Value creation and new intermediaries on Internet. An exploratory analysis of the online news industry and the web content aggregators

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**Abstract**

The traditional news industry is changing and transforming itself into a digital, online news industry. This paper analyzes this phenomenon from the value chain and value creation perspectives and explores the creation of value by new intermediaries. An exploratory study has been conducted based on strategic informants, web content analysis of 56 companies’ websites and 5 received questionnaires (of 24 web content aggregators contacted). Companies from USA, Canada, Spain, France, Germany, UK, and Switzerland have been analyzed. The information gathered provided a knowledge base to describe the value chain of the industry, the main players of the sector, and its roles in the value chain activities. Furthermore, we could identify the Web Content Aggregators (WCAs) as new players that provide third part content to other companies, institutions and end-users. They concentrate mainly in the content packaging and the distribution stages of the value chain, and aggregate the supply and demand in the industry, collect, organize, and evaluate dispersed information, and they also provide infrastructure to other industry players. The Amit and Zott (2001) four drivers (efficiency, complementarities, lock-in, and novelty) of value creation model has been applied specifically to them. Limitations, managerial implications and preliminary conclusions are proposed.
KEYWORDS: value chain, value creation, online news industry, content syndication, web content aggregators.

1. INTRODUCTION

The advent of the digitalization of pure information products has created new opportunities and changes in the information goods markets. The increasing acceptance and usage of Internet and the decrease of the access’ costs, provide a new broad scope of economic activities and business models. These business models are based on the production, distribution, and sale of information goods (Clemons, Gu & Lang, 2002; Clemons & Lang, 2003), and they have been developed either by traditional incumbents or by new players such as Internet intermediaries.

Nowadays, in the news industry, writers and journalists can distribute their contents directly to the end user. Moreover, new intermediaries, named infomediaries have emerged providing informational services to their customers (Grover & Teng, 2001; Kalakota & Robinson, 1999; Sawhney, Prandelli & Verona, 2003). These infomediaries provide customized aggregated news web content to the market and add value by essentially being cheaper, quicker, more specialized, easier to manage, and with a broader supply than the traditional businesses. As a result, the traditional news industry is changing, and it is becoming digital and online. Despite the fact of the importance of these changes for the news and other industries, there is little research about this phenomenon from a value chain or value creation perspective.

This paper focuses on the three major changes that are occurring in the news industry: the activities of the value chain of the industry that are being modified and integrated, the emergence of new players with internet-based business models, and the new innovative ways of value creation developed by the Web Content Aggregators
(WCAs). To do this, a research model, based on the value creation by e-businesses (Amit & Zott, 2001) and on the previous research on new Internet based intermediaries, is proposed.

2. LITERATURE REVIEW

2.1. Virtual Value Chain and Value creation on Internet

The impact of the Internet on businesses can be studied from both the industry and the firm’s perspective. From an industry perspective, the Internet has positive and negative effects on suppliers and clients (Benjamin & Wigand, 1995). The positive effects for suppliers are mainly a reduction of the distance between client and supplier and an increase in the suppliers’ change costs. On the other hand, a negative effect is that the Internet normally reduces the suppliers’ profit margin. For clients, Internet enhances their access to catalogues of products from multiple suppliers, online order processing, and in many cases discounted prices such as the airline industry (Buhalis, 2004).

The impact of Internet at the firm level has been analyzed using the value chain framework (Porter, 1987), in a number of papers including Koh and Nam (2005), Porter (2001), and Rayport and Sviokla (1995), among others. And the value creation on Internet (e-business) has been studied mainly by Amit and Zott (2001). As the Porter’s initial value chain was found more suitable for the analysis of production and manufacturing firms than services firms (Stabell & Fjeldstad, 1998), a virtual value chain was proposed (Rayport & Sviokla, 1995). This is based in gathering, organizing, selecting, synthesizing, and distributing information.

Regarding the general impacts of Internet on the value chain, in the infrastructure activities, Internet enhances the use of real time information for making decisions. In this sense, Internet permits the fragmentation of business processes. This
allows companies to offer only a few products and/or services, and to concentrate on some essential competences. With this, they can implement cooperation strategies with other businesses to develop those secondary activities. Moreover, Internet permits businesses to develop new or complementary business models. These models are based on the creation of value throughout the information use (Rayport & Sviokla, 1995). Given this, businesses can create value by substituting the activities of the real value chain with activities of the virtual value chain; the latter being the most efficient and flexible of the two.

