

# The Internet market in Sweden



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## Summary

### 1 Introduction

Öhrlings Coopers & Lybrand in Sweden (ÖC&L) has produced this study of the Internet market on behalf of the Swedish National Post and Telecom Agency (PTS). The purpose of the assignment has been to describe and analyse the Internet market and the development of the Internet in Sweden. The study is based on interviews with 25 companies. Apart from these interviews, extensive background material has been collected, mainly of material on the Web. In addition, ÖC&L has carried out a consumer survey of Internet use in Sweden.

The Internet has been available in Sweden for more than a decade, but only in the past 2-3 years has its use really taken off. In the space of ten years or so, the Internet has made an impact among users that it took other media, such as radio and television, several decades to achieve. Internet development is still in an expansive phase and all assessments made indicate that development will continue to be strong. The potential of the Internet has so far only been used to a limited extent, and the main areas of use have up to now been communication and information gathering.

### 2 The Swedish Internet market

#### The Internet's value chain



Source: Öhrlings Coopers & Lybrand

#### 2.1 Customer equipment

A personal computer is the main tool for most users to get access to the Internet. In 1997 there were 35.3 computers per 100 people in Sweden, an increase of 6 percentage points compared to 1996. New tax rules, where companies have the chance to provide their employees with home computers exempt from tax on benefit, have meant that sales of personal computers have grown considerably and the effect of this is expected to last for at least another year or so.

#### 2.2 Communication equipment

Connecting a computer to the Internet requires both communication equipment and access to an Internet Service Provider (ISP). For most users this product category consists of various types of modems, and usually a connection via a fixed telecommunications network. As regards private use, modems are very widespread and without doubt the most common way of reaching the Internet from the home. The main reason for the wide distribution is the low cost.



### 2.3 Access

At present there are several different ways of accessing the Internet. Dial-up access via modem is absolutely the most common way for private users and small companies, while large companies often have a leased line. By means of a modem with higher transfer capacity and more favourable terms for an ISDN connection, private users now have Internet access with a capacity that is sufficient in most cases. Both among users and industry experts, however, opinions vary widely as to the significance of bandwidth for Internet development. Available bandwidth steers the development of services, which in turn steers customers' expectations of other services. Digital television has great potential and the one who can be first to offer good services will hold a favourable position. Cable modems may have some success, but not as much as for example in the US and UK. ADSL/xDSL will probably be the technology that will dominate in the long run as far as lines to households and small and medium-sized companies are concerned, provided that the price becomes attractive.

#### **Market development**

The subscriber growth in Sweden has been exponential in the past three years. The total number of users of dial-up access has increased from 54,000 subscribers at year-end 1995 to almost 950,000 in mid 1998. Our assessment is that strong growth will continue, though with a lower net growth rate than up to now. We estimate that the number of subscribers with dial-up connections will be about 1,3 million at year-end 1998 and about 1,85 million subscribers at the turn of the millennium.

We estimate that the revenues from dial-up access to the Internet<sup>1</sup> were SEK 350 million in 1996, but had increased to SEK 920 million in 1997. In 1998 and 1999 we estimate that the total revenues for this market will be SEK 1,790 million and SEK 2,890 million respectively<sup>2</sup>. On the basis of this trend the revenues from dial-up access to Internet will be over 10% of the total revenues from the market for fixed telephony<sup>3</sup>.

Telia, Tele2, Telenordia/Algonet, Sonera (formerly Telecom Finland), WorldCom and Global One are examples of major operators who provide Internet access. Of these, however, only Telia, Tele2 and Telenordia at present offer dial-up Internet access to the private segment. In addition there are at least a hundred retailers of Internet connections in Sweden, including companies such as BIP (Bottnia Internet Provider), Utfors/Spray and SBBS2, that all offer free access to the Internet.

