



IT-UTVECKLINGEN OCH TRANSPORTERNA 2

Redovisning av en
kommunikationsundersökning
1997

Sammanfattning/Summary

Preface

We live at the beginning of the so-called information society. It is obvious that information technology (IT) will influence society and our way of life – but how? Our knowledge in this field is still insufficient. Therefore, it is important to follow the development of how new technology is used and what influence it has on our activities. This can be done by systematic surveys and analyses of communications behaviour.

This report is about such a survey. It shows the result of a survey on people's access to and use of information technology in its different forms. The purpose of the survey was to study the interplay between the use of telecommunications and computers on one hand and people's travelling on the other and to draw a picture of the growth of the new technology in society today. The report is mainly in Swedish but there is also a short version in English.

The survey was made by Statistics Sweden at the request of the Swedish Institute for Transport and Communications (SIKA) during 1997. The analysis was carried out by SIKA and the author of the report is Anna Johansson at SIKA.

Stockholm, August 1998

Staffan Widlert

Director of Swedish Institute for Transport and Communications Analysis

Summary

The survey

Swedish Institute for Transport and Communications Analysis, SIKA, is responsible Swedish authority for official statistics in the transport and communications sector. The Communications Behaviour Survey is part of SIKA's work of producing statistics and carrying out analyses. An overall goal of the survey is to provide a better basis for decision for politicians, planners and researchers in the communications sector.

One purpose of the survey is to obtain detailed information about how different groups in the community travel and how they communicate via media, telephone, fax, letter and Internet, etc. Data from the survey is to make it possible to analyse patterns of travel and communications, how the individual selects modes of communication, and the interaction that exists between physical travel and other forms of communication. An important aspect in this context is to be able to follow how different modes of communication systems develop and the demands that this development places on transport systems and telecommunications.

Another purpose of the survey is that it should provide a picture of the situation with respect to access to and use of telecommunications equipment around the country and shed light on any differences between different groups of individuals.

There are also other areas of interest covered by the survey. For example, developments on the labour market towards increasingly flexible forms of work can affect demand for communications when the individual has increasing freedom to organize his activities and communications.

Two stages of the Communications Survey have been carried out, one during spring 1996¹ and one during autumn 1997. Unless otherwise stated, this report deals with the latter study. Both stages have been carried out by Statistics Sweden, SCB. Until now, the survey has had the nature of a pilot study on a large scale. A third stage is planned for autumn 1998, after which it is expected that the survey will be made permanent.

In 1996, the survey was arranged in connection with the study of travel behaviour, RiksRVU that is now taking place². In preparation for stage two, a comprehensive

¹ SIKA Rapport 1998:1. *IT Development and Transport – A Report of a Survey of Communications Behaviour*, 1996. (Only in Swedish)

² See *Svenskarnas resor 1996 Teknisk Rapport*. ("How Swedes Travel", 1996. Technical Report) (Summary in English)

review of its arrangement and the questions was carried out that resulted in the study becoming more freestanding in 1997 and being expanded with respect to the content and complexity of the questions. The degree of detail in the tasks relating to the use of telecommunications was also considerably expanded, for instance.

Data collection has taken place by telephone interviews carried out between September and November 1997. The individuals taking part are requested in the interview to provide a detailed account of all movements and contacts that they make during a pre-selected day. To assist them, they have been sent diaries by post where they can make notes. To supplement the picture of communications behaviour, quite a lot of background information has been collected including information on profession and work, access to means of transport and to communications equipment and information on the composition of the household.

The survey has been targeted at the total population between 15 and 84. The sample was 2,500 individuals, of which 1,624 were interviewed, a reply frequency of 65 %.

The result

Access to information technology

Access to various types of communications equipment is high in Sweden, both at workplaces, schools and in households. Some computer saturation can be noted at workplaces. Over 75 % of the working population have access to a computer at their place of work. This figure has not changed significantly since spring 1996. About the same number, i.e. just over three out of four, have access to a fax at their place of work, while 42 % have access to a mobile telephone with line rental paid for by their employer.

