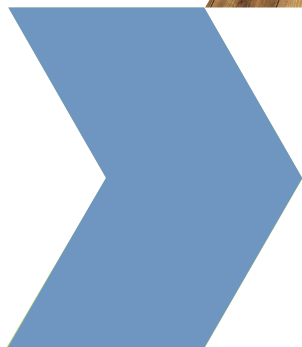


Case Study

Moving Towards a Data-Driven Business Model (DDBM) in the Online Newspaper Publishing Industry

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Moving Towards a Data-Driven Business Model (DDBM) in the Online Publishing Industry

In this case study the authors present the current strategy of news online start-up – Nettavisen – to survive and compete against large incumbent publishing firms and new media players, such as Facebook and Google, in a rapidly growing market for online news. Nettavisen is moving towards a data-driven business model (DDBM). In particular, the firm aims to increase its market share and profitability through analysing huge volumes of user Web browsing and purchasing habits across desktop, tablet and mobile devices to drive both advertising and e-commerce revenues. Furthermore, the authors used the DDBM Innovation Blueprint as a practical lens to identify the benefits and challenges associated with leveraging ‘big data’ to construct data-driven business models (DDBM) for online news businesses.

The rise of new digital media platforms means that enormous amounts of information and data are readily available to the public, highlighting the evolving role of curation, as consumers look for better ways to find the content they value most. As power shifts to consumers, who can program their own content using technology and simple interfaces, curation moves out of the hands of professionals (legacy publishers) and into communities. This creates a real danger of a ‘tyranny of demand’, as indicated by the prevalence of franchises over original creation in increasingly risk-averse industries. Nevertheless, media players that can offer the right content – not only content that consumers want today, but also what will surprise them tomorrow – are likely to prevail.

Media companies that lack competitive big data technology will increasingly find themselves outpaced by the better-informed, quicker businesses that excel in analytics such as Google and Facebook. Targeted advertising through third-party ad networks is becoming more pervasive. Data collected from users on media companies’ sites should be

protected and belong to those companies, not the third parties. Third-party ad networks process millions of ads and embedded ad-serving instructions each day, making them enormous big data operations. As more advertisers are opting for third-party ad placement, publishers are increasingly concerned about losing customer data to remnant ad networks.

In light of this unforgiving environment and ever-changing consumer dynamics, the focus firm of this case study – Nettavisen – is moving towards a data-driven business model (DDBM), where user-buying patterns become increasingly important. In particular, the firm aims to stop data leakage and develop a data-driven business model to leverage data for the media companies who own it. This creates an opportunity for Nettavisen to understand better the cross-platform audiences, to create powerful data journalism stories, streamline business processes and identify new products and services for customers. Furthermore, it can grow its business and perform better than its competitors.

