

ME2095
e-business strategies

CASE STUDY OF BROCKHAUS VS. WIKIPEDIA

Blenda Fröjdh
TIVNMI
blendaf@kth.se

Isabelle Rönkkö
TINEM
ronkko@kth.se

My Argården Björn
TINEM
mybjorn@kth.se

William Neem Laahanen
TIVNM
laahanen@kth.se

David Jacobsson
TIVNMI
djacob@kth.se

Table of Content

1. Setting The Stage	1
1.1. History of Brockhaus	1
1.2. Brockhaus Encyclopedia Market in Numbers	2
1.3. Actors on The Market	3
1. 4. Brockhaus' Ventures in The Digital Format	3
2. Situation Analysis	4
2.1. Porter's Five Forces	4
2.1.1. Bargaining power of buyers and suppliers	4
2.1.2. Threat of substitutes	5
2.1.3. Barriers to entry	5
2.1. 4. Industry Rivalry	6
2.2. The e-business market segmentation matrix	6
2.3. The value curve of Brockhaus and Wikipedia	7
2.3.1. Performance Wikipedia	7
2.3.2. Performance Brockhaus	7
2. 4. Sustaining Competitive Advantage Over Time	8
2. 4.1. Identifying Potential Threats	8
2. 4.2. Evaluating A Response Plan	9
2.5. E-business organization	9
2.6. Choosing the appropriate e-business strategy for interacting with users	11
3. Problem definition	11
3.1. Brockhaus price performance relative to Wikipedia	11
3.2. Brockhaus's adaptability to the changes in the industry	12
4. Alternative Solutions	12
4.1. Focus on the Education and Learning division	12
4.2. Acquire new competency through hiring & training	13
4.3. Use advertisement as payment	13
4. 4. Move focus segmentation of Xipolis.net	14
4.5. Reorganize company towards online and e-business	14
5. Recommendation	15
6. References	16

1. Setting The Stage

This case study deals with how the company Brockhaus, Germany's largest publisher of encyclopedias, has faced two major challenges that have changed their existence in the industry. These challenges are the arrival of digital encyclopedias on CD-ROM and the emergence of online encyclopedias that utilize advertisement and are available free of charge. Brockhaus was able to handle the emergence of digital encyclopedias in their dispute with Microsoft, but could not handle the rapid development and emergence of online encyclopedias, which resulted in abandoning the market for encyclopedias where they had a prominent role for over a century.

This is a case study that analyzes the growth of digital encyclopedias where Wikipedia had a prominent role in the early 2000s. It will also look at what Brockhaus has done to adapt to the increased use of online encyclopedias. In the year 2004, Brockhaus had recently emerged from a rivalry with Microsoft that resulted in once again creating a good position in the market, but then a new conflict was created when Wikipedia started to establish itself in the market. From this point, we will analyze Brockhaus's situation and try to evaluate possible strategies and determine the best course of action. First, we must put things into context.

All information in section 1 is compiled from the case study; *When digital David meets physical Goliath: the case of Brockhaus vs. Wikipedia* (p. 597-607, Tawfik Jelassi, Albrecht Enders and, Francisco J. Martínez-López, 2014).

1.1. History of Brockhaus

Brockhaus was founded in 1805. At the time of this case study, it was a world-renowned publisher of encyclopedias. Their *Brockhaus Encyclopedia* set the standard for European encyclopedias and stood tall as the most renowned in the country. Once a family-owned operation, Brockhaus faced severe financial difficulties in the 1970s because of market recession in conjunction with increased competition. This forced the company to merge with the *Bibliographic Institute*, creating *BIFAB*. In 1988 the company handed over 52% Ernst Tielebier-Langenscheidt, CEO of Langenscheidt KG, creating *BIFAB AG* to avoid a hostile takeover. Brockhaus was structured in six divisions, with each division representing an independent profit center: General Encyclopedias, Duden, Topical Reference Books, Calendars and Yearbooks, Education and Learning, and Brockhaus Duden New Media. The company has gained a foothold within the morning-market, a submarket for school and learning material, which now means that the company can sell books and materials used both in schools and for home studying.

1.2. Brockhaus Encyclopedia Market in Numbers

By 2004, encyclopedias were still sold in a traditional way. Half of all encyclopedias being purchased from a classic bookstore, only 9% of encyclopedias were sold through the internet.

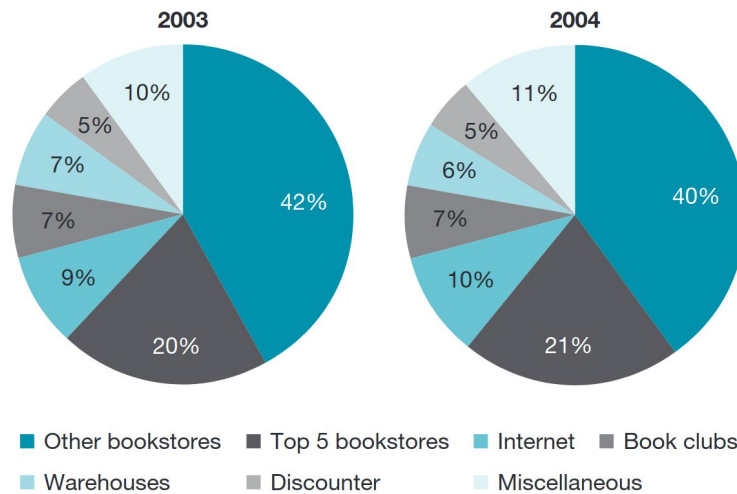


Figure 1. Distribution of Encyclopedia sales over the period 2003-2004.
Source: Jelassi, Enders and, Martínez-López (2014)

The German book market has experienced a dramatic reduction in market volume during the early 2000s going from industry sales at 9.412 billion euros in 2001 to only 9.076 billion euros in 2004. In turn, the encyclopedia market makes up a small segment of the German book market, accounting for only 1.2% of total sales. Brockhaus is the unchallenged market leader in the German encyclopedia market holding over 50% over the market shares.

