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Univ.-Prof. Dr. Wolfgang Fritz

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## **Electronic Commerce:**

### **What is Different in Germany?**

**Keynote Address, COTIM'99, Providence, R.I., USA**

**Sept. 26, 1999**

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#### **Introduction**

According to a widespread opinion, Germany is lagging behind. Many people in- and outside Germany believe that the Germans slumber through some of the most important economic trends and technological developments, especially at the incipient stages. For example Coke, color television, and computers were not invented there, and Germans often regarded words like iMac or E-commerce as slips of the pen, or the term Internet simply as an abbreviation of the word „international“.

But does this picture accurately portray today's reality of the Internet and E-commerce? In the following, I will present an outline of the current situation in Germany and Europe and of some important changes that can be expected for the future.

This will include a view on

1. the **general importance** of Germany as a market for goods sold online,
2. an examination of the **demand side** as well as the **supply side** of E-commerce transactions, and
3. of the **differences** that exist between Germany and other European countries and especially between Germany and the United States.

### **Electronic Commerce in Germany**

According to studies conducted by Forrester Research and IDC, the **total sales revenues** from E-commerce transactions on the Web should rise by the year 2002 to more than \$ 500 billion worldwide. This would include \$ 108 billion in the U.S., and 20 billion in Germany.

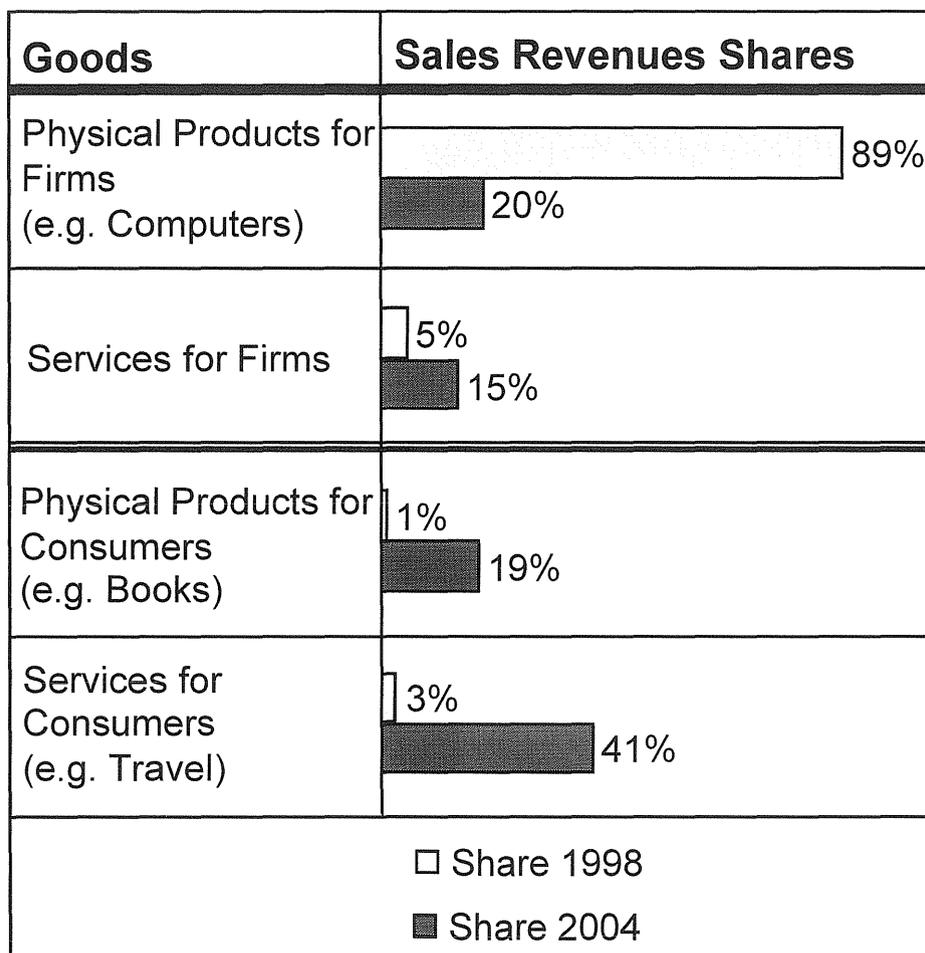
Even within the next two years, **Germany** will probably become the largest and **most important market** for E-commerce businesses in Europe. Germany's share of the European E-commerce sales revenues will be 25 %, followed by the shares of Great Britain (20 %), France (13 %), and Scandinavia (10 %).

