

Household expenditure on communication

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Foreword

In today's information society, information and communication technology (ICT) has very much become an integral part of everyday life. We know that forms of communication have diversified and that people are spending more time than ever before with different media. Less, however, is known about the amounts of money spent on communication. This report traces the changes over the past ten years in Finnish household expenditure on communication. Using data collected for Statistics Finland's Household Budget Surveys, it looks at how communication expenditure has changed both in absolute terms and as a proportion of total consumption expenditure, examining relevant trends against different background variables. There is good reason to assume that expenditure on communication as a proportion of total household consumption varies depending on the stage in the household life cycle and on the socio-economic status of the household head. The type of area where the household lives may also be a factor. Over the past ten years the structure of communication expenditure has shifted towards telecommunication and hardware, at the same time as the share of print communication has declined.

All the data shown in this report are preliminary. The weighting coefficients used in the calculations still require some revision. Some changes may also be needed in certain consumption items and their final sums. The data may not be published before Statistics Finland has released the first results of the 2006 Household Budget Survey on 19 December 2007.

This report on household communication expenditure was commissioned by the Ministry of Transport and Communications, where Elina Normo and Mikael Åkermarck contributed actively to the project. Most of the research was done at Statistics Finland by Juha Nurmela and Lea Parjo, who has been in overall charge of the project.

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Household expenditure on communication

There are two main sources we can use to measure household spending on communication: first, annual National Accounts data on private consumption expenditure (which are calculated from the input-output tables in the National Accounts¹); and second, interview sample surveys of households. The former provide a useful overall view of consumption in Finland as a whole, but they do not allow for comparisons between different types of households. This report uses both sources. Chapters 1 and 2.1 use the official definitions of the National Accounts and Household Budget Survey to describe household expenditure on communication. Chapter 2.2 applies a new classification that was specially developed for this research and that is more sensitive to communications aspects.

1. National economy

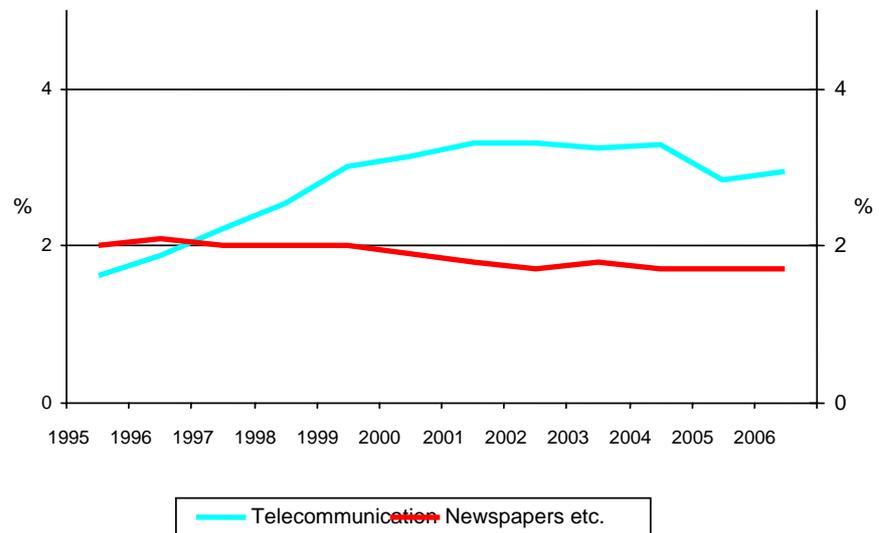
According to National Accounts data (Fig. 1), expenditure on telecommunication as a proportion of total household consumption increased up to the early 2000s, whereas the share of print media has continued slowly to decline. At the level of the national economy, total consumption expenditure by Finnish households in 1995 amount to around 48 billion euros. Expenditure on telecommunication accounted for 1.6 per cent of this; the figure for newspapers, books and stationery was 2 per cent. By 2001, household consumption expenditure had climbed to around 66 billion euros, with telecommunication expenditure accounting for 3.3 per cent and newspapers, books and stationery for 1.8 per cent. The share of telecommunication expenditure was at its lowest in 2005, but started to grow again in 2006.

By 2006, household consumption expenditure had risen to over 82 billion euros. At the same time, the share of telecommunication expenditure dropped back to 3 per cent (standing at almost 2.5 billion euros), while the share of newspapers, books and stationery remained more or less unchanged at 1.7 per cent (=1.4 billion euros).² A useful point of comparison is provided by household expenditure on food as a proportion of total consumption expenditure, which was around 11 per cent, and by fuel and lubricants for private means of transportation, at 3.5 per cent. These statistics give a good general idea of the breakdown of consumption expenditure by Finnish households at the level of the national economy.

¹ http://tilastokeskus.fi/tup/verkkokoulu/data/talt/04/01/index_en.html

² Statistics Finland, National Accounts, Private consumption expenditure in current prices.

Figure 1. Expenditure on telecommunication (C08) and books, newspapers and stationery (C095) as a proportion of total household consumption expenditure in 1995–2006



Source: National Accounts, Statistics Finland

2. Data for Household Budget Surveys

Whereas National Accounts measurements are designed to provide an overall view of consumption using a rather crude and basic classification, Statistics Finland's Household Budget Survey applies a more detailed and elaborate classification to analyse consumption once every five years.

The Household Budget Survey produces information on changes in household consumption expenditure and on how spending differs between population groups. It is a sample survey that in 2006 comprised some 4,000 households, providing detailed data on consumption in some 180 commodity categories. The data have been collected through interviews, household diaries and administrative registers. In addition to household background data, the interview schedule includes items on the ownership of consumer durables, housing and indebtedness. After the interview, the participating households keep a diary record of their consumption expenditure for two weeks. Data on education and income are obtained from register sources.

For further information on the research method, visit <http://tilastokeskus.fi/til/ktutk/index.html>

2.1 Level and structure of consumption expenditure

Major items of household consumption expenditure in 2001/2002 included transport and food. Telecommunication, by comparison, is a relatively minor expenditure item, accounting for less than four per cent of total household consumption expenditure. The amounts spent on telecommunication were slightly higher than the medical and health care costs borne by households

themselves. On average, households spent more money on telecommunication than on clothing and footwear.