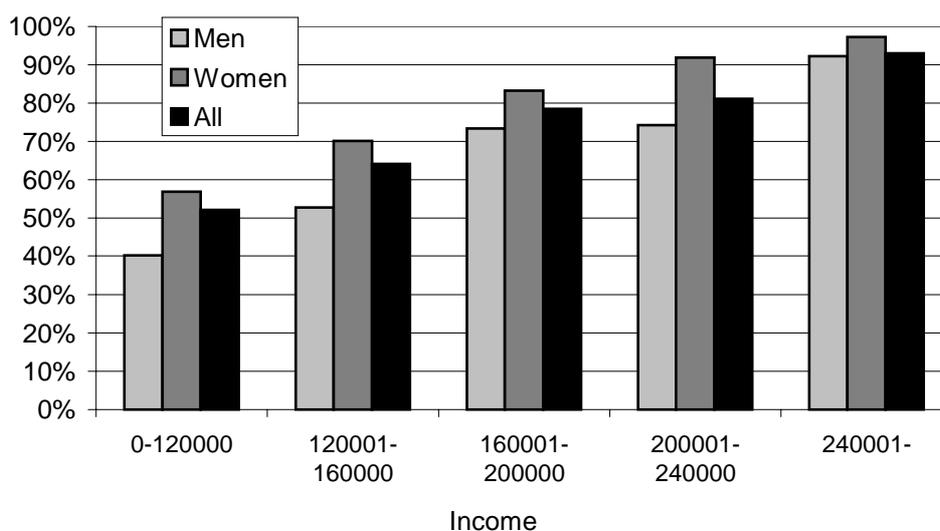


Figure 1. People's access to a computer at work.

Access to computers, etc. at work, co-varies to a great extent with income. An explanation for this is that the responsibilities associated with higher incomes are often of such a kind that communication requirements are greater.

Access to computers in households has increased markedly since spring 1996. At that time 32 % of individuals aged between 15 and 84 said that they had access to a computer at home, compared with the most recent study where this proportion had increased to 47 %. Individuals who work or study and have access to a computer at their place of work or education are among those who also have access to a computer at home to the highest extent. However, it is computer access in households among the unemployed group that has increased most, from 28 % to 55 % i.e. by 27 percentage points.

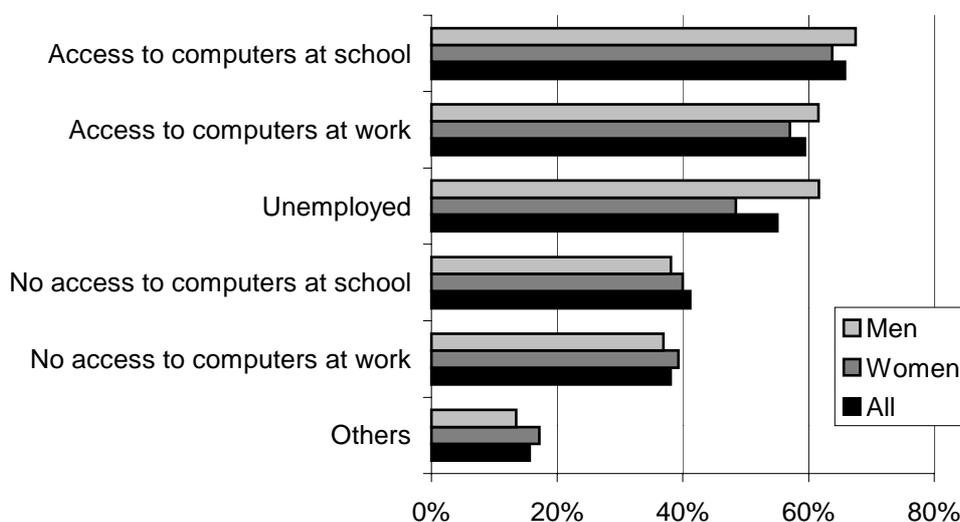


Figure 2. People's access to a computer, comparison between different groups.

With respect to other communications equipment, approximately every third household has a telephone answering machine, and 12 % of households have a fax. Approximately 2 % of households do not have a fixed telephone line rental. However, over 4 of 10 individuals say that they have access to a mobile telephone paid for by the household.