The **business-to-business area** is of most importance for E-commerce in Germany. The share of the business-to-business sales revenues is nearly twice the amount of the business-to-consumer sector (65 % vs. 35 %).

Looking at the various branches of business, wholesaling and retailing account for 50 % of the sales revenues, other services 10 %, and the production sector 30 %.

For the future, a higher significance of the **business-to-consumer area** is predicted for E-commerce in Europe. If studies by Frost & Sullivan are correct, one can expect that by the year 2004 the sales revenues from goods sold online to the consumer will exceed those from goods sold to firms (Fig. 1).

**Figure 1: E-Commerce Shares in Europe 1998 and 2004**



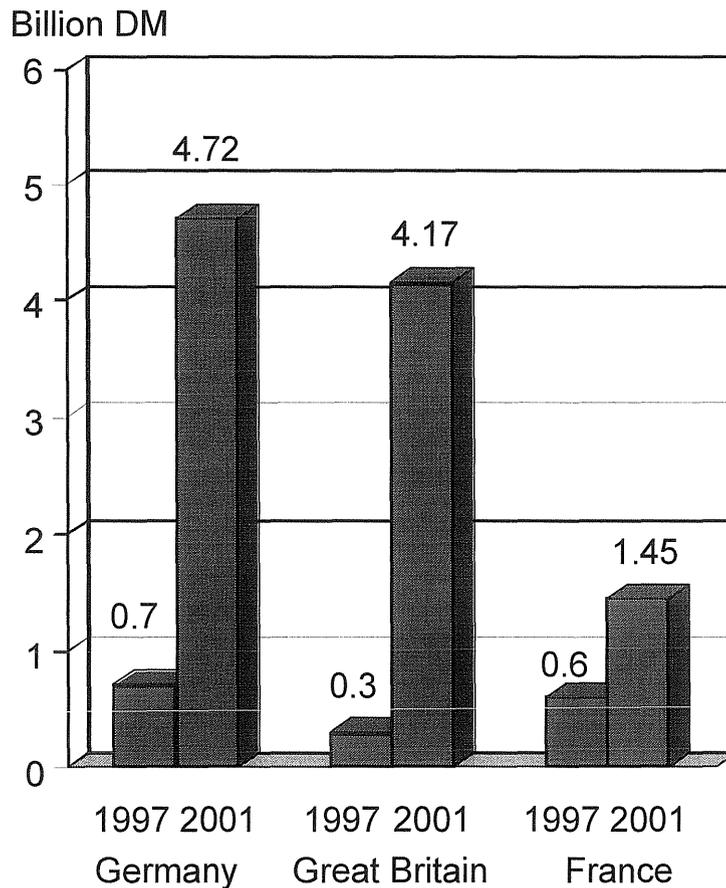
(Source: Frost & Sullivan 1998)

Above all, this change will be caused by the increasing share of **services offered online** to the consumer (e.g. travel, entertainment, music, banking, insurances). The distribution of such services on the Internet may reduce the distribution costs by 80 % and more. By the

way, this is one of the reasons why some people believe that the most important motive for E-commerce activities will change from revenue maximization to cost minimization in the near future.

A number of studies emphasise the **important role** especially of the **German market** for E-commerce. The European Information Technology Observatory (Eito) for example analyses the **capital spendings in E-commerce technology** in Europe. By 2002, these spendings will increase to DM 4.72 billion in Germany, to DM 4.17 billion in Great Britain, and to DM 1.45 billion in France (Fig. 2).

