10  Asia | 8 | 6 | 5 |
|  | 32.00% | 26.10% | 100.00% |
| 11  Africa | 0 | 0 | 13 |
|  | 0.00% | 0.00% | 76.50% |
| 12  Others | 4 | 5 | 2 |
|  | 21.10% | 15.20% | 66.70% |
| Total | 182 | 323 | 487 |
|  | 26.20% | 43% | 56.30% |

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