PRODUCED FOR THE EUROPEAN COMMISSION, DG INFORMATION SOCIETY

TELECOMS SERVICES INDICATORS

2004

Table of contents

INTRODUCTION – OBJECTIVE AND METHOD 7

1. BASIC INDICATORS 10

1.1. Purpose 10
1.2. Main observations 10
1.3. Snapshots 12
1.4. Fixed and mobile subscriptions by households 13
1.5. Television and means of reception 14
1.6. Digital television 15
1.7. Personal computer 16
1.8. Internet access at home 17
1.9. Broadband Internet access at home 18

2. FIXED AND MOBILE TELEPHONY 21

2.1. Purpose 21
2.2. Main observations 21
2.3. Overall telephone access 22
2.4 Fixed telephony 24
2.5. Public payphones 40
2.6. Mobile telephony 43

3. INTERNET 55

3.1. Purpose 55
3.2. Main observations 55
3.3. Personal computer equipment – Internet access 57
3.4. Main means of Internet access for the household 67
3.5. Internet access or use at home or away 73
3.6. Frequency of Internet use from the home 82
3.7. Internet services and types of use 84
3.8. No Internet access at home 89

APPENDIX **93**

Annex I : Maps of Regional Indicators **94**

Map I	Fixed and / or mobile	96
Map II	Households with a fixed line	97
Map III	Households with both fixed and mobile subscription	98
Map IV	Households with mobile only	99
Map V	No telephone	100
Map VI	ISDN	101
Map VII	No fixed telephone	102
Map VIII	Households with at least one mobile	103
Map IX	No mobile	104
Map X	Households with one or more forms of television access	105
Map XI	Terrestrial only	106
Map XII	Cable only	107
Map XIII	Satellite only	108
Map XIV	Digital television	109
Map XV	PC penetration	110
Map XVI	Internet access at home	111
Map XVII	Proportion of PC's connected to Internet	112
Map XVIII	No Internet at home	113
Map XIX	Broadband Internet access at home	114
Map XX	Broadband DSL	115
Map XXI	Broadband cable	116

Annex II : Details of the survey and sampling **117**

Annex III : Questionnaire **124**

Annex IV : Map of regional densities **138**

Annex V : Table with details of standard errors or statistical margins at 95% confidence levels **140**

List of charts

Chart 1 - Penetration of Electronic Communications Services within EU 15 Households, 2004 12
Chart 2 - Digital Television - penetration 2004/2003 15
Chart 3 - Personal Computer - penetration 2004/2003 16
Chart 4 - Internet access at home - penetration 2004/2003 17
Chart 5 - Broadband Internet access at home - 2004/2003 18
Chart 6 - Internet access at home: narrowband and broadband - penetration 2003/2004 19
Chart 7 - Internet access at home, DSL subscription and Cable TV access - penetration 2003/2004 20
Chart 8 - Overall telephone access (fixed and mobile) - penetration 2004/2003 22
Chart 9 - Fixed telephone line - households with at least one subscription - penetration 2004/2003 24
Chart 10 - Fixed ISDN line - penetration 2004/2003 27
Chart 11 - Households without any fixed telephone line – penetration 2004/2003 29
Chart 12 - Total amount in Euros spent per month on fixed telephone lines and calls 33
Chart 13 - Public payphones - use by households - penetration 2004/2003 40
Chart 14 - Mobile telephony – households with at least 1 subscription 2004/2003 43
Chart 15 - Households only with (one or more) mobile subscription(s) – 2004/2003 47
Chart 16 - Households without any mobile phone subscription – 2004/2003 49
Chart 17 - Households equipped with a personal computer – penetration 2004/2003 57
Chart 18 - Internet access at home - penetration 2004/2003 59
Chart 19 - Broadband Internet access at home - 2004/2003 61
Chart 20 - Internet access at home: narrowband and broadband - penetration 2003/2004 63
Chart 21 - Broadband Internet access at home: access via DSL and access via cable TV 64
Chart 22 - Proportion of households with personal computers that have internet access 65
Chart 23 - Households with personal computers: Internet access or not 66
Chart 24 - Access means 1 - Dial-up using a standard telephone line - penetration 2004/2003 68
Chart 25 - Access means 2 - Dial-up using an ISDN line - penetration 2004/2003 69
Chart 26 - Access means 3 - DSL (digital subscriber line) service - penetration 2004/2003 70
Chart 27 - Access means 4 – Via the cable TV network (using a cable modem) - penetration 2004/2003 71
Chart 28 - Means used to pay for Internet access 72
Chart 29 - Internet access at home and total Internet access 74
Chart 30 - No Internet access at home - penetration 2004/2003 89

List of data tables

Table 1 - Universe	8
Table 2 - Sampling plan	9
Tabel 3 - Fixed and mobile subscriptions by households - 2003/2004	13
Table 4 - Television and means of reception - 2003/2004	14
Table 5 - Households without any form of telephony (neither fixed nor mobile)	23
Table 6 - Penetration of fixed telephony line (traditional fixed, ISDN and/or DSL) - demographic breakdowns	25
Table 7 - Fixed telephone lines (including ISDN and/or DSL) – number of lines	26
Table 8 - Penetration of fixed ISDN line – demographic breakdowns	28
Table 9 - Households without any fixed telephone line – demographic breakdowns	30
Table 10 - No fixed telephone line – reasons why	31
Table 11 - Five main raisons	32
Table 12 - Amount spent per month on fixed telephony – demographic breakdowns	34
Table 13 - Amount spent per month on fixed telephony – price grouping	35
Table 14 - Operators used to provide fixed telephone lines	36
Table 15 - Operators used to provide fixed telephone services	38
Table 16 - Use of public payphones by households – demographic breakdowns	41
Table 17 - Public payphones - frequency	42
Table 18 - Penetration of mobile telephony among households – demographic breakdowns	44
Table 19 - Mobile telephony – number of subscriptions	45
Table 20 - Mobile telephony – pre-paid subscriptions – 2003/2004	46
Table 21 - Households with only (one or more) mobile phone subs. – demographic breakdowns	48
Table 22 - Households without any mobile phone subs. – demographic breakdowns	50
Table 23 - No mobile phone – reasons why	51
Table 24 - Three main reasons for not having a mobile phone subscription	52
Table 25 - Households with at least one subscription for these mobile phone operators	53
Table 26 - Penetration of Personal computer – demographic breakdowns	58
Table 27 - Internet access at home – demographic breakdowns	60
Table 28 - Broadband Internet access at home – demographic breakdowns	62
Table 29 - Main means of Internet access for the household	67
Table 30 - Internet access or use away at home or away – penetration 2004	73
Table 31 - Overall Internet access penetration – demographic breakdowns	75
Table 32 - Internet access at home or at work – demographic breakdowns	76
Table 33 - Internet access at home or at an educational establishment – demographic breakdowns	77
Table 34 - Internet access at home – household members	78
Table 35 - Internet access at work – household members	79
Table 36 - Internet access at an educational establishment – household members	80
Table 37 - Internet access elsewhere – household members	81
Table 38 - Frequency of Internet use from the home	82
Table 39 - Main frequency of Internet use from the home by country	83
Table 40 - Main Internet services & facilities	84
Table 41 - E-mail, info on subjects of interest, entertainment, use related education, forms/discussions	85
Table 42 - Info on products and prices, use related to work, ordering goods etc. and handling a bank account	86
Table 43 - Operators used to provide Internet services at home	87
Table 44 - No Internet access at home – demographic breakdowns	90
Table 45 - No Internet access – reasons why	91
Table 46 - Four main reasons for not having an Internet access	92

Foreword

This digest is produced by IPSOS-INRA for the Information Society Directorate-General of the European Commission and is a follow-up of the 2002 report.

The study forms part of the monitoring work on market developments in the European electronic communications services sector, undertaken in connection with the European Union's regulatory framework[1].

The survey is motivated by a number of specific objectives linked to the implementation and development of the EU regulatory framework. The first objective is to monitor access to and use of services covered by universal service obligations, such as the public telephone service. The second is to assess the development of newer services such as digital television and those related to Internet access. The third is to monitor the ongoing growth and use of mobile services.

The two salient trends raised by the 2004 survey are the rapid take up of broadband Internet access by households and the continuing fixed to mobile substitution:

- An average of 12% of households in the 15 pre-accession EU Member States has Broadband Internet access as against 5% in 2003. DSL accounts for around two third of the high speed connections at home. The highest penetration rates are observed in countries where there is competition between the DSL-public telephone network based infrastructure and cable TV network infrastructure: the Netherlands (36% of households), Belgium (32%), Denmark (30%) and Sweden (25%).
- The proportion of EU 15 households with at least one fixed line has decreased by 3 percentage points over 2003 and now stands at 82%. At the same time the proportion of households with at least one mobile phone has increased from 77% in 2003 to 81% in 2004. Moreover, there is an increasing proportion of households having a mobile phone only, with 15% of EU households in 2004 as against 12% in 2003. This proportion reaches the highest level of 33% in Finland and Portugal.

This second survey also shows us that the proportion of EU 15 households with Internet access has increased from 12% in 1999 to 34% in 2003 and to 39% in 2004. An additional 19% of households have at least one household member using the Internet at another location, such as at work or in an educational establishment, so that 58% of households have access to the Internet in one form or another.

This evolution is very dependant from the number of households equipped with a personal computer, which is now 53% of households as against 48% in 2003. The survey shows that this proportion increases as the size of the household increases, with an average of 71% for households with 4 members having a personal computer.

With respect to telephony, the overall proportion of EU 15 households with access to a telephone at home is equal to 97% while 66% have both a fixed and a mobile phone. This corresponds to an average proportion of households without any form of telephony which is equal to 3%.

[1] The situation of telecommunications services in the regions of the European Union, April 2000, undertaken for the European Commission by EOS Gallup

A demographic analysis shows that this proportion is higher in households of only one member with an EU 15 average worth 6%. However, this proportion varies greatly across countries with Portugal having 35% of households made up of one person without any form of telephony.

With respect to the 19% of EU 15 households which do not have a mobile phone, affordability is identified as an obstacle for 16% of them.

Last but not least, an average of 19% of households in the 15 Member States regularly uses public payphones. In terms of public payphone usage households from Greece have the highest usage with 53% of households using public payphones regularly. This is followed by Spain (28%), the United Kingdom (27%), Portugal (23%) and France (23%). The survey also shows that rural households use public payphones almost twice as often as do metropolitan households.

Introduction

Objective and method

The main purpose of this study is to analyse developments in the use of telecom products (fixed and mobile telephony and Internet services) in households residing in the European Union. The study has been realised on behalf of the European Commission Directorate-General Information Society, as part of the Commission's ongoing monitoring of the impact of market liberalisation and regulatory policy in the telecommunications sector. The data for the residential survey was gathered before the enlargement of the European Union to 25 Member States in May 2004, and therefore covers the 15 pre-accession Member States. A separate study on universal service and four monitoring reports on telecommunications markets in the Accession Countries were carried out at the request of the European Commission in 2001 – 2003[2].

The present report summarises the main results of the second residential survey where relevant data was gathered between the end of 2003 and the beginning of 2004. It compares key indicators with the previous survey, which was conducted in the second half of 2002 and published in 2003. The key data are reported for both years, 2003 refers to the data collected in 2002 and 2004 refers to the data collected in 2003-2004. A similar monitoring exercise was carried out in 1999[3]. This tracking study continues to be the largest survey undertaken in the sector at a European level with over 44.000 households interviewed from 127 regions of 15 EU Member States. It has allowed the gathering of a unique set of information with detailed geographic and demographic.

The data was gathered in two phases: the first phase was conducted in 2002 over a period of three months (July to September) and was based on a sample of 44,378 respondents. The second phase was also conducted over a period of three months: November - December 2003 and January 2004. It is based on a sample of 44,219 respondents. The samples are representative of the total population of the 15 European Union countries by demographics and by NUTS region.

Overall the report focuses on the following sub-markets:

- Fixed telephony
- Mobile telecommunication services
- Internet access and access with higher transmission capacity

More specifically, the report has been divided into three chapters.

The first chapter is dedicated to some basic indicators. It gives a picture of the current state and evolution of the telecommunications market as a whole. The second chapter presents the main parameters of the fixed and the mobile telephony. The last chapter focuses on the main developments on the Internet market.

Each chapter begins with a short summary that outlines the major topics to be developed in this chapter.

As in the previous study, a series of documents are included as appendix.

Main characteristics:

- Universe: total population aged 15+
- Interview technique: face-to-face interviews – omnibus

[2] See 'Study on Universal Service in Accession Countries', June 30 2001: http://europa.eu.int/information_society/topics/telecoms/international/news/index_en.htm; and 'Reports on Market for Telecoms Services in the Accession and Candidate Countries', 2002-2003: http://europa.eu.int/information_society/topics/ecomm/all_about/international_aspects/main_areas_work/eu_enlargement/index_en.htm.

[3] See "Study on the situation of telecommunications services in the regions of the European Union", Residential report, April 2000, http://europa.eu.int/ISPO/infosoc/telecompolicy/en/Study-en.htm

- Sample: 44,219 respondents aged 15+
- Questionnaire: quantitative questionnaire
- Fieldwork: November – December 2003 and January 2004

1. Universe

Table 1 - Universe

In thousands	Total population[1]	Number of households[1]
Belgium	10,214	4,114
Danmark	5,314	2,434
Deutschland	82,037	38,244
Ellada	10,522	4,046
Espana	39,519	13,713
France	58,494	24,728
Ireland	3,745	1,326
Italia	57,613	22,196
Luxembourg	429	173
Nederland	15,760	6,863
Österreich	8,083	3,347
Portugal	10,198	3,547
Finland	5,160	2,382
Sverige	8,854	4,369
United Kingdom	59,370	26,167

[1] Source: Eurostat 2002

2. Interview technique

Interviews were conducted face-to-face in household's homes, using INRA's Omnibus services except in three countries: Greece, Ireland and the United Kingdom (Ad-Hoc surveys).

The respondents, aged 15+, are representative of the total population in each country. Questions were answered by the respondents on behalf of the household.

3. Sample

- Respondents aged 15+
- Representative of the total country population by sex, age, NUTS region and locality

The table below compares the number of interviews actually conducted with the number originally laid down in the sampling plan, grouped by country. The reader will find additional information regarding the weighting factors in annex V.

The detailed sample by NUTS region is given in Annex II.

Table 2: Sampling plan

	Sampling plan	Real sample	NUTS level used
Belgium	2000	1992	I
Danmark	2000	2000	I
Deutschland	5000	5111	I
Ellada	2000	2000	II
Espana	5000	5000	II
France	5000	5126	I
Ireland	1400	1434	III
Italia	5000	4899	I
Luxembourg	1000	1001	I
Nederland	2000	2003	I
Österreich	2000	2089	I
Portugal	2000	2150	II
Finland	2000	2024	II
Sverige	2000	2006	II
United Kingdom	5150	5385	I
TOTAL	**43550**	**44219**	**115 regions**

The detailed sample by NUTS region is given in annex II.

4. Questionnaire

The questionnaire has been designed in close collaboration between the European Commission and INRA. An English version is given in Annex III.

5. Fieldwork

Interviews were conducted in November – December 2003 and January 2004, in line with the Omnibus programme of each country.

6. Breakdowns

The tables in this report include a breakdown by household size and type of locality.

The reader will find a detailed definition of the breakdown in Annex II

7. Weighting

The EU 15 averages in this report are sample based.

Chapter 1

BASIC INDICATORS

1.1. Purpose

This chapter examines the penetration rates of a series of IT equipment in the 15 EU countries:

- Fixed and mobile subscriptions by households
- Television and means of reception
- Digital television
- Personal computer equipment
- Internet access at home
- Broadband Internet access at home.

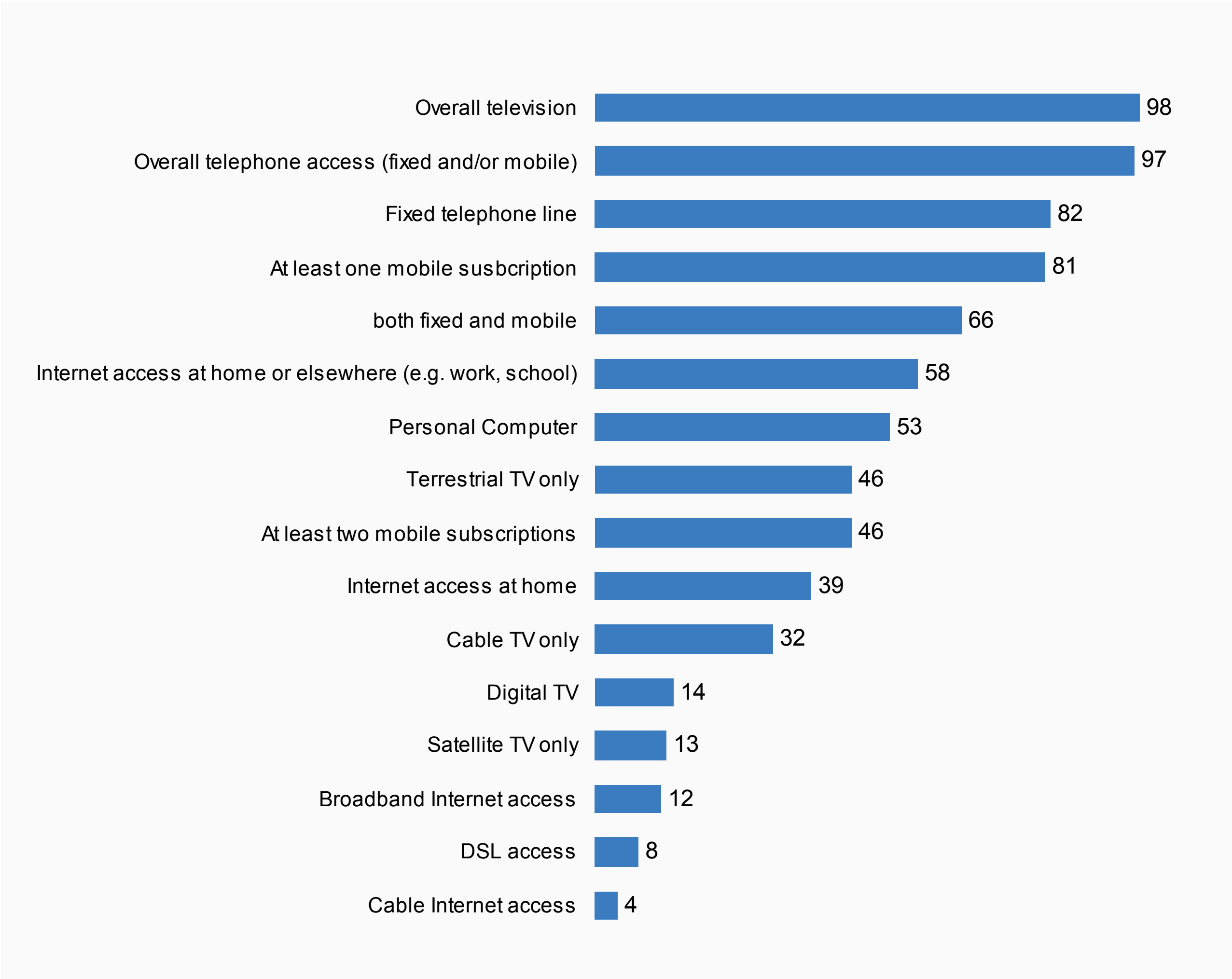
1.2. Main observations 2004

- 12% of households in the EU Member States have a Broadband Internet access against 5% in 2003. The highest penetration rates are observed in the Netherlands (36%), Belgium (32%), Denmark (30%) and Sweden (25%) while it was still near to zero in Ireland and Greece by the beginning of 2004.
- DSL accounts for around two thirds of broadband Internet access in the EU 15. However, in the Netherlands, Portugal and Austria cable TV access at home is more prevalent than DSL connections.
- The overall proportion of households having Internet access at home has increased from 24% in 2003 to 39% in 2004.
- This evolution is constrained by the proportion of households with a PC at home, which is now 53% as against 48% in 2003. This equates to 73% of PC-equipped households having Internet access in 2004 as against 69% in 2003.
- 97% of the households in the EU countries have at least one telephone line (fixed and/or mobile), the same proportion as in 2003. Three countries have a 100% penetration rate, Denmark, Luxembourg and Netherlands, while the Portugal lags behind with 90%.
- This apparent stability hides a rapid increase in the proportion of households having a mobile subscription only, with an EU average of 15% in 2004 as against 12% in 2003. There is also a decreasing proportion of EU households having a fixed telephone only, 16% in 2004 as against 20% in 2003. The proportion of households with mobile phone only is highest in Portugal and Finland, with 33% each, followed by Austria with 26% of households.
- The proportion of EU 15 households with at least one fixed line has decreased by 3 points over 2003 to 82%, while the proportion of households with at least one mobile phone has increased from 77% in 2003 to 81% in 2004. An average of 66% of EU-15 households have both fixed and mobile telephones, the highest proportion being achieved in the Netherlands (85%), Luxembourg (85%) and Sweden (83%) and the lowest by Portugal (45%), Austria (53%), France (55%) and Belgium (55%).

- 3% of the households in the EU countries have no telephone at all. The percentage of households with no telephone is more pronounced in Portugal and Belgium, at 10% and 6% respectively. On a EU-15 wide basis this proportion reaches 6% in single person households.
- 19% of the households in the 15 Member States regularly use public payphones. Households from Greece have the highest regular usage with 53% . Regular use of public payphones is also marked in Spain (28%), the United Kingdom (27%), Portugal (23%) and France (23%)
- The overall television penetration in the EU countries is 98% of the households. More specifically, 46% of the households receive television services only via terrestrial broadcast, 32% only via cable, 13% only via satellite and about 7% of the households get these services via any of the three types of television reception mentioned above. The penetration rates vary considerably depending on the country.
- 14% of the households in the EU zone have a subscription or an arrangement so as to receive digital television services.

1.3. Snapshot

Chart 1 - Penetration of Electronic Communications Services within EU 15 Households, 2004



1.4. Fixed and mobile subscriptions by households – 2003/2004

Source: question 1
Nature: table (percentages, base: all households)

Tabel 3 - Fixed and mobile subscriptions by households - 2003/2004

% of households	Fixed and/or mobile		Fixed +Mobile		Mobile only		Fixed Only		None at all	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU	**97**	**97**	**65**	**66**	**12**	**15**	**20**	**16**	**3**	**3**
Belgium	93	94	54	55	18	22	22	16	7	6
Danmark	99	100	67	73	8	9	25	18	1	0
Deutschland	98	96	62	61	4	7	32	28	2	4
Ellada	99	99	79	79	8	11	12	9	1	1
Espana	97	97	66	67	13	16	18	14	3	3
France	97	98	50	55	16	17	31	27	3	2
Ireland	98	99	70	74	12	15	16	10	2	2
Italia	97	97	70	68	13	17	14	12	3	3
Luxembourg	100	100	82	85	3	6	15	9	0	0
Nederland	100	100	77	85	7	9	16	5	0	0
Österreich	91	96	52	53	20	26	19	17	9	4
Portugal	90	90	48	45	28	33	14	12	10	10
Finland	98	98	58	56	29	33	11	8	2	2
Sverige	99	99	80	83	4	5	15	10	1	1
United Kingdom	99	99	75	76	6	7	18	16	1	1

The table above shows the penetration of telephone equipment by country as well for 2003 as 2004.

The 2004 dataset shows us that 97% of the households in the EU have at least one line telephone line. 66% have both fixed and mobile telephones. 15% have only a mobile telephone and 16% only a fixed telephone. Merely 3% of the households in the EU countries have no telephone at all.

The country-by-country results indicate that 85% of the households in Luxembourg and in the Netherlands have both fixed and mobile telephones. At 83%, Sweden comes in the second place, followed by Greece (79%), the United Kingdom (76%), Ireland (74%), Denmark (73%) and Spain (67%). In all other countries, penetration rates are below the average.

The “mobile telephone only” penetration is market by large differences among the 15 EU countries. The highest penetration rates go to Finland and Portugal: 33% each.

As far as the “fixed telephone only” penetration is concerned, the country results indicate that 28% of the households in Germany still have no telephone equipment other than a fixed line. Germany is followed close by France (27%), Denmark (18%), Austria (17%) and Belgium (26%). All other countries have a penetration rate that is lower the average.

1.5. Television and means of reception - 2003/2004

Source: question 2
Nature: table (percentages, base: all households)

Table 4 - Television and means of reception - 2003/2004

% of households	Terrestrial only		Cable only		Satellite only		One or more		None at all	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU 15	47	46	32	32	12	13	7	7	2	2
Belgium	2	3	92	90	2	2	1	2	2	3
Danmark	19	16	66	68	3	6	10	9	2	2
Deutschland	7	5	56	53	32	38	4	2	1	2
Ellada	94	94	0	0	2	2	4	3	1	1
Espana	81	83	7	6	6	2	6	8	0	0
France	72	65	10	11	9	12	6	8	3	4
Ireland	36	33	42	43	12	15	8	6	1	3
Italia	80	78	3	4	5	6	9	8	2	2
Luxembourg	5	6	69	70	16	15	8	9	1	1
Nederland	3	2	90	93	3	3	3	2	1	1
Österreich	19	14	34	37	32	33	11	13	2	1
Portugal	62	65	31	28	5	5	2	2	0	0
Finland	52	46	30	42	9	3	4	2	4	5
Sverige	27	25	47	51	9	11	13	10	3	2
United Kingdom	52	49	14	13	17	19	16	16	1	2

The table above shows the television penetration rates by country.

Overall, the television penetration among households in the EU is 98%.

More specifically, 46% of the households in the EU countries receive television services only by standard terrestrial broadcast. Greece tops the other countries with a penetration rate of 94%. At 83%, Spain comes in the second place, followed by Italy (78%), France and Portugal (both 65%).

As far as television reception via cable only is concerned, the penetration rate stands at 32% of the households in the EU Member States. The highest percentage still goes to Belgium with 90% of the households.