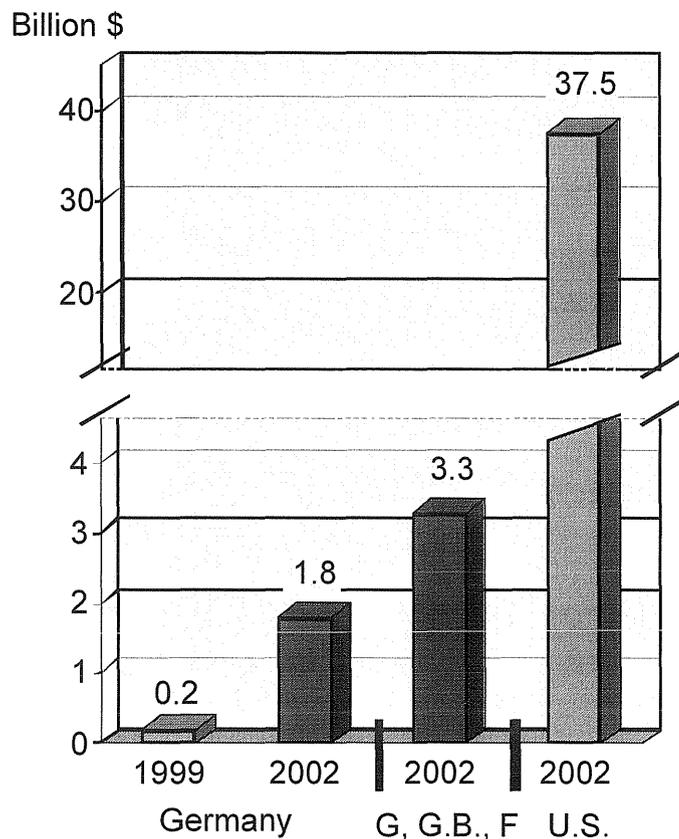
**Figure 2: Capital Spendings in E-Commerce Technology**



(Source: ZVEI/EITO)

Another example: Jupiter Communications has projected the **online shopping revenues from four popular product categories** in Germany, France, and Great Britain. Germany is expected to realize revenues of \$ 782 million in online air travel, \$ 674 million in books, \$ 216 million in music, and \$ 174 million in software sales by 2002. Leading in all four categories, Germany is projected to be well ahead of France and Great Britain, the other big European E-commerce players, and offers the greatest potential for online sales growth. But compared to the corresponding U.S. market, which is expected to reach \$ 37.5 billion by 2002, the European markets will continue to be significantly smaller (Fig. 3).

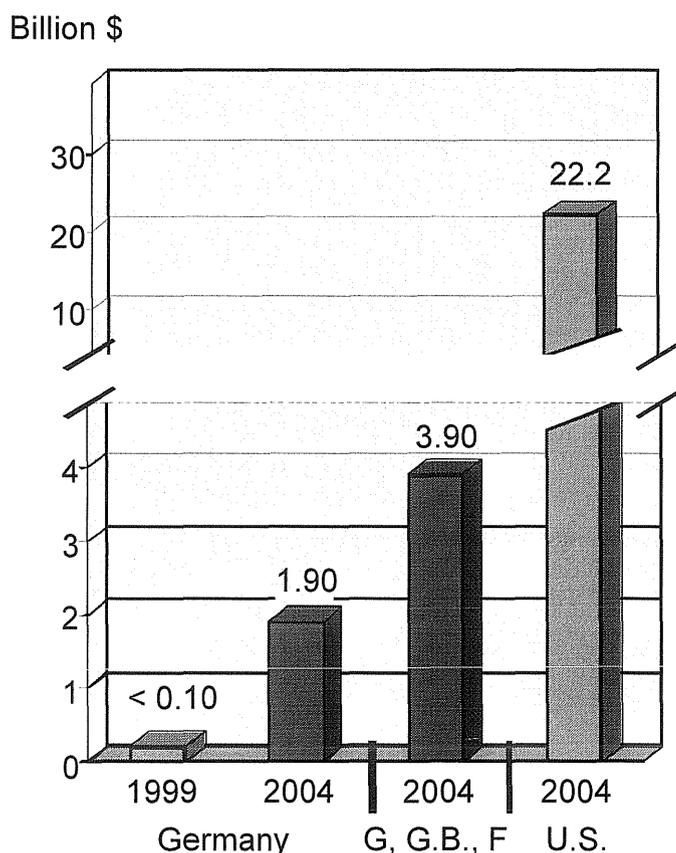
**Figure 3: E-Commerce Revenues (Books, Air Travel, Music, Software)**