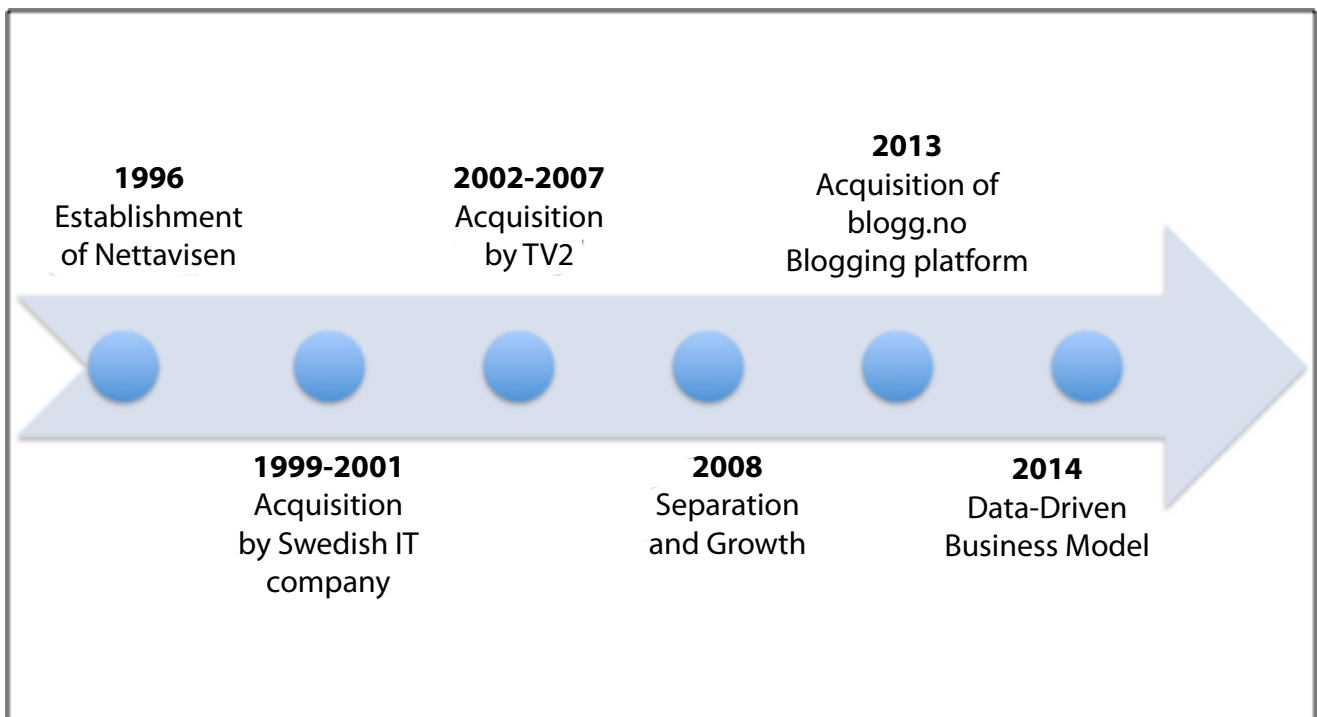


Figure 1: Nettavisen’s Timeline History

Nettavisen's History and Background

Nettavisen (Norwegian for 'Web newspaper') was established in Norway in late 1996 as a purely online start-up, competing against large incumbent publishing firms in the rapidly growing market for online news. Over the past 20 years, Nettavisen has been able to increase its market share and profitability through the use of highly disruptive business models that allow the relatively small company to outcompete powerhouse legacy-publishing companies. In the early days of online exploration, legacy news firms felt their brands were so strongly established that they could experiment with new digital platforms at their own pace. Nettavisen proved them wrong, however, establishing a leading online news site in just a few hectic years. This early success meant that Nettavisen became a sought-after commodity.

First acquisition from 1999 to 2001

In late 1999 the Swedish Web portal Spray acquired Nettavisen for 180 million NOK, and just one year later the firm changed hands again, this time to the German division of the Web portal Lycos, one of the first profitable Internet businesses in the world – then valued at \$12.5 billion. However, when the dot-com bubble burst in 2001, Nettavisen proved to be no more resilient than the rest of the Internet start-ups, or indeed legacy newspaper online sites. The opposite was in fact true, as the German owners were hit badly by declining ad revenues, which forced the managing director at Nettavisen to reduce costs and staffing, including his own job. A review of the financial records shows that the firm did not make a profit during its first five years of business – running a net loss of 10 million NOK in 1998, 13 million in 1999, 15.6 million in 2000 and 25 million in 2001. By this time, the firm was also losing market share compared to the competition and was therefore put up for sale by its owners.

Nettavisen current business model

The basic business model of Nettavisen has traditionally been purely display-ad-based. In simple terms, the firm gets money from advertisers for displaying their ads on its website. From the start, its goal has been to compete directly with the online news sites created by the large, established newspapers and broadcasters. Nettavisen's manager said: 'I think all media people have a dream of getting rid of annoying owners, and starting something on their own, something that is different.' Nettavisen pursued a very clear strategic intent as its desired competitive advantage. Particularly, the firm is free of concerns about cannibalizing existing businesses and focuses only on attracting as many people as possible to its website. This was a key difference from a number of the established newspapers, which had to balance their online exploration