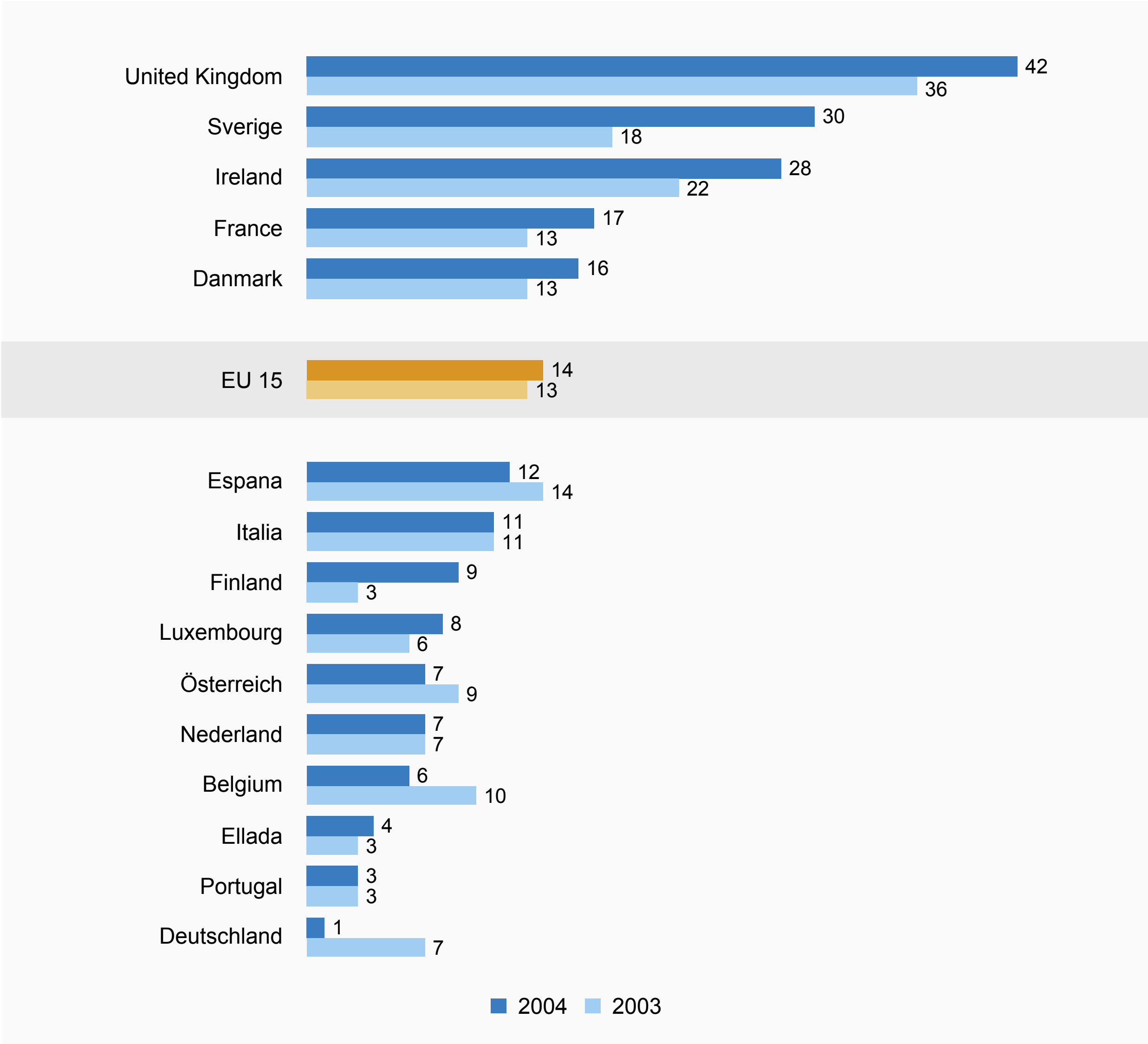
There are major differences in the penetration of satellite television only. 19% of the households in the 15 EU countries receive satellite television only. Germany has the highest penetration rate, at 38%.

We would like to draw your attention to the fact that 7% of the households in the EU zone have a combination of any of the three types of television reception mentioned above.

1.6. Digital television – penetration 2004/2003

Source: question 3
Nature: graph (percentages, base: all households)

Chart 2 - Digital Television - penetration 2004/2003



The graph above ranks the 15 EU countries and the European Union as a whole according to their total penetration of digital television. The ranking is based on the 2004 dataset.

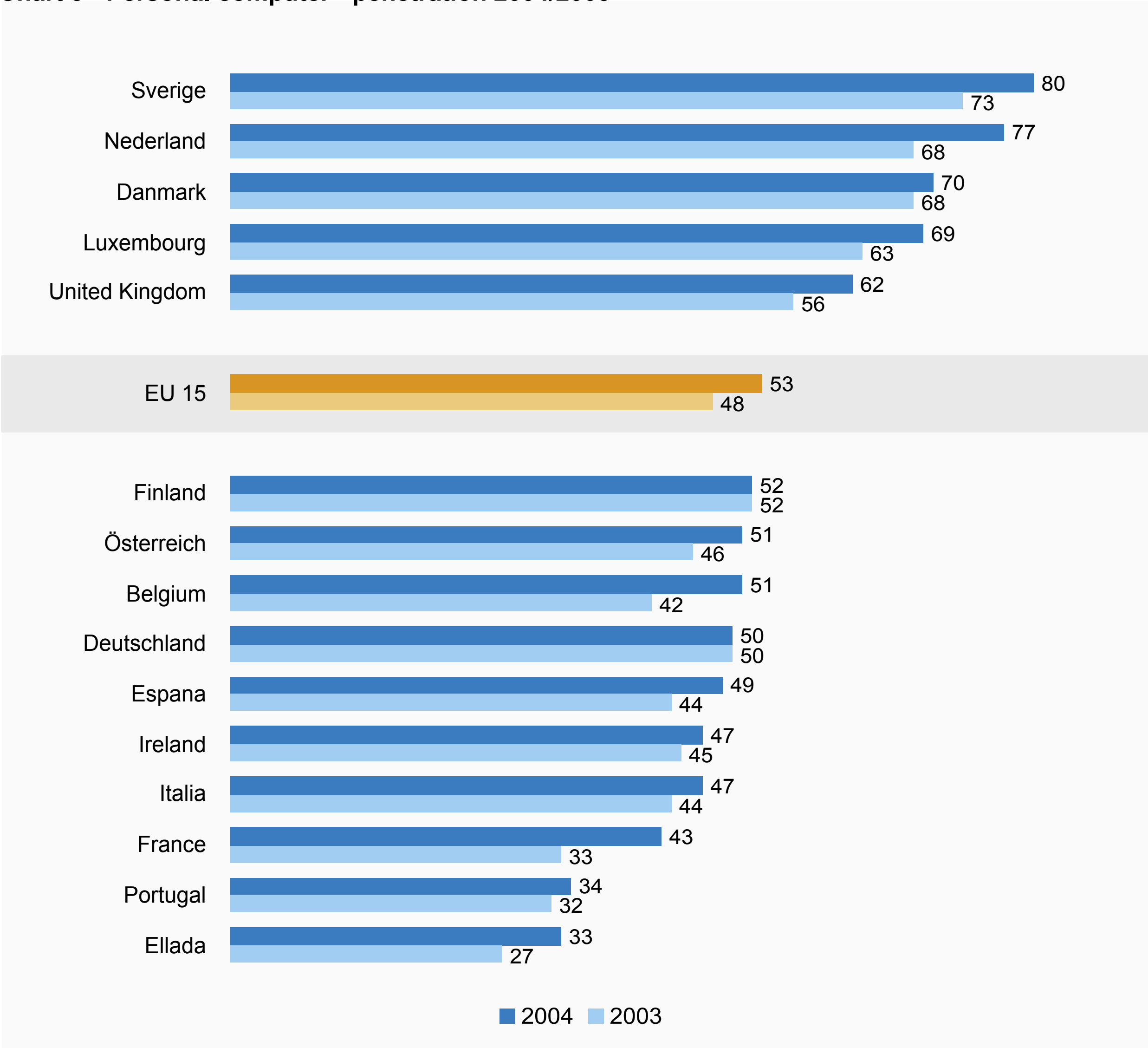
All the countries below the European Union bar have a penetration rate that is lower than the European average, and those above have a penetration rate that is either equal or higher than the European average.

As can be seen, 14% of the households in the EU countries have a subscription or an arrangement so as to receive digital television services. At 42% of the households, the United Kingdom has the highest digital-television penetration rate in the EU zone. By contrast, Germany has the lowest penetration rate (1%).

1.7. Personal computer – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)

Chart 3 - Personal computer - penetration 2004/2003



The chart above, ranked on the 2004 dataset, presents the 15 EU countries and the European Union as a whole based on their total penetration of Personal computer equipment.

The percentage of the households in the EU countries having a Personal computer grew from 48% in 2003 to 53% in 2004.

The penetration rate has increased in almost all EU countries with the exception of Finland and Germany where a status quo is observed.

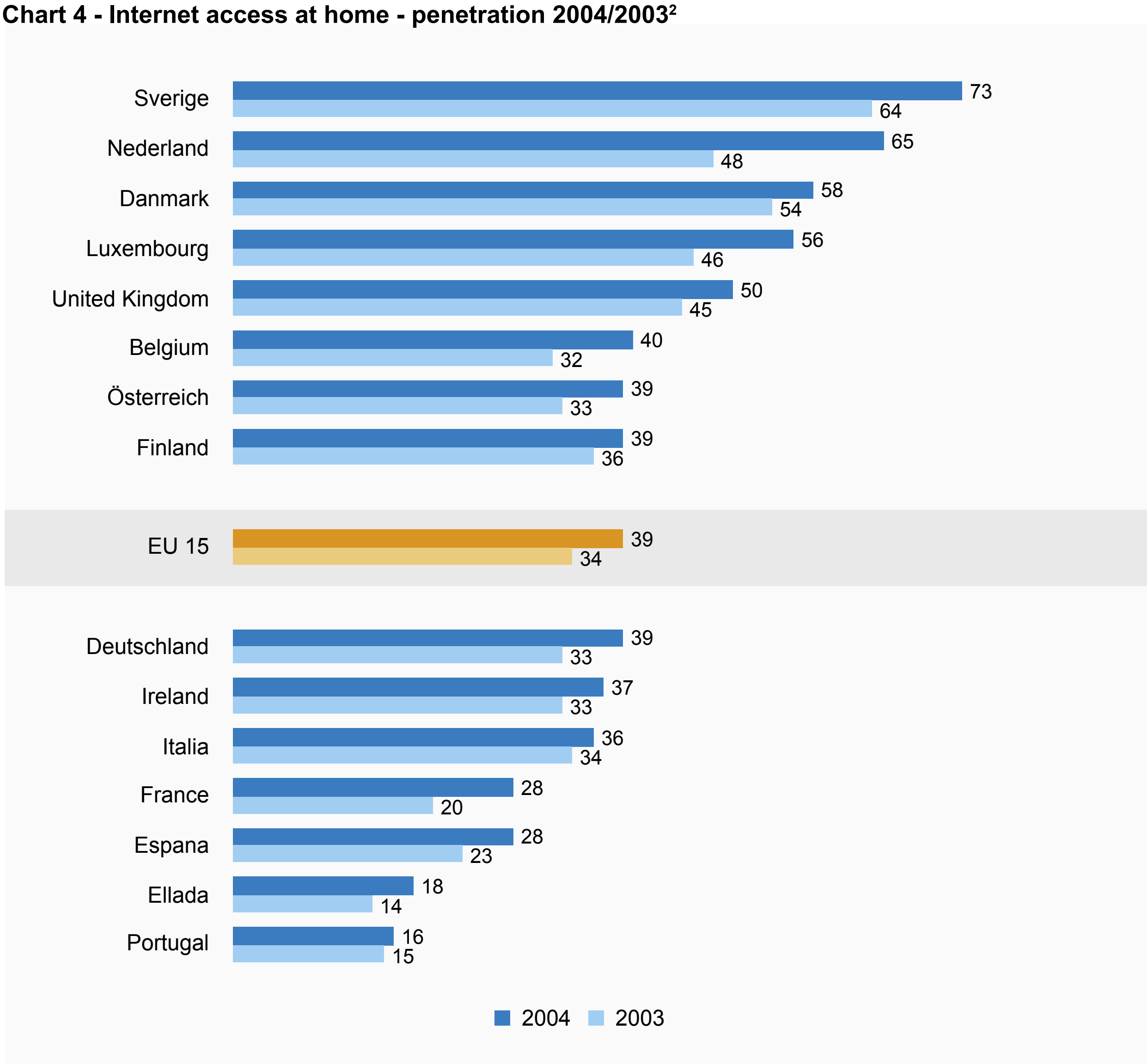
With a one-year evolution of 9 points, the Netherlands have the biggest growth among all the EU countries.

At 80% of the households, Sweden still has the highest penetration rate of Personal computer equipment in the EU zone. Greece is still at the bottom of the ranking with only 33% of the households owning Personal computer equipment.

1.8. Internet access at home – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)

Chart 4 - Internet access at home - penetration 2004/2003[2]



The graph above ranks the 15 EU countries and the European Union as a whole according to their total penetration of Internet at home.

As indicated, 39% of the households in EU countries have an Internet access at home.

Sweden still tops the other countries with 73% of the households having an Internet access at home. Sweden is followed by the Netherlands (65%), Denmark (58%), Luxembourg (56%), the United Kingdom (50%), Belgium (40%), Austria (39%) and Finland (39%).

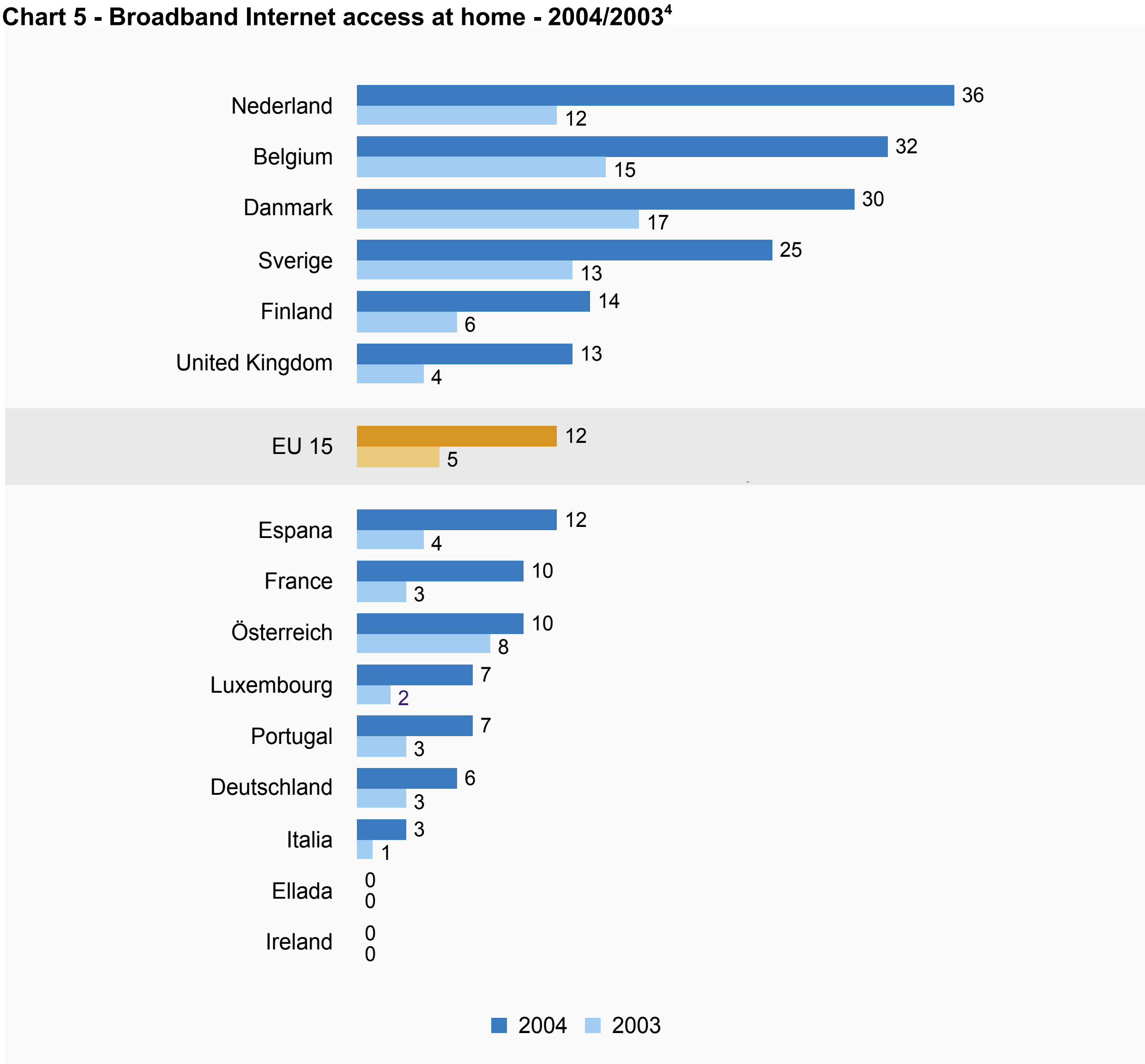
Penetration rates in the other countries are below the European average of 39% of the households.

[3] Internet access of any forms: as well narrowband as broadband Internet access

1.9. Broadband Internet access at home – 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)

Chart 5 - Broadband Internet access at home - 2004/2003[4]



The graph above ranks the 15 EU countries and the European Union as a whole according to their Broadband Internet access at home.

The graph emphasises the rapid expansion of Broadband Internet access amongst those countries where broadband technology was already well developed in 2003. In comparison with 2003, the penetration of Broadband Internet access has more than doubled in almost all the countries. Austria is the only exception with less intensive growth.

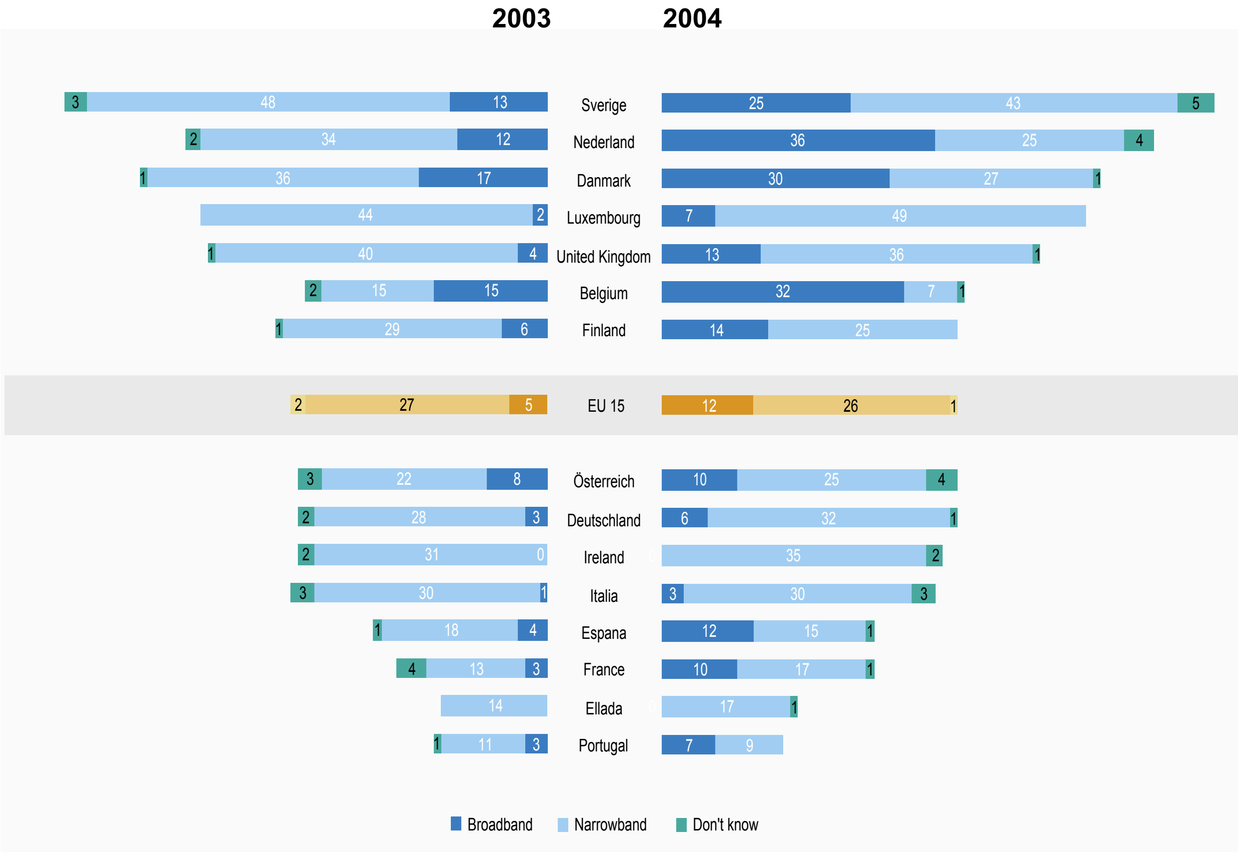
The highest penetration rates are observed in the Netherlands (36%), Belgium (32%), Denmark (30%) and Sweden (25%). The average group consists of Finland (14%), United Kingdom (13%), Spain (12%), Austria and France (each 10%). The penetration is lower in Portugal (7%), Luxembourg (7%), Germany (6%) and Italy (3%).

[4] Broadband Internet access: DSL or cable TV

It is interesting to note that neither Ireland nor Greece have Broadband Internet access at home.

In order to recap our main observations, the following graph splits the bar chart of section 1.8. in three: the first part corresponds to broadband Internet access, followed by a second colour for the those using a narrowband access and the third part represents households who didn't know if their Internet access is broadband or narrowband.

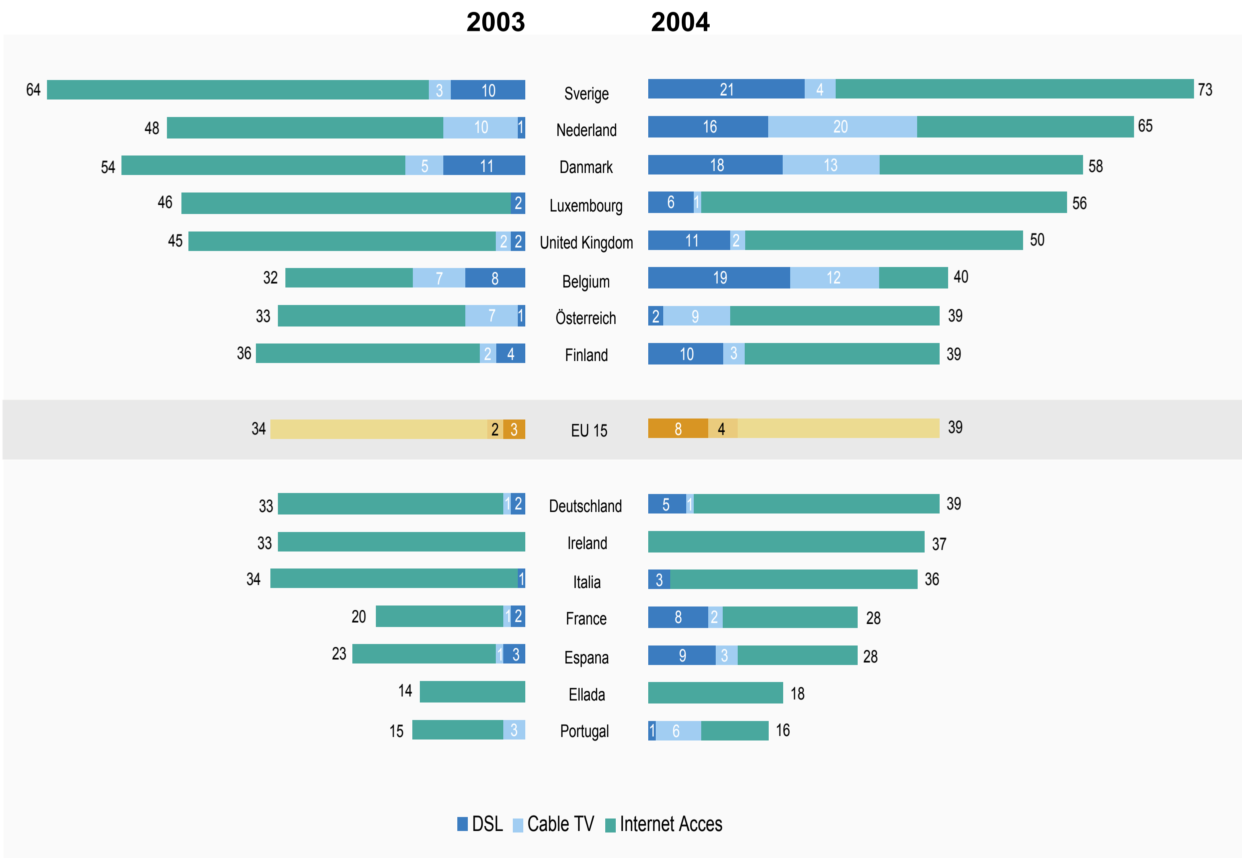
Chart 6 - Internet access at home: narrowband and broadband - penetration 2003/2004[5]



[5] Internet access of any forms: narrowband versus broadband Internet access

The graph hereunder ranks the 15 EU countries and the European Union as a whole according to their total penetration of Internet at home. The proportion of broadband Internet access is divided in the households having a DSL subscription and households using a cable TV access.

Chart 7 - Internet access at home, DSL subscription and Cable TV access - penetration 2003/2004[6]



[6] Internet access of any forms: DSL, Cable TV and narrowband

Chapter 2
Fixed and mobile telephony

2.1. Purpose

This chapter focuses on fixed and mobile telephony. More specifically, it looks at the following sub-chapters:

- Overall telephone access
- Fixed telephony
- Public payphones
- Mobile telephony

2.2. Main observations

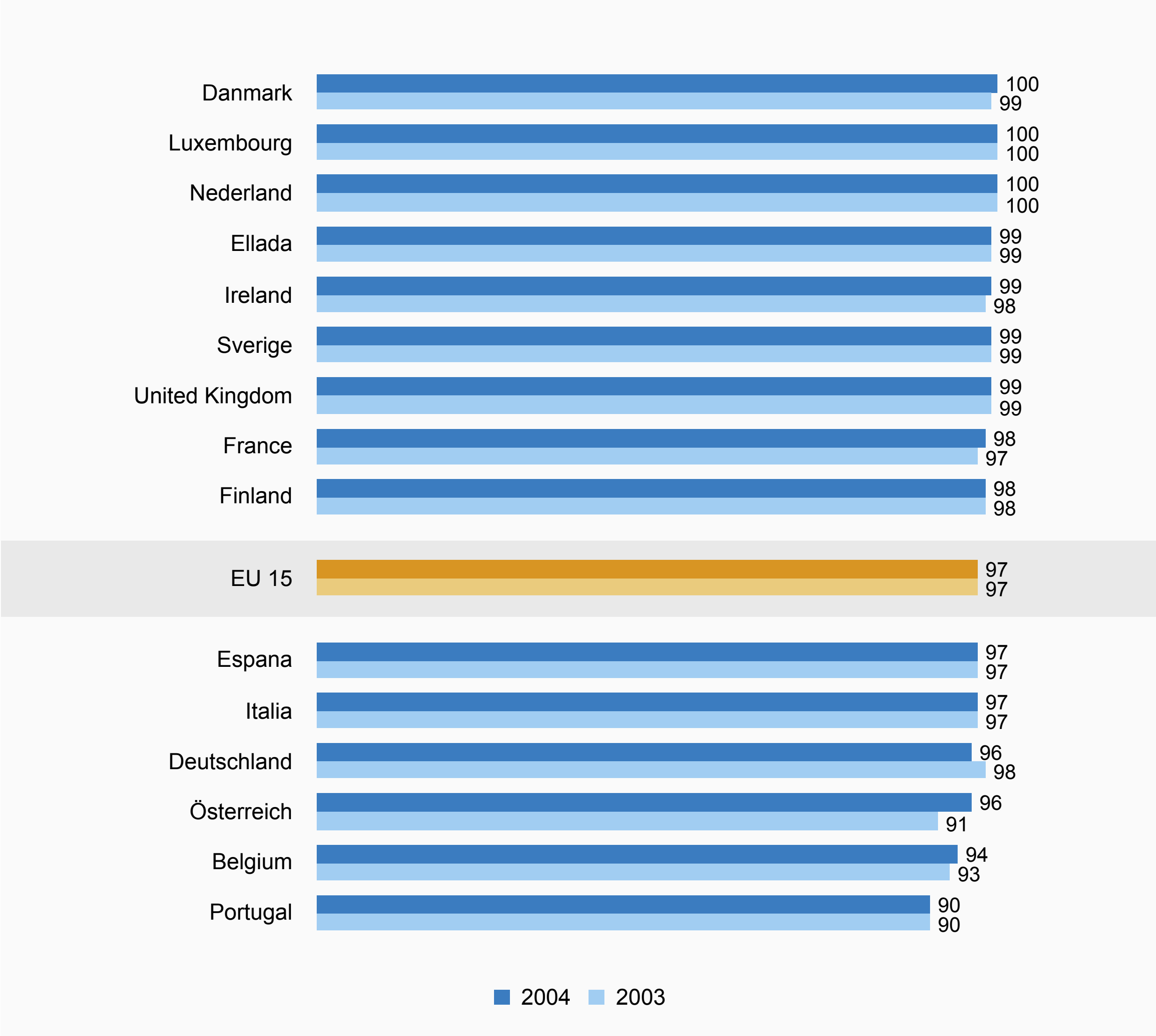
- 97 % of the households in the 15 EU countries have at least one telephone line, fixed or mobile, the same proportion as in 2003. Three countries have a 100% penetration rate, Denmark, Luxembourg and Netherlands, while the Portugal lags behind at 90%.
- The proportion of EU 15 households with at least one fixed line has decreased by 3 percentage points over 2003 to 82% while the proportion of households with at least one mobile phone has increased from 77% in 2003 to 81% in 2004.
- In the face of the fixed / mobile substitution different consumption patterns have emerged: while a high proportion of households still have both fixed and mobile phones in Netherlands (85%), Luxembourg (85%) Sweden (83%) and Greece (79%), an increasing proportion of households have a mobile phone only in Portugal (33%), Finland (33%) and Austria (26%). However, demographics data show that the fixed to mobile substitution varies to a great extent according to the number of household's members.
- The proportion of households without any form of telephony is higher in households of only one member, in particular in Portugal (35%), Belgium (16%), Germany (11%) and Italy (10%) against an EU average of 6%.
- Affordability is a reason for not having a fixed telephone for 23% of the EU 15 households (cost of using services) and 16% of them with respect to mobile phones. Concerning mobile phones, the affordability issue is of greater concern in Portugal (40%) and Greece (26%).
- 19% of the households in the 15 Member States regularly use public payphones. Households from Greece have a greater use with 53% of rate, followed by Spain (28%), the United Kingdom (27%), Portugal (23%) and France (23%). The survey has shown that public payphones are in average almost twice as likely to be used by households from the rural areas than by metropolitan households.
- Prepaid continues to be the major form of subscription to mobile telephony for 77% of the EU households, a 3 points increase over 2003.