(Source: Jupiter Communications)

The growing expenses for advertising on the Internet in Europe and the United States show the same tendency. According to Forrester Research, by the year 2004 those expenses should rise to \$ 1.9 billion in Germany, and to \$ 3.9 billion in Germany, France, and Great Britain together. But in the U.S., firms are expected to spend more than \$ 22 billion for Internet advertising during the same period (Fig. 4). Nevertheless, the whole North American share of Internet advertising should shrink worldwide from 85 % in 1999 to 68 % in 2004, while the share of Europe should rise from 9 % to 17 %. This shows the slowly increasing importance of Europe and Germany even as an online advertising market in the future.

**Figure 4: Internet Advertising Expenses**

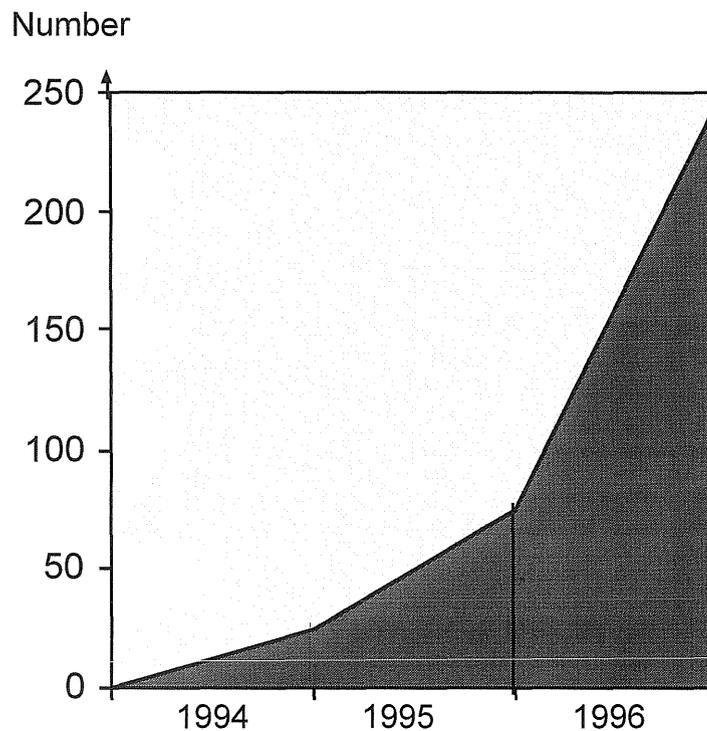


(Source: Forrester Research)

## Supply Side Perspectives

Let us take a closer look at the **Web-based marketing activities of German firms**. Our own research shows that these activities were started in 1994, but only within a few industries which I will call the **Web leaders** in Germany - the computer and the media businesses. Others, the **Web followers**, started one year later such as, for example, the financial services industries like banks and insurance companies. In view of the fact that the year 1993 is considered as the year of birth of the Internet economy, German firms seem not to have lagged behind so much at that time (Fig. 5).

