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The Development of Business Models for Internet Portals: An Explorative Investigation of Revenue Streams

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ABSTRACT

While companies in traditional industries generate their revenue directly in exchange for products they sell to their customers, the situation for e-business companies is more complex. Typically, they rely on a number of different, direct and indirect revenue streams. This phenomenon is potentially new challenge for the management of the companies. The first step of analyzing this problem is to gain a better understanding of the actual revenue streams. Therefore, this paper examines the development of revenue streams of Internet portal operators for the period from 1997 to 2004 and identifies general trends and implications.

INTRODUCTION

Many companies with an Internet-based business model can look back on several years of business activity characterized by constant ups and downs. The biggest companies, which generate billions in revenues each year, have clearly grown out of their initial status of start-up businesses. However, they are still not able to rely on stable business models, but have to adjust to ever-changing market trends.

Revenue streams represent one major aspect of a business model because they form the basis for a company's long-term success. In traditional industries, a company produces goods or services and sells these outputs to customers who recompense these monetarily. Many e-business companies find themselves in a different situation. Typically, companies in this new sector produce complex and integrated bundles of services. In most cases, these services do not generate direct revenue from its users, but rely on various direct and indirect revenue streams that are more or less related to the company's core product.

This phenomenon is potentially a new challenge for the management of such companies. It is plausible to assume that it influences strategic aspects (e. g. the issue of the companies core competencies and activities), control aspects (e. g. the issue of cost of complexity of multi revenue streams), and accounting aspects (e. g. the issue of performance measurement in such an environment).

However, a prerequisite for such analyses and discussion is a deeper understanding of the business models and revenue streams in reality. Therefore, this paper will portray the actual development of portal operators' revenue streams. The decision to focus on this type of business was based on the important fact that these companies usually rely on an extraordinarily high number of different revenue streams.

The following section provides an overview of existing research on similar questions. Section three explains the basic characteristics and revenue streams of the portal business model. In section four, an outline of the research approach and methodology of the analysis will be provided. Section five presents and discusses the results. In section six, conclusions from the results will be drawn and questions for further research will be raised.

RELATED WORK

The phenomenon of multi revenue streaming of Internet portal operators has been discussed very rarely. Typically, potential revenue sources are named (e. g. Turban, King, Lee & Viehland, 2004; Wirtz 2001), but their practical relevance and combination is not discussed. Since research in this specific area is very limited, findings from research about revenues of online magazines will be presented because there are major similarities between these businesses.

An empirical investigation of revenue streams of digital content providers is provided by Gallaugher, Auger, and BarNir (2003). They examine the relationship between seven revenue streams and managers' perceptual performance of their online efforts in the magazine publishing industry. Their research is based on a sample of 100 magazine publishing houses in the north-eastern US. The study shows that advertising and orders for print subscriptions are the dominant revenue sources for this sector. A positive influence on revenue could be detected for advertisement, online subscription fees, online ordering of print publications, and revenue sharing with other online services (syndication). The sale of non-content items did not show any significant influence on the performance. Affiliate programs and per-item fees even showed a negative impact on performance.

Ihlströhm and Palmer (2002) analyse the possibilities of revenue generation for online services of local newspapers. Their analysis is based on interviews with nine managers of local newspapers and 153 readers. Ihlströhm and Palmer conclude that a successful business model for digital news products includes content-based revenue generation. However, they see advertisement as the most important revenue source for this segment.

Picard (2000) discusses the evolution of business models of online content services. He finds that advertising is the dominant revenue source for portals. Pay-per-view revenues are estimated to be limited for general products, but to have a growth potential in special areas (e. g. educational or unique entertainment products).

Chyi and Sylvie (2000) analyse the situation of U. S. online newspapers based on 14 in-depth interviews with general managers. They identify advertising as the primary revenue source. The majority of the interviewed managers does not consider subscription as a promising revenue option, whereas e-commerce is seen a potential revenue source for the future.