Table 1. Annual household consumption expenditure in 1985–2006, euros (current 2006 prices)

Consumption item	1985		1990 1994-96		1998 2001-02		2006
	EUR	EUR	EUR	EUR	EUR	EUR	
01. FOOD AND NON-ALCOHOLIC BEVERAGES	2 590	3 086	3 046	3 017	3 397	3 835	
02. ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS	356	589	621	629	730	721	
03. CLOTHING AND FOOTWEAR	847	1 136	858	991	881	1 164	
04. HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS	2 629	4 274	5 462	6 033	7 389	8 199	
05. FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSE MAINTENANCE	825	1 002	877	1 004	1 271	1 536	
06. HEALTH	388	640	734	796	915	1 051	
07. TRANSPORT	1 752	2 490	2 407	2 956	3 785	4 778	
08. COMMUNICATION	190	276	408	598	942	859	
09. RECREATION AND CULTURE	1 364	2 095	1 996	2 240	2 543	3 385	
10. EDUCATION	15	29	30	39	46	63	
11. RESTAURANTS AND HOTELS	654	896	823	877	1 171	1 270	
12. MISCELLANEOUS GOODS AND SERVICES	1 376	2 355	2 149	2 317	2 690	3 541	
TOTAL	12 987	18 869	19 411	21 496	25 760	30 404	

2.2 Household expenditure on communication: the concepts

In the classification developed for this study, household expenditure on communication consists of telecommunication expenditure plus a number of expenditure items under the heading of Recreation and Culture.

The consumption expenditure data given in the Tables and Figures in this report are indicated for average household. Not all households have newspaper subscriptions, computers or mobile phones, for instance, and therefore they will spend no money on them. Spending in households that do have these items, on the other hand, will be higher than the consumption expenditure figures shown for the average household.

Our classification includes those items from the Household Budget Survey that describe household expenditure on communication. (See Appendix I) The items are grouped into ten categories for which we have calculated the level and development of expenditure by household structure and certain other background variables. These categories of communication expenditure are as follows:

1. Telecommunication
2. Equipment for the reception, recording, and reproduction of sound and pictures

3. Photographic and cinematographic equipment
4. Data processing equipment
5. Video and audio disks and tapes
6. Fees for AV reception
7. Books
8. Newspapers
9. Magazines and periodicals
10. Other printed material

The datasets used for this study are those collected for the 1995 (compilation for 1994–1996), 2001 and 2006 Household Budget Surveys.

Our main purpose here is to see how household communication expenditure has changed over the past ten years, both in absolute and relative terms, against selected background variables. All Tables use the standard Household Budget Survey classification of households. Data on communication expenditure for all households are presented at item level (Appendix III), but household expenditure on communication in different categories during 1995–2006 is analysed according to household life cycle stage and the socio-economic status of household head (Appendix II).

Figures on communication expenditure are given in euros per household and in euros per consumption unit. The latter controls for economies of scale. These so-called equivalence scales are needed so that meaningful resource comparisons can be made between households of different sizes and different age structures. That is, incomes and consumption needs do not increase linearly with increasing household size, but that generates a certain advantage that may be described as an economy of scale. The Household Budget Survey uses the modified OECD scale, where the first adult is given a weight of 1, all following family members aged 13 or over a weight of 0.5 and family members under 14 a weight of 0.3.³ There are certain basic consumption items even in single-person households that are not necessarily duplicated in households with a larger number of members (e.g. refrigerator, television, newspaper). Communication expenditure includes some consumption items of this kind, but the single biggest consumption expenditure item – telecommunication expenditure – consists in large part of mobile phone costs, which are duplicated in full weight with each additional household member.

3. Household expenditure on communication in 1995, 2001 and 2006

Although some adjustments have been made over time to the Household Budget Survey nomenclature, most of the results from different points of measurement can be traced and monitored in time series.

³ Statistics Finland: Markku Lindqvist, Ekvivalenssikaavat ja niiden käyttö (Equivalence scales and how to use them, in Finnish) 11.6.2004

Table 2. Household expenditure on communication, all households, euros per household (current 2006 prices) ⁴

	1995	2001	2006	1995-2006 change, %
Telecommunication	302	701	859	184
Equipment for the reception, recording, and reproduction of sound and pictures	102	142	248	143
Photographic and cinematographic equipment	9	18	63	600
Data processing equipment	68	100	222	226
Video and audio disks and tapes	48	53	104	117
Fees for AV reception	128	145	239	87
Books	55	58	119	116
Newspapers	127	140	202	59
Magazines and periodicals	97	108	183	89
Other printed material	23	28	49	113
Communication expenditure	961	1493	2287	138

Source: Household Budget Surveys, Statistics Finland

In 2006 prices, total communication expenditure in 1995 stood at 961 euros. By 2001, the figure was up to 1,493 euros and by 2006 to 2,287 euros per household, allowing for the change in the value of money. From 1995 to 2006, the biggest increase in the amount of household spending on communication was recorded in the categories of telecommunication, data processing equipment and audiovisual equipment and game consoles.

In 1995, the single biggest expenditure items were telecommunication costs and fees for AV reception. In 2001, by far the biggest expenditure item was telecommunication. In 2006, households spent 2,287 euros on communication, with telecommunication accounting for no more than 859 euros – in other words less than in 2001. At the same time, the volume of telecommunication, as measured in minutes and number of SMS messages, has almost doubled: the declining cost of mobile phone use is therefore reflected in household spending. Calculated by household, mobile phone costs accounted for one-fifth of total communication expenditure and for over one-half of telecommunication costs. Spending was lowest on other printed materials, photography and audio and video recordings.

Looking at individual expenditure items (see Appendix III), we find that mobile phone costs have dropped from 2001 to 2006. Since the beginning of the ten-year period under review, these costs had increased more than ten times over with the proliferation of mobile phones. According to survey results in 1994–1996, some 20 per cent of households owned a mobile phone, by 2006 the figure was 93 per cent. At the same time, Internet costs have increased with the proliferation of subscriptions and increasing connection speeds. In 1994–1996, less than 10 per cent of Finnish households had an Internet connection at home, in 2006 the figure was up to 57 per cent.