The most common way of getting in touch about something is still calling by a fixed telephone line. Almost three out of four contacts are made by fixed telephones. Over 10 % of contacts are made by mobile telephone and the remaining 15 % by letter, fax, e-mail or some other contact service by Internet.

Contacts

On average, each individual takes two contacts per day. Persons aged between 25 and 44 take most contacts. This group contains a large proportion of the occupationally active and work generates a lot of contacts. This age groups uses mobile telephones and e-mail to a great extent relative to other groups (13 % of the

group's contacts were made by mobile telephone and 8 % by e-mail). Letters and telephone calls are the most common ways of contact among the oldest (65 years old and over) age. Surfing on the Internet is, however, clearly most common among the youngest age group, aged between 15 and 24.

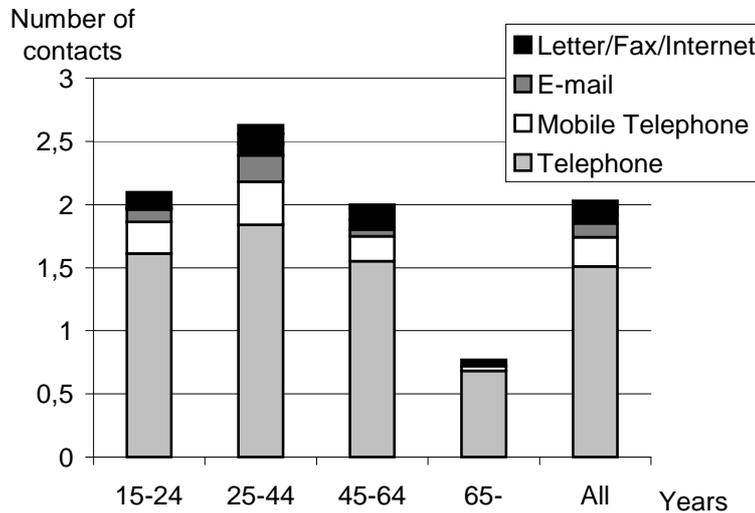


Figure 3. Number of contacts per person and day, various types of communications media.

The number of contacts increases with increased individual income (excepting the lowest income group that contains a lot of young people). It is primarily the number of contacts by e-mail and mobile telephone that are high for those in the upper income class, 17 % and 12 % respectively. The lowest income group has both the highest number of contacts over the Internet and the highest relative share of this type of contacts.

Telephone and videoconferences are still rather uncommon. Bearing in mind the fact that the equipment required in most cases is relatively expensive, this is a form of communication used mostly for business purposes. Of the employed population, 6 % say that they have taken part in telephone or videoconferences during the month preceding the study. It is most common among men aged between 25 and 64, where approximately one in ten used one of these forms of communication. For the whole population aged between 15 and 84, the proportion using telephone or videoconferences is only 4 %.

Travelling and contacts

With respect to how we travel, each individual makes on average 3.8 journeys per day for different purposes. It might be thought that people who travel a lot make less contacts and vice versa, but it is rather the case that the opposite correlation applies.

Individuals who make more journeys during a day have at the same time also taken a larger number of contacts during the same day.