Second acquisition from 2002 to 2007

In 2002 Nettavisen was acquired by TV2 – a Norwegian broadcasting company – for somewhere in the range of 20–30 million NOK, and fully integrated into its online operation. TV2 had ambitions to become a leading online site, and saw the strategic value of acquiring and integrating the Nettavisen brand into its existing product portfolio. At the time, TV2 already had its own online operations – TV2 Interactive – which had failed to generate significant online traffic or revenues. TV2 had been planning an IPO since 2000, and had invested heavily in its own online brand, TV2 Interactive, which at the time was valued at 600 million NOK. The dot.com collapse put a heavy dent in this plan, resulting in significant losses for TV2, including a series of cost and staff cuts in 2001–2 in the amount of 50 million NOK. Therefore, TV2 chose to invest in Nettavisen, recognizing the value of the brand. One of the TV2 managers said: 'I am convinced that Nettavisen was the best media investment in 2002. It had taken six years and 100–150 million to build the brand and position.' In a once-more growing online market, TV2 saw considerable opportunities for synergies by incorporating Nettavisen into its existing online operations.

Separation and growth in 2008

By 2007 TV2 Interactive, which included the rebranded site 'TV2 Nettavisen', was still growing – but several years of online investment had failed to produce revenue, and by this time TV2 was losing its online market share, showing a net loss of 15 million NOK for the year. Early in 2008 the decision was made to spin out Nettavisen as a separate firm with a staff of approximately 120 people. The strategic intent of the separation was to improve competitiveness by having TV2 focus more on broadcast-oriented activities, and Nettavisen more on purely online newspaper services.

with the need to protect the printed newspaper.

Furthermore, Nettavisen had the freedom to publish news as it happened – an important competitive advantage over the news sites managed by newspaper publishers, who had to think about what news should be saved for tomorrow's printed products. One of Nettavisen's managers said: 'We have only one agenda. We are using the Internet as a medium, an electronic paper. But it is really the world's greatest purchasing outlet. On the Internet, the marketing happens then and there; you click on an advertisement, you can make the purchase while on the page, while you are motivated to buy stuff.'

In contrast to the established news companies, Nettavisen had no journalistic legacy to protect. In 2013, Nettavisen

made an interesting strategic move that should yield an even faster turnover of writers, through the acquisition of 'blogg.no', a blogging community that has been seamlessly added to Nettavisen's existing portfolio of websites. The blogger site is also creating new verticals for advertisers. They use a network of thousands of individual bloggers to provide content, which is also used to engage in a highly controversial strategy of blending commercial and editorial content. A good example of this is a singer who shares her photos of clothing and make-up tips and writes several blogs. Increasingly, advertisers such as cosmetics' sponsors and clothing brands want their products associated with specific bloggers who generate large audiences. Similarly, another vertical is created around personal trainers who share their fitness and healthy eating tips. This creates interest from other types of advertiser, such as promoting training gear, dietary supplements, and so on. One particular aspect of the business model behind this is that Nettavisen and each individual blogger share the advertising revenues generated from the traffic to the blogger's site, a move triggered by the success of 'Huffington Post' (a leading US independent news portal). Nettavisen captured a large market share early on, and was consistently one of the top-three online news sites in

Norway over the period 1996–2001. A sluggish performance in 2002 led to the German owners selling the firm to Norwegian broadcaster TV2 in 2002, and although the next couple of years witnessed some growth, the consolidated online penetration of TV2–Nettavisen remained flat from 2004 to 2007, in a booming market where the competition was rapidly growing. In 2008 its market share slowly but steadily improved. The split from TV2 was amicable but introduced some trade-offs in terms of assets and resources. For 2008 the net result was a loss of 88.4 million NOK. In 2009 and 2010 Nettavisen was the third largest online news site, but still ran a net loss of some 33 and 16 million NOK respectively. It was not until 2011 that Nettavisen became profitable, some 15 years after it was first founded. Part of the reason for this late success was a steady increase in sales revenues, growing traffic and strict cost-control. Nettavisen came out of 2012 with a profit of 8.5 million NOK, on a turnover of approximately 85 million NOK – which is roughly one-quarter of the turnover in 2006–7. 'It is the best result in our history. I think that it is really well done to manage getting Nettavisen to work so well without any financial support. As such, it is really an achievement that we manage to make a profitable business.'