Moreover, Amit and Zott (2001, pp. 503-508) studied the value creation in e-business and identified four main drivers for it: efficiency, complementarities, lock-in, and novelty. Efficiency refers to the fact that transaction efficiency increases when the costs per transaction decrease. The greater the transaction efficiency gains that are enable to a particular e-business, the lower the costs and hence the more valuable it will be. Complementarities is related to the fact that having a bundle of goods together provides more value than the total value of having each of the goods separately. Lock-in refers to the engagement of the customers and partners with the company and prevents the migration of them to competitors. This creates value mainly by customers repeating transactions (increase of transactions volume) and partners maintaining their associations (lower opportunity costs). Novelty is related to the innovations of e-businesses in the structure of transactions. This model based on four drivers to explain value creation model will be used later applied to the web content aggregators activities.

2.2. Internet based Business Models: New Intermediaries

Internet creates new industries, reconfigures others, and has a direct impact on companies, customers, suppliers, distributors, and potential new entrants (Porter, 2001). Internet also offers intermediation opportunities for new players that connect buyers and
suppliers and enable price searches (Bakos, 1997). For example, Google offers a news service to their users putting together sources such as Reuters, Bloomberg or Washington Times. These new types of intermediaries are named cybermediaries. They are associated with new business opportunities related with the development of various intermediation functions on Internet. And they provide a range of services such as fixing prices, transaction processing and coordination, stocks management, quality guarantees, and monitoring (Spulber, 1996). This has been described as an intermediation / disintermediation / reintermediation cycle (Chircu & Kauffman, 1999).

The functions of these intermediaries have been amply studied in the literature (Grover & Teng, 2001; Sarkar, Butler & Steinfield, 1998). The main six functions identified are the following: to aggregate supply and demand, to collect, organize and evaluate dispersed information, to facilitate market processes, to provide the infrastructure, to provide trust, and to act as intermediaries, integrating the needs of buyers and sellers.

According with the roles or functions described above, different kinds of intermediaries can be found (Rappa, 2004a, 2004b): marketplace exchange, buy/sell fulfillment, demand collection system, auction broker, transaction broker distributor, search agent, virtual marketplace, and infomediaries like advertising networks, audience measurement services, incentive marketing, metamediaries, web aggregators and syndicators.

2.3. Web content aggregators

In the news industries, digital products are provided and Internet can be used for approaching the different agents involved in the different activities of the value chain: design, development, production, and distribution (Clemons & Lang, 2003). Nevertheless, the potentially direct contact between suppliers and customers creates the
problem of information overload with a subsequent increase in information costs for the suppliers as well as the customers. Moreover, it is difficult, in some cases, to determine the supply and demand of a product or service in the context of the increasingly globalized markets. Therefore, the value chain is becoming more complex and fragmented, and the players involved may need new intermediaries to integrate the various supply possibilities. As a consequence, new opportunities for uniquely positioned problem solvers, as new intermediaries, are created (Anderson & Anderson, 2002).

Intermediary web sites of the mentioned industries are primarily concerned with providing information. They use content provision and online community development to ease transactions and complement the direct e-commerce company’s channels (Grover & Teng, 2001; Hagel III & Singer, 1999). In contrast to direct transactions, these intermediaries help companies to reach a wider base of customers. In addition, customers use infomediaries with a great level of trust, because of their perceived neutrality (Sawhney et al., 2003). These intermediaries may create value by aggregating (bundling) products and services that traditionally were offered by separate industries (Bakos, 1998). Accordingly, a web aggregator is an entity that can transparently collect and analyze information from multiple web data sources (Madnick & Siegel, 2002, p. 36). Consequently, they combine content and applications from multiple online cooperating or non-cooperating sources (Madnick & Siegel, 2002) and generally without prior agreements. The main difference between content aggregators and syndicators is the establishment of costly agreements with each data source. Syndicators establish legal agreements with data sources, so the integration of new data sources in their databases is less rapidly and more costly than an aggregator. On the other hand, the “aggregators” chiefly provide technology and a service platform.
This paper focuses on WCAs that act as infomediaries in the news online industry (see Figure 1). In the context of the previous literature review, the following research questions were proposed to explore:

? RQ1: *How many activities can be identified in the value chain in a particular online based industry? Can an integration of activities be explained because of its online character?*

? RQ2: *Who are the main players in this industry? And which new business models are these players developing?*

? RQ3: *How do the WCAs, as new intermediaries, create value, in the sense of the Amit and Zott’s (2001) model?*

TAKE ON FIGURE 1

3. RESEARCH METHODOLOGY

To avoid industry related specific changes in the empirical study and to study a naturally online-based industry, the online news industry was selected. This is an increasingly important industry. According to *OutSell 60 Company Monitor’s* report, which analyses the financial situation of the information industry, the sector has revenues of more than $150 billion and includes multinationals such as *Thompson, Pearson, Reuters*, among others (Outsell Inc, 2003).

Empirical data were collected from secondary and primary sources in the online news industry. The three following stages were followed: First, we collected secondary data about the industry. Second, we analysed, by doing a Web content analysis, the main WCAs in this industry. Lastly, we conducted in-depth interviews to some managers of WCAs.

In the first stage, we mainly used business databases such as *ABI/INFORM* and well-known search engines, like *Google* and *Yahoo*. As main keywords, “news
industry” and “news aggregators”, among others, were used. The information gathered provided a knowledge base to describe the value chain of this industry, the main players of the sector, and its roles in the value chain activities.

In the second stage, industry related professional sources such as Econtent or Online journals, among others, were used to identify the main players’ websites. Then, a web content analysis was conducted. We defined a coded list of features, after visiting their websites, and looked for the presence of these features in all the cases involved in the research. This methodology is being increasingly used as a research technique for many researchers. Liu, Arnett, Capella and Beatty (1997) applied this to Fortune 500 companies websites, Costello and Tuchen (1998) to Australian insurance companies websites, Huizingh (2000) to analyze US and Dutch websites, and Coyle and Thorson (2001) to research the interactivity and web marketing features. Finally, Singh, Xhao and Hu (2003) applied it to analyze cultural adaptation on the Web, studying American and Chinese websites.

The main features analysed were: 1) interactivity with the reader; 2) information format; 3) revenue streams (Gallaugher, Auger & Barnir, 2001), 4) innovation (Byrne, 2003), and 5) Other distribution channels (PDA or mobile phone service). Although each of the analyzed cases is not explained in detail in the paper, examples from the exploration of the websites are used to illustrate the concepts that emerged.

In the third stage, the inductive case study method (Eisenhardt, 1989) was chosen as a primary technique for the research design. In a case study, the aim is to investigate a phenomenon in its real-life context, where boundaries between the phenomenon and its context are not evident and multiple sources of evidence are used (Yin, 1989, p. 23). As Amit and Zott (2001), we did a case-study analysis of a reality that is still changing. Information was collected directly from the companies using face-
to-face and email questionnaire based interviews. The questionnaire had a formal question outline, regarding aspects such as company (history, founder, finance support, and turnover), alliances, content suppliers or web content aggregatees (Madnick & Siegel, 2002) (establishing legal agreements or not), clients, services offered, and revenue streams. Information about a total of five cases was collected from interviews to the company managers. Five questionnaires were received (of 24 web content aggregators contacted). Companies from USA, Canada, Spain, France, Germany, UK, and Switzerland have been analyzed. The empirical research was conducted from January 1, 2003 to January 20, 2005. During this period the evolution of the industry and the creation or defunct of some WCAs were also analyzed.

4. FINDINGS AND DISCUSSION

In the analysis of the online news industry, the following aspects were studied: the news industry value chain, the main players and business models of this industry, and analysis of the value creation by WCAs.

4.1. News industry value chain

The traditional value chain of the news industry has different stages: creation (news stories), selection and certification (picking news and stories), production (printing), distribution (shipping to retailers/selling) and consumption (reading the paper) (Clemons & Lang, 2003; p. 275). According to the analysis done, nowadays news is a digital product, and incumbents, such as newspapers, magazines, among others, can redesign their processes using IT. With this, they can deliver the product directly to the readers. In addition, the role of companies is changing with Internet adoption, and these players are redefining the value chain. For example, traditional distributors normally are not present in the virtual value chain of the industry, and new distributors are emerging as infomediaries. These new players are web news
aggregators, blogs, and web news services, among others. Its function is mainly packaging and delivering content to the readers. Therefore, in the virtual value chain associated to this industry the following stages can be identified: content creation and production, content packaging, distribution, and consumption (Clemons & Lang, 2003; Werbach, 2000) (see Figure 2).