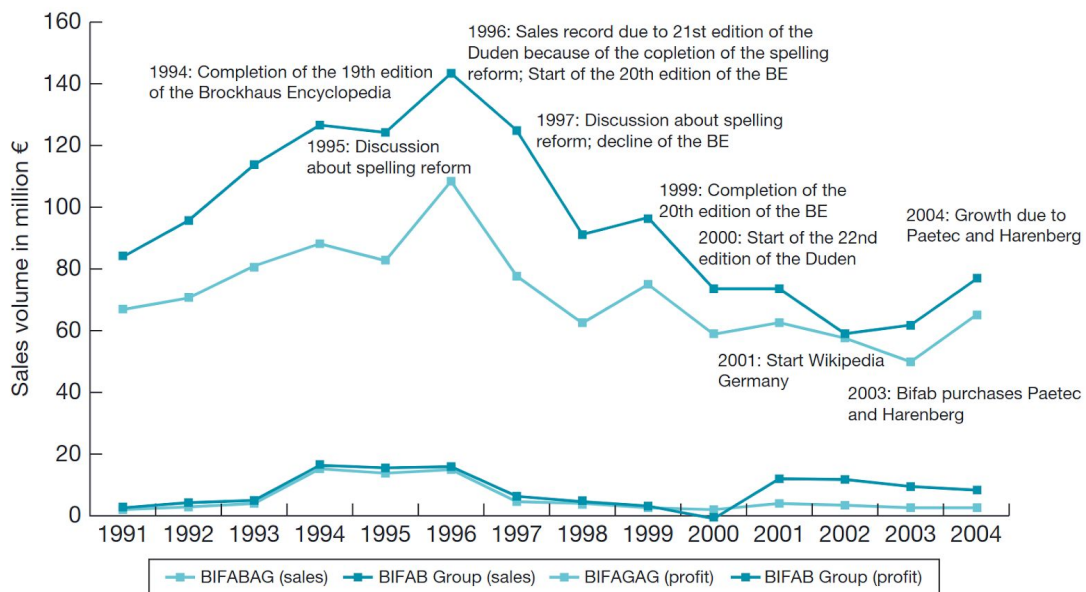


Figure 2: Sales and profitability for BIFAB and BIFA AG in the period 1991-2004.
Source: Jelassi, Enders and, Martínez-López (2014)

1.3. Actors on The Market

Brockhaus held a considerable majority position, with over 50%, in the German encyclopedia market, with the closest competitor holding less than one-fifth of the market. As such, while some other German

publishing companies were larger than Brockhaus, their position in the physical encyclopedia market was generally unthreatened.

Microsoft initially cooperated with Brockhaus but broke it off to introduce its own digital encyclopedia, *Microsoft Encarta*, in 1996. Encarta offered 27000 articles, along with media elements like audio and video, as well as an impressive search function. Microsoft had purchased non-exclusive rights to *Funk & Wagnalls Encyclopaedia*, which let them quickly establish themselves in the market.

The German Wikipedia was founded in May 2001. The number of articles grew slowly initially and had only reached into the thousands in 2003, compared to the 260,000 articles of the 20th edition of the Brockhaus Encyclopaedia. By the end of 2004, the number had grown into the hundreds of thousands.

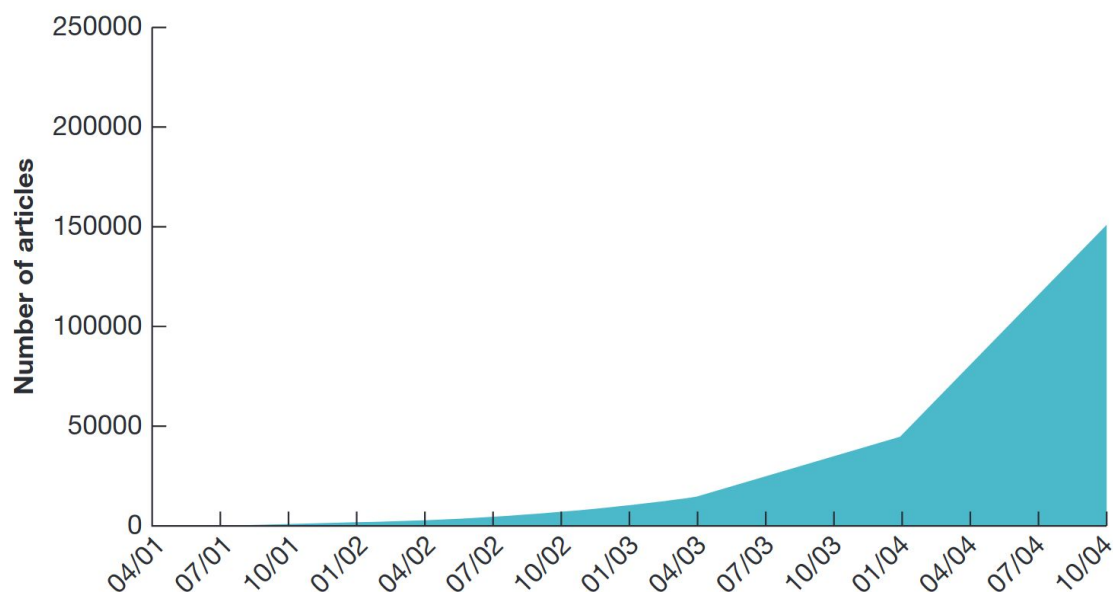


Figure 3: Wikipedia articles over time in the period of April 2001 - October 2004.
Source: Jelassi, Enders and, Martínez-López (2014)