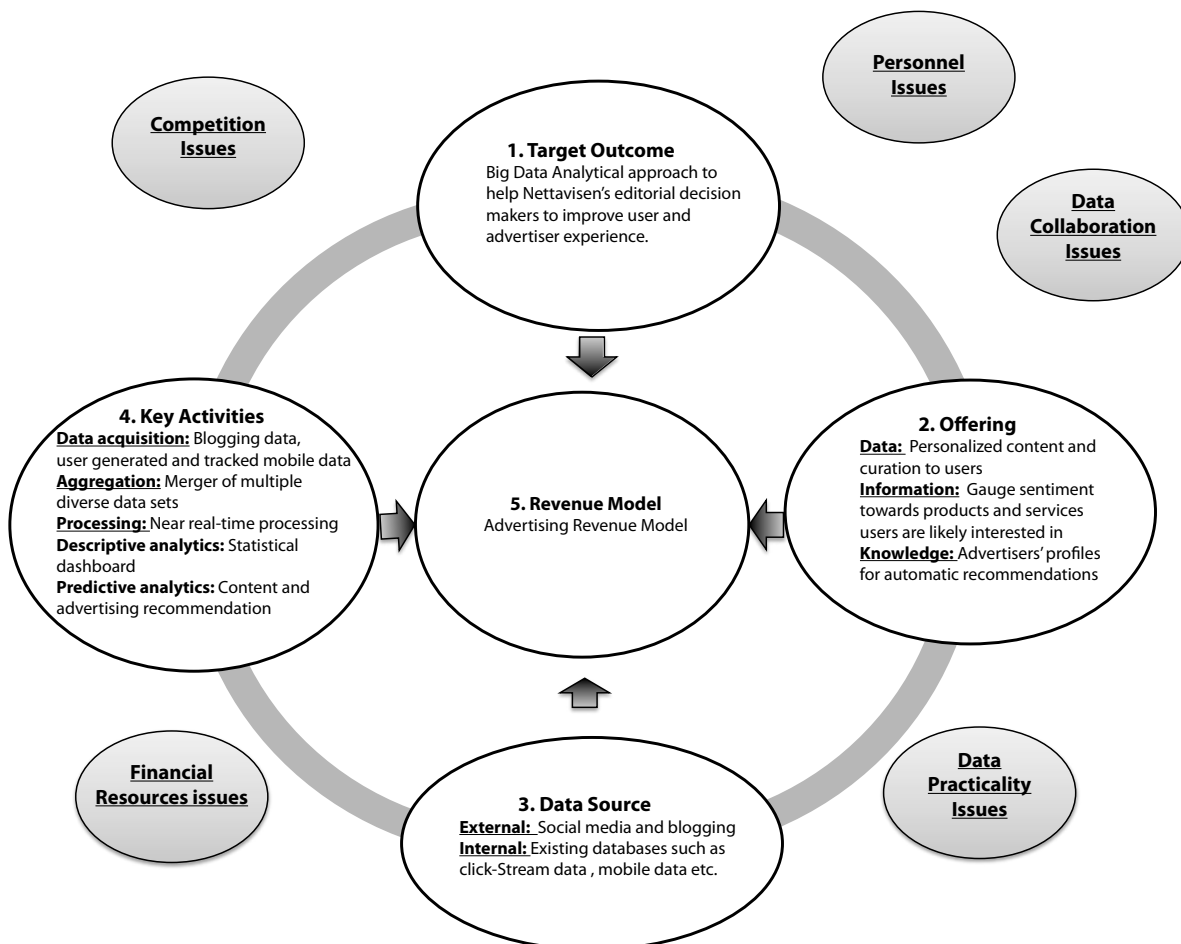


Figure 2 Nettavisen's DDBM Innovation Blueprint (Adapted from Brownlow et al. 2015)

Nettavisen answers the six fundamental questions for the DDBM innovation:

Towards a data-driven business model (DDBM)

Nettavisen comprises a young and diverse workforce of approximately 76 people. The 'average' employee is in his or her early thirties, and has largely online experience, although roughly half of the staff also has some experience from printed media. Everybody uses Facebook and other social media such as Twitter, Spotify or Instagram, and there is a strong consensus that social media provides important work tools. Most respondents think that the boundaries between online and print journalism will disappear over time – and that online stories are of equal quality to those found in the printed newspaper. In figure 3, the DDBM Innovation Blueprint depicts a practical lens through which to understand how journalism, as both a professional field and commercial enterprise, can derive value from the growing array of digital data in public life. Particularly, it demonstrates how Nettavisen is seeking to make sense of, act upon and derive value from its data. This strategy has attracted criticism from other news providers, claiming that it dilutes journalistic standards and ethics. One of the managers stated: 'When you are a front-runner, as we are here, you are also entering un-chartered territory.'

1. What does Nettavisens want to achieve by using big data?

Since 2014 Nettavisen has been moving towards a business model where user-buying patterns are increasingly important. The firm is pursuing big data strategies aimed at analysing huge volumes of user Web browsing, social media, blogging data and purchasing habits across desktop, tablet and mobile devices to drive editorial decision-makers to improve the user and advertiser experience. The management at Nettavisen is seen as relatively clear and realistic in its objectives for the firm, the most important of which are product development, capturing new markets and improving quality. Big data and online platforms are seen as the most important business opportunities over the coming years. As one manager noted: 'Part of the reason why some competing legacy newspaper firms will never succeed online is that they cling to the old ways of thinking about news and doing things. This is strongly embedded in the organisation. We are different, with limited resources; we cannot be the first with every breaking news event. But we should always be number two.'

2. What is Nettavisen's desired offering?

The proposed analytics will be used to produce personalised content that is distributed among consumers in society to satisfy various requirements. Furthermore, it will be utilised to report and present news in ways that differentiate their work from the traditional storytelling paradigm, thereby creating value for audiences interested in new

types of news, as well as creating a distinction relative to commodity news in the marketplace. The DDBM shift suggests moving from an area of coverage (a topic, beat or location of interest) to focusing instead on the method of coverage. This includes engaging the audience more deeply with more targeted news, relevant advertisements and socially engaging content. Such DDBM becomes especially important for individual news-consumers, as they increasingly use multiple devices (PCs, laptops, tablets, smartphones, phablets, wearables, etc.) to access Nettavisen products. This creates huge data tails that can be leveraged to improve both the user and advertiser experience, and to drive new business and revenues for Nettavisen. As one manager said: 'We really have no one to compare to in our market. No one is doing what we want to do.'

3. What are the key data sources for Nettavisen's DDBM?

Nettavisen collects reams of data every minute, including internal data that is available through its own existing databases used for advertising, sales, readership, usership, membership, content, accounting Web logs, player logs, click-stream data, mobile data, social networks and more. The firm had in excess of 5 million unique visitors to its website in the first week of November 2014. Of these, just over 2.2 million came via mobile devices. Daily traffic peaked on Thursday 6 November, with 1.3 million total unique visitors. On Saturday 8 November, some 665,000 users came from mobile devices, which is a new record for the firm. The online site has also put in place a number of product verticals targeting specific audience segments. For example, their online-only women's magazine had 867,000 mobile readers in one week, while a men-only site had some 700,000 unique visitors from both desktop and mobile devices. As a point of reference, the population of Norway is roughly 5 million people.

Furthermore, the firm collects unstructured data on a multitude of digital channels, including video, audio, photos and reams of social media text. Since there is no printed product or specific deadlines on which to focus, the newsroom at Nettavisen is in a constant state of activity. As one of the managers said: 'We sit all day and follow social media such as Facebook, Twitter and Instagram. This makes us much more connected than simply going into the street and asking four random people what they think about an issue.'