2.3. Overall telephone access

2.3.1. Overall telephone access (fixed and/or mobile) – 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)

Chart 8 - Overall telephone access (fixed and mobile) - penetration 2004/2003



The chart above shows the overall telephone access in the EU countries in 2004 compared to 2003.

The ranking is based on the 2004 dataset. All the countries below the European Union bar have a penetration rate that is lower than the European average[7], and those above have a penetration rate that is either equal or higher than the European average.

As indicated, 97% of the households in the EU countries have at least one telephone line.

[7] Spain and Italy have a 97% rate but are located below the EU average due to roundings

2.3.2. Households without any form of telephony access (neither fixed nor mobile)

Source: question 1
Nature: table (percentages, base: all households)

Table 5 - Households without any form of telephony (neither fixed nor mobile)

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	5+	Metro	Urban	Rural
TOTAL EU 15	**3**	**6**	**3**	**1**	**1**	**1**	**2**	**2**	**4**
Belgium	6	16	7	3	2	4	8	5	6
Danmark	0	1	0	0	0	1	1	1	0
Deutschland	4	11	4	3	2	2	4	4	5
Ellada	1	2	1	1	0	1	1	0	1
Espana	3	12	5	2	1	1	1	3	4
France	2	4	1	1	1	1	2	2	2
Ireland	2	5	3	1	0	1	1	2	1
Italia	3	10	3	1	1	1	2	1	4
Luxembourg	0	2	0	0	0	0	0	0	0
Nederland	0	0	0	0	0	0	0	0	0
Österreich	4	9	5	0	1	0	5	3	5
Portugal	10	35	15	4	5	3	10	9	11
Finland	2	5	1	1	0	1	1	1	4
Sverige	1	3	1	0	1	0	3	1	1
United Kingdom	1	2	1	0	0	0	1	1	1

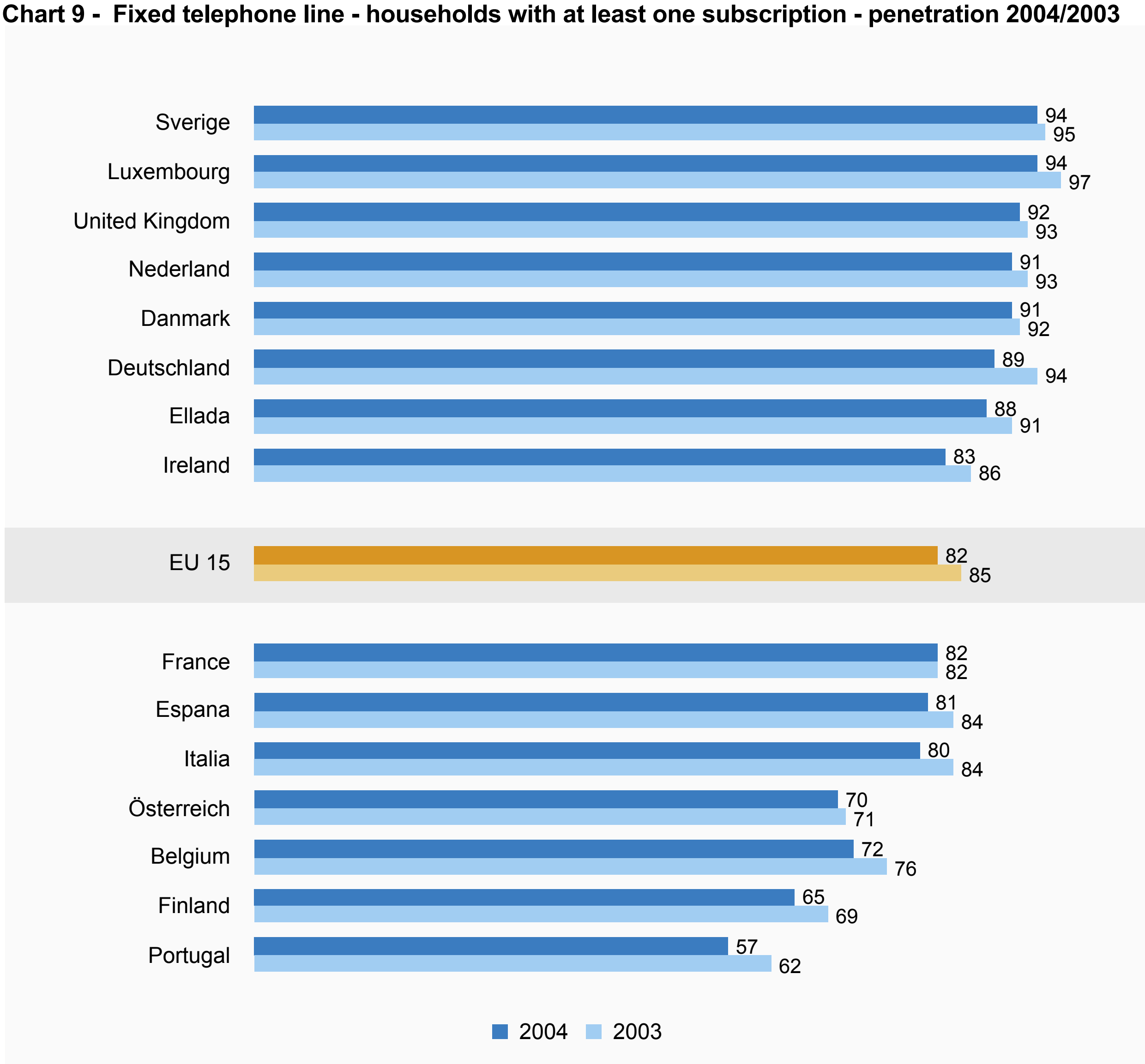
The proportion of households without any form of telephony is greater in household of one member, in particular in Portugal (35%), followed by Belgium (16%) and Spain (12%). One can observes also that the rate of phoneless households by type of locality is very different from one country to another: in Spain, this rate is higher in rural areas (4%) than in metropolitan areas (1%) but in Belgium or Sweden it is the opposite while it remains the same in other countries like France or UK.

2.4. Fixed telephony

2.4.1. Fixed telephone line (including ISDN and/or DSL) – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 9 - Fixed telephone line - households with at least one subscription - penetration 2004/2003



The chart above compares the penetration of fixed telephony in the EU countries in 2004 and 2003.

The ranking is based on the 2004 dataset. All the countries below the European Union bar have a penetration rate that is lower than the European average, and those above have a penetration rate that is either equal or higher than the European average.

It is important to remember that a household may have fixed telephone line services using a standard or traditional line or via ISDN. An additional complication arises for the current survey where some households subscribe to DSL broadband service. With DSL, households have access to broadband Internet but also retain access to their existing fixed telephone services.

Therefore, it was necessary to add together (while avoiding double counting) households with fixed telephone services via traditional telephone lines, ISDN and also where they were combined with DSL services to give the total proportion of households with fixed line services.

With one exception (France), fixed telephone line penetration has decreased in all the EU countries.

The EU average of 2004 amounts to 82 %, coming from 85% in 2003. The decrease has been most significant in Portugal (57%), Finland (65%) and Austria (70%). Belgium is also very low at 72%.

In parallel with this decrease, the penetration of mobile phones is growing steadily in every EU country.

The demographic breakdowns below show that households with 4 persons have the highest penetration rate of fixed telephony (88%), compared to 72% among households with 1 person.

The penetration rate of fixed telephony is not significantly different for the three types of locality.

(If we now consider the country results, we notice that, as far as households with 4 persons are concerned, Denmark and Luxembourg boast the highest penetration rate of fixed telephony (98% each), followed closely by Sweden (97%).

Table 6 - Penetration of fixed telephony line (traditional fixed, ISDN and/or DSL) - demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU 15	**82**	**72**	**84**	**84**	**88**	**84**	**83**	**83**	**82**
Belgium	72	59	70	69	81	79	64	73	78
Danmark	91	83	93	95	98	98	91	88	94
Deutschland	89	76	91	91	95	93	84	90	90
Ellada	88	56	88	91	96	89	90	83	89
Espana	81	63	78	82	89	82	84	80	80
France	82	73	85	82	87	82	80	79	87
Ireland	83	79	85	81	86	83	84	80	86
Italia	80	63	79	83	87	78	84	81	79
Luxembourg	94	80	96	97	98	92	94	91	96
Nederland	91	86	91	93	95	95	94	92	86
Österreich	70	58	70	77	76	83	61	71	74
Portugal	57	42	55	56	65	60	52	58	57
Finland	65	49	70	72	77	79	66	63	66
Sverige	94	88	94	97	97	98	94	94	93
United Kingdom	92	87	94	93	93	90	92	92	92

2.4.2. Fixed telephone lines (including ISDN and/or DSL) – number of lines

Source: question 1
Nature: table (percentages, base: all households)

The following table depicts the number of fixed telephone lines by country as well for 2004 as 2003.

Table 7 - Fixed telephone lines (including ISDN[8] and/or DSL) – number of lines

% households	1 fixed line		2 fixed lines		3 or more fixed lines		None at all	
	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU 15	**71**	**68**	**6**	**6**	**8**	**8**	**15**	**18**
Belgium	67	58	2	8	7	6	24	29
Danmark	70	70	7	4	14	17	9	9
Deutschland	70	63	13	16	10	10	6	11
Ellada	85	80	3	6	3	2	9	12
Espana	78	73	2	3	5	4	16	19
France	75	74	3	3	4	5	19	18
Ireland	72	71	4	4	10	9	14	17
Italia	68	65	3	2	13	13	16	20
Luxembourg	53	56	17	23	17	14	3	6
Nederland	77	68	4	8	12	15	7	9
Österreich	52	54	8	7	10	9	30	30
Portugal	57	55	2	1	3	2	38	44
Finland	58	54	3	4	8	6	31	35
Sverige	76	74	7	8	12	12	5	6
United Kingdom	76	77	10	7	7	8	7	8

As indicated, the 2004 dataset learns us that 71% of the households in the 15 EU countries have 1 fixed line, 9% have 2 and 2% have three or more fixed lines. On the other hand, 18% of the households have no fixed lines at all.

The distribution of countries up and down the EU average is similar to the one observed for the fixed telephone line (cf. chart 8)

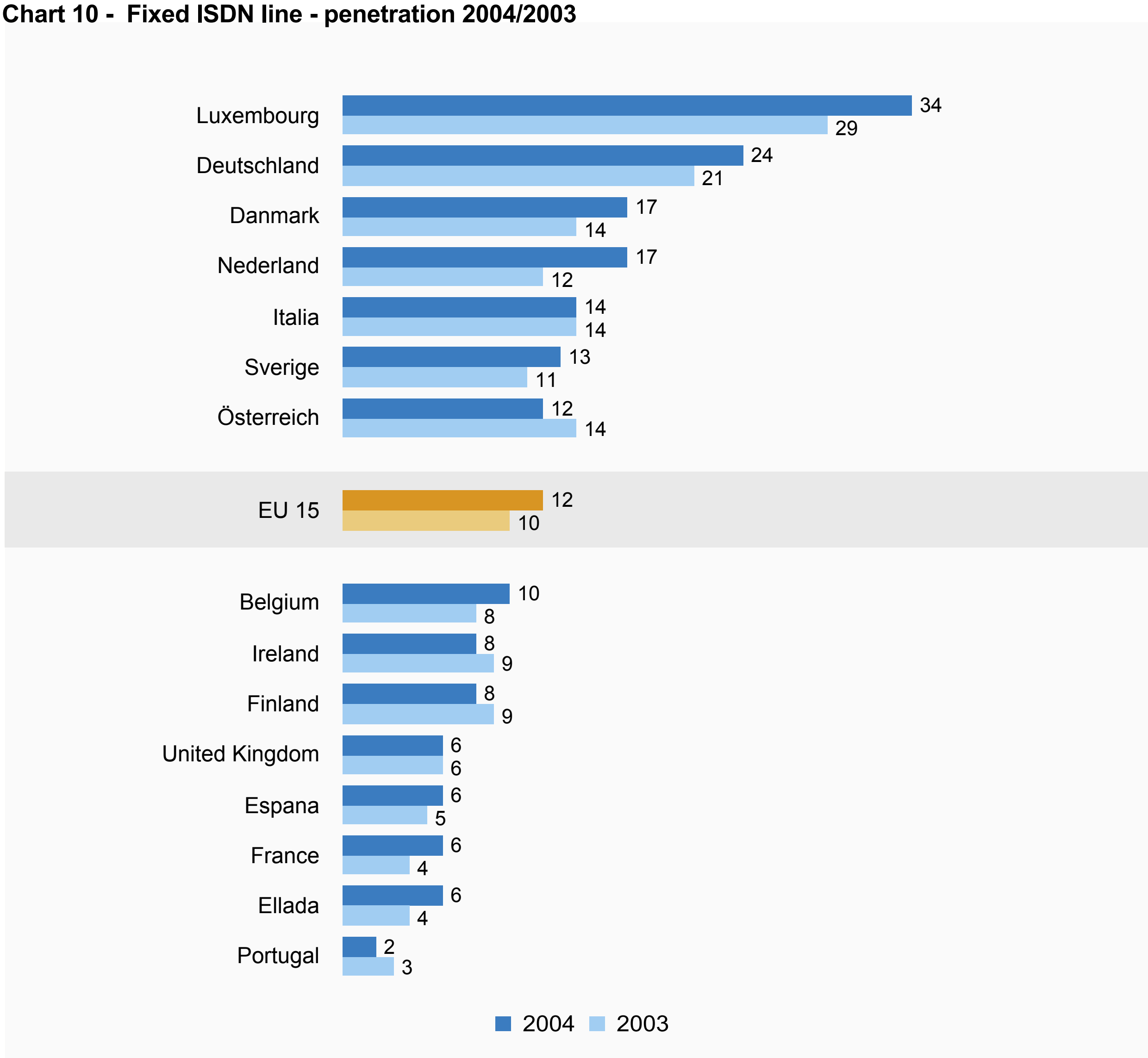
As far as the “none at all” rates are concerned, households in Portugal (44%), Finland (35%) and Austria (30%) have the highest results. By contrast, only 6% of the households in Sweden and in Luxembourg have no traditional fixed telephone lines.

[8]One ISDN subscription counts as 2 lines. ISDN is thus only included in the columns ‘2 lines’ and ‘3 or more’.

2.4.3. Fixed ISDN line – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 10 - Fixed ISDN line - penetration 2004/2003



The graph above depicts the evolution of fixed ISDN telephony penetration in the EU countries.

Despite the fact that Internet households are migrating to broadband Internet access, ISDN continues to grow, especially in those countries which already have an important installed base like Germany or the Netherlands.

Due to this, the European average slightly increased from 10% in 2003 to 12% in 2004.

Looking at the results by country, we observe that the highest penetration rate among households still goes to Luxembourg with 34% of the households having a fixed ISDN line. Germany comes in the second place (24%), followed by Denmark and the Netherlands.

The demographic analysis shows that the penetration of fixed ISDN telephony is more significant among households with 3 persons and more (14-16%), compared households with 1 person or 2 persons (7-9%).

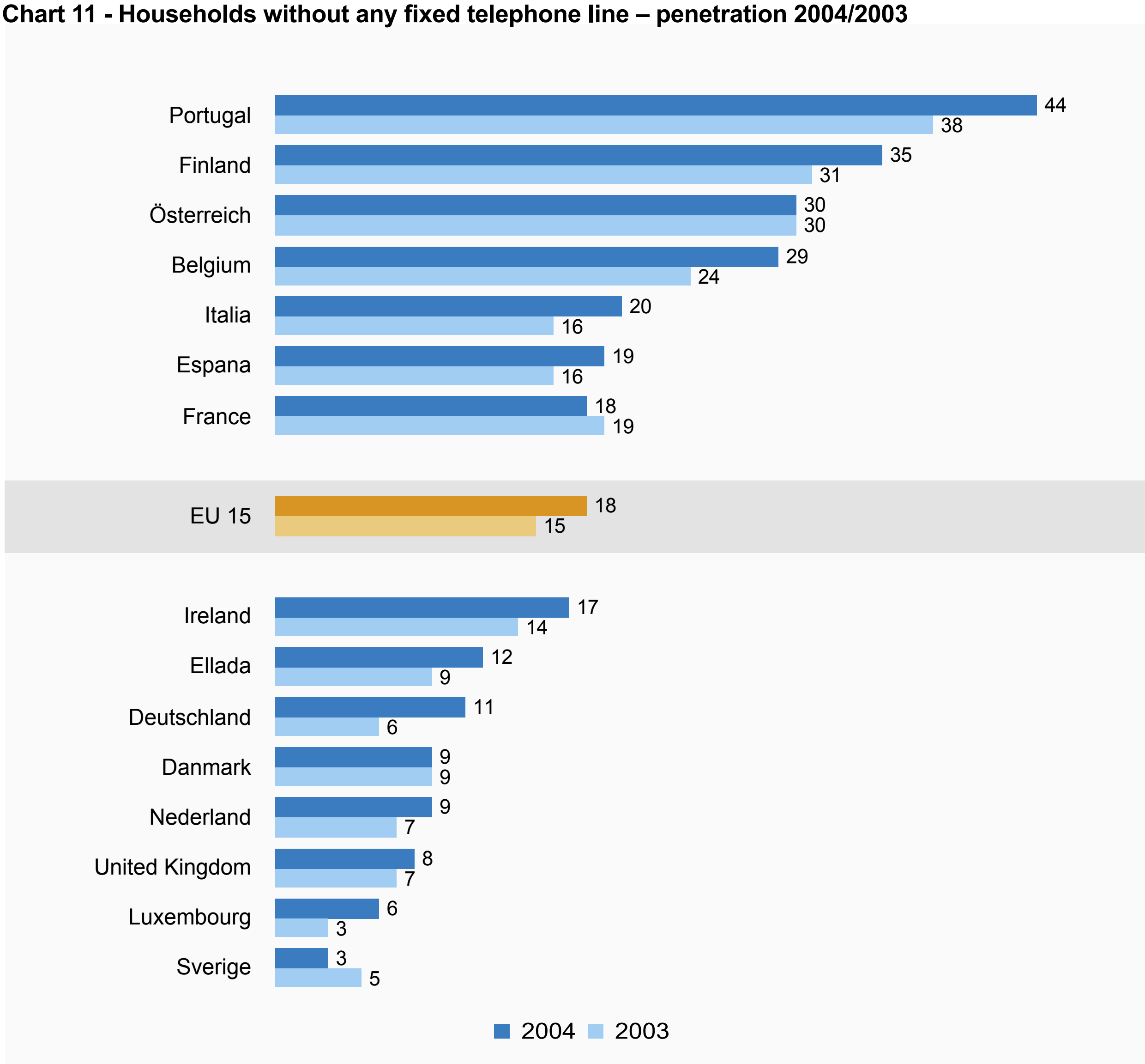
Table 8 - Penetration of fixed ISDN line – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU 15	**12**	**7**	**9**	**14**	**16**	**15**	**11**	**12**	**12**
Belgium	10	6	6	10	16	15	7	9	15
Danmark	17	9	16	24	32	20	18	12	20
Deutschland	24	10	16	34	42	40	22	24	25
Ellada	6	4	5	5	7	6	8	6	4
Espana	6	3	3	6	8	8	7	7	5
France	6	6	5	5	8	7	7	5	5
Ireland	8	6	6	7	9	11	10	12	3
Italia	14	13	10	16	16	15	13	11	16
Luxembourg	34	15	25	39	46	48	31	30	39
Nederland	17	13	15	20	21	28	17	18	14
Österreich	12	7	8	20	16	20	11	13	13
Portugal	2	1	1	2	2	1	1	2	1
Finland	8	2	7	15	16	15	8	5	12
Sverige	13	6	13	19	14	27	12	17	10
United Kingdom	8	5	7	10	11	12	7	9	8

2.4.4. Households without any fixed telephone line – 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 11 - Households without any fixed telephone line – penetration 2004/2003



The graph above outlines the rates of households with no fixed telephone line in the EU countries.

The general trend from 2003 to 2004 is a significant increase of households without any fixed telephone line (from 15% to 18%). The evolution is more pronounced in Portugal (+6 points) and Belgium (+5 points).

As can be seen, Portugal tops the other countries with 44% of the households having no fixed telephony, followed by Finland (35%), Austria (30%) and Belgium (29%).

The demographic breakdowns below show that the absence of fixed telephony is more important among households with 1 person (28%).

Table 9 - Households without any fixed telephone line – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**18**	**28**	**16**	**17**	**12**	**16**	**17**	**17**	**18**
Belgium	29	42	30	31	19	21	36	27	22
Danmark	9	17	7	5	3	2	9	12	6
Deutschland	11	24	9	9	5	7	16	10	10
Ellada	12	44	12	10	4	11	11	17	11
Espana	19	37	22	18	11	18	17	20	20
France	18	27	15	18	13	18	20	21	13
Ireland	17	21	15	19	14	17	16	21	14
Italia	20	37	21	17	13	22	16	20	21
Luxembourg	6	20	4	3	2	8	6	9	4
Nederland	9	14	9	7	5	5	7	8	14
Österreich	30	42	30	23	24	17	39	29	26
Portugal	44	58	45	44	35	41	49	42	43
Finland	35	51	31	29	23	21	34	37	34
Sverige	6	12	6	3	3	2	7	6	7
United Kingdom	8	13	6	7	7	10	8	8	8

2.4.5. Why no fixed telephone line?

Source: question 4
Nature: tables (percentages, base: households with no fixed telephone line)

About 18% of the European households said that they had no fixed telephone line at home. We have tried to find an explanation for this situation by means of question 4 (see the attached questionnaire). Respondents were given a list of answers but were free to mention as many reasons as they felt necessary for describing their situation.

The table below presents the main reasons mentioned by the respondents for not having a fixed telephone line.

Table 10 - No fixed telephone line – reasons why

% of households	Main reasons	
	2003	2004
Has at least one mobile phone subscription	41	47
Cost of using the service is too high	20	23
Cost of getting the service is too high	17	18
Do not want to	18	13
Has given up its fixed telephone line in the last year	10	6
Plan to get one in the next 6 months	7	5
Easy access to a phone elsewhere	5	5
Other	5	4

As can be seen, the main reason brought up by the respondents for not having a fixed telephone line is still “one or more household members has a mobile phone subscription that serves the needs of the household” (47%). The proportion of this answer rose substantially compared to 2003.

In the second place comes the “high cost of using the service” (23%).

2.4.5.1. Five main reasons brought up by the respondents

Table 11 – Five main raisons

% households	At least 1 mobile phone subs.		Cost of using services too high		Do not want to		Cost of getting services too high		Given up fixed telephone line	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU	**41**	**47**	**22**	**23**	**18**	**13**	**17**	**18**	**10**	**6**
Belgium	33	43	21	17	24	11	16	13	8	2
Danmark	42	28	14	8	19	15	36	10	6	0
Deutschland	34	34	18	20	12	12	17	20	6	4
Ellada	30	53	25	21	20	15	14	17	11	5
Espana	43	48	15	22	23	10	8	15	14	3
France	37	53	22	30	20	13	12	18	14	13
Ireland	27	39	20	27	22	18	15	17	8	3
Italia	45	48	23	26	10	8	14	18	13	10
Luxembourg	58	49	24	18	29	14	21	16	13	5
Nederland	50	47	27	20	21	17	26	27	13	12
Österreich	41	55	15	18	13	23	14	11	5	6
Portugal	43	46	22	29	13	5	26	27	10	4
Finland	58	55	23	20	18	18	24	18	7	4
Sverige	31	51	18	12	19	17	18	16	4	4
United Kingdom	32	39	25	31	23	22	25	26	11	8

The country by country results displayed in table 11 show that the cost of using services is a more important obstacle for households from UK (31%), France (30%), Portugal (29%), Ireland (27%) and Italy (26%). However, the household's perception is totally different when considering the cost of getting the service, with households from NL (27%) topping the list, followed by UK, Portugal and Germany.

2.4.6. Total amount in Euros spent per month on fixed telephony

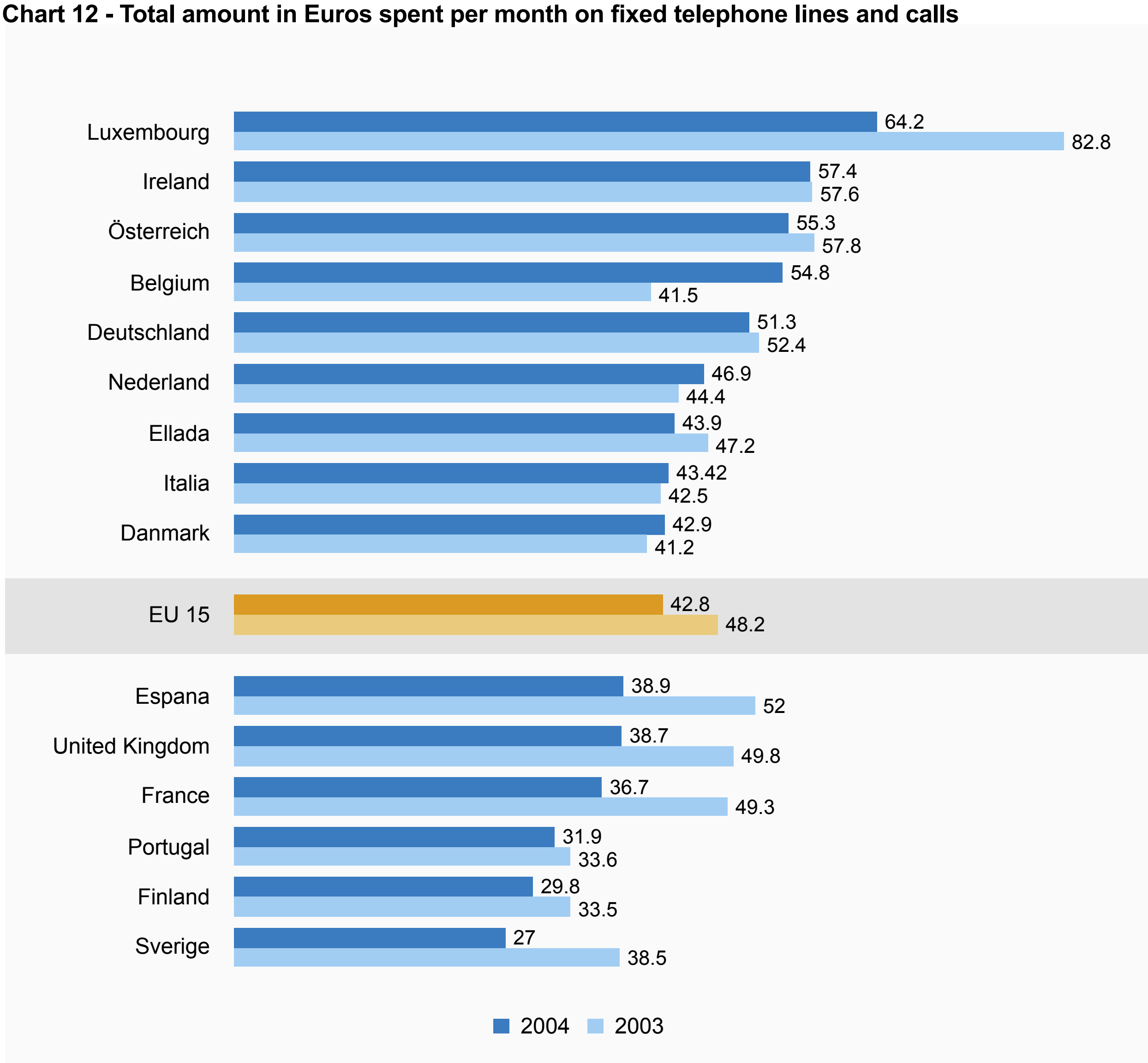
Source: questions 6
Nature: graph (amounts in Euro, base: households with at least 1 fixed telephone line)
table (amounts in Euro, base: households with at least 1 fixed telephone line)

Around 82% of the European households said that they had at least one fixed telephone line at home. We have asked them to give us their best estimate of the total amount that they spent on their fixed telephone lines and calls, for one typical month or relevant billing period.