1. 4. Brockhaus' Ventures in The Digital Format

With the introduction of Encyclopedias released on digital formats in the early 1990s, Brockhaus introduced a Standard General Mark-up Language (SGML) into its editorial system. Although initially hesitant to leave printed format, a partnership was started with Microsoft to move into the digital market. *LexiROM*, a dictionary on CD-ROM, was released in 1995. Due to increased market demand the *Brockhaus Multimedia Kompakt*, a digital single volume edition of the Brockhaus Encyclopedia was released 1996.

At this point, company management still considered digitization as “playing around” and felt confident that Brockhaus position in the market would enable them to adapt to any changes and maintain dominance. With Encarta, Microsoft released a product that both overperformed and undersold LexiROM, setting a completely new standard. To compete, Brockhaus developed the *Brockhaus Multimedia*, released in 1998. It took the company until 2003 to regain market leadership. To deal with the increasing demand in digitally

based solutions, Brockhaus hired two responsible for new media. However, human resources proved to be extremely scarce.

Brockhaus was one of the first German companies to work with online encyclopedias. realizing the growing importance of online users, *Xipolis.net* was released in 2001 as a joint venture with *Holtzbrinck Networks*. Several methods of payment were experimented with. Users were essentially unwilling to pay for material online and the Xipolis.net project incurred large losses in the range of several millions per year.

2. Situation Analysis

The following chapter includes an analysis of the situation through several relevant theories and models to get a better understanding of the company's situation. All figures and theories used in this and the following chapters are taken from the book *Strategies For E-business: Creating value through electronic and mobile commerce (concept and cases)* by Tawfik Jelassi, Albrecht Enders, and Francisco J. Martínez-López (2014).

2.1. Porter's Five Forces

Analyzing the encyclopedia industry, using Porter's Five Forces, we can see that the industry is quite tough and that the introduction of online encyclopedias and online sales channels has dramatically decreased the attractiveness of the industry. Looking at the five forces, we can see that the factors that contribute the most to making the sector less attractive are that the bargaining power of buyers is high (therefore, the bargaining power of suppliers is low), and the threat of substitutes is high. The only factors that do not contribute as much to a less attractive encyclopedia market are the fact that the rivalry within the industry is moderate to low and that the barriers to entry are moderate.

2.1.1. Bargaining power of buyers and suppliers

Looking at a number of characteristics within the encyclopedia industry, one can conclude that the buyers within the sector have the most bargaining power, therefore decreasing the position of suppliers. Characteristics that exemplify this is for example, that there exists a high concentration of buyers and that the physical encyclopedia market is in decline. The book market in Germany declined from €9,412 billion in 2001 to €9,076 billion in 2004. Encyclopedias are a small segment of the German book market, indicating that the buyers are concentrated. Furthermore is the switching cost for buyers very low if not non-existent.

Additionally, there exists a strong fragmentation of suppliers, as Brockhaus is the unchallenged market leader, clearly separating Brockhaus from its competitors. A strong fragmentation of suppliers can make it difficult to establish a joint approach to pricing. However, since Brockhaus is so much larger compared to its competitors we can assume that they set the rules for pricing as they are dominant on the market. We can also assume that it would be difficult for companies with smaller market shares to have lower prices because of the slim profit margin. We also believe that the degree of market transparency is moderate, rather than high, as the differentiation between products, i.e., encyclopedias, is significant. Products within the industry are differentiated mostly through the quality of the encyclopedia articles. In the case of Brockhaus, the company has a strong presence in the public mind as the top quality product. The digital formats, on the other hand, allow for additional media formats, like video and audio, and more complex searching methods that allow for a higher level of differentiation.

2.1.2. Threat of substitutes

The ease of substitution within the industry is quite high, as not many resources are required to create digital or online encyclopedias. For example, can licenses to ready-made articles be bought, like in the case of Microsoft's Encarta. These substitutes are also readily available to customers, being available either on the internet or in the same retail stores where physical encyclopedias are sold, with regards to the buyers' propensity to substitute brand loyalty, and a perceived quality level are factors. Brockhaus holds almost 50% of the encyclopedia market and generally holds the role as the number one encyclopedia in terms of quality. The significant investment required to buy printed encyclopedias would make people wary of going with a product that was not already tried and tested. However, as digital and online encyclopedias have been introduced, the cost for a customer to try a product is significantly lower, and here the propensity to substitute is much higher. Brand loyalty is decreasing as customers can no longer financially motivate the higher prize of the printed version.

Furthermore, as mentioned previously the switching costs for customers are low. For digital encyclopedias, the main switching cost would be learning a new program, or if switching from physical encyclopedias to digital, this would require a computer and/or internet connection. Beyond that, there are no significant costs or other factors locking buyers to a specific brand. However, as mentioned above, we believe that there is a relatively high level of differentiation of products, decreasing the threat of substitutes somewhat.