**Figure 5: German Firms on the Web:  
A Sample**

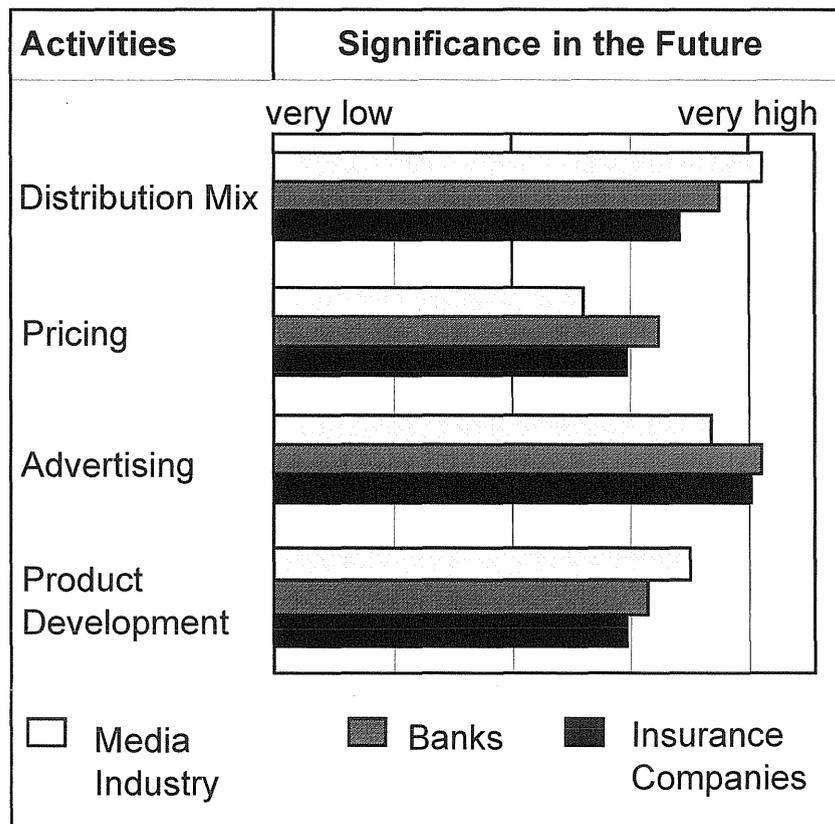


(Source: Fritz/Kerner 1997)

(n = 241 German firms)

Compared to the Internet marketing activities of the followers, the Web leaders show a somewhat different **profile**. The Web leaders emphasise the coming significance of the Web for the sales and distribution mix and for product development to a higher, but for advertising to a lower, degree than the Web followers. These findings indicate, that the Internet marketing of the Web leaders is more affected by **E-commerce considerations** than that of the Web followers. In contrast, the Web sites of the followers are primarily characterized by focus on communications objectives (Fig. 6).

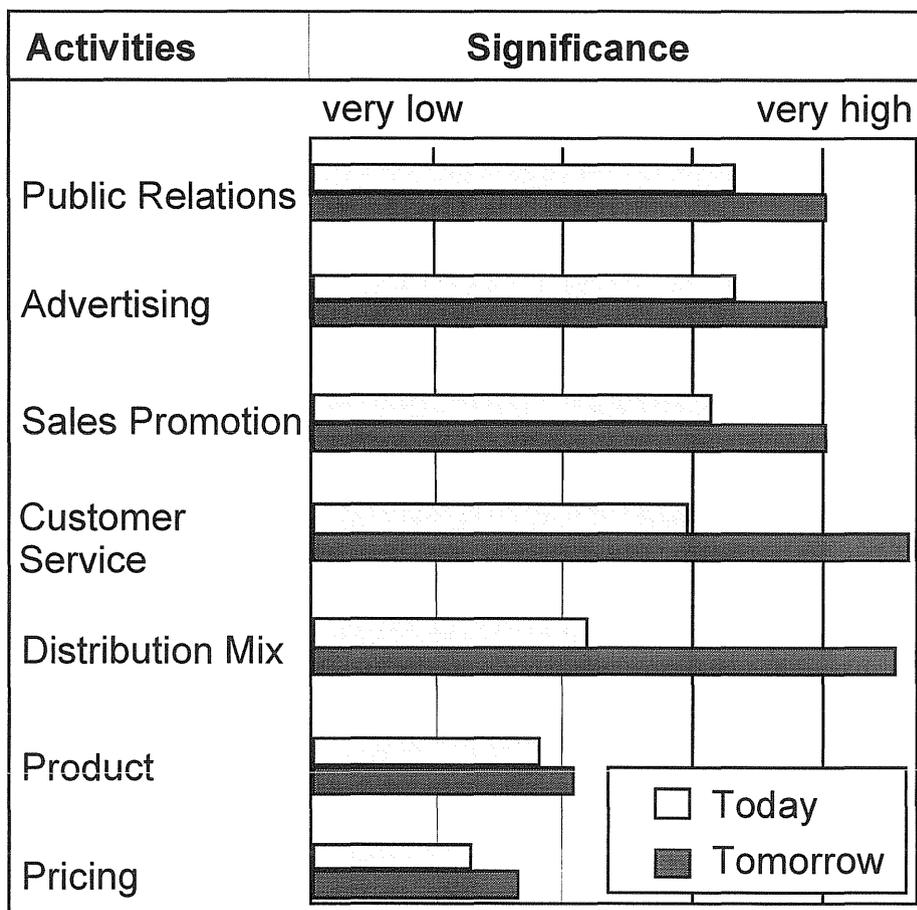
**Figure 6: The Significance of the Web for Marketing Activities in the Future (Germany)**



