

ON THE FUTURE OF THE AUSTRIAN TELE-SHOPPER

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ABSTRACT

Electronic commerce recently has become a heavily discussed possibility to use the Internet. In particular tele-shopping is seen as one of the most interesting features of networks. Since the treatment of all relevant topics concerning tele-shopping (namely who, when, why, what and how) would go far beyond the scope of the paper, the focus of this article will be on the WHO. This question is investigated with respect to the technological and demographic situation in Austria. The result of these considerations will be a realistical assesment of the future role of the Austrians as tele-shoppers in European electronic commerce.

INTRODUCTION

Buying goods and services always has been a social activity. If time is scarce it might imply stress and pressure. On the other hand relaxed shopping could as well be a most pleasant social event shared with friends and yielding much more than the simple value of the things bought. In regions with less developed infrastructure an important alternative started to flourish: buying from a mail order house via a catalogue of products. This facility is used by many people living in rural areas and/or by the elderly. For electronic commerce the underlying idea of ordering products from home and getting them delivered seems to be the same. Furthermore electronic commerce is a promising use of the Internet. Since people joining the Internet have access to worldwide data-bases, it is obvious to view them as consumers and/or sellers and to open up an electronic market. As a matter of fact there is already a more or less active part of people booking travels, ordering books and CDs and the like via the Internet.

There are many interesting aspects of electronic commerce which have to be inves-

tigated in the future. E.g one of the most crucial question is the potential difference between cost and savings for the consumers implied by the new technology (compare e.g. Ravidran, et al. 1996, Hanappi et al. 1998). An important ingredient of this topic is the prospective future pricing strategy of the Internet itself (compare McKnight, et al. 1997). Parallel to these decision theoretic foundations the identification of the consumers clearly should be a vital task of research. Therefore this article will concentrate on the potential Austrian tele-shopper. Based on the de-

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¹Note that Haddon and Silverstone (1992) have shown that business requirement is exactly the main argument for men to spend parts of the private household's budget for technical purchases in order to fulfil long existing wishes. For a more detailed discussion see Hanappi-Egger (1997).

mand structure of the Austrian economy, its demographic, gender-specific, qualitative and distributional dimensions the contours of a typical Austrian tele-shopper will arise.

TELE-SHOPPING: THE AUSTRIAN CASE

As already mentioned tele-shopping requires an electronic market consisting of suppliers and buyers. Both involved parties have to be equipped with an adequate hardware and software. Moreover access to the net must be provided. This implies – from a consumer's perspective – at least standard technical equipment such as a PC, a modem and the services of an access provider. If tele-shopping is a private activity all these cost factors have to be carried by private households. From the private budget's point of view this means an additional expenditure of approximately 2000\$ of investment and (based on the assumption of 10 hours teleshopping per month) around 70\$ per month.

Even though the available data on the distribution of PCs and Internet-accesses is not complete, there are some indices allowing to estimate rather realistically the current state: 10,7% of the Austrian households have a PC and around one third of them uses it for Internet access (data source: Rysavy, 1997). This means that in Austria there are approximately 120.000 private Internet-users.

It has to be kept in mind that at least 52% of PC-owners use their private equipment for business and office work (data source: Rysavy, 1997). It seems that a large part of the Austrians is willing to invest into technical equipment only if this expenditure is also justified by business requirements¹. It can be stated that from the technical perspective the Austrian households are in a position well comparable to other industrialized countries making them attractive for tele-shopping. In order to get a more concrete picture of the tele-shopping potential in Austria several other crucial aspects have to be considered in detail:

| region | PCs | in percent of population older than 14 years |
|---------------|---------|--|
| Vienna | 282.000 | 20,8 |
| Lower Austria | 144.000 | 11,6 |
| Upper Austria | 127.000 | 11,4 |
| Styria | 106.000 | 10,6 |
| Tyrole | 55.000 | 11,3 |
| Carinthia | 51.000 | 10,1 |
| Vorarlberg | 47.000 | 17,2 |
| Salzburg | 47.000 | 11,7 |
| Burgenland | 20.000 | 8,8 |

Table 1 Geographical Distribution of PCs in Austrian Private Households

◆ geographical aspect:

The following table shows the geographical distribution of at least PCs in private households. Unfortunately there are no data on the Internet-users available:

Evidently by far the highest concentration of PCs can be found in Vienna followed by Vorarlberg. The rest of Austria groups around 10 to 11 percent, the lowest being Burgenland with 8,8%. Evidently the countries with worse infrastructure than Vienna and Vorarlberg are the regions in which mailing order houses are well established. From the tele-shopping perspective this means that these are the potential consumers assumed that the people from these regions are used to perform their shopping activities from home. On the other side it becomes clear that the technical pre-conditions are not the best, since the distribution of PCs is not as well developed as in the leading geographical areas.

A smaller locational question concerns the place from where the access to the net takes place. Though there is no data available, it is an open secret that many people use their business access to the net for private purposes. Note that this has important implications: not only the fact that the cost of tele-shopping will not be incurred on the user, it also means some-

thing for the daytime in which tele-shopping occurs, and for the group of people – namely those whose jobs permit net-access – taking this opportunity. More precisely, there might be a certain overhang of tele-shopping during office hours.

◆ age distribution

A often neglected aspect of the acceptance of new technology concerns the age distribution of potential users. In particular it is well-known that people above a certain age – who did not experience an education in the field of information technology – do have severe difficulties to adapt to the according requirements. Moreover many of them refuse, if possible, to confront themselves with these new devices. Unfortunately the age distribution in Austria, and in particular in Vienna, is biased exceptionally strongly towards the old generation. Since 1951 the share of Austrians being 15 years or younger fell from 22,9% to 17,4%, whereas the share of those being 60 years or older increased from 15,6% to 20,1%. The share of those older or equal 75 even doubled since 1951 (compare Fassmann (1995)). Contrary to other societies these days the Austrian population thus can be characterized as an aging society. This long-run trend will make it particularly hard for tele-shopping to conquer Austrian private households.