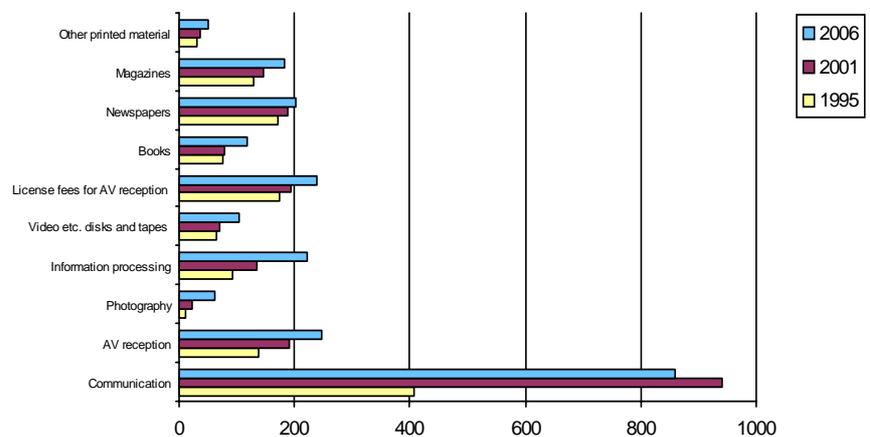
⁴ Money value coefficient = special coefficient in Consumer Price Index for the main category of telecommunication

The era of blank and recorded audio cassettes and tapes seems to have ended by the turn of the millennium. However in 2006 spending on CDs and recorded video cassettes was considerably higher than five years previously.

In 2006 spending on books, too, was much much higher than in 2001. The growth recorded for newspaper and magazine subscriptions, on the other hand, was rather more modest.

In 2006 average household spending on postal services was around 30 euros, compared to less than 20 euros in 1995. The amount of money spent on postcards and greeting cards was more or less unchanged between these two points of measurement.

Figure 2. Average household expenditure on communication in 1995, 2001 and 2006, euros (current 2006 prices)



Source: Household Budget Surveys 1995, 2001 and 2006, Statistics Finland

3.1 Household and household consumption unit

Table 3. Household expenditure on communication in 2006, euros per household and euros per household consumption unit

	household	hh consumption unit
/elecommunication	859	564
Equipment for the reception, recording, and reproduction of sound and pictures	248	165
Photographic and cinematographic equipment	63	41
Data processing equipment	222	146
Video and audio disks and tapes	104	67
Fees for AV reception	239	174
Books	119	73
Newspapers	202	142
Magazines and periodicals	183	123
Other printed material	49	33
Communication expenditure	2287	1529

Source: Household Budget Survey 2006, Statistics Finland

In both analyses the biggest communication expenditure items in 2006 were telecommunication costs: in both households and household consumption units, they accounted for almost 40 per cent of total household expenditure on communication.

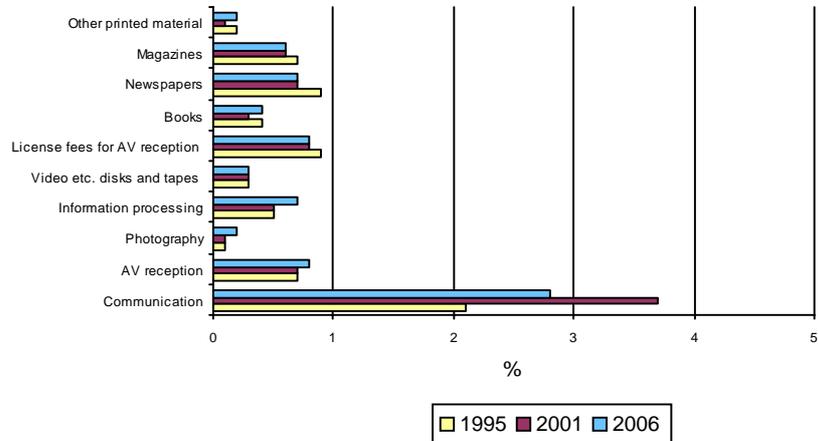
For household consumption units, the single biggest expenditure item in 1995 – accounting for one-third of total communication expenditure – was telecommunication at 275 euros, with landline telephone costs amounting to 197 euros.

By 2001 telecommunication expenditure per household consumption unit had risen to 617 euros – now accounting for around one-half of total communication expenditure.

By 2006, consumption unit expenditure on communication had risen to 1,529 euros, but the proportion of telecommunication expenditure had dropped to 37 per cent.

4. Communication expenditure as a proportion of total consumption expenditure

Figure 3. Household expenditure on communication by category as a proportion of total consumption expenditure in 1995, 2001 and 2006



Source: Household Budget Surveys 1995, 2001 and 2006, Statistics Finland

In 1995, communication costs accounted for 6.7 per cent of total household consumption expenditure; in 2001 the figure was up to 7.8 per cent; and in 2006 it had dropped back to 7.5 per cent. Strong growth was recorded from 1995 to 2001. This was particularly true for the share of telecommunication expenditure, whereas the share of print media – books and newspapers in particular – declined. However, from 2001 to 2006 the proportion of telecommunication costs decreased, and expenditure on print media as a proportion of total household consumption expenditure continued to decline.

Table 4. Structure of expenditure on communication in 1995, 2001 and 2006 per household consumption unit

	per consumption unit		
	1995	2001	2006
Telecommunication	32	47	37
Equipment for the reception, recording, and reproduction of sound and pictures	10	9	11
Photographic and cinematographic equipment	1	1	3
Data processing equipment	7	6	10
Video and audio disks and tapes	5	3	4
Fees for AV reception	14	11	11
Books	5	4	5
Newspapers	14	10	9
Magazines and periodicals	10	7	8
Other printed material	2	2	2
Communication expenditure	100	100	100

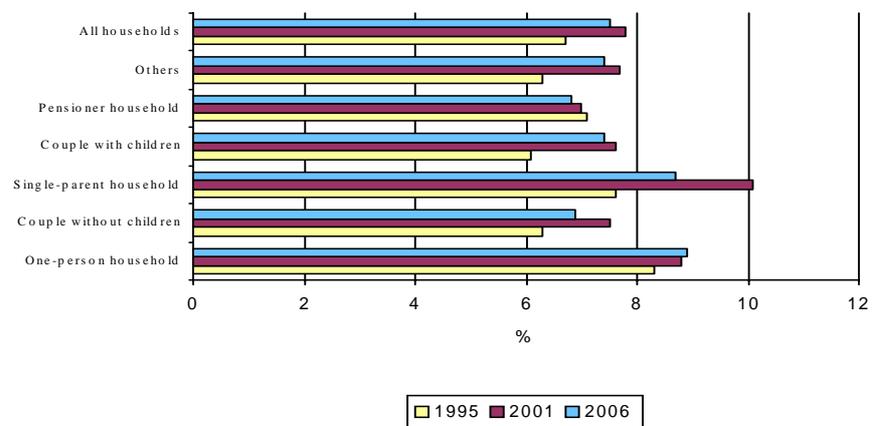
Source: Household Budget Surveys, Statistics Finland

Looking more closely at the structure of communication expenditure over the past ten years, we find that the share of print media has declined at the same time as telecommunication and data processing equipment account for an increasing proportion of total communication expenditure. In 2001, telecommunication accounted for almost one-half of total household communication expenditure.