(Source: Fritz/Kerner 1999)

But some things are changing even in Germany! Recently we conducted two surveys within the **insurance industry**. This study should reveal the changes in the Internet marketing during a period of one year. The findings suggest that even the Web followers have begun to further develop their Internet marketing towards E-commerce, although such development is occurring at a rather slow pace (Fig. 7).

**Figure 7: The Significance of the Web for Marketing Activities Today vs. Tomorrow**  
(German Insurance Industry)



(Source: Fritz 1999)

Although we can identify a slight tendency towards E-commerce within the Internet marketing of German firms, other studies report that the **firms do not exhaust the given potential** by far. This was indicated, for example, in an analysis of the Web sites of the leading 100 German industrial firms, conducted recently by Norbert Mundorf, Detlev Zwick, and Nik Dholakia. Very often the Web sites offered no possibility for feedback, interaction, and online purchasing to the Web user. A recent study by Roland Berger & Partners, a famous German consulting company, shows that only with the exception of a few industries (i.e. media/entertainment and information technology) German firms do not offer electronic transactions to their customers and suppliers and thus do not sufficiently utilize the given E-commerce potential.

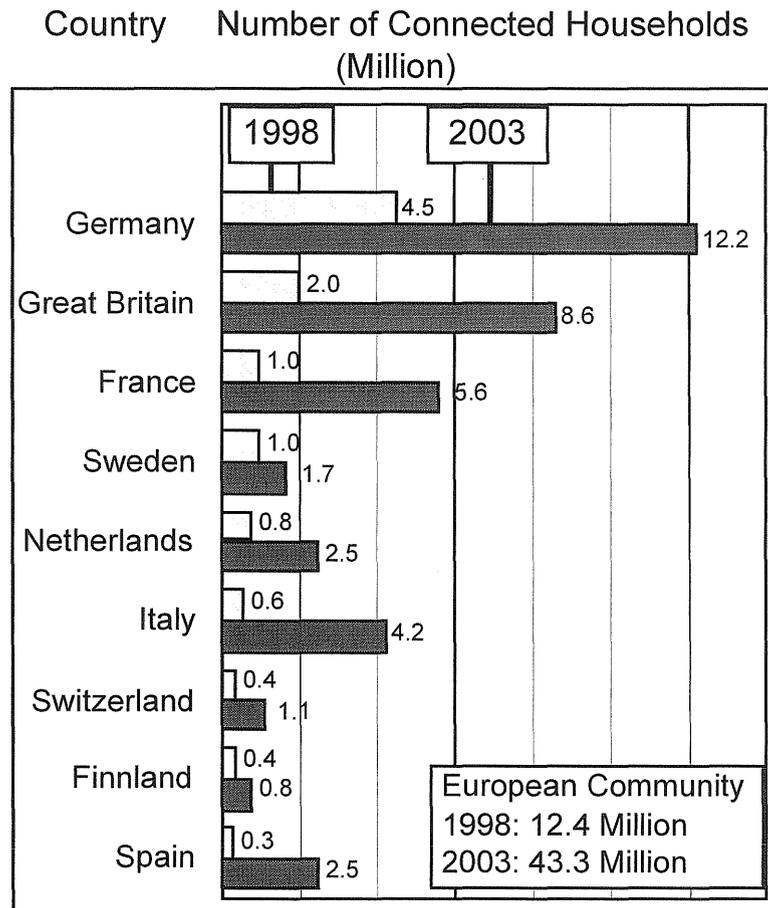
One reason for this state of affairs may be the generally **insufficient capital spending in E-commerce in Europe**. According to cost estimates from Forrester Research, a successful E-commerce Web site connected to business logistics and the management information system requires an annual average of \$ 6.81 million in the business-to-business and of \$ 11.34 million in the business-to-consumer area (for physical products and 200.000 expected transactions each year). But even the leading E-commerce firms in Europe spend only \$ 1.8 million for their Web sites on the average. There are only few exceptions, like Bertelsmann, who spent more than \$ 150 million to introduce their online bookstore BOL in Europe, and to successfully compete with Amazon.com. On the whole, the old phenomenon returns: Europe and Germany are lagging behind.