When the household had two or more telephone bills – e.g. for separate services (where some or all calls are made using a company that is different from the one providing the telephone line) or additional lines – the respondent within the household was asked to give the overall total estimate.

The graph below shows the average amount in Euro spent per month by country, as well for 2004 as 2003.

Chart 12 - Total amount in Euros spent per month on fixed telephone lines and calls



The 15 EU countries, and the European Union as a whole, are ranked according to the overall amount that the households within each country spend on fixed telephone lines and calls.

As indicated, the European average stands at 42.8 Euros, 5.4 Euros less than in 2003.

A significant decrease has been measured in Luxembourg, Spain, the United Kingdom, France and Sweden. On the contrary, the total amount spent increases significantly in Belgium.

Luxembourg still leaves the other countries behind with an average amount of 64.2 Euros. Sweden is last in the ranking with an average amount of 27 Euros.

If we examine the demographic analysis below, we can see there is a clear relationship between the average amount spent on fixed telephone lines and calls, on the one hand, and the size of the household, on the other: the bigger the size of the household, the higher the average amount spent on fixed telephony.

Table 12 - Amount spent per month on fixed telephony – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU 15	**43**	**33**	**37**	**47**	**49**	**56**	**44**	**43**	**42**
Belgium	55	41	36	73	59	80	48	60	53
Danmark	43	33	42	61	46	49	45	42	41
Deutschland	51	42	44	59	61	67	59	50	50
Ellada	44	33	37	42	47	56	49	41	40
Espana	39	29	31	39	42	56	43	43	36
France	37	32	34	41	41	43	39	36	34
Ireland	57	36	46	59	64	72	53	61	57
Italia	43	30	36	45	51	54	46	46	42
Luxembourg	64	47	49	68	77	83	73	64	60
Nederland	47	45	44	52	50	55	48	47	46
Österreich	55	50	47	63	65	65	57	60	52
Portugal	32	22	28	33	37	36	34	33	31
Finland	30	24	24	45	29	48	31	35	24
Sverige	27	20	22	34	35	39	25	27	30
United Kingdom	39	28	34	42	46	52	40	36	42

The table below outlines the percentage of households within each of the 15 Member States by the total amount spent on fixed telephone lines and calls.

Table 13 - Amount spent per month on fixed telephony – price grouping

Nature: table (amount in Euro)
Base: Households with at least one fixed telephone line, don't know excluded)[9]

% of households	AMOUNT SPENT PER MONTH				
	<25€	25-49€	50-74€	75-100€	>100€
TOTAL EU 15	**25**	**45**	**18**	**9**	**4**
Belgium	17	39	24	15	7
Danmark	21	56	16	4	4
Deutschland	10	48	25	12	5
Ellada	17	50	20	10	3
Espana	27	51	15	5	2
France	34	45	13	6	2
Ireland	10	37	29	18	7
Italia	16	49	22	10	3
Luxembourg	7	34	30	17	12
Nederland	13	48	24	12	3
Österreich	17	36	26	14	8
Portugal	37	48	10	4	1
Finland	48	37	10	3	2
Sverige	66	20	7	4	3
United Kingdom	30	46	15	7	3

As indicated, 45% of the fixed telephone users (households) in the EU countries spend between 25 and 49 Euros per month, followed by 25% of the households below 25 Euros, 18% between 50 and 74 Euros, 9% between 75 and 100 Euros and by 4% of the households that spend per month more than 100 Euros on fixed telephone lines and calls.

[9] In the 2003 digest "don't know" answers were not excluded. Thus a comparison between the 2003 and 2004 results is not relevant

2.4.7. Operators used to provide fixed telephone lines/services

Source: question 7
Nature: tables (percentages, base: households with at least one fixed telephone line)

2.4.7.1. Operators used to provide fixed telephone lines

The tables below outline the 5 main operators that the households use to provide **fixed telephone lines** (in percentages) in each of the 15 Member States.

Table 14 - Operators used to provide fixed telephone lines

2004

Belgium		Danmark		Deutschland		Ellada	
N=1425		N=1820		N=4555		N=1760	
Belgacom	88	TDC	77	Deutsche Telekom	94	O.T.E.	100
Telenet	11	Tele2	9	Arcor/o.tel.o	2		
Euphonie	1	Telia	5				
		Orange	1				
		Sonofon	1				

2003

Belgium		Danmark		Deutschland		Ellada	
N=1589		N=1830		N=4983		N=1827	
Belgacom	88	TDC (Tele DK)	79	Deutsche Telekom	95	O.T.E.	100
Telenet	6	Telia	7	Arcor/o.tel.o	3		
		Tele2	6	Viag Interkom	1		
		Orange	2				
		Sonofon	1				

2004

Espana		France		Ireland		Italia	
N=4034		N=4181		N=1193		N=3910	
Telefonica	88	France Telecom	98	Eircom	97	Telecom Italia	94
Madritel/Auna Cable	5			Esat/BT/Ocean	1	Wind - Infostrada	6
Cableuropa/ONO	4					Fastweb	2
Euskaltel	1						

2003

Espana		France		Ireland		Italia	
N=4219		N=4137		N=1204		N=4063	
Telefonica	92	France Telecom	98	Eircom	96	Telecom Italia	96
Cableuropa/ONO	3	UPC France	1	Estat/BT/Ocean	1	Wind - Infostrada	8
Madritel/Auna Cable	2					Tele2	3
Euskaltel	1					Fastweb	1
Supercable	1						

2004

Luxembourg		Nederland		Österreich		Portugal	
N=939		N=1817		N=1515		N=1345	
Post, P&T	98	KPN Telecom	90	Telekom Austria	80	Portugal Telecom	95
Cegecom	1	UPC	3	Priority Telekom	5	CabovisDo	5
		Casema	1	UTA	5		
		Tele2	1	Liwest Kabelmedien	1		
				1003 Multikom	1		

2003

Luxembourg		Nederland		Österreich		Portugal	
N=990		N=1854		N=1454		N=1345	
Post, P&T	99	KPN Telecom	89	Telekom Austria	81	Portugal Telecom	97
Tele2	1	Essent	1	UTA	6	CabovisDo	3
		Casema	1	Priority Telekom	3		
		Tele2	1	1003 Multikom	1		
		UPC	1	Liwest Kabelmedien	1		

2004

Finland		Sverige		UK	
N=1313		N=1946		N=4955	
Finnet-yhtiot	46	Telia	92	Britisch Telecom	77
Elisa Comm	19	Kabelvision/Tele2	3	NTL/Cable&Wireless	14
Sonera	14	Telia ADSL	2	Telewest	8
Auria	4	Bredbandsbolaget	2	Onetel/BGC	1
Soon	4				

2003

Finland		Sverige		UK	
N=1397		N=1899		N=4996	
Finnet-yhtiot	41	Telia	94	British Telecom	78
Sonera	24	Kabelvision/Tele2	3	NTL/Cable&Wireless	14
Elisa Comm	21	Telia ADSL	1	Telewest	7
Auria	3	Utfors	1	Onetel/BGC	1
Tikka	2	Telenordia ADSL	1	Kingston Comm	1

2.4.7.2. Operators used to provide fixed telephone services

The tables below present the five main operators that the households use to provide **fixed telephone services** (in percentages) in each of the 15 EU countries.

Table 15 - Operators used to provide fixed telephone services

2004

Belgium		Danmark		Deutschland		Ellada	
N=1425		N=1820		N=4555		N=1760	
Belgacom	77	TDC (Tele DK)	70	Deutsche Telekom	73	O.T.E.	100
Telenet	10	Tele2	11	Arcor/o.tel.o	8	Tellas	7
Euphonie	5	Telia	6	Tele 2	8	Telepassport	5
Tele2	3	Orange	1	01058 Telecom	3	Forthnet	4
		Sonofon	1	Talkline ID	2		

2003

Belgium		Danmark		Deutschland		Ellada	
N=1589		N=1830		N=4983		N=1827	
Belgacom	80	TDC (Tele DK)	72	Deutsche Telecom	77	O.T.E.	80
Telenet	6	Tele2	9	Arcor.o.tel.o	8	Telepassport	1
Mobistar	3	Telia	9	Talkline ID	3	Forthnet	1
Base	1	Orange	2	Telepassport	3		
Euphony	1	ACN	2	01058 Telecom	2		

2004

Espana		France		Ireland		Italia	
N=4034		N=4181		N=1193		N=3910	
Telefonica	79	France Telecom	88	Eircom	82	Telecom Italia	84
Madritel/Aunacable	5	Télé2	13	Estat/BT/Ocean	4	Wind - Infostrada	11
Uni 2	3	Le “7” (Cegetel)	5	Euphany	2	Tele2	10
Tele2	2	Le 9/9 Telecom	4			Fastweb	2
Jazztel	2	One.Tel	1			Tiscali	1

2003

Espana		France		Ireland		Italia	
N=4219		N=4137		N=1204		N=4063	
Telefonica	86	France Telecom	90	Eircom	81	Telecom Italia	88
Retevision	5	Télé2	8	Estat/BT/Ocean	3	Wind - Infostrada	15
Uni2	4	Le “7” (Cegetel)	5	Spirit	1	Tele2	7
Cableuropa/ONO	3	Le 9/9 Telecom	2	Euphany	0.4	Fastweb	1
Euskaltel	2	One.Tel	1	Newtel	0.3	Tiscali	1

2004

Luxembourg		Nederland		Österreich		Portugal	
N=939		N=1817		N=1515		N=1345	
Post, P&T	93	KPN Telecom	91	Telekom Austria	57	Portugal	88
Tele2	14	Tele2	11	Tele2	15	CabovisDo	5
Cegecom	1	UPC Nederland	3	UTA	9	Novis	4
Cross comm.	1			Priority Telekabel	5	Oni telecom	3
				Tele.ring	4		

2003

Luxembourg		Nederland		Österreich		Portugal	
N=990		N=1854		N=1454		N=1345	
Post, P&T	96	KPN Telecom	90	Telekom Austria	61	Portugal Telecom	89
Tele2	17	Tele2	3	Tele2	12	Oni	4
		UPC Nederland	2	UTA	10	Novis	4
		O2 (Telfort)	1	Tele.ring	6	CabovisDo	3
		Essent	1	Priority Telekabel	4		

2004

Finland		Sverige		UK	
N=1313		N=1946		N=4955	
Finnet-yhtiot	50	Telia	54	Britisch Telecom	69
Elisa Comm	20	Telia2	17	NTL/Cable&Wireless	14
Sonera	18	Glocalnet	8	Telewest	7
Auria	4	ACN	5	Onetel/BGC	3
Soon	3	Optimal Telecom	4		

2003

Finland		Sverige		UK	
N=1397		N=1899		N=4996	
Finnet-yhtiot	40	Telia	68	British Telecom	72
Sonera	26	Telia2	17	NTL/Cable&Wireless	14
Elisa Comm	21	ACN	6	Telewest	7
Auria	3	Optimal Telecom	2	Onetel/BGC	3
Tikka	2	Glocalnet	2	Sky	1

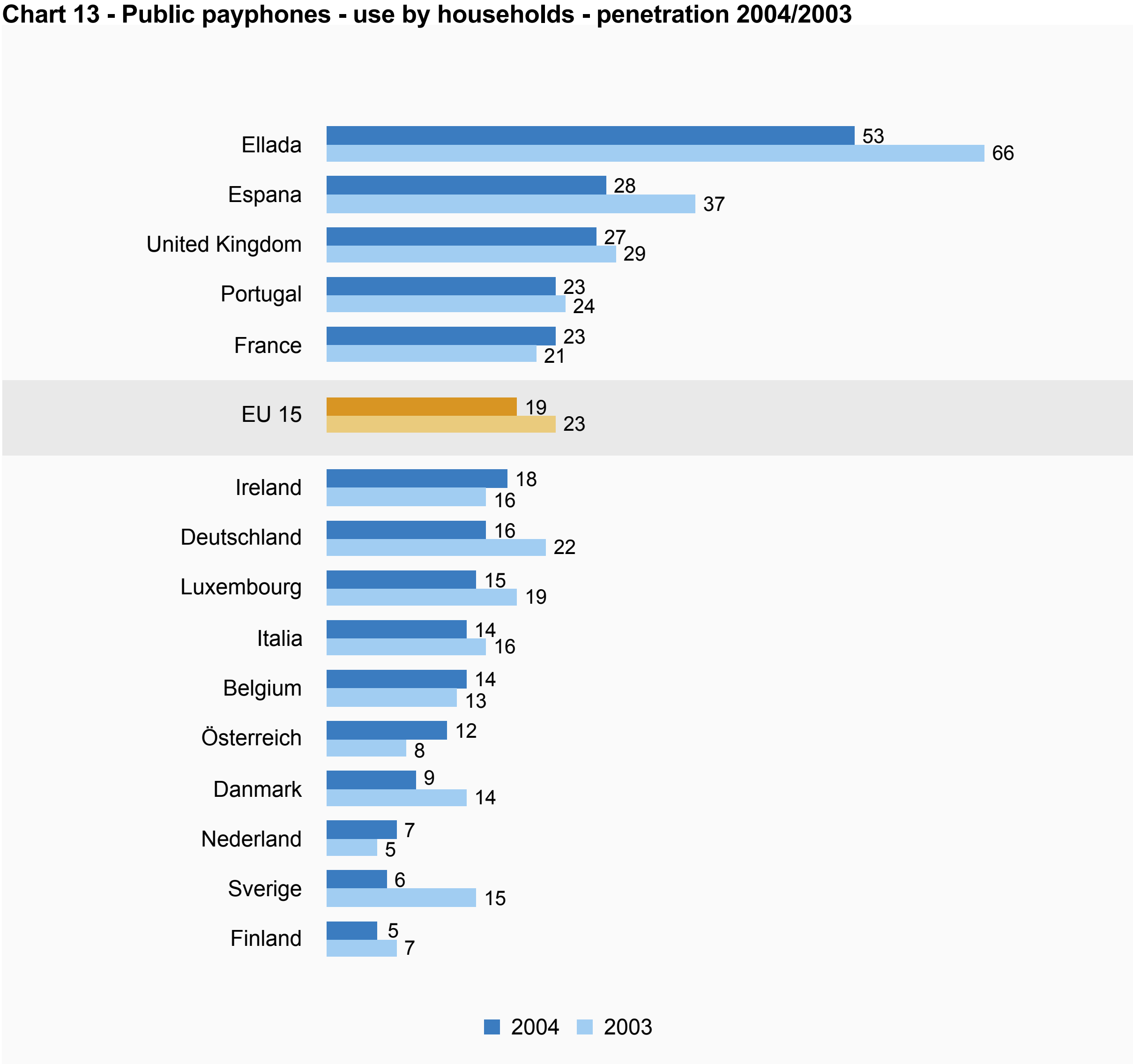
2.5. Public payphones

2.5.1. Public payphones – use by households

Source: question 9
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

The table below shows the rates of households in the 15 pre-accession EU countries that use public payphones (e.g. public call box, a phone-shop or public phones). These rates decreased in most countries from 2003 to 2004, with an EU 15 average moving from 23% in 2003 down to 19% in 2004. At European level: from 23% to 19%.

Chart 13 - Public payphones - use by households - penetration 2004/2003



As can be seen, Greece still tops the other countries far behind with 53% of the households using public payphones, followed by Spain (28%), the United Kingdom (27%), Portugal (23%) and France (23%).

The rates in the other countries are below the European average of 19%. Finland has the lowest rate of households using public payphones (5%).

Table 16 - Use of public payphones by households – EU 15 average demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	5+	Metro	Urban	Rural
Base	**44219**	**8312**	**13710**	**9059**	**8692**	**4446**	**10514**	**15325**	**18369**
Yes	19	16	16	22	21	27	25	18	17
No	78	82	82	75	75	69	73	80	79
DK/NA	3	2	2	3	4	4	2	2	4

Demographics show that in metropolitan areas, public payphones are more used than in rural areas.

2.5.2. Public payphones – frequency

Source: question 10
Nature: table (percentages, base: households that use public payphones)

The chart below depicts how frequently the households use public payphones. Around 19% of the European households are concerned here or, in other words, only those who use public payphones.

As can be seen, the chart itself is divided into four columns:

- Regularly: once a week or more often
- Occasionally: about once a month
- Rarely: less often than once a month
- Only when away from home or travelling.

We can note that 34% of the public payphone users (households) rarely use public payphones, followed by 32% occasionally, 22% regularly and 13% of the households only when away from home or travelling. However, one can observes important differences among EU countries: in Greece and Spain, public payphones are regularly used by 28% of households while they are used in Sweden and Danmark respectively by only 2% and 8% of households.

Table 17 - Public payphones - frequency

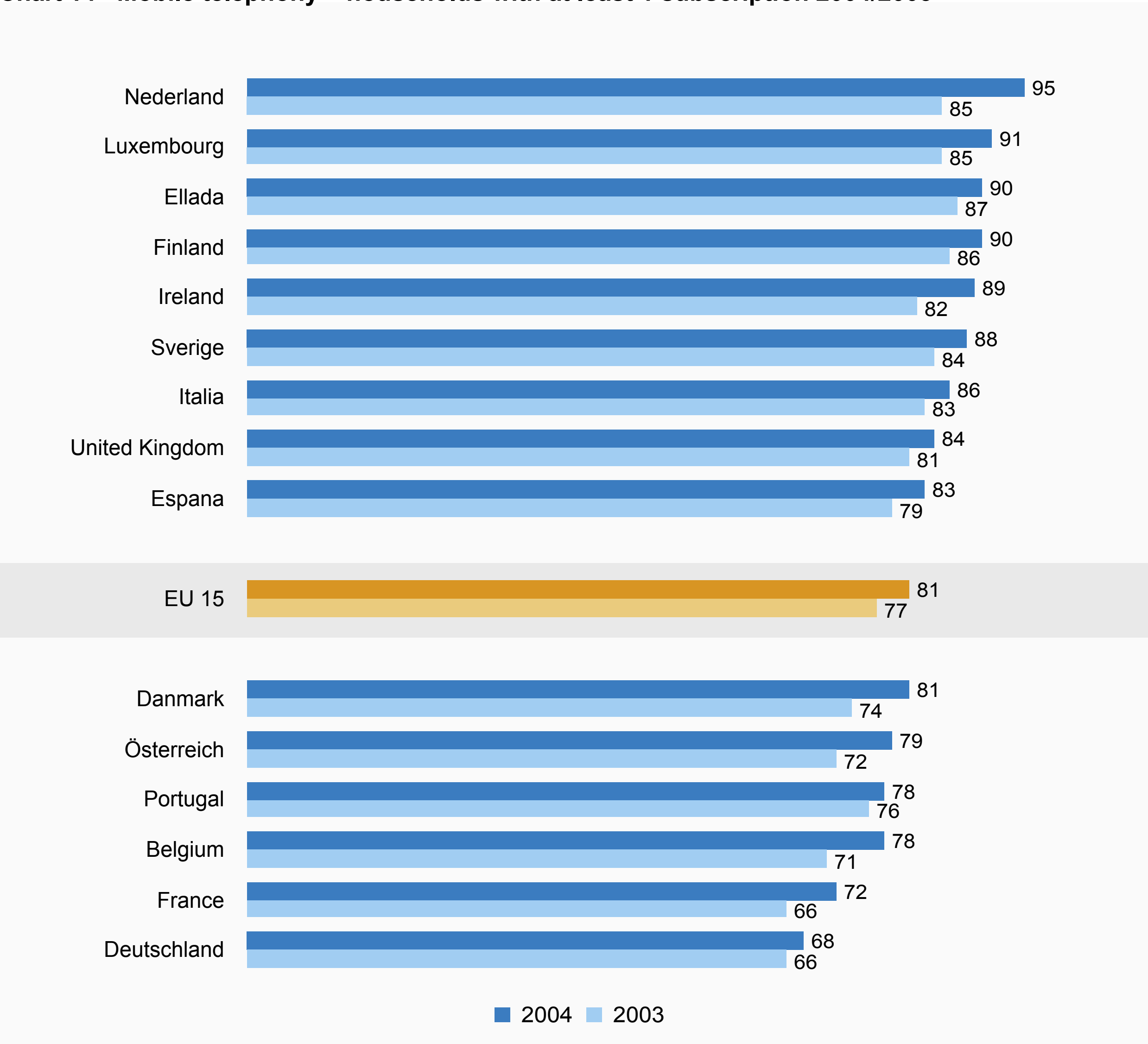
% households	Regularly		Occasionally		Rarely		Only when away from home or travelling	
	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU	**22**	**19**	**30**	**32**	**32**	**34**	**16**	**13**
Belgium	29	22	29	36	31	32	9	8
Danmark	18	8	26	18	47	59	9	15
Deutschland	10	10	22	22	31	32	37	35
Ellada	37	28	30	34	24	30	9	8
Espana	28	28	33	39	27	24	11	9
France	20	20	34	34	33	34	12	12
Ireland	20	12	33	29	30	39	16	15
Italia	21	21	36	35	27	31	14	11
Luxembourg	13	15	33	40	40	33	14	12
Nederland	22	11	22	33	30	44	22	10
Österreich	15	22	36	33	27	25	19	16
Portugal	31	22	34	36	25	33	10	9
Finland	8	11	28	27	42	41	22	20
Sverige	3	2	19	15	48	63	30	18
United Kingdom	17	15	27	30	42	43	13	12

2.6. Mobile telephony

2.6.1. Mobile telephony – households with at least 1 subscription 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 14 - Mobile telephony – households with at least 1 subscription 2004/2003



The above chart compares the penetration of mobile telephone in the 15 pre-accession EU countries for 2003 and 2004.

All the countries below the European Union bar have a penetration rate that is lower than the European average, and those above have a penetration rate that is either equal to or higher than the European average.

As can be seen, there has been an overall growth in cellular telephony access: 81% of the households in the EU countries have a mobile phone subscription. It is a substantial gain of 4 points in comparison with the penetration of 2003.

Looking at the results country-by-country, it is interesting to note the significant progress in the Netherlands (+10 points). The Netherlands comes in the first place with the highest penetration rate (95%), followed by Luxembourg (91%), Greece (90%), Finland (90%), Ireland (89%), Sweden (88%), Italy (86%), the United Kingdom (84%), and Spain (83%).

The penetration rates in the other countries are below the European average of 81%.

At 72% and 68% of the households respectively, France and Germany, the two countries have the lowest penetration rates of mobile telephony in the EU zone.

The demographic breakdowns below show that there is a clear relationship between the household size and the penetration of mobile telephony: the bigger the size of the household, the higher the mobile phone penetration. Indeed, households with 4 or 5 persons or more have both a mobile phone penetration of 93%. By contrast, the penetration rate of mobile phone stands at 63% among households with 1 person. However, it appears that in Netherlands and Greece, which both achieves the highest penetration rates, the household size factor is not influential.

Table 18 – Penetration of mobile telephony among households – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**81**	**63**	**75**	**91**	**93**	**93**	**83**	**81**	**80**
Belgium	78	50	69	92	90	87	79	77	79
Danmark	81	60	87	96	98	96	82	81	81
Deutschland	68	49	60	81	81	85	69	66	69
Ellada	90	84	76	94	97	97	92	93	87
Espana	83	58	67	91	95	97	87	85	81
France	72	54	67	84	87	88	77	68	67
Ireland	89	60	79	94	98	99	92	91	85
Italia	86	65	76	93	95	93	84	90	84
Luxembourg	91	70	88	99	98	97	92	94	89
Nederland	95	91	95	97	97	98	94	95	95
Österreich	79	66	73	91	93	96	83	80	76
Portugal	78	37	64	91	91	90	78	83	76
Finland	90	77	93	96	99	99	94	90	87
Sverige	88	78	89	95	93	93	87	90	87
United Kingdom	84	57	81	94	94	95	82	83	86

2.6.2. Mobile telephony – number of subscriptions by households 2003/2004

Source: question 1
Nature: table (percentages, base: all households)

The information on the number of mobile phone subscriptions by household is depicted in the table below.

Table 19 - Mobile telephony – number of subscriptions

% households	1 mobile subs.		2 mobile subs.		3 or more mobile subs.		None at all	
	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU 15	**35**	**36**	**25**	**27**	**17**	**19**	**23**	**19**
Belgium	35	28	22	27	14	23	29	22
Danmark	43	42	20	26	11	13	26	19
Deutschland	43	42	16	18	7	8	34	32
Ellada	34	31	30	33	24	26	13	10
Espana	30	27	27	30	22	26	24	17
France	44	43	15	19	8	10	34	29
Ireland	28	29	26	31	28	30	18	11
Italia	33	36	26	25	24	25	18	14
Luxembourg	32	32	31	33	22	27	15	9
Nederland	41	47	29	34	14	14	16	5
Österreich	31	42	28	23	13	14	28	21
Portugal	25	25	27	29	24	24	24	22
Finland	32	39	34	29	20	22	14	11
Sverige	44	39	27	30	13	19	16	12
United Kingdom	31	30	29	30	22	24	19	17

As shown above, 36% of the households in the 15 EU countries have 1 mobile phone subscription, 27% have 2 and 19% have 3 or more mobile phone subscriptions. However, the proportion of households having no mobile phone subscription at all amounts to 19% in 2004 in comparison with 23% in 2003.

Regarding the "none at all" rates, Germany (32%) and France (29%) have the highest absence rates of mobile phone subscriptions. Differences from one country to another should also take into account differences in the average size of households by country (see table 1).