5. Communication expenditure by stage of household life cycle

Expenditure on communication as a proportion of total consumption expenditure varies according to household structure.

Figure 4. Expenditure on communication by stage of household life cycle, proportion of total consumption expenditure in 1995, 2001 and 2006

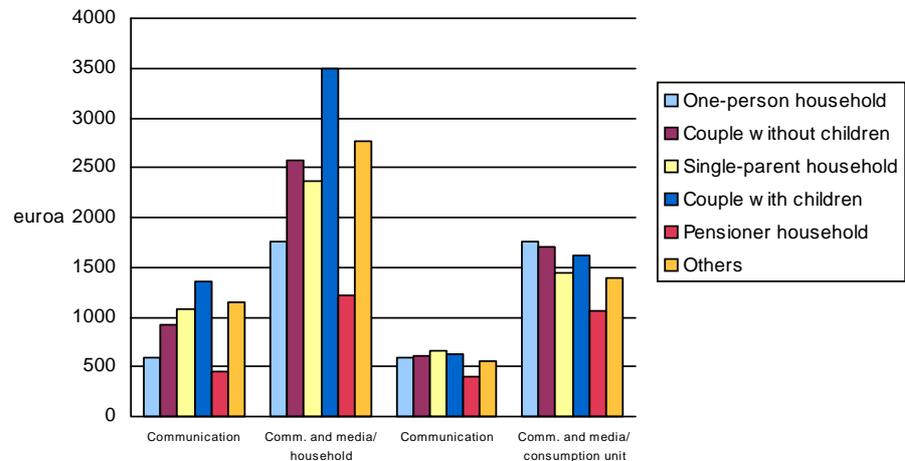


Source: Household Budget Surveys 1995, 2001 and 2006, Statistics Finland

Expenditure on communication as a proportion of total consumption expenditure was highest at around 9 per cent in single-parent households and among people living alone. The average for all households in 2006 was 7.5

per cent. In elderly households the relative share of communication expenditure declined over the ten-year period under review, in other types of household the share increased somewhat. At all three points of measurement, telecommunication expenditure accounted for the largest proportion of communication expenditure at all life cycle stages. Elderly households spend the least amount of money on communication, but in 1995, for instance, their communication expenditure accounted for a larger proportion of total consumption expenditure than in all households on average. In 1995 and 2001 the second biggest communication expenditure item after telecommunication for elderly households was newspapers, although the television fee also accounts for a large proportion of their total expenditure on communication. In 2006 the second biggest expense item for elderly households was newspapers, followed by fees for audiovisual reception. Among people who live alone, communication expenditure accounts for a large proportion of total consumption expenditure. Many of the products and services in the communication and media categories (newspaper, computer, television fee) can be used by more than one household member, which lowers expenditure per consumption unit.

Figure 5. Average household and household consumption unit expenditure on communication by stage of household life cycle in 2006

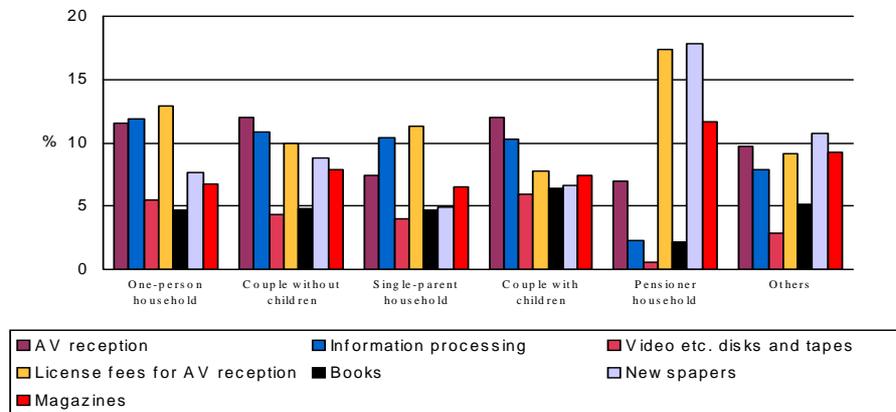


Source: Household Budget Survey 2006, Statistics Finland

When examined by **household consumption unit**, the differences between households at different life cycle stages are less pronounced.

Communication expenditure per consumption unit are lowest in elderly households, highest among people who live alone and couples without children. Newspapers were the second biggest communication expenditure item in elderly households at all three points of measurement.

Figure 6. Percentage breakdown of household consumption unit expenditure on communication by category and stage of household life cycle stage in 2006



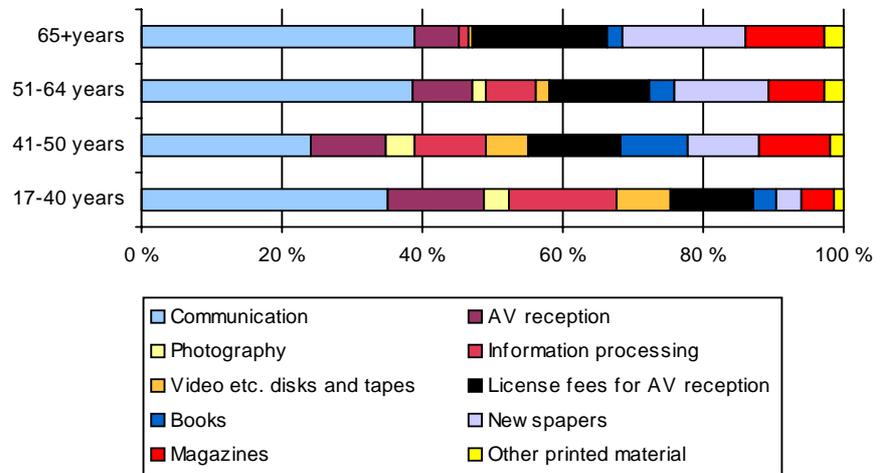
Source: Household Budget Survey 2006, Statistics Finland

With the single exception of elderly households, data processing equipment accounted for approximately 10 per cent of total expenditure on communication in all types of household. Elderly households have traditionally spent relatively large on magazines. Expenditure on audiovisual equipment and game consoles is relatively high among people who live alone, childless couples and two-parent families with children.