## **Demand Side Perspectives**

According to NUA Internet Surveys, a number of 195 million individual **people** worldwide have been **online** since August 1999. Among these, 107 million were in Canada and the U.S., and 46 million in Europe. In Germany, 13 million people have access to the Internet, and 10 million make use of it at least occasionally. In 1998, the number of Internet users has increased by 40 %. Within the next two or three years, a number of 20 million users will be obtained in Germany.

Within the European Community, 12.4 million private **households** (not individual persons!) were **online** by 1998. An increase to 43.4 million is expected until 2003. In Germany, the number is expected to increase from 4.5 million by 1998 to 12.2 million by 2003. In Great Britain, the increase is expected to be from 2.0 to 8.6 million, and in France from 1.0 to 5.7 million within the same period (Fig. 8). Once again, these data indicate the high importance of Germany for the rising Internet economy in Europe.

**Figure 8: Households with an Internet Access in Europe**



(Source: Datamonitor)

Online surveys conducted in the U.S. and in Germany show a **high percentage of online shoppers** among the Internet users. In the U.S. 89 % of those surveyed and 60 % of those surveyed in Germany declare that they have made use of the Internet for online purchasing at least once. But these findings may be biased and overestimated because the studies suffer from the **methodological problems** associated with online surveys (self-selection; over-representation of heavy Internet users). In the summer of 1999, the true share of online shoppers in Germany was estimated to be 28 to 30 %. Compared to the U.S., this share is rather small.

Nevertheless, the **items most frequently purchased online** are the same in both countries: books, software, music (CDs), hardware, and travel (Fig. 9). Because of the growing diffusion of the Internet and the continuously increasing share of online shopping, one can predict a significant growth of the market potential for E-commerce in Germany. More than 50 % of the German Internet users are of opinion that the Internet is well suited for online shopping.

**Figure 9: Items Purchased Online in the U.S. and in Germany**

United States	Germany
(1) Software 58%	(1) Software 59%
(2) Books 53%	(2) Books 57%
(3) Hardware 48%	(3) Music 32%
(4) Music 41%	(4) Hardware 29%
(5) Travel 30%	(5) Shareware 27%
Source: GVU's 10th WWW User Survey (Oct.-Dec. 1998)	Source: 7th W3B Internet User Survey (Oct.-Nov. 1998)

There are, however, important **barriers inhibiting the use of the Internet** especially in Germany. In a recent study conducted in the

U.S., Ruby Roy and Nik Dholakia found out that privacy, security, pornography, online crime, and danger to children were among the serious concerns U.S. people have with the Internet. High costs for the use of the Internet did not seem to play an important role.