The main characteristics of these stages are summarized in Table 1.

### 4.2. Main Players in the Online News Industry

The industry players described above are developing different roles in the virtual value chain. We can observe an integration of the activities from the content creation and production to the distribution stage in one sole player. The business model of these companies is defined in more detail in Figure 3 and Table 2.

According to this study, the value chain in this industry is becoming a network of relations between companies, traditional and new players. Moreover, different revenue streams are needed for these firms to success (Pack, 2001). Table 2, and Figure 3 show the different players observed in the online news value chain: traditional, new media, alternative media, distribution intermediaries, and WCA’s.

### 4.3. Traditional Media

In the virtual value chain of this industry there are traditional firms engaged in one or more stages such as news agencies, newspapers publishers, magazines, and audiovisual media. These companies provide online news covering world, business, science, and the entertainment arena. In addition, they offer sports, finance, and
technology audio/video news. Therefore, they develop different activities from the content creation to the distribution stage (see Traditional Media, Table 2, and Figure 3).

In terms of efficiency, in the Internet as a distribution channel, the readers or users can access to news and more information such as archive and search facilities, related subjects, etc. These media capture a massive audience through their web pages, so they have advertising incomes and, in most of the cases, the content is free, with or without registration. Some of them are premium services, such as the newspaper El Pais or the Web-based publication Salon and they only offer free the headlines news. These companies also use the web for cross-selling activities, as they sell subscription services to the offline newspaper (i.e., USA Today costs 39% less online than in the traditional newsstand), to the online newspaper (PDF format), and to other products or services such as archive access, art, photos, merchandise, front pages, or reprints.

These web pages present different customization services like pop-up headlines, e-mail news, or desktop tickers. The users insert these services in their systems. In addition, a range of personalization services is provided, being the most common the personalized your weather option, or, for example, ABC.es that offer free email counts.

Finally, in innovation terms, these companies are delivering news through mobile devices, PDAs and cellular phones; and integrate news on individuals or corporative websites. The New York Times offers this service with two partners, Verizon Wireless and Sprint PCS, the user have to subscribe this service and pays a monthly subscription. Other companies charge a price per article or offer these services using AvantGo, one of the world’s leading mobile Internet service. These media groups also deliver headlines to websites, using the RSS or XML formats, this service usually requires a signed agreement and it is free of charge, for individual, non-commercial use
and incorporate news into their preferred newsreaders, bloglines, amphetadesk and weblogs among others.

**TAKE ON FIGURE 3**

### 4.4. New media

In this research, we define new media as companies that combines proprietary content with syndicated content. In the Internet there are new media companies such as Wired News, Techweb or CNET News.com that provide daily technology news, including enterprise, e-business, communications, media, and personal technology stories among others. These companies create and deliver their content and content from other companies such as Slate.com, *The New York Times*, CNN.com or BBC online. Using these media the users can access for free to a variety of content from different sources. Wired News site also uses the web for cross-selling activities related with the print Wired Magazine. These media also provide headlines to websites, using the RSS or XML technologies, and CNET News.com provides mobile services through the AvantGo system.

### 4.5. Alternative Media

Other alternative media groups such as the blogs or weblogs have appeared few years ago. A weblog is, literally, a "log" of the web - a diary-style site, in which the author (a "blogger") links to other web pages he or she finds interesting using entries posted in reverse chronological order. A weblog is similar to a diary or journal that is organized, managed and made available through a web site. Using a weblog, a person can post information to a web site on a regular basis and have their posts archived, searchable and categorized for easy reference. Content users and journalists use weblogs to post content, using, for example blogger.com, a tool for blogs creation acquired by Google in 2002. Normally this media do not have any revenue streams, but the most
popular are including advertising in their websites. Some companies have emerged (like Dicelared.com) that analyse the information posted in these blogs and provide market studies. These blogs foster the culture of freedom and democracy in the Internet. Some traditional media, as The Guardian, are using these facilities to implement a type of discussion board linked to their website (Welch, Jensen & Reeves, 2003).