5.1 Structure of expenditure on communication in single-person households in 2006

The amount of money spent on communication decreased with advancing age from roughly 2,000 euros in the youngest age group to approximately 1,500 euros in the oldest age group. In single-person households telecommunication accounted for the largest proportion of total communication expenditure in all age groups. Among persons aged 17–40, data processing equipment accounted for a larger proportion of total communication expenditure than in older age groups who lived alone. Furthermore, expenditure on fees for AV reception as well as on newspapers as a proportion of total communication expenditure increased with advancing age. In the age bracket 41–50, people who lived alone spent around ten per cent of their total communication expenditure on books, whereas in other age groups spending on books was very modest.

Figure 7. Breakdown of household expenditure on communication in single-person households by age in 2006

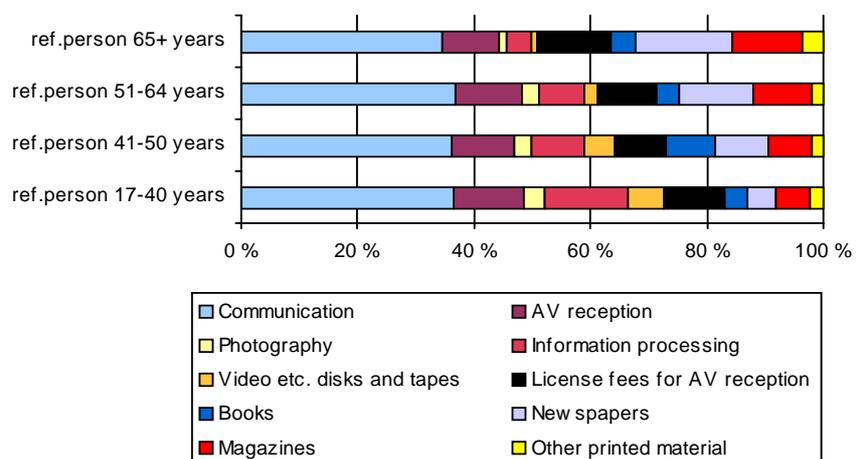


Source: Household Budget Survey, Statistics Finland

5.2 Structure of expenditure on communication in two-person households in 2006

The amount of money spent on communication decreased with the increasing age of household head from around 2,700 euros in the youngest age group to around 1,700 euros in the oldest. In two-person households, too, telecommunication accounted for the largest proportion of total communication expenditure in all age groups. Among persons aged 17–40 who lived in two-person households, expenditure on data processing equipment accounted for a larger proportion of total communication expenditure than was the case in older age groups, and the share of newspapers and magazines increased with advancing age. In two-person households those aged 41–50 spent twice as much money on books as persons in other age groups.

Figure 8. Breakdown of average household expenditure on communication in two-person households by age in 2006

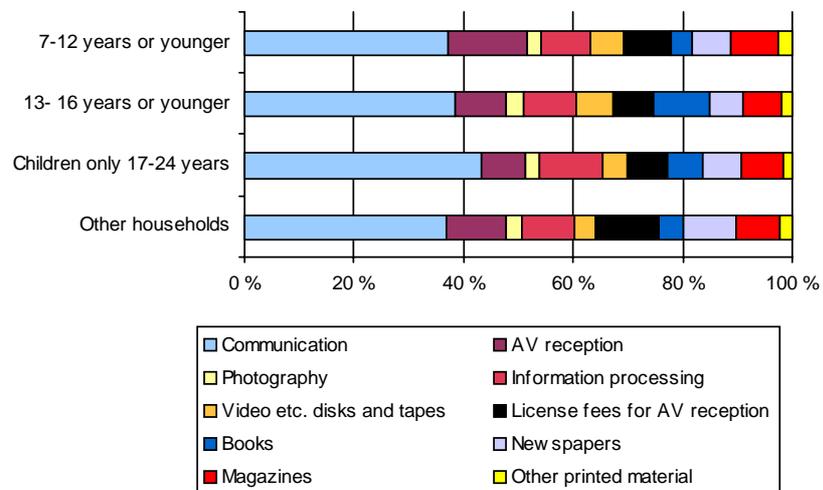


Source: Household Budget Survey, Statistics Finland

5.3 Communication expenditure in households with children in 2006

In 2006 average household expenditure on communication was around 2,300 euros. We already know from earlier studies that households with children were quicker to adopt new information technologies than childless households.⁵ The age of children comes into play as well. In 2006 telecommunication was the single biggest communication expenditure item even for households with children, and particularly for households with children aged 17–24.⁶ In all households with children, data processing equipment accounted for some 10 per cent of total communication expenditure. AV equipment and game consoles accounted for a large proportion of spending on communication in those households that had children aged under 12. Spending on books accounted for the largest proportion of communication expenditure in households with children aged 13–16, where textbooks and non-fiction books are a major expense item. On the other hand the costs of AV reception as a proportion of total communication expenditure are smaller in households with children than they are in other households – which is understandable since the television fee is the same regardless of the size of the household.

Figure 9. Breakdown of household expenditure on communication in households with children by age of children in 2006



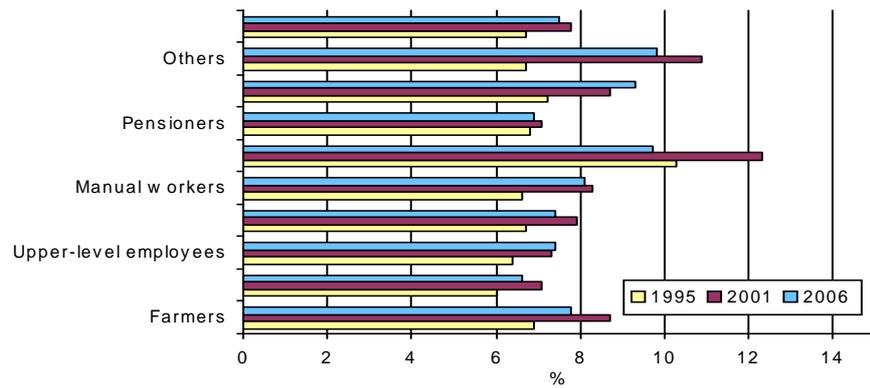
Source: Household Budget Survey, Statistics Finland

⁵ A Great Migration to the Information Society. Reviews 2003/1. Statistics Finland

⁶ Only children aged 17–24; children aged 13–16 or younger = at least one child in the family aged 13–16, possibly younger children as well; children aged 7–12 or younger = at least one child in the family aged 7–12, possibly younger children as well