2.1.3. Barriers to entry

Producing physical encyclopedias and CD ROMs has high fixed costs, which is a crucial barrier to entry to those markets. In the Brockhaus case, fixed costs are associated with creating the articles, i.e., the work hours their authors put into research and writing. However, Wikipedia has managed to overcome this issue since its users create their articles. Entering the online- articles market has, in their case, low barriers with regards to fixed costs. Companies within the physical encyclopedias, that have a solid customer segment, are exposed to fewer risks entering the online/electronic encyclopedia market. Since they already have built trust and brand loyalty among many of their consumers, however, ability to ensure that quality is maintained and to manage to provide a positive user experience will be vital to keep those users. Completely new actors in the industry will probably experience the opposite where a lack of trust and brand loyalty on the market will be a barrier to entry.

Although, the switching costs are, as mentioned previously, quite low in the industry of both physical and digital/online encyclopedias. Furthermore, are there not strong network effects within the industry, either tying customers to specific brands, thus decreasing the barriers to entry. It can be assumed that there exists some intellectual property protection with regards to the exact content of the encyclopedia articles. However, the information itself is challenging to protect, also contributing to a decrease in barriers to entry.

2.1. 4. Industry Rivalry

Several factors contribute to a lower level of industry rivalry within the encyclopedia industry. These are the small number of competitors, differentiation between products, lack of excess capacity, and the lack of strategic relevance. The number of competitors offering online or digital versions of encyclopedias is only two, namely Microsoft, with their product Encarta and Wikipedia. When considering only physical versions of encyclopedias, there are also only two 'real' competitors Welbildt and Bertelsman. The strategic relevance

is quite low as no apparent strategic advantage is gained by succeeding within the encyclopedia industry. However, it may provide an excellent reputation within the non-fiction book industry.

There are, however, only two factors contributing to a higher level of rivalry, some of them being high fixed costs and the low growth rate of the industry. As mentioned previously, the fixed costs are quite high within the encyclopedia industry. The resources required to produce articles within the industry are extensive, and developing software for electronic encyclopedias also presents substantial fixed costs. Although there are high fixed costs in the industry in general, the situation for Wikipedia is quite the opposite. The fixed costs of Wikipedia can be expected to be lower in proportion to its variable costs. Since Wikipedia does not need any significant resources to create their articles (the Wikipedia community does this), the majority of their expenses will be that of server space, which is a variable cost. Lastly, the growth rate of the encyclopedia industry can be considered low as the book market, in general, is experiencing a decrease in market size. However, with the introduction of the online and electronic encyclopedia, the market may have grown somewhat, because of the opportunity to reach new customers. In conclusion, rivalry in the industry can be seen as low.

2.2. The e-business market segmentation matrix

Using The e-business market segmentation matrix, would for Brockhaus enable a better understanding of which market segment their current operations are within, but could also provide a clearer picture of a potential market segment that might be interesting considering expanding into. This could be a great support in the design process of their product offer and which distribution channels that should be used as well as when deciding on a strategy for entering those potential market segments.

Currently, Brockhaus covers the B2C by selling its products directly to the consumer, B2B, by selling its products to organisations and private institutions, which for their business corresponds to two of three potential market segments, which is shown in figure 4. Broadening their market segment would, in their case, be through the possibility of expanding into the B2G-segment.

		Buyer/recipient		
		Consumer/peer/citizen	Business	Government
Supplier/ provider	Consumer/ peer/citizen	Consumer-to-consumer (e.g. ebay) Peer-to-peer (e.g. Napster) Citizen-to-citizen (French presidential election 2007)	Consumer-to-business (e.g. Amazon.com)	Citizen-to-government (e.g. online tax return forms)
	Business	Business-to-consumer (e.g. Ducati.com)	Business-to-business (e.g. Covisint.com)	Business-to-government (e.g. online filing of corporate tax returns)
	Government	Government-to-citizen (e.g. information about pension statements of citizens)	Government-to-business (e.g. information about most recent legal regulations)	Government-to- government (e.g. exchange of diplomatic information)

Figure 4: The e-business market segmentation matrix. Source: Jelassi, Enders and, Martínez-López (2014)

2.3. The value curve of Brockhaus and Wikipedia

2.3.1. Performance Wikipedia

Wikipedia's performance on price is the best possible as their articles are entirely free, only relying on donations from their users. Wikipedia does not even rely on advertisements for funding. Wikipedia ranks very high with regards to convenience; all articles are available through the internet. Quality of Articles refers to the reliability of the information in the articles. Since the articles used on Wikipedia are written and reviewed by users, the reliability can be viewed as low. The number of articles available on Wikipedia was relatively few during the starting phase of the German website. However, by 2004, the number of articles exceeded 100 000. While there is no information about the user experience of the Wikipedia website, we can assume that the website design was more appropriate for online encyclopedia articles compared to Xipolis.net.

2.3.2. Performance Brockhaus

The cost of Brockhaus's physical encyclopedias as well as their Brockhaus Multimedia CD Rom rival that of their competitors. "...The price will be determined by the market and, in this case, by the competitor who has already set foot in the market. We cannot exceed this price; at best, we will charge the same Microsoft does.". However, with regards to their online encyclopedia, their performance on pricing is lower than that of Wikipedia since they only offer parts of their articles for free, requiring payment for the whole articles.

Brockhaus's performance on convenience can be considered equal to that of Wikipedia, if not better. Their online encyclopedia is reached by all through the internet, and their physical and CD encyclopedia offers the convenience of choosing a format that suits the user. Brockhaus's performance with regards to the quality of articles can be considered as very high. Brockhaus's performance with regards to the range of articles is high, with the number of articles above 260 000 articles. Although Xipolis.net contains only the content of the Brockhaus Encyclopedia in fifteen volumes, the number of articles on Xipolis.net can, therefore, be estimated to be about half of 260 000. While the CD ROM version of the Brockhaus encyclopedia was rewarded with the Digital award, their online encyclopedia, Xipolis.net, had the same layout as their printed version. We can, therefore, assume that the user experience of Xipolis.net.