4.6. Distribution Intermediaries

We have found a new kind of intermediaries in the online news industry that mainly focus their operations on the distribution stage: web-based news services, newsreaders, and digital delivery partners.

The web-based news services offer continuously updated news and headlines links to several news sources as Reuters, USA Today.com and BBC, among others. These services also provide customization services like email, messenger or mobile alerts. Some of these companies also distribute headlines to mobile devices and to users’ websites, for example, Allheadlinesnews.com. Another example is Yahoo’s website that includes links to other related news and the Story Tools where readers can add comments and rate the news. In this model, the revenues come from the exploitation of customised advertising.

The newsreaders, as other players in the industry, use RSS and XML delivering technology. With RSS and XML, the user can access to updated content directly from the computer without the need to connect to the media websites. For that purpose, the reader need to use an online (for example Bloglines.com or Newsgator) or desktop newsreader (Notess, 2002). Their functionalities are more or less the same, but in the first case, the user does not need to install any software. The desktop reader is quite similar to the e-mail software and using it the reader has the control of the subscription process (Lillkvist, 2004). Several free newsreaders like Amphetadesk or Feedreader can
be found in the Internet, and some others require a premium subscription (InfoSnorkel and Newsgator).

Recently, some new players like AvantGo and Newsstand, have appeared in the distribution stage. They are digital delivery partners. These companies provide new services to the users. AvantGo is a service that delivers mobile websites to customers’ PDAs and mobile phones. Companies such as CNET, Rolling Stone and The New York Times, are already using AvantGo’s technology to deliver content. Newsstand has moved the traditional newsagent’s business model to the Internet. Through Newsstand, readers can buy several newspapers in PDF format and read them on their computers or mobile devices.

4.7. Analysis of the value creation of Web content aggregators

Nowadays companies, institutions, public administrations are demanding aggregated content from several media sources. These companies need to supply updated content, financial and business information to key workers in their Intranets. They also need to provide dynamic content to their websites from traditional, new and alternative media trying to avoid the called Empty portal Syndrome (Miller, 2004). WCAs deliver aggregated content to these organizations and give the control to the subscriber. These firms combine content from several online or offline media with or without prior legal agreements with content creators. WCAs and syndicators that have agreements with content creators pay between the 60 and the 35 percent of the content price to the creators, though content creators tend to offer flat-fees to acces the whole content instead of pay-per-use. Sometimes these infomediaries offer free services to non-commercial users. They generate revenue through subscription-based services, advertising and licensing fees. A list of the WCAs researched is on Table 3.

TAKE ON TABLE 3
Regarding the value creation of web content aggregators the mentioned Amit and Zott’s (2001) criteria (efficiency, complementarities, lock-in, novelty) were applied.

4.7.1. Efficiency

WCAs can contribute to the creation of value by reducing the information searching costs and aggregating the demand. WCAs, as Internet intermediaries, create value reducing the associated information searching costs for news. Customers can access to news headlines, full-text articles, company data, market data and stock quotes, etc. from several content providers just dealing with the WCAs. A common WCA aggregates, categorizes, customises and distributes all this content to the customers. Therefore, WCAs reduce the cost of obtaining and processing existing information. The customer only have to deal with an intermediary to obtain all the content he needs, lowing down the number of interactions needed whether a WCA would not exist.

WCA’s also play a demand aggregation role, hence, contributing to the decrease of the transaction costs. Companies and organizations from many sectors buy content to them (see Table 4). Furthermore, customers can access to information from thousands of sources through the WCA website, or the WCA can integrate the content to their intranets, extranets, and corporate websites.

TAKE ON TABLE 4

4.7.2. Complementarities

WCAs can facilitate the creation of value by vertical and horizontal complementarities and integration. Nowadays, WCAs are offering a wide range of services, in vertical complementarities terms, like content syndication, consulting services, press-clipping, broadcast monitoring, content consulting, technology services or business intelligence solutions. In terms of horizontal complementarities in the online news industry, the WCAs can develop their activity with or without prior legal
agreements. In our research, we have mostly found aggregation with partners. In this case, the WCAs sign agreements with content aggregatees, for example Factiva. But other aggregators do not have this policy, for example, Moreover offer headlines updated every 15 minutes to the B2B market, linking to full-text articles on the source sites without any agreement. These WCAs collect links to digital content directly from the Internet and includes them on websites or intranets.