6. Expenditure on communication by socio-economic status

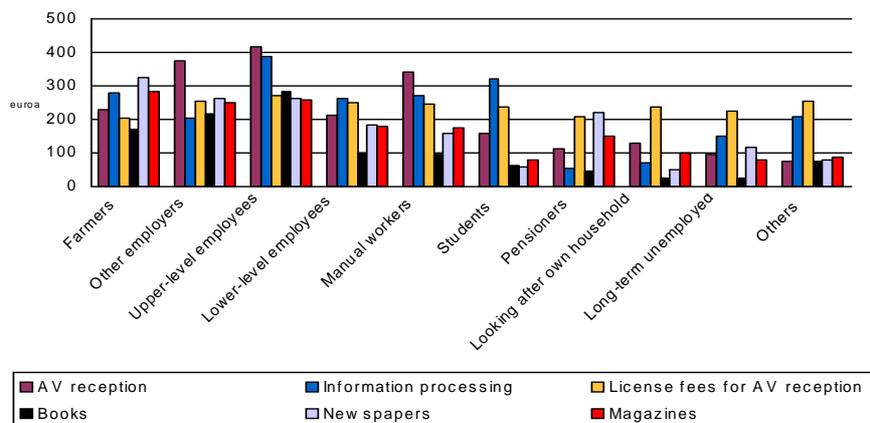
Figure 10. Expenditure on communication by socio-economic status of household head, proportion of total consumption expenditure in 1995, 2001 and 2006



Source: Household Budget Surveys 1995, 2001 and 2006, Statistics Finland

Expenditure on communication as a proportion of total consumption expenditure was highest in student households and lowest in self-employed and pensioner households. Relative expenditure on communication increased by less than one percentage point over the ten-year period under review, but in pensioner and student households the proportion of communication expenditure declined.

Figure 11. Household expenditure on communication by category and household socio-economic status in 2006, euros per household

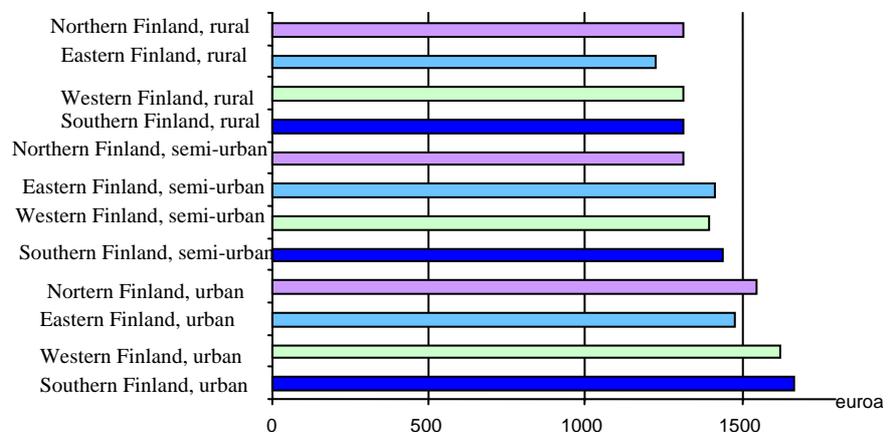


Source: Household Budget Survey 2006, Statistics Finland

Telecommunication was the single biggest expenditure item in all households. In self-employed households, upper-level employee households and manual worker households considerable sums were spent on audiovisual equipment and game consoles. In student households and upper-level employee households, spending on data processing equipment was also high. Upper-level employee households bought books more often than others. Spending on newspapers was low in student households and among household keepers.

7. Expenditure on communication by region

Figure 12. Household expenditure on communication by region in 2006, euros per household consumption unit

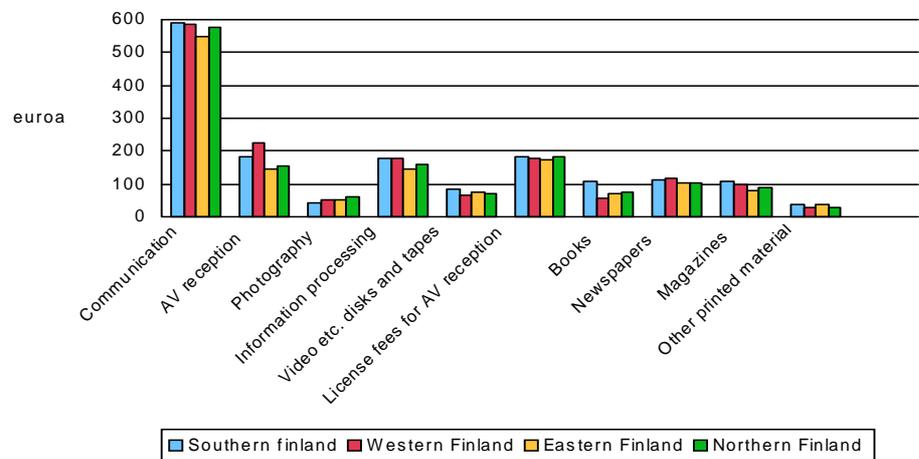


Source: Household Budget Survey 2006, Statistics Finland

In 2006 communication expenditure per household consumption unit was highest at over 1,700 euros in households living in urban areas in southern Finland.⁷ Expenditure was higher in urban and semi-urban municipalities than in rural areas throughout the country. Spending on communication was lowest of all in the rural areas of eastern Finland. Data for the Åland Islands are included in the statistics for the whole country.

⁷ See Appendix II for definitions

Figure 13. Household expenditure on communication in urban municipalities in 2006, euros per household consumption unit



Source: Household Budget Survey 2006, Statistics Finland

There are no major regional differences in the figures for different urban municipalities, although urban households in southern Finland spent more money on books than urban households in other parts of the country. In semi-urban municipalities, households in eastern Finland spent the most money on data processing equipment.

Communication expenditure per household consumption unit is lower in rural than in other types of municipalities. However, rural households in southern and eastern Finland spent larger sums of money on newspapers than rural households in other parts of the country.

On average, urban households in southern Finland had the highest expenditure on telecommunication, audiovisual recordings, audiovisual viewing, books and magazines. The lowest level of expenditure was recorded for rural households in eastern Finland in the categories of telecommunication, data processing equipment, audiovisual recordings, books and magazines. Even in the semi-rural municipalities of eastern Finland, households spent the least money on audiovisual equipment. Spending on data processing equipment, on the other hand, was higher in these areas than anywhere else in the country.