CHARACTERISTICS AND REVENUE SOURCES OF INTERNET PORTALS

Chaffey (2004) defines a portal as "a web site that acts as a gateway to information and services available on the Internet by providing search engines, directories and other services such as personalised news or free e-mail". We can distinguish between general (horizontal) and theme- or area-specific (vertical) portals. Additionally, portals can be divided into

B2C and B2B portals according to their target group. This paper will only look at horizontal B2C portals.

Generally speaking, portals represent a starting point for an Internet search. When these portals evolved from catalogues into a multifunctional service, this understanding changed dramatically: multifunctional portals do no longer solely serve as a starting point for a surf session, and thus help the users find the websites they are looking for, but, by offering a wide variety of services, they want the user to look at their website for an extended period of time. George Bell, Excite's CEO, emphasizes this new development: "We used to think that the faster we pointed people to other sites, the better we were doing things. Now our strategy is something like a walled garden. There should be plenty of ways to get out, but there should also plenty of reasons of stay in" (Chandrasekaran, 1998).

Portals were one of the first types of Internet-based business models that got their revenues solely from advertising (Phillips, 2003). With the extension of services, however, the revenue stream changed as well. From a managerial perspective, a main characteristic which separates portal operators from companies in traditional industries is that these companies can generate multiple revenue streams from just one product (the portal). In traditional industries, only mix-financed media companies are able to achieve this. They get revenues from selling contents as well as advertising space.

Portal operators can rely on a wider variety of revenue streams. It can be distinguished between the following categories (Turban et al., 2004; Wirtz, 2001):

1. Direct Revenues:
   a. *Paid Services*: Revenues from sales of digital services
   b. *Acces*: Revenues from Internet service provider (ISP) fees
2. Indirect Revenues:
   a. *E-Commerce*: Transaction fees from third party e-commerce sales
   b. *Advertising*: Revenues from third parties for placing banner advertisements and referring customers to other web sites
   c. *Listing*: Charging third parties for including them in search results
   d. *Licensing*: Selling licence for developed technologies to other companies

Direct revenues are basically the fees customers pay the operating company for a service. Indirect revenues, on the other hand, come from a third party which uses the portal to provide some kind of additional service that is somehow connected to the operation of the portal.

It is important to acknowledge that there is a close connection between the revenue streams and the various services offered by a portal. The degree of popularity and the image of a particular brand often set the foundation for a success on the market. As a result, it is often complicated to break off one particular function without reducing the popularity of the whole product disproportionately. For instance, if a portal operator were to eliminate the free-mail service, not only would the revenues from this particular area decrease, but, based on the sinking popularity, we could also expect a reduced revenue stream for the whole product.

RESEARCH APPROACH

As shown before, researchers have neither discussed revenue streams of e-business companies in general, nor have they focused on portal operators specifically. Therefore, it was opted for an explorative approach to identify basic connections in the area under investigation (Bortz & Döring, 2003, p. 358).

The selection of companies that were included in the analysis is based on the following criteria:

1. The company has to run a web site that can be classified as horizontal B2C portal (as defined above).
2. In the investigated language areas, the portals must belong to the ten most frequently used offers. This criterion ensures that the most important companies of this industry are included.

In order to collect the data, a financial statement analysis is used. The data collection includes information from annual reports, SEC fillings, and IPO prospectuses. The individual numbers are either derived directly from the statement of operations and its annotations or from the segment reporting. The main advantage of this approach is the data's public availability which allows for objectivity and replication of the investigation. However, it is a disadvantage that the level of details is limited and that certain businesses could not be taken into consideration. Hence, this forms yet another selection criterion:

3. The financial statements published by the business operators need to provide sufficiently detailed information on the investigated research question.

On the one hand, this criterion excludes businesses not listed on the stock exchange because these businesses are not forced to make their records public; thus the data is not readily available. On the other hand, this criterion excludes those portals belonging to business corporations which do not announce detailed information on the action of one segment (MSN for instance).