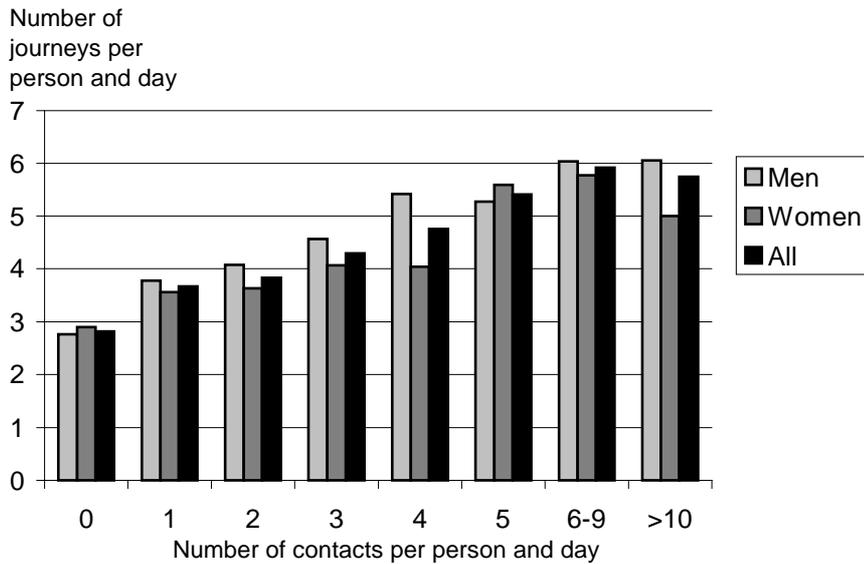


Figure 4. Number of journeys per person and day – segmented by number of contacts made during the same day.

Certain services can be carried out either by a contact or by making a journey to the place that sells the service. Examples of such errands are visits to post office and banks, booking appointments and tickets, and purchasing various kinds of goods. The distribution between travel and contacts in various errands has been examined in the study. Business that is easy to carry out by telephone and does not require any special equipment such as booking appointments and tickets are also made in many cases by a contact (91 %), mostly ordinary telephone calls. Even among post and bank visits, a relatively large proportion (36 %) are now carried out by some communication media instead of a visit in person to a bank or a post office.

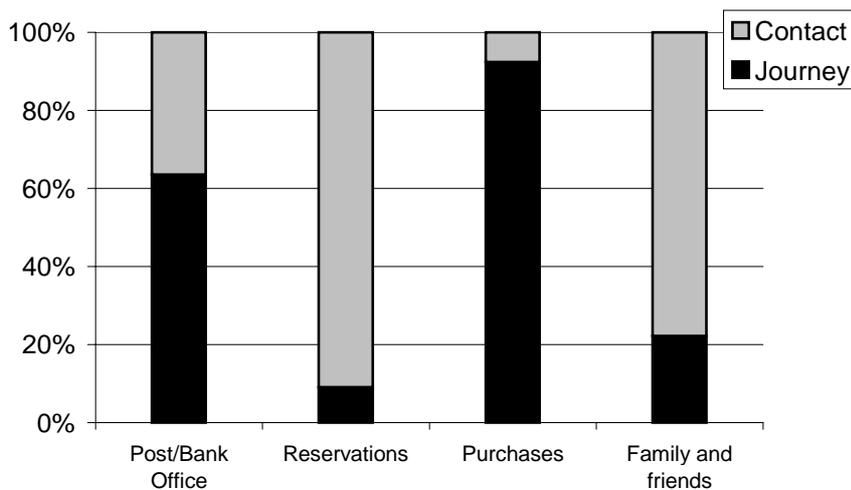


Figure 5. Distribution of journeys and different kinds of contacts (e.g. telephone or e-mail) for some common errands.

With respect to purchasing of goods, there are naturally variations depending on what it is that is to be obtained. In all, the proportion of purchases that takes place via some form of contact made is 8 %. This proportion may, however, be regarded as relatively high bearing in mind the nature of the errand, and that the possibilities of shopping in this way are not so widespread yet. When we want to get in touch with relatives or friends, we often opt to do so by phone or some other means of communications rather than travelling to visit them in person (78 % compared with 22 %).

Just over 7 % of the employed population say that they regularly, at least a few days each month, do telecommuting³. The greatest population does so from their home. Telecommuting as a form of work is more widespread among high wage earners and in big city regions.

It is open to discussion whether telecommuting leads to less travel or not. This study shows that individual communications behaviour is very complex. It is not so simple that one mode of communication can replace another. Our previous study shows that telecommuters as a group travel further than others, primarily for leisure purposes, but also to and from work. The results of the later study confirm that telecommuters as a group have a somewhat different pattern of travel and contacts relative to others. They have both longer travelling time and make a larger number of journeys than other groups. To what extent this is an effect of their telecommuting or a result of the group as such having different communication requirements is, however, unclear.

³ By telecommuting is meant regular work at some other place than the ordinary fixed place of work. The following are not regarded as telecommuting:

- taking work home after work
- business trips
- working temporarily at home due to sick children, etc.

People with mobile jobs, i.e. where travel and mobility are a part of their work are not included, nor people who have their ordinary place of work at home.