2. 4. Sustaining Competitive Advantage Over Time

Who was Brockhaus's lowest margin customer? Disruptors usually move into the lowest margin customer base, while the incumbent retreats into its highest margin customer base.

Sustaining innovation is based on using the incumbents' existing infrastructure and resources (competency, customer base, brand, etc.) to develop better products. Disruptive innovations are achieved by identifying possibilities to imitate or direct attention to over-served customers by delivering a "good enough product" for a competitive price.

2. 4.1. Identifying Potential Threats

When identifying potential disruptive threats, the incumbent needs to ask themselves the following questions:

1. *Is there a large group of people who previously did not have the money or skills to purchase the product themselves?*

These are customers who, as of yet, are not buying the product, i.e., non-served. Physical encyclopedias were a niche part of the book market. Publishers offered abbreviated versions of their complete product. However, there was still a large customer segment that did not spend any money on encyclopedias because there was no general need for one. The usage to cost ratio was probably relatively large, even for the lowest-priced version. Brockhaus had cultivated a brand of excellence, and as such, likely didn't market towards low budget segments.

2. *Are there customers on the bottom end of the market who would buy the same product with fewer features for a lower price?*

The distinct line is pretty vague, but right next to the segment described above, there is also an over-served segment. These customers could be people who might be using an encyclopedia to some degree in their professional or personal lives. They would be well served by older versions of the encyclopedia, being unable to motivate buying an updated version due to high cost financially. Alternatively, they would opt for abbreviated or specialized publications.

3. *Is the innovation disruptive relative to all relevant companies that are currently competing in the market?*

The publishing industry had a reasonably firm grip on the possible markets, while the physical version was the only option available. When the digital formats started becoming introduced, this was loosened. Microsoft Encarta is disruptive, as it matched the quality of the physical version while lowering cost distinctly. Wikipedia, on the other hand, was delivering content for free. While it would be unable to establish itself as quickly as Microsoft, the steady increase in articles and information could eventually match the quality demands of mainstream users. Being entirely user-operated, Wikipedia will not struggle with significant production overhead, as Brockhaus does. It also distributes the sizable cost of research and quality assurance among its users. Once the quality reaches mainstream customer expectations, Brockhaus will no longer have

2. 4.2. Evaluating A Response Plan

Multiple strategies for dealing with disruptive competition exist. Below are described a few possibilities relevant for Brockhaus.

The first strategy is known as *Migration/Harvesting*. It would entail essentially stopping all investments into the physical format. This investment capital is thereby freed up to use in other areas where it might be utilized better in other parts of the organization. It would, however, leave the physical format to remain as is and risk the market eventually being overtaken by competitors. The method is based on the incumbent's assumption that the competitors inevitably will reach a point of overtaking the physical format market, and being unable to pivot or adapt appropriately.

The above strategy is a more careful alternative to *Switching entirely*, which would have Brockhaus simply abandoning their printed encyclopedia for the digital one. Considerably riskier, requiring an exceptional understanding of the new market, as well as demanding a pivot in every level of the organization. In the Brockhaus case, these two would most likely be far too risky and complicated. The in-house competency is not at all attuned to the new digital/online space, and a substantial change, of course, would likely be far too difficult.

A more careful approach would be *Straddling*. This would mean incorporating a new business model designed to utilize the digital format and e-market, while still remaining active in the previous domain. This would allow Brockhaus to adapt their focus depending on developments in the market, focusing attention as it is needed to and from the two halves. In part, Brockhaus is already employing this method since they are moving into the digital format. As of yet, the physical version remains profitable, and the investment in *Multimedia* was paying off. The method has a tendency of leading to *cramming*, where the new business model is simply forced into the existing one. As mentioned, Brockhaus competency was in the publishing business, and as such, might fail to utilize possibilities of digital formats and e-commerce fully. While this method would allow for a more natural and reliable transfer of focus, they would still have to overcome the inherent assumptions and prejudices about the business they were getting into.

2.5. E-business organization

In order to implement an effective e-business strategy, a company needs to address several internal organizational issues. To be able to do so, it is vital to evaluate how the company should align their e-activities with their physical activities to avoid conflicts between the online and offline channels (Jelassi, Enders and Matínez-López, 2014). Brockhaus launched its digital encyclopedia 2001, and today the company has physical and digital encyclopedias. Brockhaus has a separate e-business organization for all activities related to the digital content called Duden New Media.

According to Jelassi, Enders, and Matínez-López (2014), there are advantages and disadvantages to a separate e-business organization. Since e-business is a fast-moving industry, it is essential to be able to effectively make changes and fast decisions. This could be difficult in a large organization like Brockhaus, but there are some disadvantages to having a separate e-business organization. With Duden New Media Brockhaus can, for example, not take leverage on the already established and trusted Brockhaus brand, take advantage of the infrastructure or the customer base to the same extent as the company could have. Therefore they miss the opportunity to utilization and scale effect, purchase leverage, and reduce purchasing costs as well as to have a shared customer service. The advantage with Duden New Media is that it provides a greater focus on the e-business related products as well as more flexibility and ability to make fast decisions regarding their e-business activities. A separate e-business organization could also promote the entrepreneurial culture and access to venture capital.