This is completely different in Germany, where even the Internet users consider the telephone charges and the access costs to the Internet as much too high (Fig. 10). A few months ago, these costs were nearly twice as high as in the U.S., especially because of the higher local telephone fees. Even though these costs are currently declining in Germany, they continue to be a hurdle that prevents many Germans from taking advantage of the Internet.

**Figure 10: Internet Usage Barriers in Germany**

Barriers	Percent
Cost of usage too high	 48
Telephone fees too high	 34
Information insufficient	 20
No benefit	 16
PC too expensive	 4

(Source:Booz, Allen & Hamilton 1988)

## Conclusions

In regard to the Internet usage and E-commerce, Germany lags behind the United States by at least three or four years. Nevertheless, based on the emerging evidence, it should be regarded as perhaps the most important market for E-commerce in Europe.

There are several **explanations** for this big difference between Germany and the United States. Among these, there are technological reasons - the diffusion lag in computers and modern communications technologies. Economic and political reasons could also be pointed out - the higher telephone fees and access costs, or even a more restrictive legislation to govern E-commerce in Germany. But one additional aspect has to be mentioned which gives us a deeper insight.

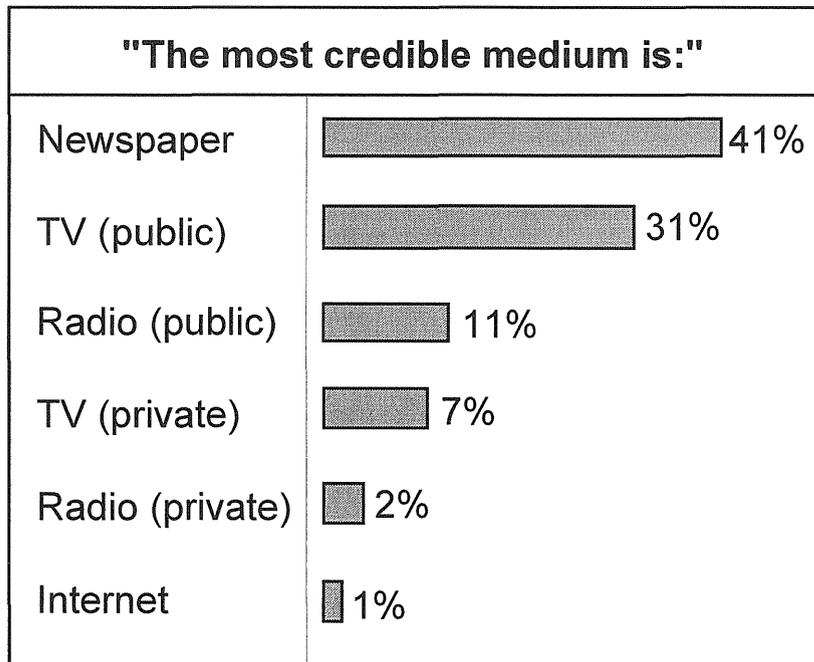
Germans are generally more hesitant than Americans in adopting new ideas or technologies which could lead to a fundamental change. This could be illustrated by **Geert Hofstede's cultural theory**.

Hofstede found that the the cultural dimension of „**uncertainty avoidance**“ is significantly higher in Germany than in the U.S. It follows that Germans generally feel more threatened than Americans by new and unknown situations. As long as this difference exists, Germans cannot to be expected to be as ready and primed as Americans in facing new, life-changing technologies such as the Internet.

Many Germans instead have a more sceptical attitude towards new technologies including the Internet. This is perhaps one of the reasons why they do not ascribe much credibility to the Internet.

According to a recent survey, the Internet turned out to be in a bad position compared to other media. Newspapers, TV, and radio, were rated to be more credible in Germany than the Internet (Fig. 11).

**Figure 11: The Credibility of Media in Germany**



(Source: Forsa 1999)

Is this an important barrier to E-commerce in Germany? Perhaps it is! But fortunately there are many other modern industrial countries in the world with even higher uncertainty avoidance scores and with even more skepticism towards modern western technologies. Because the prospects for E-commerce in these countries are less promising, Germany should not be neglected within the E-commerce considerations of American firms.

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