Risks and Challenges for Retailers: The Value Chain Transformation.  
A European Perspective.  
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Abstract

Electronic commerce - especially online shopping - creates radical changes in the value chain of various businesses. These changes emerged not only because of the new technology but also because of the willingness of customers to use the Internet for commercial transactions. This paper describes intentions of households in the urban area of Vienna, Austria, to shop online. Additionally it identifies major reasons for the possible disintermediation of retailers.

Online Shopping in the Urban Area of Vienna

The Internet provides a very efficient and convenient way for shopping and selling for retailers as well as for customers. Therefore also in Europe the attention of more and more companies is drawn to online selling. But this development creates not only business opportunities but dangers as well, especially for retailers. Analyzing the ability of the Internet as new transaction medium for business should always include the fact that relative cost of a distribution channel grows, if a more direct connection - compared to the old channel - to the customer is established. The Internet is the most direct connection which can currently be provided, thus alternative channels might be replaced in future (Hansen, 1997).

One of the major advantages of online distribution is that producers and wholesalers may be able to gain the trade margin of eliminated middlemen (Brandtweiner and Greimel, 1998). Another argument is the reduction of personnel costs of distribution. Additional cost reduction can be possible through less selling and storage space (Hansen et al 1996).

Moreover certain prerequisites have to be met on the demand side as well. First of all we have to mention Internet access. This may sound trivial but it is not. In the United States the percentage of people owning personal computers and modems is twice as high than in central Europe. The reason lies in the history of telecommunication monopolies in many European countries, e.g. Germany and Austria. These monopolies led to respectively high charges for telecommunication services (Hansen, 1997).

By the end of 1997 the Austrian public telephone company has reduced the fees for online services. Therefore, we can expect an increased usage of the Internet due to lower telephone cost. The figures provided in Table 1 show the rising Internet use in the urban area of Vienna, based on a study completed at the Department of Management Information Systems of the Vienna University of Economics and Business Administration (Schuster and Sporn 1998). The survey is based on telephone interviews of 483 households from November to December 1997. Major objective of the study was to assess the market potential for grocery shopping via Internet in the urban area of Vienna. Additionally, it analyzed the acceptance of online shopping in the Vienna area.

<table>
<thead>
<tr>
<th>Internet Access</th>
<th>Percentage (n=483)</th>
</tr>
</thead>
<tbody>
<tr>
<td>existing</td>
<td>10,8%</td>
</tr>
<tr>
<td>definitely planned</td>
<td>4,6%</td>
</tr>
<tr>
<td>possibly planned</td>
<td>6,4%</td>
</tr>
<tr>
<td>not planned</td>
<td>74,3%</td>
</tr>
<tr>
<td>Internet unknown</td>
<td>3,9%</td>
</tr>
</tbody>
</table>

Table 1: Internet Access in the Urban Area of Vienna (Schuster and Sporn 1998)

Furthermore, the study shows us that the majority (65,4%) of the interviewees having Internet access use the Web at work. But home use of the Internet is increasing and currently holds at 46,2%. The intention to use online services depends strongly on the service in question (see Figure 1).
Already 17% of households in the Vienna urban area consider online shopping. The most likely products which are or would be bought via the Internet are compact discs, books, videos, and gifts. More expensive goods like hardware, software, sporting goods, and clothing are less likely to be ordered via the Internet (see Table 2). One explanation could be that Viennese households demand service and advice before buying these products (Schuster and Sporn 1998).

Books and CDs are obviously regarded as very suitable for online shopping by the Viennese households. The reason lies in the typical attributes of books which give them a great advantage in online selling compared to less standardizable products. Therefore, we will take a closer look at the trade margins and the value chain of the book industry.

**Disintermediation**

The general characteristics of products being easily sold online identified by Benjamin and Wigand (1995) are:

1. ease of description,
2. low asset specificity and
3. independence of a department store.

Any of these characteristics fit for books.

At present, the value chain of the book industry starts with the author, takes its way to the publisher, from the publisher to the wholesaler, from there to the retailer and finally it reaches the consumer, who can either be a person, a company or a library (Hansen, 1996).

By using the Internet as a distribution channel there is theoretically no need for the steps between the consumer and the producer, i.e. in our case the author (Benjamin and Wigand, 1995). The author writes and layouts the book on his personal computer and offers it via the Internet. Customers who use the web for shopping simply order and pay with a mouseclick. After processing the order and payment the author transfers the book (e.g. as an electronic document via the Web) to the customer (Brandtweiner and Drimmel, 1998). This procedure is not only possible theoretically because of the Internet, but also because almost the whole production of the book, e.g. typing and layouting, has shifted from the publisher to the author. This shift was made possible by modern word processing and/or desktop publishing programs (Hansen, 1997).

Is such a scenario likely to become reality soon or still science fiction? Let’s take a closer look at the German book industry which has implemented an industry information system that supports communication as well as business transactions between publishers, wholesalers, and retailers. Libraries have online access but they are only entitled to use the industry information system for information retrieval. If all parties including consumers (persons, companies, and libraries), can use the system it develops into an electronic market (Hansen, 1997; Brandtweiner and Greimel, 1998). If we imagine a book with a retail price of $ 100, the author price would be $ 10 (see Figure 2).
The question is: Who will buy from retailers in such a scenario? Probably nobody since the retailer has to have a higher price than the wholesaler or publisher, even when we still use paper copies of the books. If we consider the possibility of an electronic book version that could be bought directly from the author all intermediaries will probably be eliminated (Brandtweiner and Greimel, 1998).

Certainly retailers, wholesalers, and publishers will try to avoid any of the scenarios described in Figure 2. Authors on the contrary have a great incentive to do so, because they would be able to sell their books online at a much lower price. The number of sold copies of the book will probably increase because they are cheaper now. Additionally, the author doesn’t have not to face a reduction of the price per book. Thus the author’s profits will increase rapidly.

But why should the producer, i.e. the author grant the buyer the full 90% price advantage? Obviously, there is no reason to do so. Customers would already appreciate if they pay 10 to 20% off the current price. Therefore, producers who engage in electronic commerce before their competitors are likely to achieve high profits by eliminating certain elements of the value chain and by not passing over the full price advantage to the customers (Benjamin and Wigand, 1995). The price advantage will only be passed over in case of a polytopic market structure, i.e. many demanders and many suppliers where suppliers due to competition are forced to pass over the full price advantage to the consumers (Bauer and Brandtweiner, 1997).

**Conclusions**

As this paper shows disintermediation is one of the great risks for businesses created by the commercial use of the Internet. But not all businesses are suitable for online shopping or challenged by disintermediation. Whether there is a risk of disintermediation depends on the specific industry and the product characteristics. Additionally, demographics of a certain region play an important role. In the urban area of Vienna the demographics are not so bad for online shopping, because approximately half of the interviewed households meet the minimum requirements (intention to shop online and intention to buy the necessary computer equipment) which are necessary for online shopping (Schuster and Sporn 1998). So even if the line of business is endangered because of disintermediation in principle, there must not necessarily be a current danger because there remains the possibility that the prospective customers do not accept the new technology. But of course this will change sooner or later. Therefore, some experience with the new medium is a must for successful business in future. Furthermore, I think that businesses have to find creative solutions how to deal with the spreading commercial use of the Internet.

**References**