Our study suggests that WCAs also play an integrating role in the supply chain, because they connect different partners, like traditional media, new media, alternative media and others WCAs with customers (see Table 4).

4.7.3. Lock-in

The WCAs deliver personalized information to users through their web pages, e-mail and enterprise portals. This contributes to the customer loyalty and the increase of switching costs. These companies search daily in electronic media news items including key word previously chosen by customers. The infomediary sends, usually free to non-commercial users, a press dossier by email with headlines, source, and extract, including keywords. Therefore, these companies provide continually updated and personalised news headlines about any topic, to be automatically integrated into a website.

4.7.4. Novelty

In our empirical research, we have observed that these companies are continuously developing new services and looking for new partners. This contributes to the creation of value by innovations in the structure of transactions. Regarding the innovations in new services, these infomediaries offer innovative services, such as business intelligence services including competitive intelligence, strategic planning, new business development, researching new products, tracking mergers and
acquisitions, conducting sales and marketing activities, among others. For example, Factiva integrates news and business information into their daily workflow.

About the innovations related to strategic partners, in the US, alliances, mergers and acquisitions are occurring between different companies in complementary industries. The main incumbents in the business information sector have diversified their activities buying companies with experience in the online news industry. Some examples are MarketWatch (it has been acquired by Dow Jones in January 2005), which acquired Pinnacor in early 2004 (ScreamingMedia became Pinnacord in October 2002); Yellowbrix acquired iSyndicate.com in 1997. Moreover, in 2001 Thomson Corporation acquired NewsEdge (founded as Desktop Data in 1988) and subsequently integrated it with its subsidiary The Dialog Corporation to create Dialog NewsEdge.

4.8. Managerial implications

From our case analysis, we can conclude that in a context where the users are not still prepared to pay for information, a new situation is in prospect for WCAs. Currently they are centring on integrating content on corporate Internets and portals as firms are more willing to pay for digital content. They are also trying to exploit other models based on publicity. Lately, we observe that some of these WCAs focus on providing technology facilities and licenses to third parties. For example, iMente is licensing its search engine to third companies to use it for their intranet or website. Some others use its technology to make more efficient the paper press-clipping, which has traditionally been non-automatized and intensive in labour. A major maturity of the sector is observed, which is reflected on the numerous mergers and acquisitions that have taken place among the various firms, thereby leading to a greater concentration in the sector.

4.9. Limitations
As we have used a limited number of cases, a major number of them could improve the results of the paper. In addition, a long-term study could possibly determine which players are adapting better their strategies to the new situation. Furthermore, there is a problem related to the speed that the sector is evolving. Once a study is carried out, a new technology can appear that substantially modifies the landscape. Finally, another limitation is the terminological imprecision, due to the steadily appearance of new terms.

5. CONCLUSION

The online news industry has been affected by the Internet adoption modifying the value chain. The traditional media are adopting new roles and a re-intermediation phenomenon is observed. The industry value chain is becoming a network of relations between traditional and new players, from this and other different industries.

The empirical study results suggest that in this industry Internet can be used to integrate the different agents involved in the different activities of the value chain: content creation and production, content packaging, distribution, and consumption. So, an integration of activities can be explained because of the online character of the industry.

The main players in this online industry are the traditional media, the new media, the alternative media, the distribution intermediaries, and the web content aggregators. Related to their business model, it is possible to observe a reintermediation process in this value chain. New Internet intermediaries have appeared such as the distribution intermediaries and the WCAs, that provide third part content to other companies, institutions and end-users. These new players, as intermediaries, are developing different roles in the value chain stages, mainly in content packaging and the distribution stages. They aggregate the supply and demand in the industry, collect,
organize, and evaluate dispersed information, and they provide infrastructure to other industry players.

About the value creation, these new players add value by essentially being more convenient, specialized, and more efficient than the other media. The Amit and Zott (2001) four drivers (efficiency, complementarities, lock-in, and novelty) of value creation model has been applied specifically to the WCAs finding interesting strategies of value creation in this sector. About efficiency, WCAs create value reducing the associated information searching costs for news. In relation to complementarities, WCAs offer vertical and horizontal complementarities and play an integration role in the supply chain. Concerning lock-in, WCAs deliver personalized information to users through their web pages, e-mail and enterprise portals, and this contributes to the customer loyalty and the increase of switching costs. Finally, regarding novelty, WCAs contribute to the creation of value by innovations in the structure of transactions.