2.6.2.1. Mobile telephony – pre-paid subscriptions – 2003/2004

Table 20 - Mobile telephony – pre-paid subscriptions – 2003/2004

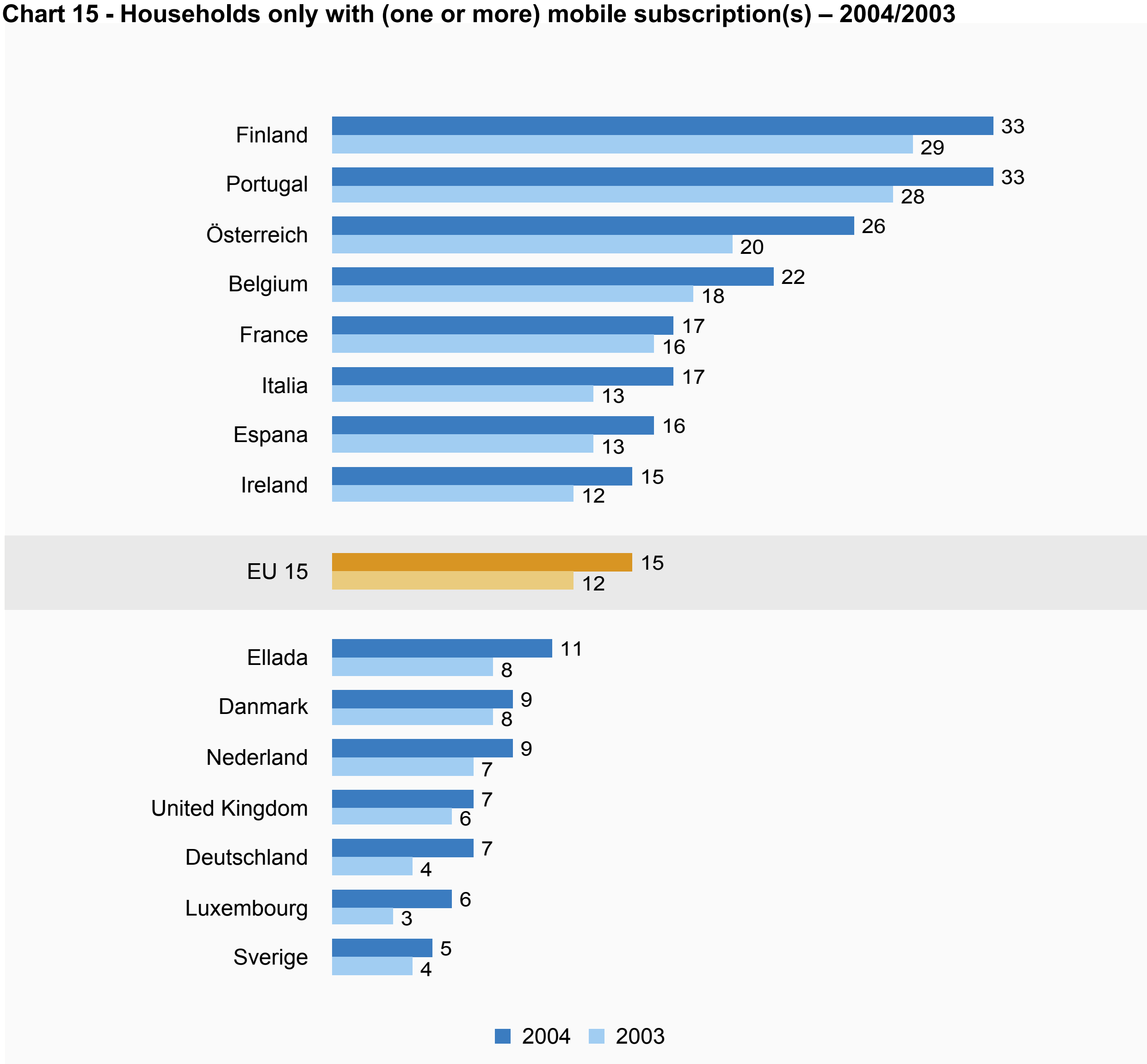
% households	With at least 1 mobile subs.		With 2 or more mobile subs.		With prepaid (base 'if mobile')	
	2003	2004	2003	2004	2003	2004
TOTAL EU 15	77	81	42	46	74	77
Belgium	71	78	36	50	66	78
Danmark	74	81	31	39	48	56
Deutschland	66	68	23	26	79	98
Ellada	87	90	53	60	75	76
Espana	79	83	49	56	88	79
France	66	72	23	29	54	53
Ireland	82	89	54	60	90	95
Italia	83	86	50	50	99	99
Luxembourg	85	91	54	59	56	64
Nederland	85	95	43	48	76	74
Österreich	72	79	41	37	59	57
Portugal	76	78	51	53	98	99
Finland	86	89	54	51	8	21
Sverige	84	88	40	49	76	81
United Kingdom	81	83	51	53	81	83

The first column of the above table depicts the proportion of households with at least one mobile subscription, next column gives the total number of subscriptions (counting all those where two or more) and the last column gives the proportion of these total subscriptions that are pre-paid.

2.6.3. Households only with (one or more) mobile subscription(s) – 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 15 - Households only with (one or more) mobile subscription(s) – 2004/2003



When examining the penetration of "mobile phone only" among households in the EU countries in 2004, one observes that 15% of the households have only a mobile phone without having a fixed phone subscription (compared to 12% in 2003). The 3 points growth compared to 2003 is also in line with the decline of fixed telephony (from 85% to 82%)

By country, we find that the highest penetration rate among households still goes to Finland with 33% of the households having only a mobile phone. Portugal has caught up Finland and is followed by Austria (26%), Belgium (22%), France and Italy (17% each), Spain and Italy (16%) and Ireland (15%).

The other countries have penetration rates below the European average of 15%: Sweden has the lowest penetration rate of mobile phone only (5%).

The demographic analysis shows that, at 22%, households with 1 person have the highest penetration rate of mobile phone only, compared to 11% of the households with 4 persons.

In the first place we find the households from urban areas with a penetration rate of 13%, followed by those from metropolitan areas (12%) and by households from rural areas (11%).

Table 21 - Households with only (one or more) mobile phone subs. – demographic breakdowns

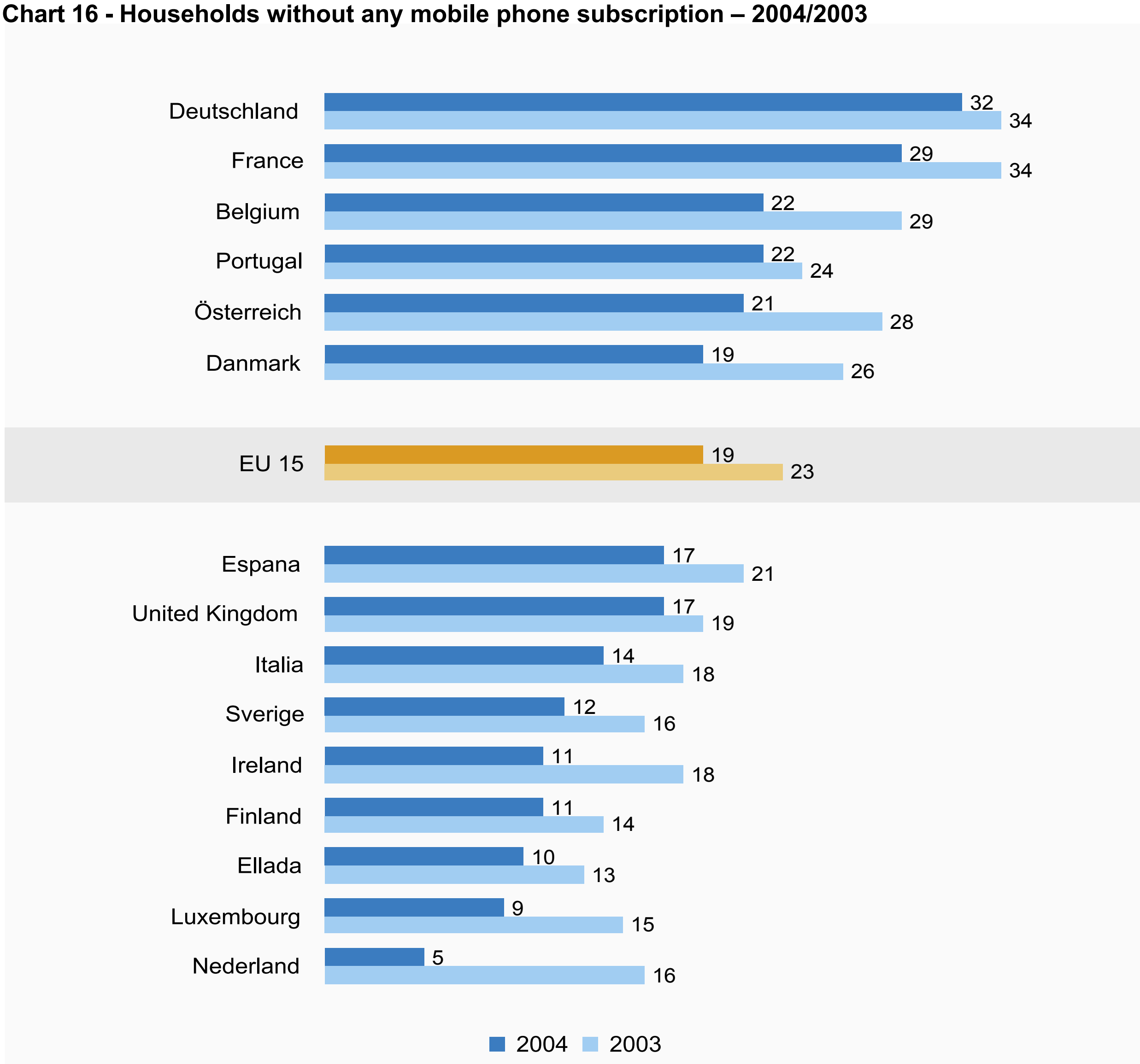
% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU 15	**15**	**22**	**13**	**15**	**11**	**15**	**15**	**15**	**15**
Belgium	22	26	23	28	17	17	29	22	16
Danmark	9	16	7	5	3	1	9	11	6
Deutschland	7	13	5	6	3	5	12	6	5
Ellada	11	43	12	9	4	10	10	17	10
Espana	16	25	17	16	10	17	15	17	16
France	17	23	14	17	12	17	18	19	11
Ireland	15	17	13	18	14	17	15	18	13
Italia	17	28	18	16	12	21	14	19	17
Luxembourg	6	18	4	3	2	8	6	9	4
Nederland	9	14	9	7	5	5	7	8	14
Österreich	26	33	26	22	23	17	34	26	22
Portugal	33	23	30	40	31	38	38	33	33
Finland	33	46	30	28	23	20	34	36	30
Sverige	5	9	4	3	2	2	4	5	6
United Kingdom	7	11	5	7	6	10	7	7	8

One can observes that in a majority of countries, households of one member have a higher proportion of mobile phone only subscription. However, in Belgium and Ireland, this proportion seems to be independent from the household size and in Portugal, which has the lowest penetration for fixed line, larger households have a higher penetration of mobile phone subscription only.

2.6.4. Households without any mobile phone subscription – 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 16 - Households without any mobile phone subscription – 2004/2003



The graph above outlines the rates of households with no mobile phone in the EU countries as well for 2003 as 2004.

In 2004 only 19% of the households in the EU Member States do not have a mobile phone subscription in comparison with 23% in 2003.

At 32% of the households with no mobile phone, Germany and France still top the other EU countries, followed by Belgium (22%), Portugal (22%), Austria (21%) and Denmark (19%).

The rates in the other countries are below the European average of 19%. It is interesting to note that the Netherlands have experienced the most intensive growth of mobile phone penetration in 2004 and therefore have the lowest rate of households with no mobile phone (5%).

The demographic breakdowns below show a clear relationship between the household size and the absence of mobile telephony: the bigger the size of the household, the lower the absence of mobile telephony. Thus, the absence of mobile phone is more significant among households with 1 person (37%), compared to merely 7% among households with 4-5 persons or more.

Table 22 - Households without any mobile phone subs. – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**19**	**37**	**25**	**9**	**7**	**7**	**17**	**19**	**20**
Belgium	22	50	31	8	10	13	22	23	21
Danmark	19	40	13	4	2	4	18	20	19
Deutschland	32	52	40	19	19	15	31	34	32
Ellada	10	16	24	6	3	3	8	7	13
Espana	17	42	33	9	5	3	13	15	19
France	29	47	33	16	13	12	23	32	34
Ireland	11	41	21	6	2	1	9	9	15
Italia	14	35	24	7	5	7	16	10	16
Luxembourg	9	30	13	1	2	3	8	6	11
Nederland	5	9	5	3	3	2	7	5	5
Österreich	21	35	27	9	7	4	17	20	24
Portugal	22	63	36	10	9	10	22	17	24
Finland	11	23	7	4	1	1	6	10	13
Sverige	12	22	11	5	7	8	13	10	13
United Kingdom	17	43	19	6	6	5	18	17	14

It is interesting to observe that while households of one member have the highest rates of mobile phone only (see table 21), they also appear to have the highest rates without any mobile phone subscription. These rates for households of one member are higher in Portugal, Germany, Belgium and France.

2.6.5. Why no mobile phone?

Source: question 13
Nature: tables (percentages, base: households with no mobile phone)

An average of 19% of households interviewed said that they had no mobile phone subscription at home. We have tried to find an explanation for this situation by means of question 13 (see the attached questionnaire). Respondents were given a list of answers but were free to mention as many reasons as they felt necessary for describing their situation.

The table below shows the main reasons brought up by the respondents for not having a mobile phone subscription.

Table 23 - No mobile phone – reasons why

% households	Main reasons	
	2003	2004
There is currently no wish to have a mobile phone	47	48
Fixed telephony line(s) is (are) sufficient for current needs	31	29
Cannot afford to have a mobile phone	16	16
Good access to phones elsewhere, when outside the home	5	6
Plan to get one in the next 6 months	5	5
Mobile coverage in the area is not very good	1	2
Other	6	6

As can be seen, we obtained the same pattern in 2004 as in 2003.

The main reason mentioned by the respondents for not having a mobile phone subscription is that there is currently no wish to have a mobile phone (48%). In the second place comes the fact that the fixed telephone line(s) is (are) sufficient for current needs (29%), followed by households that cannot afford to have a mobile phone (16%), those that say there is a good access to phones elsewhere, when outside the home (6%) and households that plan to get a mobile phone in the next 6 months (5%). At the bottom of the pyramid we find the households saying that the mobile coverage in their area is not very good (2%).

The table next page provides a more detailed information by country concerning the three main reasons.

2.6.5.1. Three main reasons for not having a mobile phone subs. by country

Table 24 - Three main reasons for not having a mobile phone subscription

% households	Currently no wish to have a mobile phone		Fixed Telephone is enough		Cannot afford to have a mobile phone	
	2003	2004	2003	2004	2003	2004
TOTAL EU	**47**	**48**	**31**	**29**	**16**	**16**
Belgium	36	45	31	29	15	7
Danmark	54	65	43	34	12	7
Deutschland	45	40	37	32	20	18
Ellada	62	57	27	34	19	26
Espana	61	55	23	21	15	19
France	36	54	35	36	13	13
Ireland	41	42	25	41	14	14
Italia	45	39	29	25	12	11
Luxembourg	44	47	37	38	8	6
Nederland	58	51	40	24	13	9
Österreich	54	61	27	32	10	14
Portugal	29	28	20	19	38	40
Finland	54	46	22	29	13	19
Sverige	35	31	28	21	15	12
United Kingdom	60	59	23	19	15	11

This table shows that households from the 15 EU countries, which still do not have a mobile telephone behave differently. In particular, the affordability is a greater concern in Portugal and Greece while it appears to be a minor issue in Belgium, Denmark, Luxembourg and Nederland.

2.6.6. Operators used to provide households mobile phone subscription

Source: question 12
Nature: tables (percentages, base: households with at least 1 mobile phone subscription)

The tables below outline the 5 main operators that the households use to provide **mobile (e.g. GSM) phone subscription** (in percentages) in each of the 15 EU countries.

Table 25 - Households with at least one subscription for these mobile phone operators

2004

Belgium		Danmark		Deutschland		Ellada	
N=1551		N=1624		N=3456		N=1806	
Proximus	60	TDC	40	D1 (T-Mobile)	49	Cosmote	55
Mobistar	40	Sonofon	25	D2 Vodafone	32	Vodafon	46
Base	12	Telia	15	E-Plus	14	Tlestest	31
		Telecom Plus	15	Viag Interkom/02	7	Q Telecom	3
		Orange	13	Debitel	3		

2003

Belgium		Danmark		Deutschland		Ellada	
N=1499		N=1485		N=3496		N=1734	
Proximus	61	TDC	41	D1 (T-Mobile)	45	Cosmote	55
Mobistar	33	Sonofon	29	D2 Vodafone	36	Panafon/Vodafone	45
Base	10	Orange	17	E-Plus	16	Telestet	32
		Telia	14	Viag Interkom/02	6		
		Debitel	7	Debitel	2		

2004

Espana		France		Ireland		Italia	
N=4146		N=3667		N=1275		N=4192	
Movistar	61	Orange	51	Vodafone	69	Tim	61
Amena	30	SFR	40	O2	49	Omnitel Vodafone	50
Vodafone	30	Bouygues Telecom	22	Meteor	10	Wind	25
Euskatel	1						

2003

Espana		France		Ireland		Italia	
N=3965		N=3353		N=1153		N=3998	
Movistar	67	Orange	40	Vodafone	70	Tim	60
Vodafone	26	SFR	33	2	46	Omnitel Vodafone	55
Amena	25	Bouygues Telecom	19	Meteor	7	Wind	23
						Blu	4

2004

Luxembourg		Nederland		Österreich		Portugal	
N=912		N=1894		N=1649		N=1677	
Tango	51	KPN Mobile	43	Mobilkom Austria	47	TMN	60
Post (P&T)	30	Vodafone	24	T-Mobile	28	Vodafone	36
Mobilux	22	T-Mobile	21	One	24	Optimus	22
CMD	19	Telfort	15	Tele.ring	13		
		Orange	15				

2003

Luxembourg		Nederland		Österreich		Portugal	
N=872		N=1691		N=1487		N=1645	
Tango	50	KPN Mobile	51	Mobilkom Austria	47	TMN	59
Post (P&T)	29	Vodafone	29	T-Mobile	35	Vodafone	33
Mobilux	22	Dutchtone	17	One	22	Optimus	26
CMD	17	O2	13	Tele.ring	9	Yorn	1
		Debitel	3				

2004

Finland		Sverige		UK	
N=1811		N=1768		N=4497	
Sonera	57	Telia Mobitel	54	Orange	36
Radiolinja	35	Comviq	39	Vodafone	31
DNA	24	Vodafone	20	O2	28
		Tele2 Mobile	3	One2One/Tmobile	25
		Djuice	2	Virgin	8

2003

Finland		Sverige		UK	
N=1743		N=1684		N=4350	
Sonera	68	Telia Mobitel	56	Orange	39
Radiolinja	36	Comviq	34	Vodafone	33
DNA	8	Vodafone	22	Oy	26
Telia Mobile	7	Tele2 Mobile	5	One2One/Tmobile	25
Jippii Group	1	Djuice	1	Virgin	5

Chapter 3
Internet

3.1. Purpose

This chapter focuses on Internet access and access with higher transmission capacity. More specifically, it looks at the following sub-chapters:

- Personal computer equipment – Internet access
- Internet – means of access
- Internet access or use way from the home
- Frequency of Internet use from the home
- Internet services
- No Internet at home.

3.2. Main observations 2004

- 12% of the households in the EU Member States have Broadband Internet access up from 5% in 2003. The highest penetration rates are observed in the Netherlands (36%), Belgium (32%), Denmark (30%) and Sweden (25%) while it was still near to zero in Ireland and Greece at the beginning of 2004.
- DSL represents around two thirds of the broadband Internet access in the EU 15. However, in three countries cable TV access at home is more prevalent than DSL connections. These are the Netherlands, Portugal and Austria.
- The overall proportion of households having Internet access at home has increased from 24% in 2003 to 39% in 2004.
- In all EU 15 countries, a majority of households of three members and more have a computer at home, to the exception of Greece and Portugal.
- The three main reasons brought up by the respondents for not having an Internet access at home are: “no PC or means of connecting at home” (41%), “household is not familiar with Internet” (31%) and “concern about the cost” (17%).
- 53% of EU 15 households have a personal computer, against 48% in 2003. Nordic countries and Luxembourg top the 15 countries while Greece, Portugal and France lag behind. In particular, a majority of EU households of three members and more have a computer at home, with the exception of Greece and Portugal.
- 73% of the PC-equipped households in the 15 Member States have an Internet access on their PC equipment. Sweden leaves the other countries far behind with a penetration rate of 90%. However, we find Portugal at the bottom of the pyramid with only 49% of the PC-equipped households having an Internet access on their PC equipment.

- 35% of the households with an Internet access at home use it more than once a day, 27% several times a week, 25% at least once a day, 8% about once a week, 2% about once a month and merely 1% of these households less frequently than once a month.
- The three Internet services most frequently used by the households having an Internet access at home are: e-mail (86%), information on subjects of interest (80%) and information on products and prices (60%).

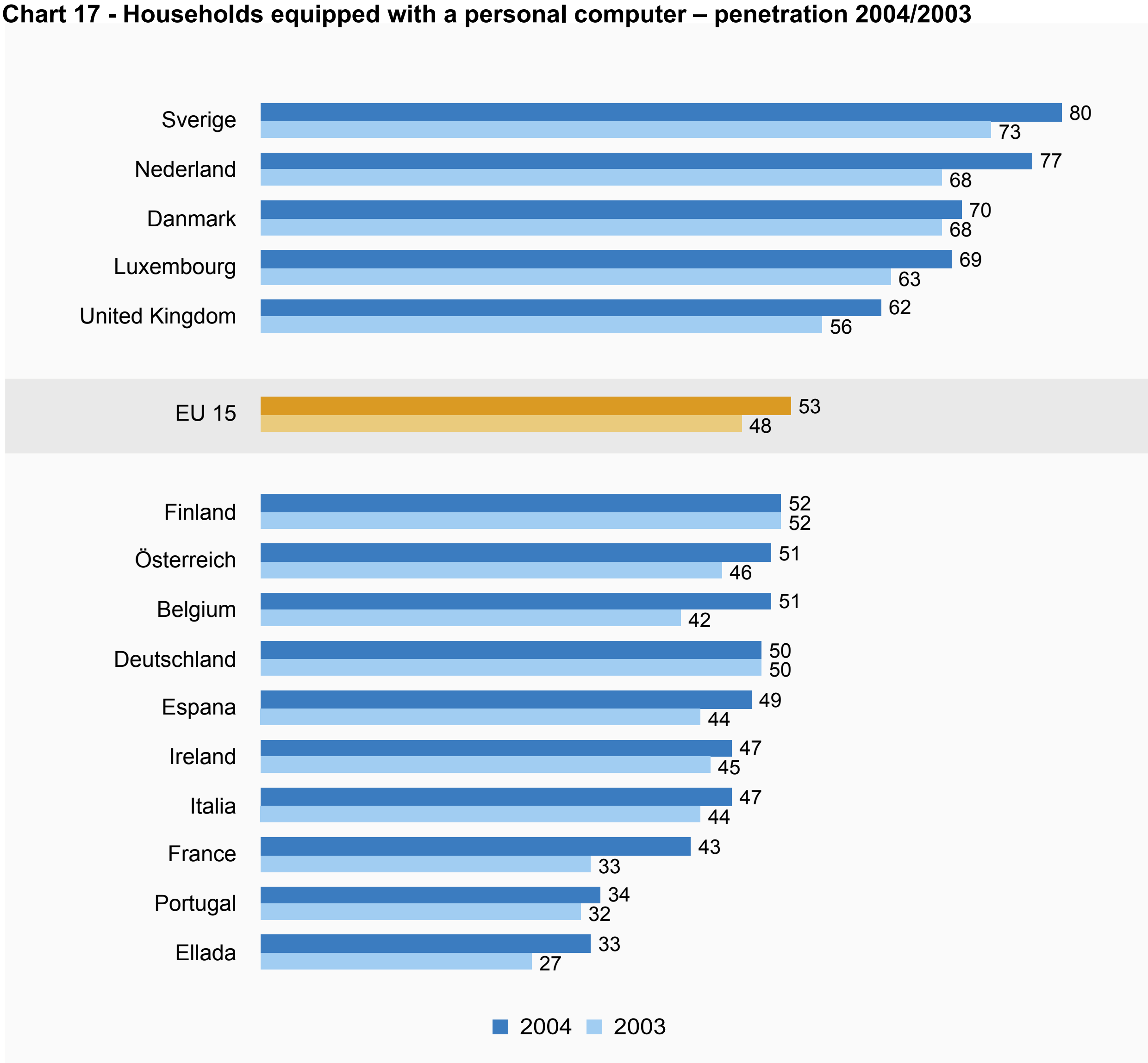
3.3. Personal computer equipment – Internet access

3.3.1. Households equipped with a personal computer – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

The chart below shows the penetration of Personal computer equipment among households in the 15 Member States.

Chart 17 - Households equipped with a personal computer – penetration 2004/2003



The percentage of the households in the EU countries having a Personal computer grew from 48% in 2003 to 53% in 2004.

The penetration rate has increased in almost all EU countries with the exception of Finland and Germany where a status quo is observed.

With a one-year evolution of 9 points, the Netherlands have the biggest growth among all the EU countries.

At 80% of the households, Sweden still has the highest penetration rate of Personal computer equipment in the EU zone. Greece is still at the bottom of the ranking with only 33% of the households owning Personal computer equipment.

Looking at the demographic breakdowns, we can see that a majority of EU households of three members and more have a computer at home, with the exception of Greece and Portugal. However, no great differences exist among the three types of locality.

The Personal computer penetration is hardly more significant among households in metropolitan areas (56%) as compared to those from rural areas (50%).