◆ distribution of purchasing power

In the last 20 years Austria has experienced a tremendous shift in income distribution away from wage income towards property income. Most of it took place between 1981 and 1991 when the share of property income did increase from roughly 30% to 40% of GDP. As was the case in other industrialized countries in this period², Austria also saw an enormous concentration of income and wealth in the hands of an ever smaller part of the population. In the future suppliers of goods and services will in generally have to follow this effective demand in the hands of a decreasing number of very rich households. With respect to this development the vision of tele-shopping as an activity of high mass-consumption of a rising mid-

REFERENCES

Balka, E. *Gender and Access to the Information Highway and Knowledge Based Economy, Manuscript, Simon Fraser University, Vancouver, Canada, 1997.*

Biffi, G., 'Ausbildung und Erwerbstätigkeit der Frauen in Österreich', *WIFO 87, Vienna, 1996.*

Durndell, A. 'The persistence of gender gap in computing', *Computers and Education, 16, 1991, pp. 283-287.*

Fassmann, H. 'Der Wandel der Bevölkerungsstruktur in der 2.Republik', in *Österreich 1945-1995, Sieder R. et al (eds.), Verlag für Gesellschaftskritik, Vienna, 1995.*

Grisold, A. and Simsa, R. *Frauen am österreichischen Arbeitsmarkt, in Vergleichsweise ungleich, Buchmayr et al. (eds.), Vienna, 1992.*

² For an impressive study of these processes on a global level see Thurow (1996).

the class seems to be doomed if this class falls to the social bottom. Tele-shopping either would have to compete with the low opportunity cost for traditional search that poor households usually face, or it could try to occupy niches in the consumption patterns of the rich.

◆ gender-specific aspect

A very interesting aspect of tele-shopping is the question of gender. Currently 80% of the traditional purchasing decisions are made by women. As a consequence they are obviously an important target group for tele-shopping. On the other hand the situation of women has to be considered very carefully:

The qualification criteria are not met by many females. As Biffel (1996) shows there is still a very strong gender-specific educational segregation: Young women focus on 'social' skills and languages, males are concentrating on technical and mathematical qualification. Studies on the gender-specific aspects of new information technologies show that there is still a qualification lack of women in this area (see e.g. Durndell, 1991; Shashaani, 1993). Concerning the time-aspect it must be kept in mind that women are mostly not in a position in firms offering them high time-autonomy (compare Grisold, et al. 1992). As a consequence they are hardly in a situation enabling them to use the firm's internal technical features for private shopping (compare geographical aspect).

The Austrian Ministry of Social Affairs has published in its report 1995 that the average salary of female employees is about 1000\$ less than the one of their male colleagues. This is so, because firstly women do have less paid jobs, and secondly for the same work they still do not get the same money. As a consequence it must be questioned if women are willing to spend parts of their limited budget for purchasing the equipment necessary for tele-shopping.

Haddon, L. and Silverstone, R. 'Information and Communication Technologies in the Home: The Case of Teleworking', Working Paper 17, SPRU, University of Sussex, 1992.

Hanappi, H. and Rysavy, E. 'Economic Foundations of Electronic Commerce', in Proc. of the International Conference on Electronic Commerce '98, Seoul, Korea, 1998.

Hanappi-Egger, E. Sozialpolitische Auswirkungen neuer Informationstechnologien', in Der Informationssektor in Österreich, H. Hanappi (ed.), Technical Report to the Ministry of Science, Vienna, 1997, pp. 278-316.

McKnight, L.W. and Bailey J.P. (eds.), Internet Economics, MIT Press, Cambridge (Mass) 1997.

Ravidran, S. et al. 'Strategies for Smart Shopping in Cyberspace', Journal of Organizational Computing and Electronic Commerce (6:1), 1996, pp. 33-49.

Rysavy, E. 'Mikroökonomische Auswirkungen neuer Informationstechnologien', in Der Informationssektor in Österreich, H. Hanappi (ed.), Technical Report to the Ministry of Science, Vienna, 1997, pp. 66-167.

Shashaani, L. 'Gender-based differences in attitudes towards computers', Computers and Education, 20, 1993, pp. 169-181.

Thurow, L., The Future of Capitalism, Nicholas Brealey Publishing, London, 1996.

Though there are no reliable data on the participation of women in the Internet, the implication that this is only a very selected group seems to be admissible (compare e.g. Balka, 1997).

CONCLUSION

Clearly there are still many other questions linked with the Austrian future of tele-shopping, but the paper tried to highlight at least the most important. We are still far away from having solutions and it will cost a lot more research till the concepts for the establishment of electronic commerce are in reach. Linking the presented aspects of the Austrian situation the future tele-shopper could have the following profile: Tele-shoppers are male, around 35 years or younger, positioned in the middle or upper management, and he is shopping from his office.

Given the above mentioned trends, this would also mean that the Austrian tele-shopper group would stay rather small, unless concepts of electronic commerce are elaborated that meet the requirements of the groups excluded so far: exceptionally cheap infrastructure, offers cheap enough to make tele-shopping the better alternative even for poorer households – and a main aspect: it must be easy to use. An user interface design including time-saving search algorithms will play a crucial role in the distribution and acceptance of electronic commerce – in particular in Austria.