Brockhaus's physical encyclopedia is well-known and respected, but, they could deconstruct their value chain over the internet and separate the economics of things and economics of information. A digital encyclopedia costs as much as a physical one to produce, but the cost is not affected by how many people buy it. With a deconstruction, Brockhaus can pick out the online encyclopedia and compete only in one dimension with a larger-scale and a higher degree of specialization to gain competitive advantages.

Nevertheless, one issue with this strategy is that Brockhaus need to convince their customers of the quality of the online encyclopedia.

To meet the new demand from customers and the increased competition, Brockhaus needs to rethink their traditional organization and unbundle their core business. This is because the internet, as well as the IT advances, in general, have made it possible to decrease the transaction cost. The unbundling concept focuses on product innovation, infrastructure management, and customer relationship management. However, these three concepts will conflict with one another, and therefore, there will be a need to make trade-offs within economics, culture, and competition. For example, Brockhaus's online encyclopedia Xipolis grew slowly, but the content held the same quality as their physical encyclopedias. Brockhaus did not want to finance Xipolis with online advertisement and created a payment system for completed articles, while short versions were accessible for free. However, none of the payment methods were successful, and some users were not willing to pay for the content. This is one example of trade-offs Brockhaus did with Xipolis. Since it is not possible for a company to get it all, all companies need to make trade-offs and choose what is more important.

Within an organization that has both online and offline distribution channels, there can arise conflicts. In the channel conflict matrix presented by Jelassi, Enders, and Martínez-López (2014), Brockhaus is positioned in quadrant 3. Brockhaus's online distribution of encyclopedias is vital for the company, but there is a low risk that the physical distribution of encyclopedias will threaten it. Brockhaus's online distribution is a channel to reach a broader customer segment. The employees working with the physical encyclopedia may feel threatened by the online version, and it is thus important to raise this issue and reassure them that it is not a threat.

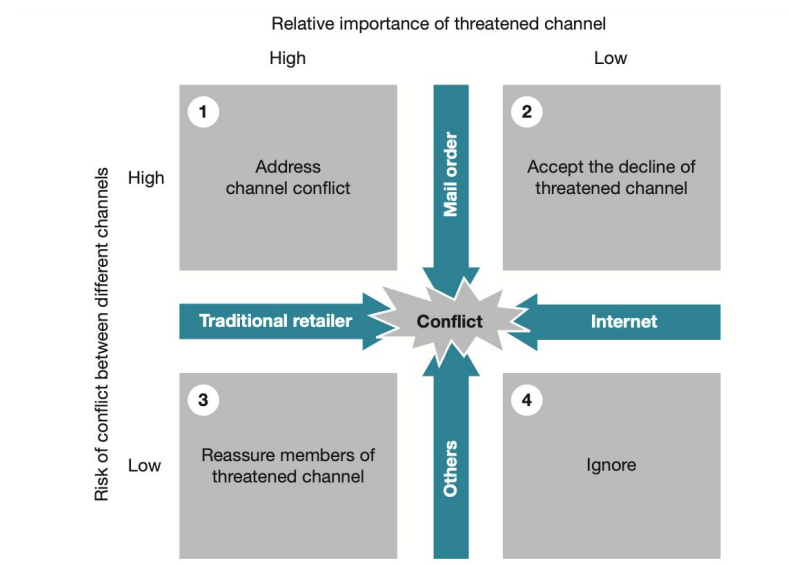


Figure 5. The Channel Conflict Matrix. Source: Jelassi, Enders and, Martínez-López (2014)

2.6. Choosing the appropriate e-business strategy for interacting with users

The internet has become an extremely interactive platform, thanks to its enormous number of users and the large variety of services coming up. In the beginning, it was just a static platform consisting of unidirectional information flow. Although, today it has become a place driven by its users where they can create content themselves. The users are today more involved in the process of content-making. Web 2.0 was a paradigm shift when supplier-generated-content was now supposed to be user-generated content (Jelassi, Enders and Martínez-López, 2014). This is where Brockhaus lost their track. Customers today have information and power that wasn't accessible in earlier stages of the internet and Web 1.0. In Web 2.0, most of the content and services are offered for free. Instead, revenue comes from advertisements. Brockhaus is determined not to let their encyclopedia be available free of charge except for the short and summarizing paragraphs which introduce the article. If they want to read the full article, they would have to pay for it, which does not seem to be sufficiently satisfactory for people to unlock the full articles.

3. Problem definition

Based on our analysis of the company, we have concluded that there are two major problems that the company needs to overcome to survive the new climate within the encyclopedia industry.

3.1. Brockhaus price performance relative to Wikipedia

Looking at the value curve presentation of Wikipedia and Brockhaus, one can see that Brockhaus severely underperforms Wikipedia in one dimension of key customer benefits, namely price. One symptom of this problem is that Brockhaus is losing a lot of money on its online encyclopedia, Xipolis.net. The cause of this problem is twofold. Firstly that Brockhaus is experiencing the Early-Movers disadvantage of market uncertainty. The company's online encyclopedia, Xipolis.net, relies on online payment. The market is not ready for this business model, as most users are not willing to pay for online content. Secondly, the company does not want to change their business model and finance their online articles through advertisement. There is resistance within the company to adapt to the needs and wants of the users and therefore fix the problem with their failing business model. The fact that Brockhaus underperforms Wikipedia with regards to price is a long term problem since it results in fewer users using and paying for Brockhaus's online encyclopedia, causing significant financial problems for the company.