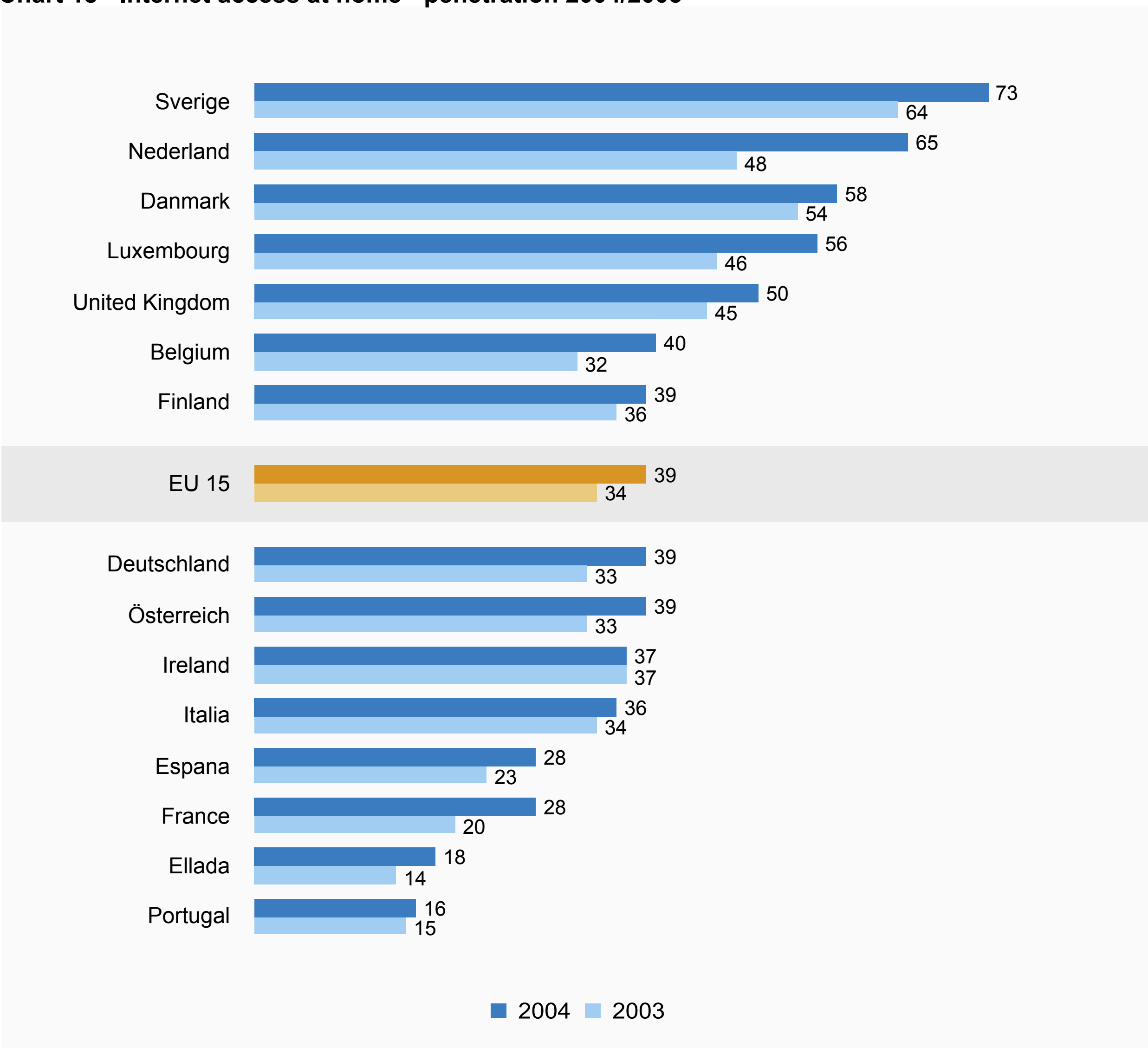
Table 26 - Penetration of Personal computer – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**53**	**32**	**42**	**61**	**71**	**69**	**56**	**54**	**50**
Belgium	51	19	29	63	78	79	49	51	54
Danmark	70	47	73	89	90	89	71	68	70
Deutschland	50	24	35	68	79	75	50	50	50
Ellada	33	25	19	32	44	38	40	37	23
Espana	49	24	30	54	66	65	55	51	46
France	43	23	35	58	66	63	49	36	42
Ireland	47	23	35	51	58	58	50	50	43
Italia	47	23	27	52	67	63	47	48	47
Luxembourg	69	41	48	81	91	87	72	66	70
Nederland	77	67	78	78	92	98	77	81	72
Österreich	51	30	39	71	78	81	51	50	52
Portugal	34	10	18	41	52	38	30	41	31
Finland	52	30	48	75	79	84	63	55	44
Sverige	80	62	79	93	96	97	82	81	79
United Kingdom	62	29	55	73	82	81	61	62	63

3.3.2. Internet access at home – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 18 - Internet access at home - penetration 2004/2003[10]



The graph above presents the penetration of Internet access at home among households in the 15 Member States. These results are of course correlated with the proportion of households equipped with a computer.

As indicated, 39% of the households in EU countries have an Internet access at home, a five points increase compared to 2003

Sweden still tops the other countries with 73% of the households having an Internet access at home. Sweden is followed by the Netherlands (65%), Denmark (58%), Luxembourg (56%), the United Kingdom (50%), Belgium (40%), Austria (39%) and Finland (39%). The greatest increase over the year has been achieved by the Netherlands, with an increase of 17 points, thanks in particular to the growth of broadband access (see chart 18), followed by Luxembourg (+10 points), Sweden (+9 points) and Belgium (+8 points).

[10] Internet access of any forms: as well narrowband as broadband Internet access

Penetration rates in southern countries appear to be below the European average of 39% of the households.

The demographic analysis shows that the penetration of Internet access at home is the most significant among households with 4 persons (48%), compared to 19% of the households with 1 person.

The presence of Internet access at home is higher among households living in metropolitan areas (43%), followed by those from urban areas (41%) and by households living in rural areas (36%).

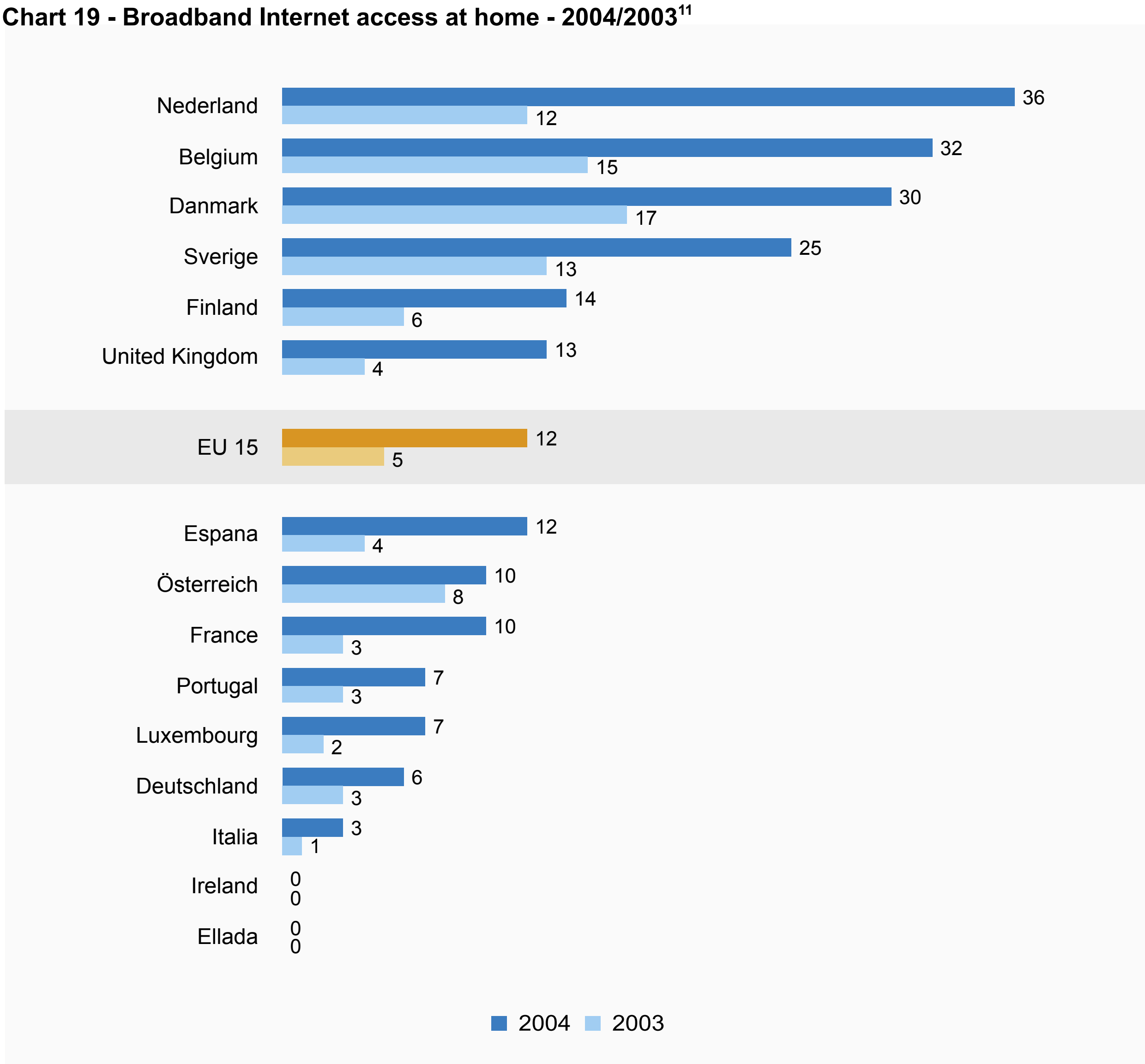
Table 27 - Internet access at home – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU 15	**39**	**24**	**32**	**46**	**54**	**50**	**43**	**41**	**36**
Belgium	40	13	20	51	66	63	36	40	46
Danmark	58	33	62	76	83	76	59	59	56
Deutschland	39	19	27	53	64	59	39	39	39
Ellada	18	13	10	20	24	20	25	19	12
Espana	28	15	17	29	40	39	35	31	25
France	28	15	22	37	43	39	34	20	24
Ireland	37	21	29	43	45	41	42	35	36
Italia	36	16	21	42	51	44	36	38	35
Luxembourg	56	29	39	64	78	71	59	51	58
Nederland	65	65	52	85	81	55	64	64	68
Österreich	39	22	29	58	58	58	42	39	37
Portugal	16	4	7	19	29	17	14	21	14
Finland	39	16	38	59	67	65	50	39	34
Sverige	73	52	71	87	89	91	77	71	69
United Kingdom	50	20	44	59	68	64	47	50	52

3.3.3. Broadband Internet access at home – 2004/2003

Source: question 16
Nature: graph (percentages, base: all households) table (percentages, base: all households)

Chart 19 - Broadband Internet access at home - 2004/2003[11]



The graph above ranks the 15 EU countries and the EU 15 according to their Broadband Internet access at home.

In comparison with 2003, the penetration of Broadband Internet access has more than doubled in almost all the countries. Austria is the only exception with less intensive growth.

The growth of broadband is superior to the growth of the overall Internet access because broadband combines households migrating from narrowband to broadband and households deciding to have Internet broadband access from scratch.

[11] Broadband Internet access: DSL or cable

The highest penetration rates are observed in the Netherlands (36%), Belgium (32%), Denmark (30%) and Sweden (25%). The middle group consists of Finland (14%), United Kingdom (13%), Spain (12%), Austria and France (each 10%). The penetration is the lowest in Portugal (7%), Luxembourg (7%), Germany (6%) and Italy (3%).

It is interesting to note that neither Ireland nor Greece have Broadband Internet access at home.

Looking at the demographic breakdowns, we can see that, as far as the 15 pre-accession EU countries as a whole are concerned, the rates of Broadband Internet access at home are strongly correlated with the household size,

If we turn to the types of locality, it appears that Broadband Internet access at home is more significant among households living in metropolitan areas: 17% versus 8% in rural areas.

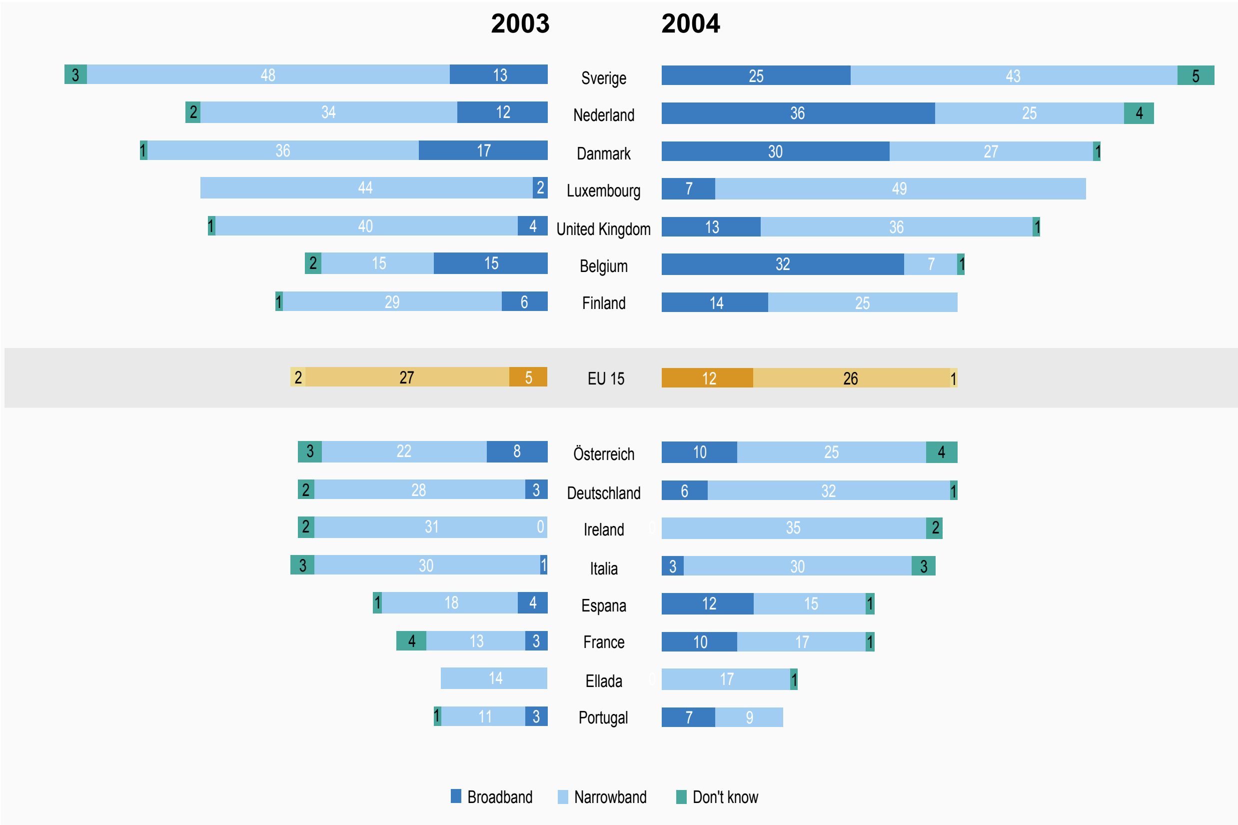
Table 28 - Broadband Internet access at home – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU 15	**12**	**9**	**10**	**14**	**15**	**16**	**17**	**14**	**8**
Belgium	32	11	13	42	50	55	31	30	35
Danmark	30	16	31	41	44	49	30	36	25
Deutschland	6	3	4	9	11	7	6	7	6
Ellada	0	0	0	0	0	1	0	0	0
Espana	12	6	7	13	14	20	16	16	9
France	10	6	7	14	15	12	16	6	2
Ireland	0	0	1	0	1	0	0	1	0
Italia	3	2	2	5	4	5	0	4	4
Luxembourg	7	4	4	6	10	10	6	7	7
Nederland	36	37	26	52	45	37	33	36	40
Österreich	10	7	8	16	17	8	20	11	5
Portugal	7	2	3	9	9	7	6	10	5
Finland	14	6	14	23	19	24	29	14	7
Sverige	25	19	23	30	31	33	34	26	14
United Kingdom	13	5	10	15	18	18	15	15	7

The graph below is an in-depth analysis of the data already examined in the first chart of the previous paragraph (Internet access at home – penetration 2003/2004). The chart compares the penetration rate of Broadband Internet access at home and Non-Broadband Internet access at home.

It shows that in countries which have above the EU average overall Internet access, plus Spain and Portugal, the share of narrowband tends to decrease as households are migrating to broadband access.

Chart 20 - Internet access at home: narrowband and broadband - penetration 2003/2004[12]

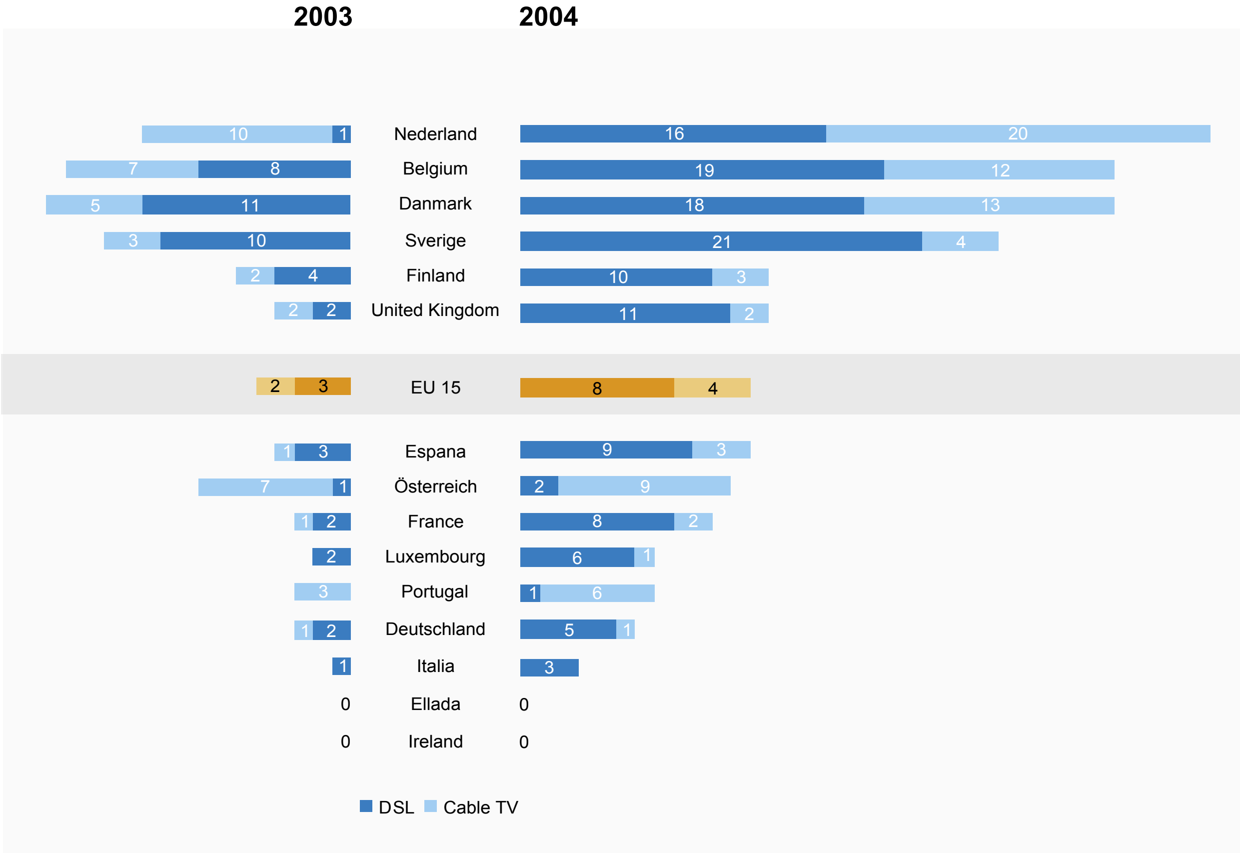


[12] Internet access of any forms: narrowband versus broadband Internet access

The graph below ranks the 15 EU countries and the European Union as a whole according to their Broadband Internet access at home and shows the figures for Internet access at home through a DSL line and Internet access at home through Cable TV Network.

DSL is the main broadband Internet access technology used by EU households, with two thirds of the total connections, and one third of connections using a cable TV modem. In all countries DSL is increasing more rapidly than cable to the exception of Portugal. However, in Belgium, Denmark and the Netherlands, cable TV is also growing rapidly. In Germany and Sweden where the penetration of cable TV is important (see table 4), the growth of broadband is mainly driven by DSL.

Chart 21 - Broadband Internet access at home: access via DSL and access via cable TV[13]

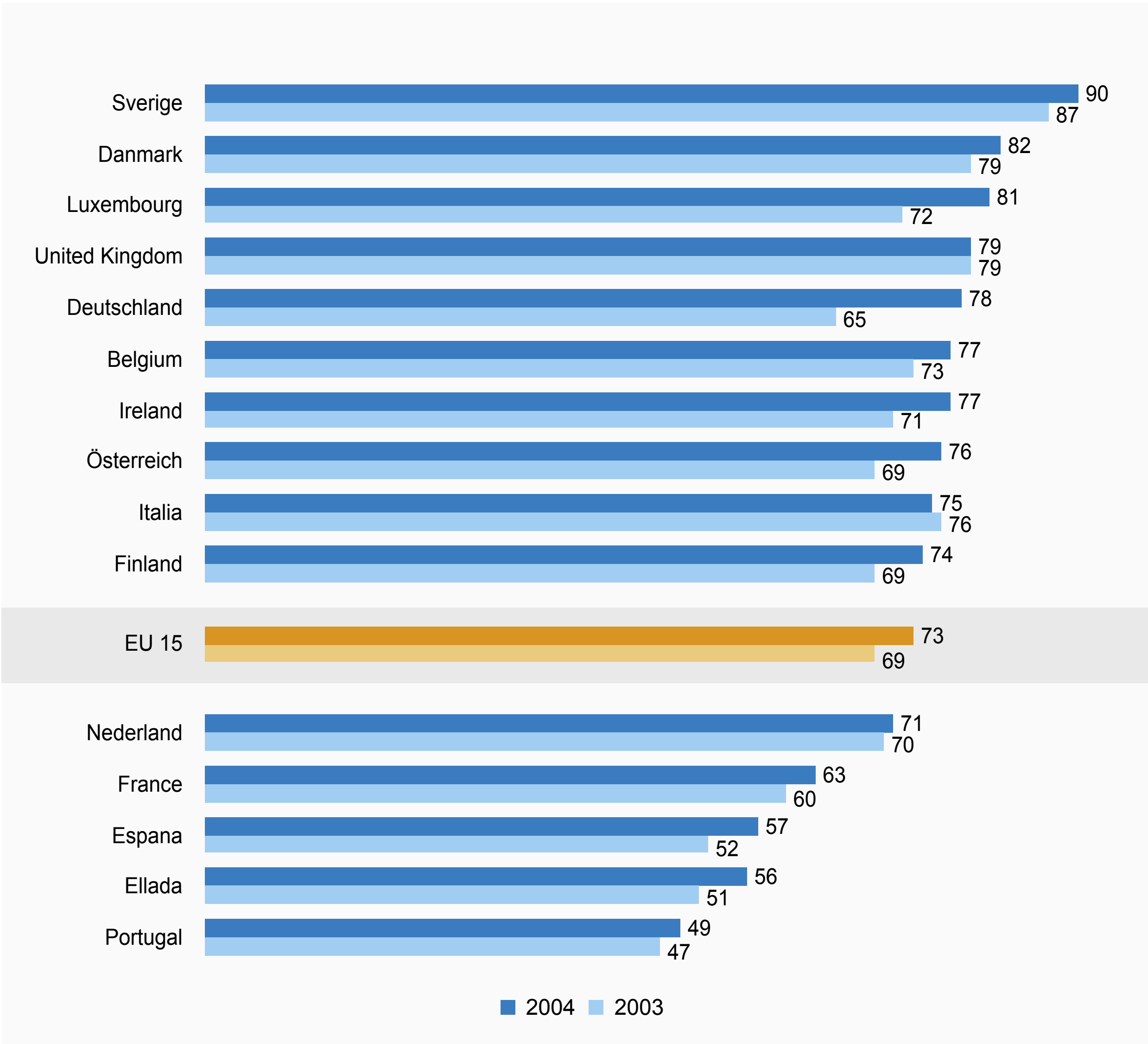


[13] Broadband Internet access: DSL access versus cable TV access

3.3.4. Personal computer with Internet – penetration 2004/2003

Source: question 1
Nature: graph (percentages, base: households with at least 1 Personal Computer)

Chart 22 - Proportion of households with personal computers that have internet access[14] penetration 2004/2003



The above graph presents the penetration of Internet among PC-equipped households in the 15 pre-accession EU countries. In comparison to the previous chart (3.3.2.), the positions of certain countries have changed.

As can be seen, for 2004, the European average stands at 73%; it means that 73% of the Personal computer-equipped households have an Internet access on their Personal computer equipment. This is 4 points more than in 2003.

[14] Internet access of any forms: as well narrowband as broadband Internet access

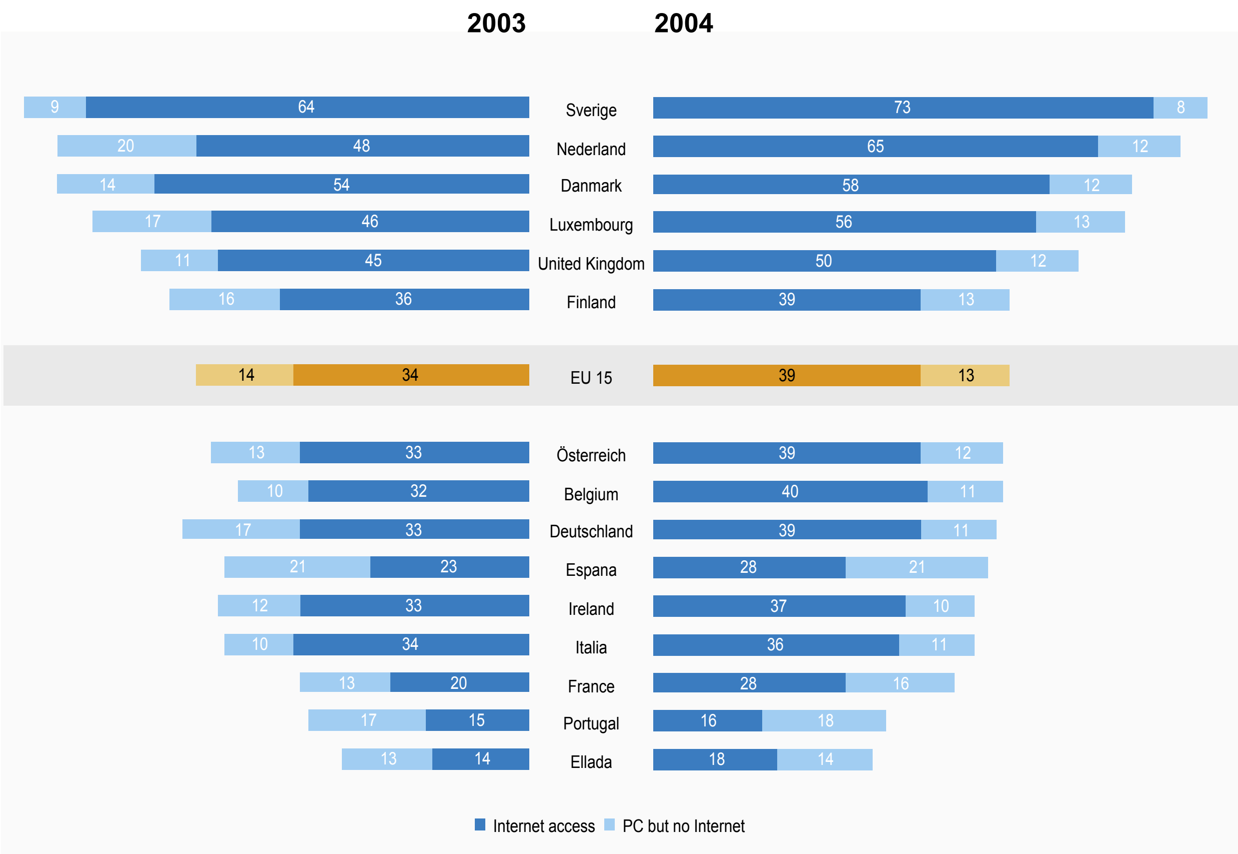
It is interesting to see that three countries are experiencing a particular strong increase. The proportion of households with personal computers that have Internet access increased 13 points in Germany, 9 points in Luxembourg, and 7points in Austria.

When examining the ranking of 2004, we can see that Sweden still leaves the other countries behind with an Internet penetration rate of 90% among households with Personal computer equipment. In the second place comes Denmark (82%), followed by Luxembourg (81%), the United Kingdom (79%), Germany (78%), Belgium and Ireland (both 77%), Austria (76%), Italy (75%) and Finland (74%).

The other countries have penetration rates below the European average: the Netherlands (71%), France (63%), Spain (57%) and Greece (56%). At 49%, Portugal has the lowest penetration of Internet among Personal computer-equipped households.

The graph below is the same as 3.3.1. with the bar divided into two. The first part of the bar corresponds to households equipped with a personal computer with Internet access and the second part to households without Internet access.

Chart 23 - Households with personal computers: Internet access[15] or not*



*The country ranking is based on relative data, not on absolute values

[15] Internet access of any forms: as well narrowband as broadband Internet access

3.4. Main means of Internet access for the household

Source: question 16
Nature: table (percentages, base: households with an Internet access at home)
graphs (percentages, base: households with an Internet access at home)

About 39 % of the European households said that they had an Internet access at home. We asked them what were the main means of Internet access for the household.