In essence, the chosen sample is best described as a non-representative "convenience sampling" (Bryman & Bell, 2003, pp. 104/105). Yet, this sample is in line with the general aim of an explorative investigation.

The period under consideration includes the years 1997 to until 2004. For the year 2004, data from the first and second quarter of the year were used to project the year-total figures. The time of investigation is August 2004.

The businesses under investigation chose different modes of disclosing their revenue sources. Therefore, it is indispensable to categorize the varying revenue sources in order to evaluate them based on a uniform schema. The revenue categories that were identified before (see section 3) will be used. The category *Access* plays a particular role because this specific form of revenue is only remotely connected with the portal business. In this case, the portal is mainly used to communicate the businesses' brand name as an ISP and to increase customer loyalty. Therefore, two types of business will be investigated separately: those with access revenues and those without. In this sample, six companies fall into the first group, while the other seven belong to the second group. Figure 1 shows the analyzed companies.

RESULTS AND DISCUSSION

According to the selection criteria, 13 businesses were included in this study. In 2003, the businesses' revenues were between 40 million and 1.6 billion US$.

Figure 1. Analyzed Companies

Portal operators with access revenues (group 1)	Portal operators without access revenues (group 2)
Freenet AG (Germany)	Ask Jeeves Inc. (United States)
Lycos Europe N. V. (The Netherlands)	Google Inc. (United States)
Terra Lycos S. A. (Spain)	Looksmart Inc. (United States)
Tiscali Group (Italy)	Sina Corporation (China)
Wanadoo (France)	Sohu.com Inc. (China)
Yahoo Inc. (United States)	UOL S. A. (Brazil)
	Web.de AG (Germany)

Basically, the analysis affirmed the hypothesis that portals generate revenue from different sources. As seen in figure 2, the number of revenue sources increased from 2.67 to 3.45 in the time of investigation. Originally, businesses with access revenues (group 1) used a larger number of revenue sources. However, in the last couple of years, the two aforementioned categories converged to 3.5 revenue streams on average. This development indicates that businesses without access revenues (group 2) do not necessarily use fewer revenue sources but that they chose others. The standard deviations for 2004 are 0.4 for the first group, 0.82 for the second group, and 0.67 for the total sample.

The absolute values of the revenues emphasize the tremendous development of the sector (see figure 3). Between 1997 and 2004, the annual average growth in revenue was 70.53%. When looking at the absolute values in figure 3, the collapse of the sector due to the dot.com crisis in 2001 is clearly visible. After an increasing growth in 2003, the decreasing growth in 2004 might be interpreted as evidence that the market might reach its maximum potential in a few years from now. As expected, the category *advertising* turned out to be the most important revenue source. *Listing* can be understood as a new form of advertising and needs to be evaluated in close connection with the *advertising* category.

In the following, the composition of the businesses' revenue streams will be examined in detail. Therefore, the aforementioned two groups of businesses will be distinguished. Figure 4 and 5 portray the mean percentage of revenue streams, i.e. the average value of the relative size of a company's revenue stream. This approach purposely neglects the absolute value of each business because the difference in size of the businesses would distort the interpretation. This approach is in line with the general aim of the study because it does not focus mainly on industry trends, but rather aims to analyze the typically revenue mix of an individual company.

For businesses with revenues from access, the revenue structures were more or less stable during time of investigation. The proportion of advertising revenues tends to decrease and is being replaced by access revenues. This is particularly astonishing because, on average, the absolute value of revenues from advertising increased annually by 67.03%. This development could signify that portal operators and ISPs's business models are converging, or, rather, that portal operators are starting to get more involved in the access business with the help of acquisition. Revenue from *paid services* has remained steady at about 8%. Because the revenues shares generated by e-commerce increased temporarily, many people had hoped for the development of a new means for revenue. The decrease of this proportion below 1% in 2004 shows that these hopes remain unfulfilled.