As mentioned earlier, the firm also uses the blogger network 'blogg.no' to blend commercial and editorial content. Using blog data helps Nettavisen to obtain continuous feedback, making the firm more responsive to real-time market demand. Nettavisen understands what online surfers want and how to attract more advertisers to its site. As the manager of one of the competing news sites noted,

the first couple of years of online experimentation for Norwegian newspapers was of little interest, apart from one significant incident: 'The launch of Nettavisen, which pushed newspaper firms to pursue online experimentation more aggressively than they really were comfortable with at the time.'

4. What are the key activities for Nettavisen's DDBM?

Much of the activity in Nettavisen's newsroom is centered on the front page of the online site, as this is the page that attracts most readers and directs traffic to the rest of the site. The front page editor thus becomes a key figure in the newsroom, as reporters will try to 'sell' stories to him or her in order to make front page news. In everyday operations, there is an ongoing demand to be first in breaking events and to provide a constant stream of news that can help generate traffic (and thus ad revenues). Therefore, the firm plans to develop content personalisation and targeted analytics to determine behaviour patterns or paths through the Nettavisen website (ideal for identifying how consumers engage with website content and how they transact). Ultimately Nettavisen wants to be able to gauge user sentiment towards products and services, which will facilitate a better understanding and targeting of customers and help editors make decisions about the creation and selection of content that is best suited to viewers' preferences and behaviours.

By using big data analytics Nettavisen will be able to make near-real-time decisions about how to target better ad campaigns. In particular, through the merger and analysis of individual user behaviour across desktop, mobile and tablet devices, it is possible to offer more relevant advertising, which in turn is likely to trigger users to visit retailer sites and make purchases. Through these online purchases, users provide personal information to the retailer, which can be shared with Nettavisen to improve future personalised advertising. This is a shift from sampling techniques (descriptive analytics) to real-time, predictive analytics based on the merger of multiple, diverse data sets with 'big data'. Through these activities, Nettavisen can segment viewers into groups, offer tailored content recommendations and relevant advertising, for example, advertisers' profiles for automatic recommendations. Furthermore, it will help to optimize advertising campaign decisions, based on understanding the relationships and networks between viewers in social settings. Through statistical dashboards, Nettavisen can know and visually understand who is connecting to whom, and their respective degrees of influence in that community.

5. How does Nettavisen monetize this DDBM?

Approximately one-third of revenues now come from online services, and Nettavisen has continued to blur the boundaries between editorial and commercial content – for example, advertisements that may look like news stories. Nettavisen has continued to grow into 2014, pursuing a strategy of differentiating itself from the other legacy news firms. The big data analytics could be used to make near-real-time decisions to offer more relevant advertising, which in turn is more likely to trigger users to visit retailer sites and make purchases. The financial viability of the firm as of 2014 is also largely due to the diversification of revenues today; traffic-driven revenues amount to roughly 70 per cent of total revenues, whereas those from other services such as shopping and betting are growing. Salaries, in relation to sales revenues, measure productivity, and Nettavisen is now beating the competition, in part, thanks to a strategy that uses bloggers to drive traffic and sales revenues.

6. What are the barriers that Nettavisen considers when pursuing this DDBM?

Internal soft issues – personnel turnover - The management recently attempted to put in place more coordinated planning and meeting structures, as well as long-term strategic plans, but found this difficult to maintain. The lack of both structure and consistency was discussed in-depth with the publisher, who said that one of the challenges was the constant turnover of personnel, who typically worked at the firm for a while before going to work in one of the larger, legacy newspaper firms. Gaining experience from Nettavisen, a purely online operation, was apparently seen as a valuable addition to their resume, rather than a long-term career path. Others expressed similar sentiments. The constant flow of temporary employees meant that the organisation got new impulses and ideas, but also that it was difficult to manage at times, and that there was some reluctance to make long-term investments in dedicated resources to build, for example, business analytics teams in-house, as there was a perceived high risk of the top personnel being recruited by competitors.

Internal soft issues – collaboration - The acquisition of blogg.no, a blogging community that is now seamlessly integrated into Nettavisen's existing portfolio of websites, has brought a challenge – as bloggers all have their own agendas (literally), and their liquid connection means that they will arguably never be socialised into Nettavisen's procedures and beliefs. This can be seen as a blessing or a curse, and serves as a good example of the challenges of the ongoing exploration that characterizes Nettavisen.