The table below presents the main means of Internet access mentioned by the respondents:

Table 29 – Main means of Internet access for the household

% households	Main access means	
	2003	2004
Dial-up using a standard telephone line	64	51
Dial-up using a ISDN line	15	13
DSL (digital subscriber line) service	8	21
Via the cable TV network	7	10
Via the television	1	0
Via a mobile phone	0	1
Other	0	0

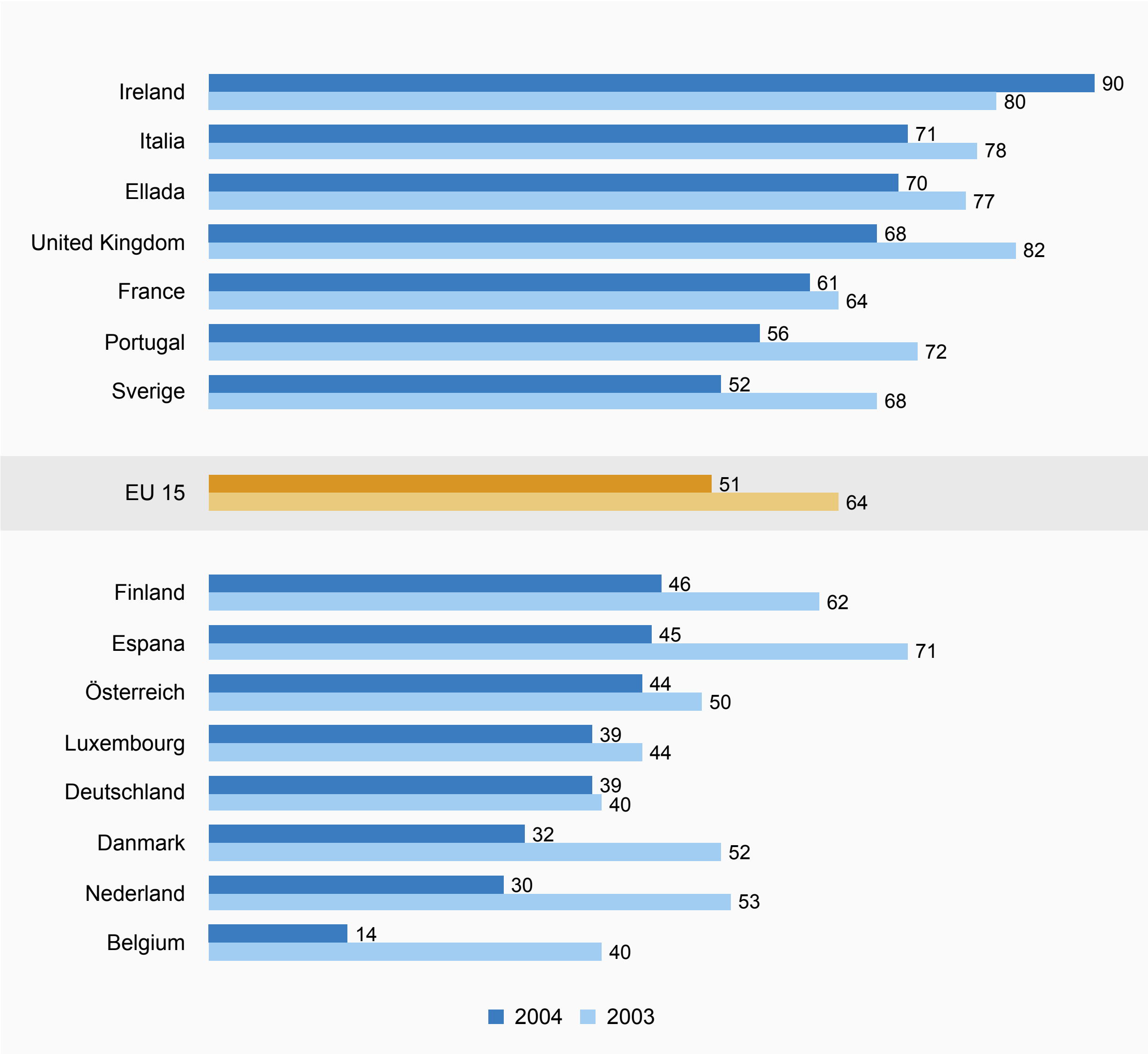
Not surprisingly, the share of DSL among the means of Internet access is growing rapidly: from 8% in 2003 to 21% in 2004. But, as indicated, at 51% (a 13% drop), the main mean of Internet access brought up by the respondents is “dial up using a standard telephone line”.

The share of ISDN is falling despite the fact that the total amount of ISDN line subscriptions has been characterised by a sluggish growth in 2004.

Looking at the results by country, we will focus below on the four main access means.

3.4.1. Access means 1 - Dial-up using a standard telephone line

Chart 24 - Access means 1 - Dial-up using a standard telephone line - penetration 2004/2003*

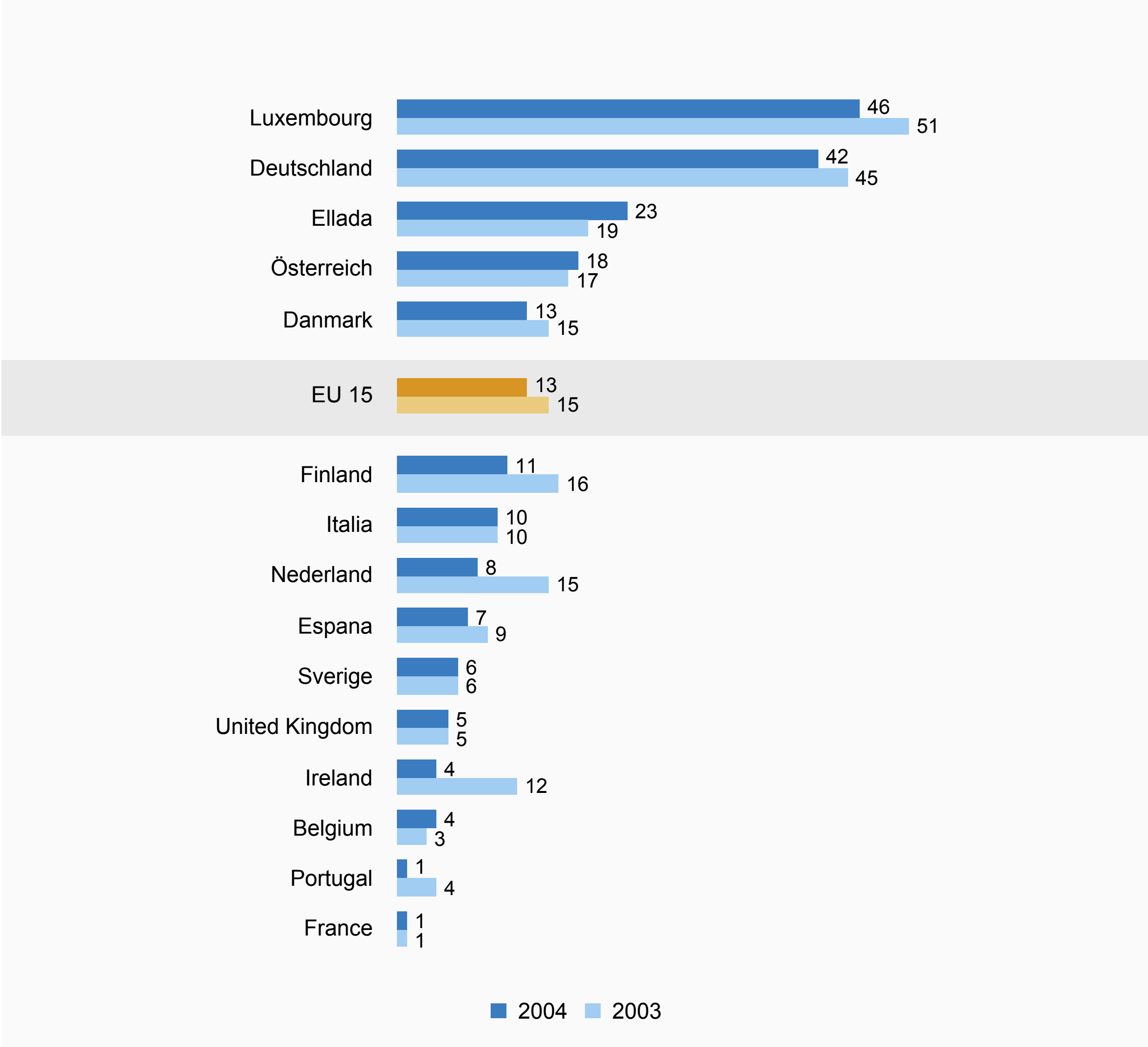


*The country ranking is based on relative data, not on absolute values

If we look at the households that have an Internet access at home by using a standard telephone line, we notice the rapid drop from 64% in 2003 to 51% in 2004.

3.4.2. Access means 2 - Dial-up using an ISDN line

Chart 25 - Access means 2 - Dial-up using an ISDN line - penetration 2004/2003*

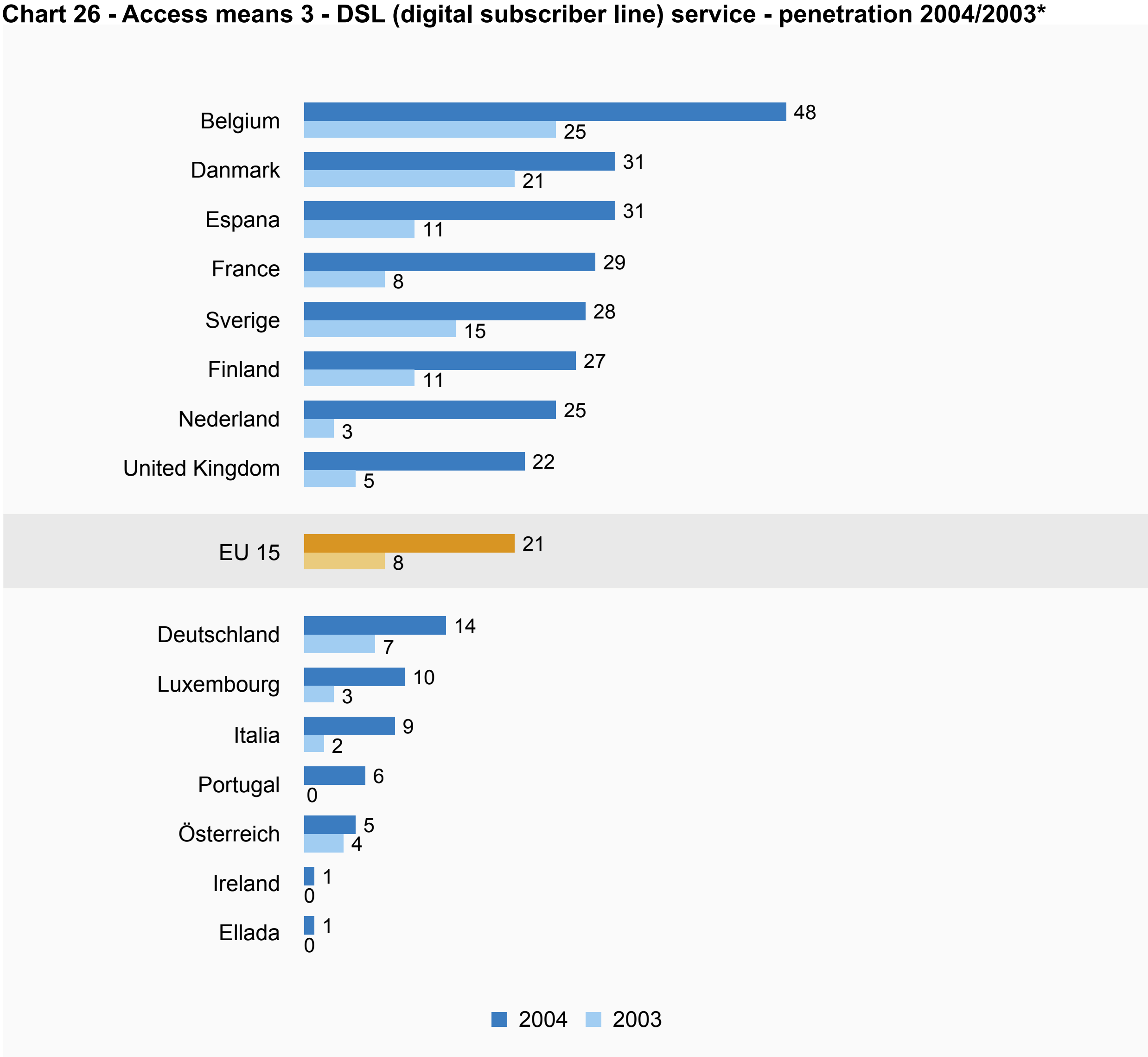


*The country ranking is based on relative data, not on absolute values

If we look at the households that have an Internet access at home, it seems that in 2004 13% of them use an ISDN line.

3.4.3. Access means 3 - DSL (digital subscriber line) service

Chart 26 - Access means 3 - DSL (digital subscriber line) service - penetration 2004/2003*

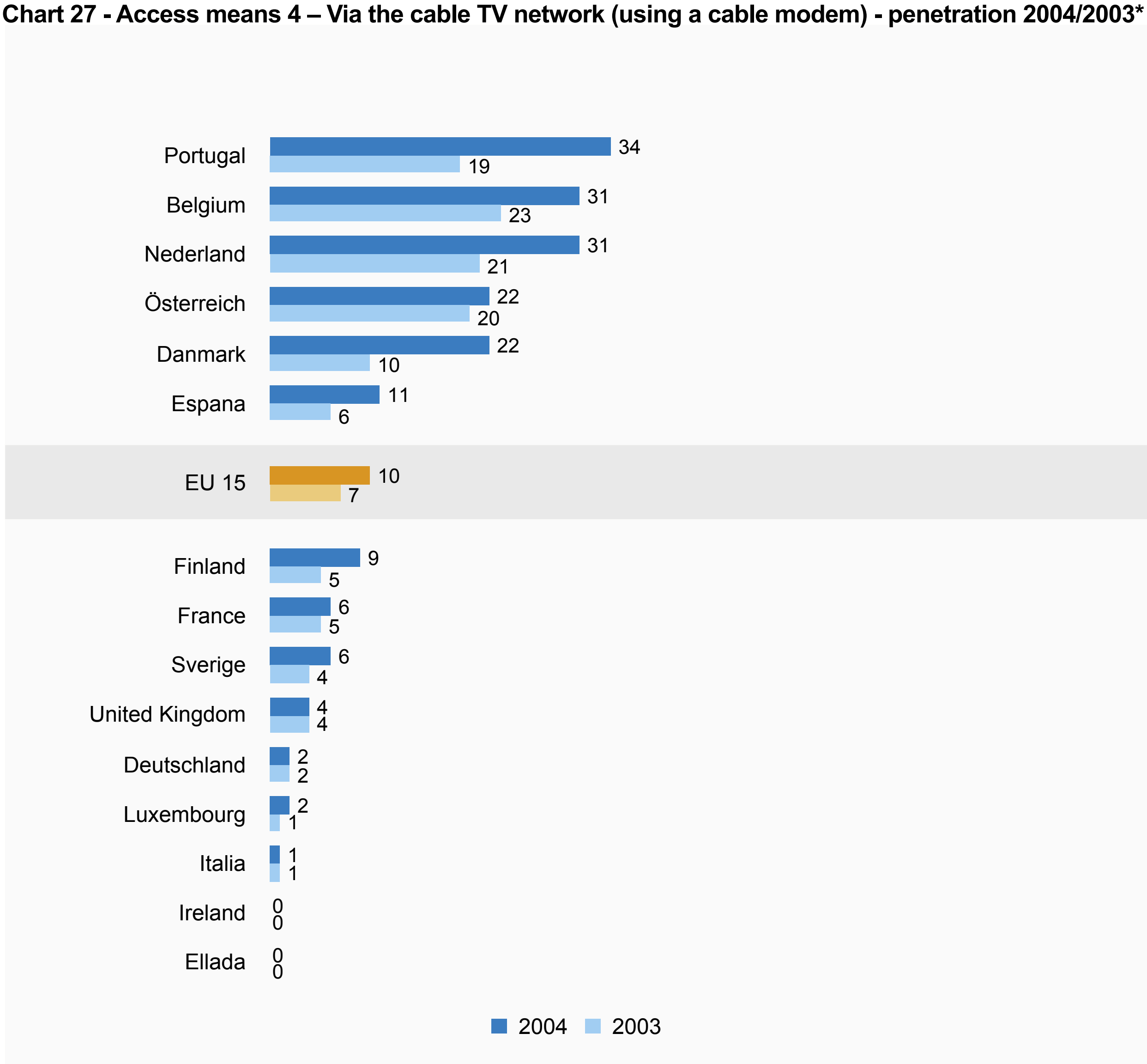


*The country ranking is based on relative data, not on absolute values

If we look at the households that have an Internet access at home, we can clearly see the important growth of those using a DSL service. The European average grew with 13% in 2004. Belgium owns the most rapid expansion with an increase of 23%.

3.4.4. Access means 4 – Via the cable TV network (using a cable modem)

Chart 27 - Access means 4 – Via the cable TV network (using a cable modem) - penetration 2004/2003*

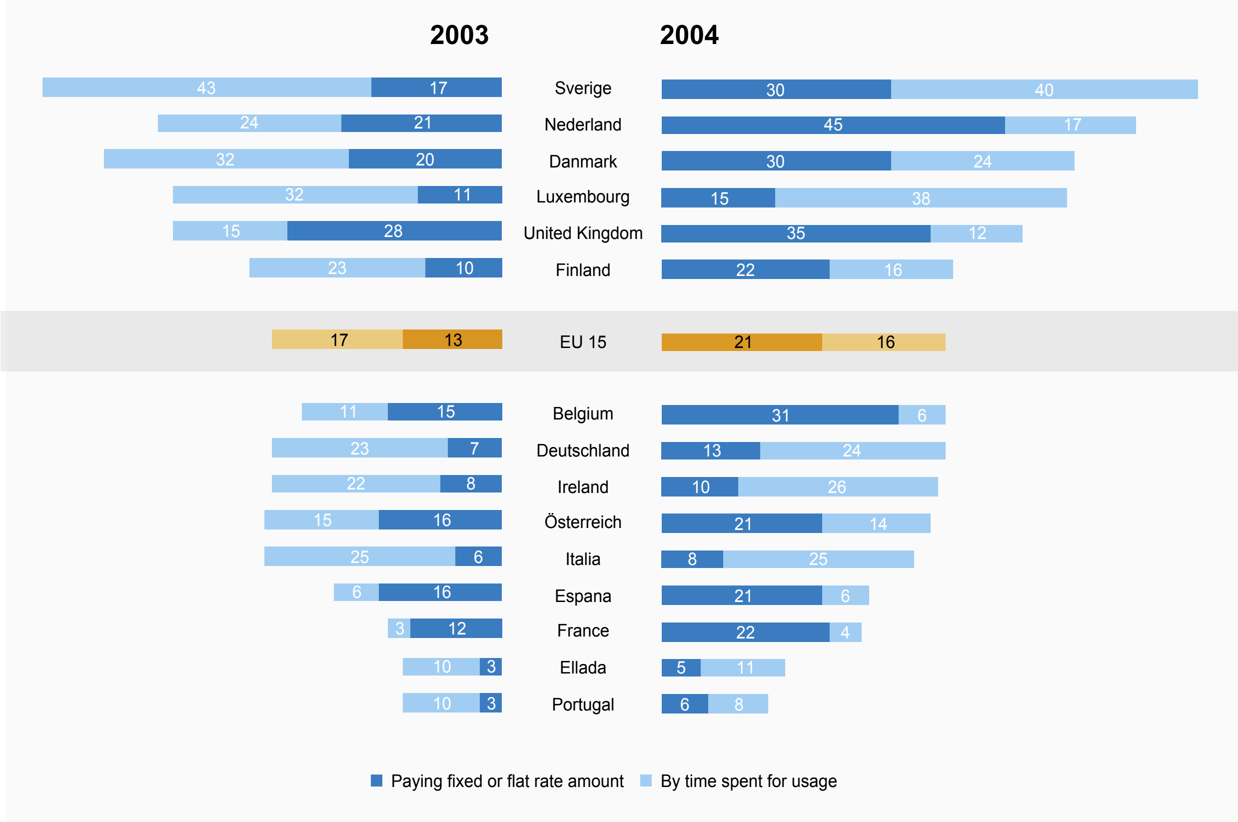


*The country ranking is based on relative data, not on absolute values

3.4.5. Means used to pay for the Internet access

Source: question 19
Nature: graph (percentages, base: all households)

Chart 28 - Means used to pay for Internet access



This bar chart indicates how households with Internet access pay for their access, whether on a usage basis or by means of a fixed or flat rate subscription (not including 'don't know' and 'others')

The rapid increase of flat fee form of payment mainly results from the take up of broadband access by EU households.

3.5. Internet access or use at home or away

3.5.1. Internet access or use at home or away – penetration 2004

Source: question 14
Nature: table (percentages, base: all households)

The table below presents the percentage of households that have an Internet access according to the place where they use it.

Table 30 - Internet access or use away at home or away – penetration 2004

% of households	TOTAL Any-where	At home	At work	At school	Else-where	At home or at work	At home or at educa-tional establish-ment
TOTAL EU	58	39	30	23	18	49	47
Belgium	55	40	24	23	17	47	47
Danmark	73	58	42	34	29	65	66
Deutschland	52	39	27	18	15	46	44
Ellada	38	18	18	13	11	28	26
Espana	52	28	24	18	21	39	37
France	48	28	22	19	17	37	37
Ireland	54	37	29	26	8	46	48
Italia	53	36	33	16	13	48	42
Luxembourg	67	56	40	27	18	62	62
Nederland	81	65	42	24	23	77	70
Österreich	59	39	37	20	23	51	45
Portugal	36	16	15	19	11	24	28
Finland	65	39	36	31	31	51	50
Sverige	86	73	56	38	33	81	77
United Kingdom	69	50	34	34	13	57	61

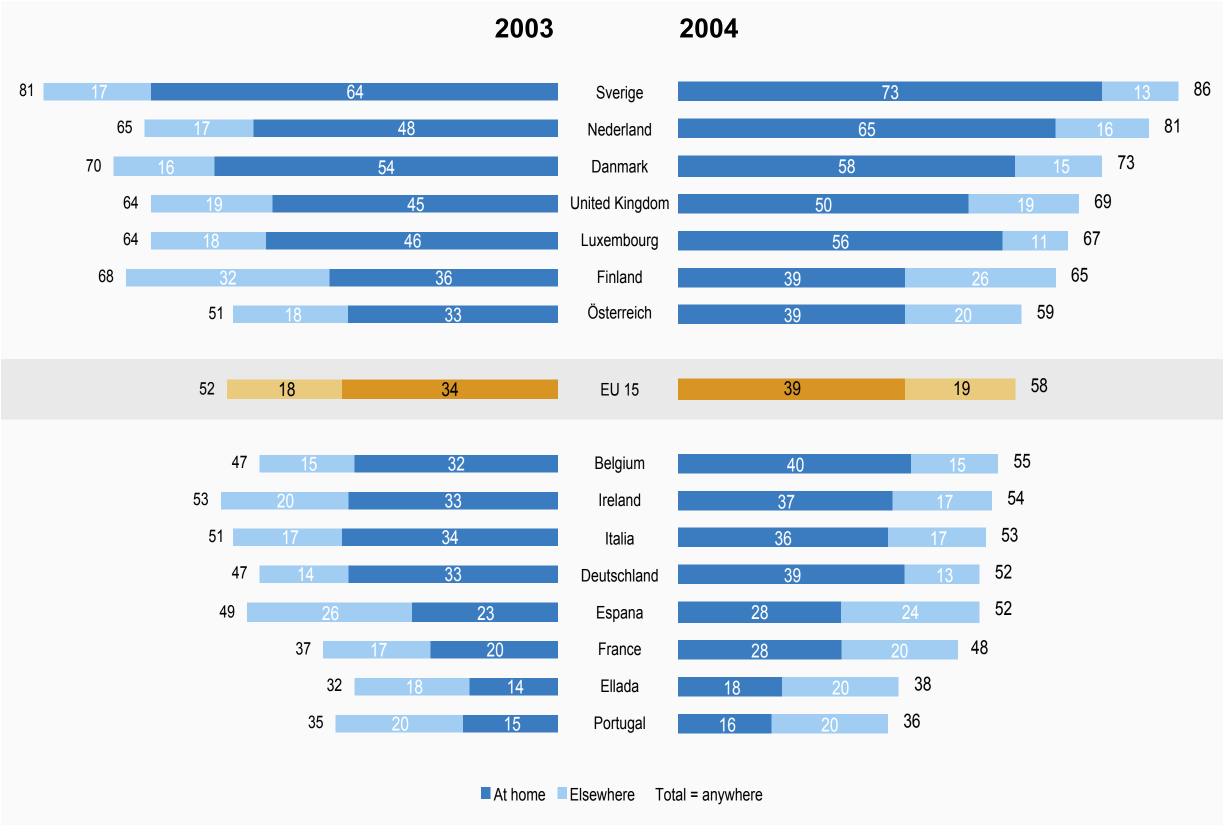
As indicated, 58% of the households in the EU countries have an Internet access.

More specifically, if we take the European Union as a whole, 39% of the households use Internet at home, 30% at work, 23% at an educational establishment and 18% elsewhere. 49% of the households in the Member States have an Internet access at home or at work, while 47% of the households use Internet at home or at an educational establishment.

At 86% of the households, Sweden has the highest overall Internet penetration rate. In the second place comes the Netherlands (81%), followed by Denmark (73%), the United Kingdom (69%), Luxembourg (67%, Finland (65%) and Austria (59%).

The other countries have penetration rates below the European average of 58% of the households: Belgium (55%), Ireland (54%), Italy (53%), Germany and Spain (52% each) and Greece (38%). Portugal stands at the bottom of the pyramid with only 36% of the households having an Internet access.

Chart 29 - Internet access at home and total Internet access



3.5.2. Internet access or use at home or away - Demographics 2004

Source: question 14
Nature: tables (percentages, base: all households)

3.5.2.1. Overall Internet access penetration – demographic breakdowns

The tables below present the socio-demographic analysis of three of the Internet penetration indicators mentioned in 3.5.1:

- Total – anywhere
- At home or at work
- At home or at an educational establishment.

Readers interested in the demographics of the other indicators should rather refer to the volume of additional tables.

Overall, the three tables below show that the bigger the household size, the higher the Internet penetration.