Due to the small sample size, a significant spreading of the single values can be observed. The most stable revenue stream is access with a coefficient of variance (cv) of 0.64 for 2004, followed by advertising with 0.81. The highest spreading is observed for e-commerce revenues with a cv of 2.00.

A different development can be found for companies without revenues from access. Indirect revenues are still the major component. However, classical banner ads are no longer the most important source for revenues: whereas they generated close to 100% of all revenues in 1997, their proportion decreased to a mere 20% in 2004. Even if we take absolute numbers into account, it is obvious that the importance of this revenue stream is unstable. On the one hand, in 2001 an 2002, the absolute numbers decreased. In 2003 and 2004, on the other hand, these figures increased by about 40%. This cyclical development is fairly typical for the advertising market. One of the major reasons for the sinking importance of classic ads is the fact that listing has become more popular. In 2000, listing only played a minor role. In 2004, however, listing has developed into the major revenue stream and now generates 46.56% of all revenues. The absolute number attests to the fact that we can expect further increases: even in 2004, the absolute numbers still increase by 100% per year. It is important to acknowledge that, if we combine these two revenue streams, advertising has constantly been the most important revenue source (70%).

Figure 2. Average Number of Revenue Streams

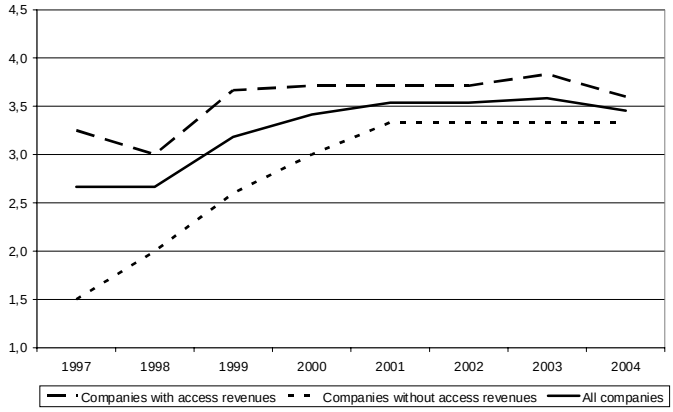


Figure 3. Average Absolute Value of Revenue Streams

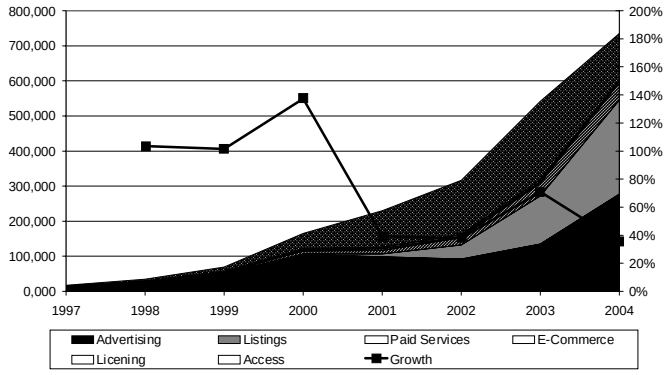
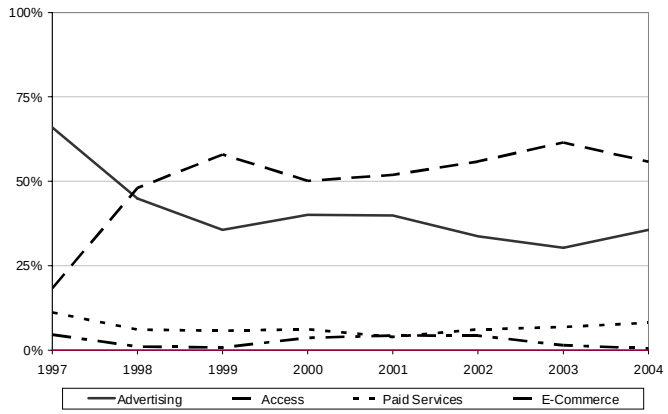