3.2. Brockhaus's adaptability to the changes in the industry

Analyzing the actions of the company, i.e., Brockhaus, it becomes evident that the company has had a poor understanding of the change within the industry, and the pace of that change. The company has been ill-prepared to respond to the digitization of encyclopedias, the rise of online encyclopedias, and the fact that the sales numbers of physical encyclopedias have decreased for several years. The symptoms of this problem have been many. The company has focused too many resources on competing with Microsoft's Encarta and has neglected its online encyclopedia Xipolis.net. Looking at the design of Xipolis.net, it is evident that it is not adapted to an online format since the layout is the same as that of the physical encyclopedia. The cause of this problem is, first and foremost, the lack of relevant competence and

leadership within the company. The company is ill-prepared for the introduction of online encyclopedias since they do not have enough employees and leaders with relevant experience in online products and digitization. Although the company has employed two managers with relevant experience for their New Media division, the company hired the two managers as a reaction to the digitization of the encyclopedia market rather than taking action before the fact.

4. Alternative Solutions

Chapter 5 introduces several alternative solutions to the problems that the company is experiencing—listing the disadvantages and advantages of each solution.

4.1. Focus on the Education and Learning division

One alternative solution to the threat of Wikipedia is that Brockhaus moves resources and focus from their General Encyclopedias division and on to the company's Education and Learning division instead of trying to fight the success of Wikipedia. There are several advantages to this alternative. The textbook market is a very lucrative market that has not yet been affected by digitization to any larger extent (and will not be affected by it any time soon). By focusing and expanding their Education and Learning division, it can be financially beneficial for the company. Since the schoolbook industry will presumably be quite slow to digitize, the company can leverage their existing experience of the physical book and encyclopedia industry when expanding their Education and Learning division and prepare for digitization further down the road. We can assume that the morning-market education segment will be slow to digitize as this would mean that schools would need to provide students with tools to be able to access the digitized schoolbooks. The company could also start by digitizing the afternoon-market learning books (i.e., books and learning material intended for home studying), steadily developing and testing their digital and online content. The afternoon-market will most likely be quicker to digitize than the morning-market since it is more likely that students will have access to a laptop at home rather than at school. A further benefit of an increased focus on education and learning literature is the fact that Brockhaus's excellent reputation and well-known brand will help to gain larger market shares within the education and learning literature industry. Lastly, the company has good prerequisites to expand their business within this area since they have been able to secure the morning-market (i.e., books and material used in German schools).

The downsides of this solution are that there already exist other big players within the textbook industry, meaning that there exists a high degree of rivalry within the industry. The size of the market share that the company can acquire might be limited. The market is also strictly controlled by the government. Another downside is that the company's identity is very much tied to their encyclopedia. Furthermore, this alternative could result in considerable layoffs within the company. Significant changes within an organization are also unpredictable, can lead to turbulence within the company and may demand a significant amount of resources. Due to the reasons above, moving their primary focus from their encyclopedia to their Education and Learning division could be very detrimental to morale. While this alternative is in line with the company's objectives to avoid any further financial losses, the solution is drastic and may go against its vision.

4.2. Acquire new competency through hiring & training

A significant problem for Brockhaus is their lack of employees and managers within the company with relevant experience concerning digitization. A solution is to recruit new talent with this experience and talent that can help the company act instead of reacting.

The advantage of the solution is that the company will become better prepared for technological change within the encyclopedia industry. Hiring managers and employees with digitization experience can also improve how prepared the company's other divisions are for digitization. The other divisions can learn from the General Encyclopedias division. If the needed competence is obtained, the company would possibly also be in a better position to evaluate their current problems with their online encyclopedia and solve them.

There are, however, several disadvantages. One is that the recruitment of new talent is expensive. Another con is that the on-boarding process of the new talent could be time-consuming. Making room for new talent might also force a restructuring within Brockhaus, which requires a lot of resources and can lead to a temporary adjustment period. The restraints of this alternative are that human resources are scarce, meaning that there most likely is limited competence in digitization available on the market, and the company might not afford this recruitment.

Another option could be to educate and train existing employees at the company, therefore, avoiding having to make room for new talent or spend time on an on-boarding process. Training existing employees would however, also be time-consuming and cost money. Another disadvantage of training existing staff is that the employees haven't had any training about new technology previously, it is, therefore, difficult to predict how the training will be received. This alternative is in line with the company's objective as it tackles the problem of the company's poor understanding of the digitization of the encyclopedia industry.

4.3. Use advertisement as payment

One of the problems Brockhaus has come across is how they should get paid for their product. They tried several different payment methods such as credit cards, a subscription system, or credit points that could be used to access articles. However, most users were not willing to pay for online content at this time. One alternative that Brockhaus could consider would be to start using advertisements on their website to finance their product and, in that way, be able to release the articles for free. The pros that would come out of this would be that it is right in time. People expect online content to be for free and do not mind to see advertisements on the website. Meaning that Brockhaus could expect the number of visitors to their website to drastically increase if they went out with the information that the website could now be used for free in exchange for advertising now funding the project.

The downside of this alternative would be that the company would go against their principles. They have previously made it clear that they would never consider giving away their content for free since they believe that quality is expensive, and people should be willing to pay for that. The problem with this model that has been used is that they are making heavy losses of several million euros per year, which proves the model used does not work and that they, therefore, need to test something new to be able to make a profit again. Another downside with the advertisement model would be that they might lose the legitimacy that they have built up.