6. REFERENCES


Stages of the Value Chain | Main characteristics
--- | ---
Content creation and production | Freelance journalists sell articles or reports to newspapers, magazines, weeklies, news agencies or other communications media. These companies produce the content putting together text, image, etc. Other content creators are readers or journalist that are running personal websites, called blogs as web-based personal or topic-specific bulletin boards. In some cases, they have become opinion formers in Internet communities, generating a large volume of traffic. The majority of these suppliers did not consider selling their content until they received offers from third parties (Juhnke, 2003).

Content packaging | The packagers or aggregators, also called WCAs, provide creator’s content to the distributors or readers. There are various types of WCAs depending on the type of information syndicated (video, audio, MP3, articles, news items, headlines, etc.) and the origin of the information (from aggregators themselves, or from other sources). The content packaging process consists of four different stages: 1) obtaining the raw information from the creators, 2) classifying and indexing the content, 3) personalising the content according to distributor or customer specifications, and 4) transferring the content.

Distribution | The last stage in the virtual value chain is news distribution to the reader. Nowadays, different companies or individuals are developing this role in the virtual value chain such as incumbents (audiovisual firms, news agencies, newspapers, and magazines, among others), WCAs, web news services, business websites, and readers/freelancers through blogs.

Consumption | The end-users of content, those who use the information, are the readers. These might be firm employees, independent professionals or Internet users interested in the subject.

Table 1. Characteristics of the stages of the news industry value chain

<table>
<thead>
<tr>
<th>Model</th>
<th>Virtual value chain stages</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Model III</td>
<td>Alternative media</td>
<td>Content creation to distribution</td>
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<tr>
<td>Model IV</td>
<td>Distribution intermediaries</td>
<td>Distribution</td>
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<tr>
<td>Model V</td>
<td>Web content aggregators</td>
<td>Content packaging and distribution</td>
</tr>
</tbody>
</table>

Table 2: Main business models. Media and Internet intermediaries in the news online industry researched online (web content analysis applied to 56 websites)
<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Year Founded</th>
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<tbody>
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<td>MarketWatch, Inc.</td>
<td>US</td>
<td>1997</td>
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<td>Yellowbrix</td>
<td>US</td>
<td>1997</td>
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<td>Moreover</td>
<td>US</td>
<td>1998</td>
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<td>Context News</td>
<td>US</td>
<td>1981</td>
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<tr>
<td>Factiva</td>
<td>US</td>
<td>1999</td>
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<td>Hoover's Inc</td>
<td>US</td>
<td>1990</td>
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<td>Loudeye</td>
<td>US</td>
<td>1997</td>
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<td>Cyberalert</td>
<td>US</td>
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<td>2002</td>
</tr>
<tr>
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<td>UK</td>
<td>1999</td>
</tr>
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<td>Tanto</td>
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<td>1998/2002</td>
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<td>7am</td>
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<td>1989</td>
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<tr>
<td>iMente</td>
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<td>Iconoce</td>
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<td>Spypress</td>
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<td>OCS MEDIA</td>
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<td>Denodo</td>
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Table 3: Web content aggregators researched

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<thead>
<tr>
<th>WCAs´s Supply</th>
<th>WCAs´s Demand</th>
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</thead>
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<tr>
<td>Traditional media</td>
<td>Companies and institutions</td>
</tr>
<tr>
<td>New media</td>
<td>End-users</td>
</tr>
<tr>
<td>AOL journals, Business 2.0, Business Wire, CNET, RollingStone, Salon.com, Virgin.net.</td>
<td>City traders, investors, entrepreneurs, students or journalists, among others.</td>
</tr>
<tr>
<td>Alternative media</td>
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<tr>
<td>Blogger.com</td>
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<td>Others WCAs</td>
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<td>Comtex</td>
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</tbody>
</table>

Table 4. Supply and demand aggregation

![Figure 1. Research model](image-url)
Figure 2. Virtual value chain of the news industry

Figure 3. Main business models in the online news industry