ÖC&L's assessment is that Telia and Tele2 are of equal size in terms of market share for dial-up access. Both companies held a market share of 33% in mid-1998, while Telenordia had an 18% share. We estimate that they will maintain their strong market

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<sup>1</sup> I.e. revenues from connection, subscription and traffic

<sup>2</sup> Excluding any revenues from interconnection

<sup>3</sup> This assumes that the revenues from the fixed telephony market increase to the corresponding extent as during the years 1994-1997, see Stelacon's report for PTS "Marknaden för telekommunikation i Sverige, 1997" (The Telecommunications Market in Sweden, 1997)



positions for dial-up Internet access for the next few years. In the longer term we believe that the market concentration will increase, when smaller ISPs will find it difficult to survive only offering Internet connection.

### **Price development**

There has been a considerable fall in price for Internet subscriptions as the operators compete to attract new subscribers. Our estimate is that the average monthly cost of a subscription for dial-up access has been reduced by 50 % in the last two years. In the USA a so-called flat rate is used, that is the cost to the customer is not affected by how long he/she is connected to the Internet. The break-even point for when the present price model in the USA is more advantageous for the private subscriber than the Swedish time-related price model is 20 hours per month. For the corporate subscriber the corresponding level is 10 hours. From this it can be concluded that the structure and the charge level in Sweden is more advantageous for the private user, who ÖC&L estimates is connected for 12 hours on average, while the opposite applies to the corporate user, who ÖC&L estimates is connected for 20 hours per month (dial-up access).

ÖC&L's assessment is that the traditional minute rates for the Internet will be replaced by payment for services used. One scenario for the future is that many companies will pay for a certain service level and per megabyte, while a considerable proportion of the private segment will be offered Internet access without charge in exchange for using a certain start page on the World Wide Web.

## **2.4 The Internet**

The Internet consists of the packet switched network that uses IP (Internet Protocol) for traffic. In this category one finds the traditional telecom operators that offer various types of access and Internet services to corporate and private users. Our assessment is that future IP-based services, which e.g. integrate speech and data, will have a great impact in the longer term in the entire telecoms industry. IP-based networks have a different cost structure than the public circuit-switched network, and offer major opportunities to develop applications for the future. For both traditional telecom operators and equipment suppliers, considerable investments in development of IP-based services will be necessary for long-term competitiveness. For Internet telephony in its simplest form our assessment is that this service will only have a market in the next 3-5 years. When the margin for arbitrage disappears as accounting rates and retail prices in the public telecom network are drastically reduced, the cost advantage of this service will disappear. In the future, packaged value-added services over IP-based networks will play a significant role in the telecoms market.

## **2.5 Web sites, services and products**

A company's presence on the Internet consists of its Web site. This includes both the infrastructure itself for enabling the Internet presence, i.e. servers, software (e.g. Web server software) and networks etc, as well as graphic design and any interface with other systems. The Web site is a prerequisite that enables the company to offer its

services and products over the Internet. As the Internet has grown, the number of Web sites has increased dramatically at the same time as the design of the sites tends to be increasingly extensive and sophisticated.

The service/product category refers to all the services and products offered by Internet as a common sales channel. This category includes companies from more or less all industries. For companies in the short term the Internet means a possible competitive advantage. In the long run the development provides opportunities for increased cost-efficiency through reduced transaction costs and increasing economies of scale.

The sale of products and services via the Internet is, however, still a relatively new and immature concept. Many Web shops do not offer more than a catalogue on the Internet, where the customer can fill out an order form and send it electronically to the supplier. A great strength of the Internet is its quality of being an excellent medium for presenting large amounts of information in a clear and interactive way. Even if the sales of relatively simple products such as food will increase, in our opinion mainly financial services and so-called information-rich products will be traded on the Internet. Books, music, computers, travel and cars are examples of information-rich products, i.e. products that require facts, news, knowledge, wisdom and advice.

### **3 Use of the Internet**

Use of the Internet has developed extremely rapidly in the past two years. Our recently completed survey shows that 46% of the Swedish population between the ages of 18-74 stated that they have access to the Internet. 40% stated that they use the Internet, which means that over 2.4 million people between the ages of 18-74 use the Internet for some purpose in the home and/or at work.