Table 5. Selected communication expenditure items by region in 2006, euros per consumption unit

grey = highest value among all regions

red = lowest value among all regions

Region and degree of urbanization	Telecom communication	AV reception	Data processing	Fees for AV reception	Books	Newspapers	Magazines	Expenditure on communication
Southern Finland, urban	589	181	168	185	108	141	134	1670
Western Finland, urban	584	226	171	178	56	141	121	1620
Eastern Finland, urban	547	146	146	172	70	128	102	1479
Northern Finland, urban	576	156	160	183	76	129	108	1546
Southern Finland, semi-urban	547	141	141	172	43	136	120	1440
Western Finland, semi-urban	542	129	114	159	42	146	130	1396
Eastern Finland, semi-urban	508	88	239	172	87	136	102	1414
Northern Finland, semi-urban	518	134	92	142	95	150	99	1315
Southern Finland, rural	513	131	86	163	26	159	134	1311
Western Finland, rural	559	118	86	154	49	145	115	1316
Eastern Finland, rural	497	147	75	163	14	159	94	1226
Northern Finland, rural	503	98	151	141	45	140	123	1314

Source: Household Budget Survey 2006, Statistics Finland

In 2001 expenditure on communication was highest in urban households in northern and southern Finland and in semi-urban households in eastern Finland. Expenditure was lowest among semi-urban households in eastern Finland.

In 1995 expenditure on communication was highest in urban households in southern Finland, followed by households in other urban and semi-urban municipalities. People living in rural municipalities in eastern Finland spent the least amount of money on communication.

The pattern of regional differences has remained effectively unchanged over the past ten years. The differences in communication expenditure remained more or less the same from 1995 to 2001, when expenditure on communication in the lowest-spending region was 76 and 77 per cent of expenditure levels in the highest-spending regions, respectively. By 2006, the difference had widened so that communication expenditure in the lowest-spending region was 73 per cent of the expenditure level in the highest-spending region.

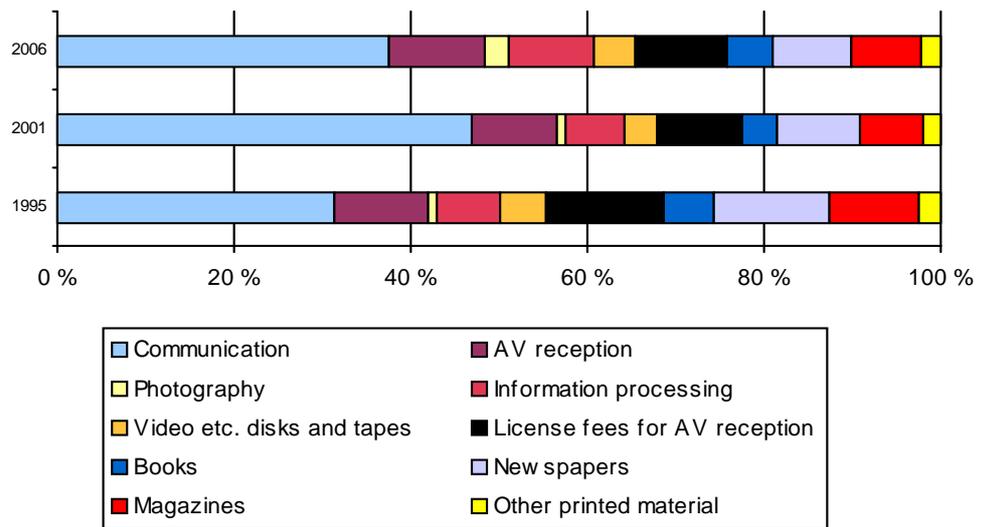
8. Summary

Household expenditure on communication as a proportion of total household consumption expenditure has increased from 6.7 to 7.5 per cent over the ten-year period under review.

Expenditure on telecommunication as a proportion of total communication expenditure has continued to increase, at the same time as spending on

newspapers and magazines has decreased. On the hand hand the proportion spent on books remains at the same level as ten years earlier.

Figure 14. Breakdown of average household expenditure on communication in 1995, 2001 and 2006



Source: Household Budget Surveys 1995, 2001 and 2006, Statistics Finland

Communication accounts for a large proportion of total consumption expenditure in single-person households. These households already have television and subscription newspapers, for instance, which in larger households are shared by all household members at the same cost.

In 2001, telecommunication accounted for a large proportion of total communication expenditure. By 2006, the figure had dropped to below 40 per cent. The structure of communication expenditure is also affected by the age of children in the household. Audiovisual equipment and game consoles accounted for a large proportion of expenditure on communication in households that had children under 12. Books accounted for the largest proportion of communication expenditure in households that had children aged 13–16.

In single-person and two-person households the age of head of household also affected the structure of communication expenditure. Among persons aged 17–40 who lived in small households, data processing equipment accounted for a larger share of communication expenditure than in older age groups, and the share of spending on newspapers and magazines increased with advancing age. Among persons aged 41–50 living in small households, spending on books was twice as high as in other age groups.

APPENDIX I: Classification of communication expenditure items⁸

Category

	CODE	Content
1. Telecommunication	0811101	Postal charges
	0812101	Mobile phones, including communicator, batteries and chargers
	0812102	Telephones, answering machiners and pagers
	0812103	Repair of telephones etc.
	0813101	Telephone charges for home and holiday home
	0813103	Mobile phone charges, including pre paid
	0813104	Calling cards, coin calls and telegrams
	0813105	Company phone
	0813108	Fixed line Internet costs
	0813110	Other Internet costs, e.g. cable
2. Equipment for the reception, recording, and reproduction of sound and pictures	0911101	Radios and receivers
	0911102	CD players etc.
	0911103	Large portable CD-radio players
	0911104	Speakers
	0911105	All-in-one hifi systems
	0911106	Personal portable mini players
	0911107	Parts and accessories for radio, recorder, etc.
	0911201	Televisions
	0911202	VCRs
	0911203	Satellite antennas
	0911204	DVD players
	0911205	Digital set-top box
	0911206	Home theatres, projectors, speaker systems
	0915101	Radio, television etc. repairs
0931101	Game computers	
3. Photographic and cinematographic equipment	0912101	SLR cameras, digital cameras and accessories
	0912102	Video cameras and accessories
	0912202	Car navigators and other GPS systems
4. Data processing equipment	0913101	PCs, modems and accessories
	0913102	Computer software
	0913103	Typewriters and calculators
	0913104	Parts and accessories for computers etc.
	0915102	Repair of computers, cameras, etc.
5. Audio and video disks and tapes	0914101	Film and other photography supplies
	0914102	CDs, phonograms
	0914104	Recorded cassettes and tapes
	0914105	Blank cassettes and tapes
	0914106	Recorded video cassettes
	0914107	Blank video cassettes etc.
	0931106	Computer and console games

⁸Compiled in collaboration with Ministry of Transport and Communications experts.