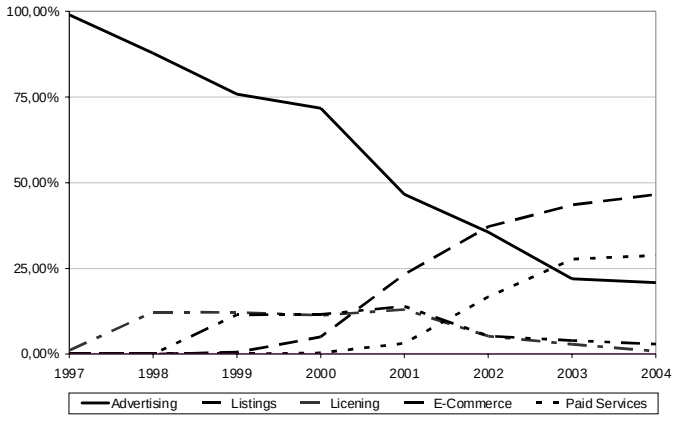
Figure 4. Mean Percentage of Revenue Streams in Companies with Revenues from Access



Even for this group, e-commerce revenues did only represent a short-lived trend. The proportion of e-commerce revenues has constantly decreased from an all-time high in 2001 (13.96%) to less than 3% in 2004. The absolute numbers confirm this observation: the revenues have declined by 50% between 2001 and 2004 and are now at an average level of less than 1 million US$ per company.

A similar trend can be found with regard to licensing. Since 2001, the proportional revenues from licensing have constantly decreased to

Figure 5. Mean Percentage of Revenue Streams in Companies without Revenues from Access



about 1% in 2004. However, if we look at the absolute numbers, we can observe an important difference to e-commerce: the licensing revenues have remained at a fairly constant level since 2000. On average, a company gets between 3 million US$ and 5 million US$ from licensing per year. As a result, this revenue stream represents a solid basis for portal operators. The growth potential, however, is only limited, especially if we compare it to other types of revenue streams.

Paid services, on the other hand, represent the main pillar for an increase in revenues. While this direct revenue was nearly insignificant in 2000 (less than 1% total revenues), it has risen to about 30% by 2003. The absolute numbers confirm this positive image. The average company gets about 17 million US$ per year from this type of revenue. In 2004, this equaled an increase of 58.73%.

The revenue streams of this group show a high spreading as well. For 2004, the lowest cv can be observed for advertising with 0.84, while e-commerce revenues have a cv of 1.57.

CONCLUSION

The analysis of internet portal operators' revenue streams has shown that business models are constantly changing in this industry; a development towards one optimal combination of revenues cannot be found yet. The average number of revenue streams seems to level off at 3.5.

Companies that do not only function as portal operators, but also as ISPs, are significantly different from those companies that do not offer these additional services. For the former group, the combination of revenue streams is much more stable. Most of them tend to develop from a portal operator with ISP as secondary business to a business model that combines both areas equally. Companies that do not do business as an ISP are much more diverse and are characterized by more dynamic revenue streams. Classical advertising is often replaced by listings. Revenues from e-commerce seem to be of minor importance. Direct revenues from paid services, on the other hand, are likely to become more important in the future. Technology licensing will continue to be a stable source of income, but there is little room for growth.

As pointed out before, this paper is only a first step towards analyzing the phenomenon of multiple revenue streams.

Further research needs to be done in two directions. On the one hand the approach of the paper should be continued. The analysis should be extended to a broader range of companies. On the other hand, this mainly descriptive work has to be supplemented by a discussion of the managerial implications of the observations. On the strategic level, under consideration of the theory of core competencies, it might be discussed wheather such multifunctional business models can be successful on a long term basis at all. On a more operational level, it would be important to find out whether the rising administrative complexity caused by a high number of revenue streams leads to disproportionate higher costs. Furthermore, questions of revenue accounting and performance measurement for such business models need to be discussed. One of the major goals of further conceptual research is to develop an instrument that supports the management to optimize the mix of revenue streams.

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