There is a certain geographical difference in the availability of the Internet. 65% of the Internet users living in urban areas state that they have access to the Internet at work and 63% at home. The corresponding percentage of those who use the Internet and live in rural areas is 53% at work and 71% at home<sup>4</sup>. Consequently there is a higher proportion of those who use the Internet in urban areas who have access to it at work, while the percentage who have access to it at home is higher in rural areas.

26% of those who use the Internet at *home* state that they use it daily. Of those who have access to and use the Internet at *work* 43% state that they use it daily.

In our study we have also investigated both private users' present areas of use and the services that the users believe that they want to use more in future. This comparison gave the following results.

- 4% use the Internet for Internet telephony while as many as 58 % say they want to use Internet telephony in the future.

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<sup>4</sup> By urban area is meant Stockholm, Gothenburg and Malmö. By rural area is meant sparsely populated areas and communities with a population of less than 200.



- About 20 % state that at present they use banking services and pay bills over the Internet, while about 70 % say they want to use these services on the Internet in the future.
- 6% state that they trade in securities/shares at present, while almost half of the users state that they are interested in doing this in the future.
- 18% state that they use the Internet for ordering goods, such as books and CDs, but over 70% wish to do this in the future.
- 8% state that they order food over the Internet, but also in this case more than 70% wish to do this in the future.
- 20% state that they order/book tickets via the Internet, but almost nine out of ten say they want to use the Internet for this in the future.

These figures indicate the considerable market that is opening up and has opened up for companies that can make attractive offers to customers over the Internet. There are a lot of different types of goods and products that have a good chance of making a major impact over the Internet.

### 3.1 The future significance of the Internet

As part of the survey we also put questions to users about the future significance of the Internet, and what they feel are the greatest obstacles to development.

- A majority of users (55%) did not think that present prices for subscriptions were any obstacle at all to use. 7% regard this as a very great obstacle.
- As regards security, 36% believe that this is not an obstacle to use. 10% regard this as a very great obstacle.

Internet users do not seem to see any obvious obstacles to increased use. Nor were there any dramatic differences in the attitude to obstacles as regards sex, geography, demography or level of education. In our opinion it is, therefore, more important to overcome the obstacles felt by non-users than to alleviate the obviously modest obstacles felt by today's users.

As regards the future significance of the Internet the following was noted:

- 96% of Internet users believe that the Internet will have a fairly great or very great significance for economic and social development in the future. As many as 53 % believed that the Internet will play a very great role.
- Among the non-users of the Internet, 84% believed that the Internet will have fairly or very great significance for economic and social development. 44% believe that the significance will be very great.

Of Internet users, over 80% believe that the Internet will play a very great role for the individual in the future. The survey on Internet use gives several interesting indications. Among other things, it shows an expected increase in use of services over the Internet, such as transaction services, trade and communication. It also shows the considerable importance for future economic and social development that both non-users and users attribute to the Internet. The obstacles that many industry experts are



emphasising do not seem to be regarded by today's users as a major impediment to increased use.

Use of the Internet will continue to increase rapidly in the next few years. The traditional areas of use, i.e. e-mail, information seeking and surfing as pure entertainment will continue to be important, but we will see a significant increase in the use of transaction services, such as banking and paying bills etc. We will probably see a strong increase in commerce over the Internet. We do not believe, however, that trade over the Internet will fully take off before the turn of the millennium. For companies it is a matter of understanding the new business logic and of creating services over the Internet that generate real added value and customer benefit for the users.

Level of penetration and use of the Internet is already high in Sweden, and there is little to contradict that expansion will continue to be strong. The Internet has the potential of becoming available to everyone and as natural a part of life as the telephone and television are today. However, it is essential that the right conditions are created through increased education, both at school and in working life, so that everyone will have a good chance of taking an active role on the Internet and in its future influence on society.