6. Fees for audio/video reception	0942103	Films and film clubs
	0942301	Television licence
	0942302	Viewing fees for subscription TV channels
	0942303	Video cassettes, television, VCR rental
7. Books	0951101	Textbooks and non-fiction books
	0951102	Encyclopedic series
	0951103	Novels, short stories, poems
	0951104	Novels series
	0951105	Children's and young people's books
	0951106	Books unspecified
8. Newspapers	0952101	Newspaper subscription fees
	0952102	Newspapers, single copies
9. Magazines and periodicals	0952103	Magazine subscription fees
	0952104	Magazines, single copies
	0952105	Periodicals subscription fees
	0952106	Periodicals, single copies
10. Other printed material	0953102	Postcards and greeting cards, printed condolence cards
	0953103	Calendars, maps and other printed material
	0954102	Stationery and envelopes etc.

APPENDIX II: Background variables

Classification of household life cycle stage:

- one-person household (-> 65 years)
- couple without children (both 65 or under)
- single parent household
- couple with children (married or unmarried couple with children)
- pensioner household (all members over 65)
- others, not elsewhere classified

Socio-economic status of household head:

- **Farmers (employers)**
- **Other employers**
- **3 Upper-level employees with administrative, managerial, professional and related occupations**
- **4 Lower-level employees with administrative and clerical occupations**
- **5 Manual workers**
- **6 Students**
- **7 Pensioners**
- **Looking after own household**
- **81 Long-term unemployed**
- **Others not elsewhere classified**

Region:

The statistical classification of municipalities describing their degree of urbanisation was designed by Statistics Finland and introduced in 1989. In this classification, municipalities are divided into three categories – urban, semi-urban and rural – based on the proportion of people living in built-up areas and based on the size of the population in the largest of those settlements.

1 Urban municipalities

Urban municipalities are those in which at least 90 per cent of the population lives in urban settlements, or in which the population of the largest urban settlement is at least 15,000.

2 Semi urban municipalities

Semi-urban municipalities are those in which at least 60 per cent but less than 90 per cent of the population lives in urban settlements, and in which the population of the largest urban settlement is at least 4,000 but less than 15,000.

3 Rural municipalities

Rural municipalities are those in which less than 60 per cent of the population lives in urban settlements, and in which the population of the largest urban settlement is less than 15,000, as well as those municipalities in which at least 60 per cent but less than 90 per cent of the population lives in urban settlements, and in which the population of the largest urban settlement is less than 4,000.

APPENDIX III. Average household expenditure on communication in 1995, 2001 and 2006, euros per household, current prices.

..data not reliable enough to publish, too few observations

	1995	2001	2006
	€	€	€
Postal charges	18.31	21.92	28.35
Mobile phones, batteries and chargers	41.10	60.04	71.19
Telephones, answering machines and pagers	6.87	5.42	2.60
Repair of telephones etc.	0.92	3.64	..
Telephone charges for home and holiday home	288.66	228.19	125.30
Mobile phone charges, including pre-paid	47.46	529.04	446.29
Calling cards, coin calls and telegrams	4.37	1.38	..
Company phone		49.45	33.55
Fixed line Internet costs*		40.11	7.30
Other Internet costs, e.g. cable**		2.50	141.83
Radios and receivers	7.66	14.41	5.50
CD players etc.	12.21	14.41	..
Large portable CD-radio players	3.87	6.55	2.49
Speakers	2.67	11.44	..
All-in-one hifi systems	15.84	9.50	7.56
Personal portable mini players	2.05	4.14	11.04
Parts and accessories for radio, recorder, etc.	3.29	7.63	8.14
Televisions	53.43	74.73	117.94
VCRs ***	19.33	17.19	1.71
Satellite antennas	3.40	3.02	3.00
DVD players		10.46	23.37
Digital set-top box			34.77
Home theatres, projectors, speaker systems			16.08
SLR cameras, digital cameras and accessories	7.32	11.12	46.82
Video cameras and accessories	5.25	12.70	8.06
Car navigators and other GPS systems			7.72
PCs, modems and accessories	73.39	101.01	172.73
Computer software	3.04	7.51	21.35
Typewriters and calculators	2.15	2.27	..
Parts and accessories for computers etc.	13.72	19.76	24.95
Film and other photography supplies	12.51	7.55	3.63
CDs, phonograms	26.25	39.09	41.47
Recorded cassettes and tapes	5.52	0.75	..
Blank cassettes and tapes	3.81	0.81	..
Recorded video cassettes	8.10	15.54	37.20
Blank video cassettes etc.	8.70	7.03	4.98
Repair of radio, television, etc. ****	13.76	3.39	..
Repair of computers, cameras, etc.		3.83	..
Game computers		14.50	4.19
Computer and console games			16.20
Films and film clubs	13.36	17.97	16.96
Television licence	136.55	159.73	199.88
Viewing fees for subscription TV channels	7.60	8.19	13.70
Video cassettes, television, VCR rental	5.19	9.26	8.18
Novels series	1.95	4.03	
Textbooks and non-fiction books	43.96	32.11	46.35
Encyclopedic series	10.60	4.41	
Novels, short stories, poems	24.52	11.62	32.87
Children's and young people's books	6.15	6.28	15.51
Books unspecified		28.48	24.28
Newspaper subscriptions	144.38	155.86	127.60
Newspaper single copies	27.58	32.22	30.26
Magazine subscriptions	99.58	111.04	106.08

Magazine single copies	19.60	21.77	25.70
Periodical subscriptions	10.39	11.39	9.52
Periodical single copies	1.04	1.05	..
Postcards and greeting cards, printed condolence cards	18.15	21.14	26.92
Calendars, maps and other printed material	7.31	9.36	12.71
Stationery and envelopes etc.	6.16	7.33	9.57
Telecommunication expenditure	407.69	941.69	859.18
Equipment for the reception, recording and reproduction of sound and pictures	137.49	191.37	247.90
Photographic and cinematographic equipment	12.57	23.82	62.60
Data processing equipment	92.30	134.37	228.37
Video and audio disks and tapes	64.88	70.77	104.11
Fees for AV reception	173.31	195.15	238.72
Books	74.64	78.48	119.03
Newspapers	171.97	188.08	157.86
Magazines	130.61	145.24	144.02
Other printed material	31.62	37.83	49.20
Communication expenditure	1297.08	2006.82	2210.99

* = in 2001 including other Internet costs e.g. cable

** = in 2001 including Internet costs from mobile phones

*** = in 1995 including DVD players

**** = in 1995 including repair of computers, cameras etc.