One manager noted: 'We also want to be a different voice. I am very interested in the boundaries between news and opinions.'

Internal hard issues – lack of data practices - The sheer volume of data generated by different siloed systems is a challenge for Nettavisen. The need to link existing internal data with external data creates new challenges that require new analytic approaches. For example, Nettavisen and the blogging community use different online publishing platforms, complicating the merger and comparison of data across the different websites. There is little coordination of these activities, and no real way of currently tracking the complex interaction between bloggers, readers and advertisers. The complexity is constantly increasing, as more bloggers are added to the site, in turn generating new verticals of content, and drawing in more users, in particular from mobile devices. For example, weekend content might be consumed on a smartphone or tablet, and other content on an office desktop during the week. A multichannel view further complicates the ambition of understanding a unique customer's needs and behaviour. Furthermore, in practice, the editor is constantly tweaking both the design and specific wording of individual front-page articles in an effort to capture readers' preferences. He/she has the ability to monitor the traffic for each individual article and to see the immediate effect on, for example, changing a photo or creating a more interesting headline, but cannot directly decide if the story makes 'top news'.

Furthermore, it is increasingly challenging for Nettavisen to gauge the sentiments of people who are active on social websites and blogging sites. The collection and analysis of unstructured data creates new complexities. The current generation of analytics tools has not been designed to cope with comments and tagging, nor can they easily be used to conduct sentiment analysis to gauge aggregated

Summary

The market for online news continues to be dominated by legacy media organisations, which have now integrated their online and print operations, making it possible to leverage existing resources and well-known brands to draw audiences and generate revenues. In this industrial context, legacy newspaper organisations would be engaged primarily (if not exclusively) in low-risk exploitation. Explorative activities are carried out by a number of industry frontrunners that experiment with new ideas, technologies and products. Nettavisen is one of these explorative firms that managed to increase its market share and profitability through the use of highly disruptive business models, allowing the relatively small staff to outcompete powerhouse legacy-publishing companies.

trends. Linking audience preferences to advertising in real time requires significant computing capacity, which is not currently in place.

External issues – competition - The market for online news continues to be dominated by legacy media organisations, which have generally integrated their online and print operations, making it possible to leverage existing resources and well-known brands to attract audiences and generate revenues. Online revenues draw heavily on advertising, but with literally millions of websites in existence, advertising rates are kept low. Moreover, a few very large US-based players, such as Google and Facebook, are now capturing much of the search and display advertising in the European markets. Therefore, even if readers and advertisers migrate to new digital platforms, it is not a given that online-only journalistic start-ups will be profitable.

External issues – financial resources - For Nettavisen to survive a distinct quality product is required; supported by a cost-effective organisation; diverse revenue streams; and an orientation that focuses on niche audiences poorly served by the existing legacy media. Most online start-ups in Europe are heavily dependent on continued support and investment. However, Nettavisen was spun out from TV2 to manage its own finances. One Nettavisen manager suggested that being divested from TV2 forced Nettavisen to focus on being independently profitable and competitive, and that the timing of the spin-out (2008) was such that Nettavisen actually emerged from the financial crisis of 2009 stronger than its competitors. The analysis of financial records over the period 2009–2012 (shown in Figure 2) supports this argument, as Nettavisen has steadily improved both market share and productivity compared to the competition.

Nettavisen's current DDBM suggests the shift to a data-driven economy that can capture audience imagination through creativity and innovation. This comes as many legacy news organisations are struggling to find their way amid disruptions to the data-driven business models, while still following the traditional logic of news production and distribution. Furthermore, Nettavisen is able to compete with other sophisticated online companies (Facebook and Google) that are frequently ahead through realizing the potential strategic value of data as a business model. Therefore, Nettavisen aims to stop this data leakage from the Norwegian market and leverage its own data sets, combined with other external big data sets, to drive focused, embedded analytics apps and therefore improve editorial decision-making and advertising revenues.