4. 4 Move focus segmentation of Xipolis.net

One alternative that could ensure more stable revenues for Brockhaus, while keeping their current payment/business model of Xipolis.net using no advertisement, is moving the focus segmentation of their online service to B2G. Targeting governmental institutions such as schools, universities, and libraries would be a great opportunity since these actors all need services that supply reliable and comprehensive information. Instead of targeting thousands of individuals within the B2C- segment (who is not willing to pay for the online- service), Brockhaus should prioritize the establishment of contracts with a fewer number of government-owned institutions. This would generate stable cash flow, both short- and long-term since the operations of these governmental institutions will most certainly continue for a long time. Therefore, this is one great advantage of adopting this alternative. Another advantage of this alternative is that establishment of contracts will enable Brockhaus to abandon the online- payment concept almost completely. The fact that Brockhaus has a well-known and highly respected brand is a crucial advantage and an essential competitive factor in initiating this kind of contract.

Disadvantages of shifting segmentation focus are related to the risks of it. First, losing one of their institutional customers decreases their income drastically, causing severe economic loss. Second, the risk of losing potential customers within the B2C- segment if the attitude towards online transaction changes or if a new online transaction method enters the market. Restraints of this alternative are that it presumes that government agencies are interested in and willing to negotiate about the services of the online encyclopedia. Since this alternative will promote more stable cash flows generated by Xipolis.net without changing their current payment/ business model, this alternative mirrors the objectives of Brockhaus.

4.5. Reorganize company towards online and e-business

One challenge Brockhaus has is that they are facing internal conflicts between their physical and digital products. A reason behind this could be that Brockhaus has, as mentioned in section 3.5 *E-business organization*, separated the e-business organization from the parent company. Consequences from the separation are that Duden New Media misses out on the opportunity to utilization, scale effect, purchasing leverage, and to reduce purchasing costs as well as to have a shared customer service with Brockhaus. If Brockhaus would change their organizational structure and integrate the e-business organization Duden New Media with the parent company, they would be able to leverage this.

Furthermore, the well-established Brockhaus brand could also be applied for their e-business activities, which increase the amount of trust put in it. However, if Brockhaus integrates Duden New Media, the flexibility and ability to make fast decisions regarding e-business might decrease since Brockhaus is a larger organization. Being able to make quick decisions is a vital competitive advantage since e-business is a fast-moving industry.

Integrating Duden New Media could also improve the on-going digitalization in Brockhaus since Duden New Media has more knowledge within the area. It could also be a solution to the internal conflict in the company between the employees working with the physical encyclopedia and the employees working with the online encyclopedia. If all employees understand that Brockhaus online distribution is a channel to reach a more extensive customer base, they will not consider it a threat and instead work better together.

5. Recommendation

Brockhaus is facing a large change in user culture. The introduction of online alternatives and a steady decrease in encyclopedia sales indicate a clear shift in the market. It appears clear that the disruption will eventually overtake Brockhaus unless they make a distinct restructure to face the new consumer needs.

In order to face these new challenges and meet the problems described in section 3, it is the author's opinion that the *migration* strategy described in section 2. 4.2 is the most appropriate one for Brockhaus. This is because we feel it is of great importance for Brockhaus to transition their primary business into the online arena, becoming more of a tech company, while maximizing the long-running competency they hold in-house. To achieve this sustainably, it will be important for Brockhaus to dedicate themselves to an almost complete transformation, while not executing the changes too fast. For this end, migration is the most appropriate option. More specifically, of the alternatives described in section 4, we recommend for Brockhaus to focus their efforts on the options described in *4.1 Focus on the education and learning division*, *4.2 Acquire new competency through hiring & training*, *4.5 Reorganize company towards online and e-business*.

Firstly, we believe that the Education and learning segment is a very attractive market. Brockhaus should focus their efforts on providing an online encyclopedia service to the Education and Learning market segment. Direct competition with Wikipedia will likely prove to be unsustainable, as Wikipedia reaches mainstream customer quality. Instead, by moving away from the private consumer market, they can build a niche B2G service. As explained in section 4.1, this could be financially beneficial for Brockhaus since education and learning is a lucrative market. However, this industry has a high degree of rivalry, and the government controls the industry. This is believed to be manageable with the well-established Brockhaus brand, and Brockhaus has already entered the afternoon-market and has recently gained a foothold in the morning-market. Hence, they have excellent opportunities to increase their market share of the morning-market segment. The education and learning market has many opportunities to become more digitized, and Brockhaus could become a market leader in this segment.

To meet the new challenges and shift of focus, our next recommendation is that Brockhaus should reorganize their organization. Today they have internal conflicts between their physical and digital products. Therefore we believe, as explained in 4.5, that Brockhaus should integrate their e-business organization Duden New Media into the parent company. Brockhaus could, by doing this, improve the on-going digitalization and leverage on the Brockhaus brand for all e-business activities as well as to solve the internal conflicts. The reorganization does however, imply that they need to improve the technical competence at the company, which is our third recommendation.

In order to meet the rising demand for digitized products, Brockhaus needs to recruit new talent or train existing employees. This will, as stated in section 4.2, prepare the company for future technical challenges. The competence is going to be needed both to focus on the Education and Learning division as well as for the reorganizing towards a more technology-centered company.

In the short term, Brockhaus will be facing a considerable adjustment period. Navigating the changes in the online market will be very challenging, and the sizable rebranding introduces additional challenges to management. Changes of this magnitude are likely unavoidable. If successful, this migration will allow Brockhaus to remain a strong actor in key markets in the long term.

6. References

Jelassi, T. Enders, A. Martínez-López, F.J. Strategies for e-Business creating value through electronic and mobile commerce. Pearson, Edinburgh, 2014.