Table 31 - Overall Internet access penetration – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	58	39	46	68	75	74	63	60	53
Belgium	55	23	30	72	81	84	57	53	57
Danmark	73	49	76	93	97	96	76	73	70
Deutschland	52	30	36	70	80	75	54	51	51
Ellada	38	36	25	36	47	44	41	45	31
Espana	52	30	31	58	68	71	62	57	46
France	48	27	38	66	71	70	57	39	43
Ireland	54	25	41	59	67	66	62	52	52
Italia	53	30	34	63	70	63	59	60	50
Luxembourg	67	43	45	79	88	86	72	61	68
Nederland	81	76	75	91	97	84	78	82	83
Österreich	59	37	47	81	80	86	61	59	57
Portugal	36	11	17	43	57	46	29	42	34
Finland	65	46	59	88	93	92	77	69	56
Sverige	86	73	84	97	98	98	88	88	82
United Kingdom	69	35	58	81	89	91	70	68	69

3.5.2.2. Internet access at home or at work – demographic breakdowns

Table 32 - Internet access at home or at work – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**49**	**32**	**40**	**56**	**64**	**59**	**53**	**51**	**44**
Belgium	47	19	26	59	72	71	44	47	51
Danmark	65	39	69	83	88	86	67	66	61
Deutschland	46	26	32	63	73	64	47	47	45
Ellada	28	19	18	29	36	27	34	31	20
Espana	39	23	26	42	51	49	49	43	34
France	37	20	30	50	55	50	45	28	33
Ireland	46	24	38	50	56	50	55	44	42
Italia	48	27	31	55	63	57	54	52	45
Luxembourg	62	38	43	71	85	77	67	55	65
Nederland	77	72	70	91	91	77	75	77	78
Österreich	51	31	43	72	72	71	53	53	50
Portugal	24	9	13	28	39	22	19	30	22
Finland	51	28	48	75	82	75	66	53	43
Sverige	81	65	79	92	95	96	84	82	77
United Kingdom	57	26	52	67	76	72	56	57	59

3.5.2.3. Internet access at home or at school – demographic breakdowns

Table 33 - Internet access at home or at an educational establishment – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**47**	**28**	**35**	**56**	**66**	**67**	**51**	**49**	**43**
Belgium	47	15	22	58	77	78	46	46	50
Danmark	66	39	68	90	91	89	66	67	64
Deutschland	44	21	29	61	74	68	46	44	44
Ellada	26	24	15	25	31	35	30	30	19
Espana	37	17	19	40	53	54	43	41	33
France	37	18	26	52	61	63	44	31	35
Ireland	48	22	31	54	60	60	52	47	46
Italia	42	18	23	49	60	54	43	46	40
Luxembourg	62	29	40	74	86	82	67	56	63
Nederland	70	67	57	87	92	76	68	69	73
Österreich	45	23	31	67	70	76	46	45	44
Portugal	28	5	10	34	48	39	24	31	28
Finland	50	25	45	75	83	87	59	54	43
Sverige	77	56	74	92	95	97	81	77	73
United Kingdom	61	26	49	72	83	88	62	60	61

3.5.3. Which household members have Internet access?

Source: question 14
Nature: tables (percentages, base: all households)

Next peace of information is which household members use Internet:

- At home
- At work
- At an educational establishment
- Elsewhere.

3.5.3.1. Internet access at home – household members

Table 34 - Internet access at home – household members

% of households	TOTAL	Respondent/ partner	Children <12 years	Children 12-17 years	Other people 18+
TOTAL EU	39	37	5	7	12
Belgium	40	37	8	10	18
Danmark	58	57	9	9	8
Deutschland	39	38	3	6	11
Ellada	18	14	1	3	8
Espana	28	24	2	5	15
France	28	26	4	6	8
Ireland	37	34	4	9	16
Italia	36	30	2	4	18
Luxembourg	56	52	7	12	18
Nederland	65	64	6	6	11
Österreich	39	37	5	8	12
Portugal	16	13	2	5	8
Finland	39	39	6	10	7
Sverige	73	72	13	14	12
United Kingdom	50	48	11	12	12

3.5.3.2. Internet access at work – household members

Table 35 - Internet access at work – household members

% of households	TOTAL	Respondent/ partner	Children <12 years	Children 12-17 years	Other people 18+
TOTAL EU	**30**	**25**	**0**	**0**	**7**
Belgium	24	21	0	0	5
Danmark	42	41	0	0	3
Deutschland	27	23	0	0	6
Ellada	18	14	0	0	6
Espana	24	17	0	0	9
France	22	19	0	0	4
Ireland	29	22	1	1	10
Italia	33	22	0	0	13
Luxembourg	40	31	1	1	11
Nederland	42	35	0	0	8
Österreich	37	31	0	0	9
Portugal	15	11	0	0	5
Finland	36	33	1	1	4
Sverige	56	52	0	0	6
United Kingdom	34	31	0	0	5

3.5.3.3. Internet access at an educational establishment – household members

Table 36 - Internet access at an educational establishment – household members

% of households	TOTAL	Respondent/ partner	Children <12 years	Children 12-17 years	Other people 18+
TOTAL EU	23	10	5	9	6
Belgium	23	9	6	9	7
Danmark	34	19	8	11	5
Deutschland	18	8	2	7	4
Ellada	13	6	1	5	4
Espana	18	8	2	5	7
France	19	8	3	8	4
Ireland	26	12	5	10	8
Italia	16	8	0	3	7
Luxembourg	27	9	5	13	8
Nederland	24	13	4	7	5
Österreich	20	8	4	8	5
Portugal	19	6	4	8	5
Finland	31	18	7	12	4
Sverige	38	19	10	15	6
United Kingdom	34	13	14	15	6

3.5.3.3. Internet access elsewhere – household members

Table 37 - Internet access elsewhere – household members

% of households	TOTAL	Respondent/ partner	Children <12 years	Children 12-17 years	Other people 18+
TOTAL EU	18	12	1	4	4
Belgium	17	10	1	5	6
Danmark	29	21	4	6	3
Deutschland	15	10	1	4	3
Ellada	11	6	0	2	5
Espana	21	13	1	4	9
France	17	12	1	4	3
Ireland	8	5	0	2	3
Italia	13	8	0	1	5
Luxembourg	18	11	1	6	5
Nederland	23	19	1	3	5
Österreich	23	17	2	5	5
Portugal	11	6	1	3	3
Finland	31	26	4	7	4
Sverige	33	25	4	8	5
United Kingdom	13	9	2	2	2

3.6. Frequency of Internet use from the home

3.6.1 How often does a household member typically use the Internet?

Source: question 18
Nature: tables (percentages, base: households with an Internet access at home)

About 39 % of the European households said that they had an Internet access at home. We asked them how often do the household members access the Internet at home.

The table below presents the frequency of Internet use from the home:

Table 38 - Frequency of Internet use from the home

% households	Frequency of Internet use	
	2003	2004
More than once a day	26	35
Once a day	26	25
Several times a week	31	27
About once a week	9	8
About once a month	2	2
Less frequently than once a month	1	1

It appears that more and more households with an Internet access at home use it more than once a day. In comparison with the 2003 data collection, we encountered a growth of 9%. Yet 35% of households with an Internet access at home use it more than once a day. Several times a week scores 27%, at least once a day 25%, about once a week 8%, about once a month 2% and merely 1% of these households less frequently than once a month.

Looking at the results by country, we will have a look below at the three main frequency of Internet use from the home. Nevertheless, information about the other frequency of Internet use can be found in the volume of additional tables.

3.6.1.1. Main frequency of Internet use from the home by country

Table 39 - Main frequency of Internet use from the home by country

% of households	Several times a week		More than once a day		Once a day	
	2003	2004	2003	2004	2003	2004
TOTAL EU	**31**	**27**	**26**	**35**	**26**	**25**
Belgium	30	19	25	44	23	30
Danmark	27	18	33	49	25	22
Deutschland	38	38	23	26	24	21
Ellada	35	29	19	23	33	31
Espana	26	24	35	33	32	34
France	25	24	22	39	21	26
Ireland	40	45	17	14	25	17
Italia	35	32	19	21	26	22
Luxembourg	30	31	20	23	32	29
Nederland	28	17	25	59	25	18
Österreich	30	33	27	30	29	25
Portugal	39	39	15	24	32	25
Finland	33	20	25	44	26	19
Sverige	29	24	31	36	23	28
United Kingdom	28	24	32	38	26	25

3.7. Internet services and types of use

3.7.1. Internet services & facilities

Source: question 17
Nature: tables (percentages, base: households with an Internet access at home)

A list of services and facilities accessible via Internet were examined in the questionnaire. We are going to focus on the situation in each country, but let us first have a look at the situation in the European Union as a whole.

Table 40 - Main Internet services & facilities

% of households	Internet services & facilities	
	2003	2004
E-mail	84	86
Information on subjects of interest	79	80
Information on products & prices	56	60
Entertainment	51	52
Ordering goods or making purchases	38	45
Use related to education	42	44
Use related to work	43	43
Handling a bank-account(s)	36	41
Forums/discussions	24	27

The table above shows in overall terms the frequency of use of each service and activity in European households.

The three services most frequently used are still the same as in 2003: e-mail (86%), information on subjects of interest (80%) and information on products and prices (60%). The other services apply to 27-52% of the Internet users (households).

We have drawn up below two tables in the same manner for each of the 15 Member States of the European Union.

3.7.1.1. E-mail, info on subjects of interests, entertainment, use related to education and forums/discussions

Table 41 - E-mail, info on subjects of interest, entertainment, use related education, forms/discussions

% of households	E-mail		Info on subjects of interest		Entertainment		Use related to education		Forums and discussions	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU	**84**	**86**	**79**	**80**	**51**	**52**	**42**	**44**	**24**	**27**
Belgium	74	85	69	78	48	54	39	50	28	28
Danmark	95	94	90	90	50	56	39	37	20	26
Deutschland	84	85	76	79	52	51	41	42	27	29
Ellada	75	67	72	68	47	55	35	37	19	14
Espana	83	80	78	70	52	46	44	42	33	28
France	68	85	62	81	46	55	32	45	27	31
Ireland	82	78	72	67	45	34	44	44	14	10
Italia	77	71	72	66	47	40	45	45	23	21
Luxembourg	88	84	85	79	37	42	47	47	24	27
Nederland	93	95	86	85	56	64	31	41	22	35
Österreich	83	86	73	73	57	56	37	32	23	22
Portugal	62	68	61	69	46	47	46	50	25	26
Finland	90	90	84	86	55	61	51	54	24	37
Sverige	89	93	84	89	53	57	42	45	23	31
United Kingdom	91	92	89	88	54	56	48	51	22	21

3.7.1.2. Info on products and prices, use related to work, ordering goods etc. and handling a bank account

Table 42 - Info on products and prices, use related to work, ordering goods etc. and handling a bank account

% of households	Info on products and prices		Use related to work		Ordering goods, etc.		Handling a bank account	
	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU	**56**	**60**	**43**	**43**	**38**	**45**	**36**	**41**
Belgium	43	46	39	43	21	18	29	31
Danmark	66	73	42	46	53	62	64	65
Deutschland	62	67	42	41	43	52	41	43
Ellada	32	33	48	51	12	12	7	6
Espana	39	35	46	44	18	16	18	16
France	39	63	31	39	30	46	25	42
Ireland	50	43	49	40	47	52	23	18
Italia	33	36	45	40	11	13	10	11
Luxembourg	71	60	45	48	53	48	43	46
Nederland	64	68	38	41	40	57	40	61
Österreich	48	55	41	42	30	36	36	44
Portugal	29	35	40	46	9	13	11	21
Finland	66	73	48	50	43	51	84	80
Sverige	71	79	42	42	51	61	57	66
United Kingdom	73	76	44	45	59	68	36	41

3.7.2. Operators used to provide Internet services at home

Source: question 20
Nature: tables (percentages, base: households with an Internet access at home)

The tables below present the 5 main operators that the households use to provide **Internet services at home** (in percentages) in each of the 15 Member States.

Table 43 - Operators used to provide Internet services at home

2004

Belgium		Danmark		Deutschland		Ellada	
N=800		N=1160		N=1990		N=369	
Skynet	52	TDC Internet	48	T-online	45	Otenet	42
Telenet/Pandora	27	Telia Stofa	9	AOL	25	Forthnet	11
Tiscali	6	Tele2	7	Freenet	16	Panafon Net	7
Planet Internet	5	TDC Kabel TV	6	Arcor	6	Hellas on line	4
Chello	2	CyberCity	5	1x1	2	ACC	5

2003

Belgium		Danmark		Deutschland		Ellada	
N=666		N=1087		N=1744		N=273	
Skynet	33	TDC Internet	49	T-online	46	Otnet	46
Telenet/Pandora	25	Tele2	12	AOL	21	Forthnet	10
Planet Internet	8	Tiscali A/S	8	Freenet	12	Hellas on line	6
Tiscali	5	Telia	6	Arcor	6	Panafonet	6
Wanadoo	4	CyberCity	5	1x1	2	University	3

2004

Espana		France		Ireland		Italia	
N=1406		N=1408		N=536		N=1761	
Telefonica/Terra	60	Wanadoo	43	Eircom Net	71	Liberto Infostrada	37
Uni2/Wanadoo	8	AOL	20	Ireland on Line	7	Clubnet	19
Ono	5	Free	11	Esat Net	4	Tiscali	16
Madritel/Aunacable	6	Club Internet	6	NTL	4	Wind	6
Retevision	5	Tiscali	6	Ocean	4	Fast web	4

2003

Espana		France		Ireland		Italia	
N=1140		N=1014		N=466		N=1658	
Telefonica/Terra	62	Wanadoo	36	Eircom net	61	Liberto Infostrada	40
Retevision/Eresmas	11	AOL	19	IOL	9	Clubnet	19
Uni2/Wanadoo	7	Free	6	Indigo	9	Tiscali	15
Ono	4	Club Internet	6	Esat Net	6	Wind	9
Madritel/Aunacable	3	Liberty surf	5	Ocean	5	Italia On Line	3

2004

Luxembourg		Nederland		Österreich		Portugal	
N=561		N=1302		N=812		N=353	
P&T	80	KPN	10	Telekom Austria	26	Clix	12
Tangp	8	Planet Internet	14	UTA	12	Netsapo	16
Internet.lu	5	Chello	14	A-Online	14	IOL	11
CMD	1	Wanadoo	12	Chello	16	Telepac	9
Visual Online	2	Zonnet	10	Tele2	5	Netcabo	28

2003

Luxembourg		Nederland		Österreich		Portugal	
N=467		N=962		N=677		N=328	
P&T	75	KPN	22	Telekom Austria	27	Clix	28
Tango	7	Planet Internet	12	UTA	17	Netsapo	23
Internet.lu	7	Chello	10	A-Online	13	IOL	13
Restena	5	Wanadoo	10	Chello	12	Telepac	13
Visual Online	4	Zonnet	7	Tele2	4	Oninet	6

2004

Finland		Sverige		UK	
N=795		N=1455		N=2687	
Sonera	26	Telia	45	BT Internet/OW	19
Finnet	23	Telia2	17	AOL	19
Elisa Comm.	17	Telenordia	4	Freeserve	18
DNA	7	Spray	5	Tiscali	5
Alma Media	7	Brebandsbolaget	7	NTL	15

2003

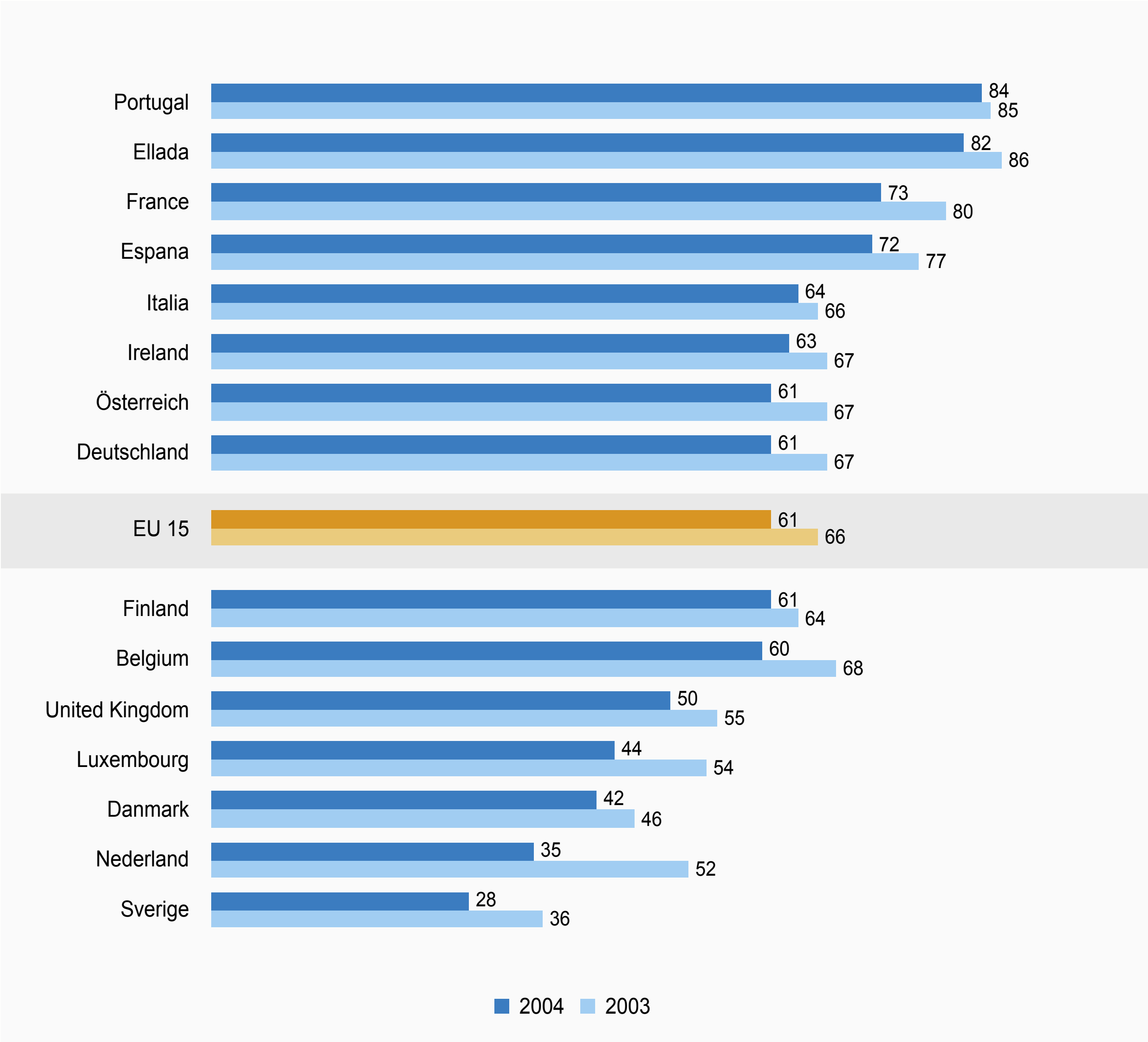
Finland		Sverige		UK	
N=725		N=1286		N=2437	
Sonera	34	Telia	48	Freeserve	20
Finnet-yhtiot	17	Telia2	19	BT Internet/OW	20
Elisa Comm.	16	Telenordia	7	AOL	19
Alma Media Int.	11	Spray	6	Karoo/KC	15
Jippii Group	9	Utfors	4	NTL	12

3.8. No Internet access at home

3.8.1. No Internet access at home

Source: question 1
Nature: graph (percentages, base: all households)
table (percentages, base: all households)

Chart 29 - No Internet access at home - penetration 2004/2003



The above chart outlines the rates of households with no Internet access at home in the 15 pre-accession EU countries as well for 2004 as 2003.

As indicated, around 61% of the households in the EU zone did not have an Internet access at home in 2004.

As can be seen, there are considerable differences between countries. The biggest evolutions were measured in The Netherlands (-17 points), Luxembourg (-10 points), Sweden and Belgium (both –8 points) and France (-7 points). Other countries progress less well.

With 84% of households with no Internet access, Portugal tops the other Member States, closely followed by Greece (82%). In the third place comes France (83%), followed by Spain (72%), Italy (64%), Ireland (63%), Austria and Germany (61% each).

The rates in the other countries are below the European average of 61%. At 28%, Sweden has the lowest percentage of households with no Internet access.

The demographic breakdowns below show that 81% of the households with 1 person have no Internet access, followed by households with 2 persons (73%), households with 3 persons (61%), households with 5 persons or more (57%) and by households with 4 persons (52%).

Table 44 - No Internet access at home – demographic breakdowns

% of households	TOTAL	HOUSEHOLD SIZE					TYPE OF LOCALITY		
		1	2	3	4	+5	Metro	Urban	Rural
TOTAL EU	**61**	**76**	**69**	**54**	**46**	**50**	**57**	**59**	**64**
Belgium	60	87	80	49	35	37	64	60	54
Danmark	42	67	38	24	17	24	41	41	44
Deutschland	61	81	74	47	36	41	61	61	61
Ellada	82	87	90	80	76	80	76	81	88
Espana	72	86	83	71	60	61	65	69	75
France	73	85	79	63	57	61	66	80	76
Ireland	63	79	72	57	55	59	58	65	64
Italia	64	84	79	58	49	56	64	62	65
Luxembourg	44	71	61	36	22	29	42	49	42
Nederland	35	35	48	15	19	45	36	36	32
Österreich	61	78	71	42	42	42	58	61	63
Portugal	84	96	93	81	71	83	86	79	86
Finland	61	84	62	41	33	35	50	61	66
Sverige	28	48	29	13	12	9	23	29	31
United Kingdom	50	80	56	41	32	36	53	50	48

3.8.2. Why no Internet access?

Source: question 15
Nature: tables (percentages, base: households with no Internet access)

About 61% of the European households said that they had no Internet access at home. We have tried to find an explanation for this situation by means of question 15 (see the attached questionnaire). Respondents were given a list of answers but were free to mention as many reasons as they felt necessary for describing their situation.

The table below shows the main reasons brought up by the respondents for not having an Internet access.

Table 45 - No Internet access – reasons why

% of households	Main reasons	
	2003	2004
No PC or means of connecting at home	40	41
Household is not familiar with Internet	32	31
Concerned about the cost	16	17
Have access at work, at an educational establishment or elsewhere	8	9
Plan to get one in the next 6 months	8	9
Concerned about access to unsuitable content	3	3
Other	5	5

As can be seen, the answer pattern of 2004 does not change in comparison with 2003.

The main reason mentioned by the respondents for not having an Internet access at home is the absence of PC or means of connecting at home (41%). In the second place comes the fact that the households are not familiar with Internet (31%), followed by households concerned about the cost (17%), those who have access at work, at an educational establishment or elsewhere and those who plan to get an Internet access in the next 6 months (9% each). At the bottom of the pyramid we find the households concerned about access to unsuitable content (3%).

Turning to the results by country, we will have a look below at the four main reasons for not having an Internet access.

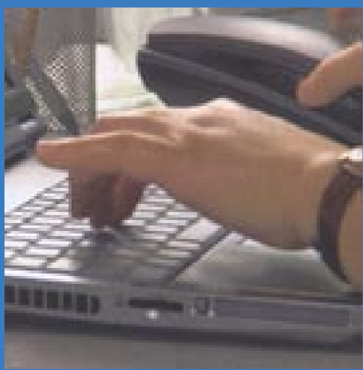
3.8.2.1. Four main reasons for not having an Internet access

Table 46 - Four main reasons for not having an Internet access

% of households	No PC or means of connecting at home		Household is not familiar with Internet		Concerned about the cost		Have access at work, educational establishment or elsewhere		Plan to get one in the next 6 months	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
TOTAL EU	**40**	**41**	**32**	**31**	**16**	**17**	**8**	**9**	**8**	**9**
Belgium	40	45	27	31	21	11	6	6	6	8
Danmark	41	37	38	36	17	21	10	9	11	12
Deutschland	37	39	30	27	23	23	8	9	7	8
Ellada	43	43	42	41	17	21	5	8	7	7
Espana	40	41	40	37	10	13	10	10	9	6
France	44	48	24	32	14	19	4	7	8	10
Ireland	35	38	21	19	12	12	8	8	8	6
Italia	47	45	33	29	8	10	9	10	7	7
Luxembourg	27	36	32	37	12	12	8	5	16	17
Nederland	26	17	38	14	17	5	7	5	8	33
Österreich	33	35	28	32	19	20	13	14	10	8
Portugal	47	39	33	38	18	23	8	7	6	5
Finland	35	35	22	31	23	22	17	15	10	11
Sverige	33	43	25	20	17	14	11	17	14	10
United Kingdom	44	41	38	27	18	16	9	8	10	10

APPENDIX

TELECOM SERVICES INDICATORS 2004



Annex I: Maps of regional indicators 94

Annex II: Details of the survey and sampling 117

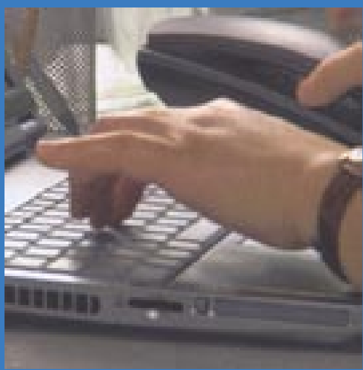
Annex III: Questionnaire 124

Annex IV: Maps of regional density 138

Annex V: Table with details of standard errors or statistical margins at 95% confidence level 140

APPENDIX

TELECOM SERVICES INDICATORS 2004



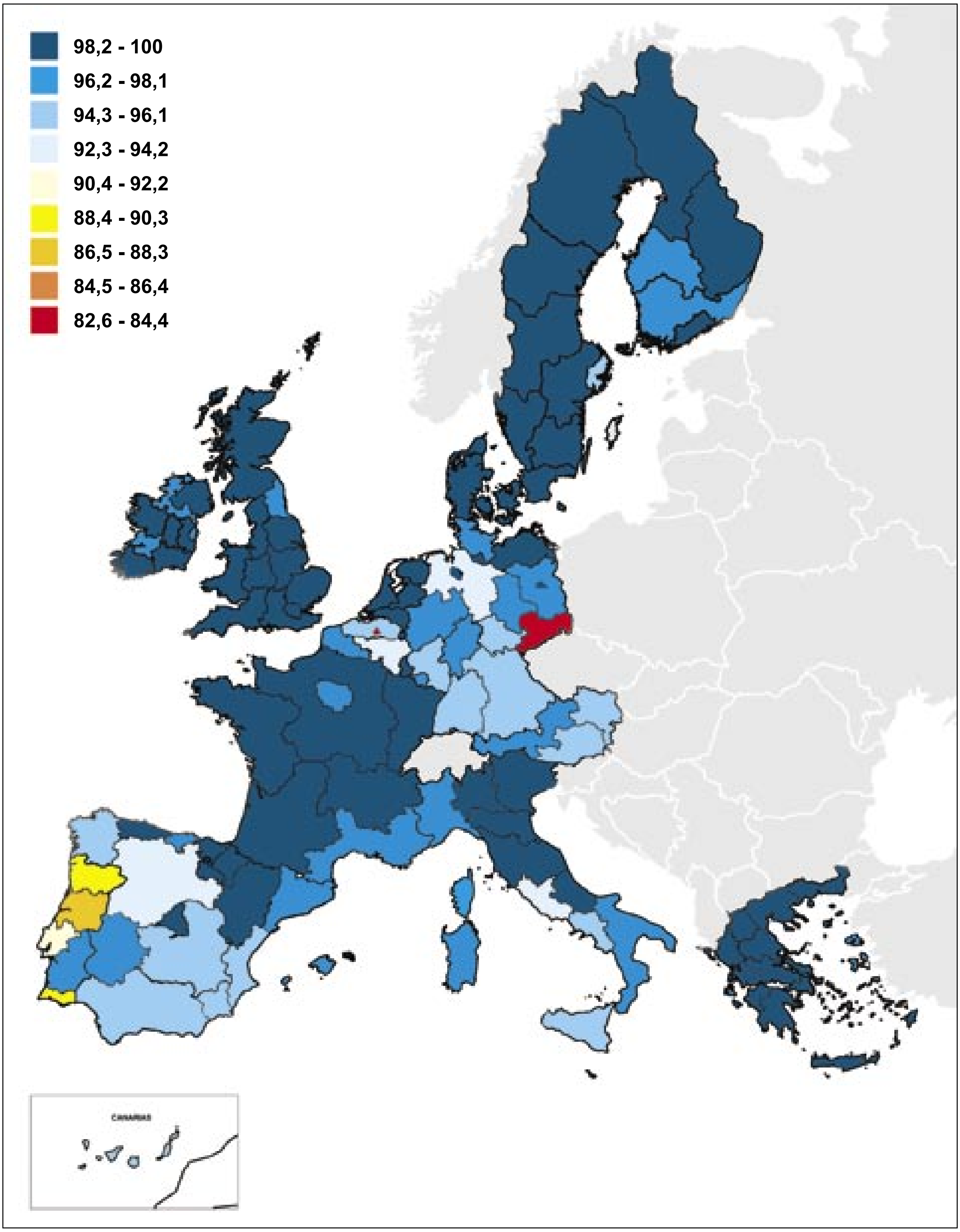
ANNEX I

MAPS OF REGIONAL INDICATORS

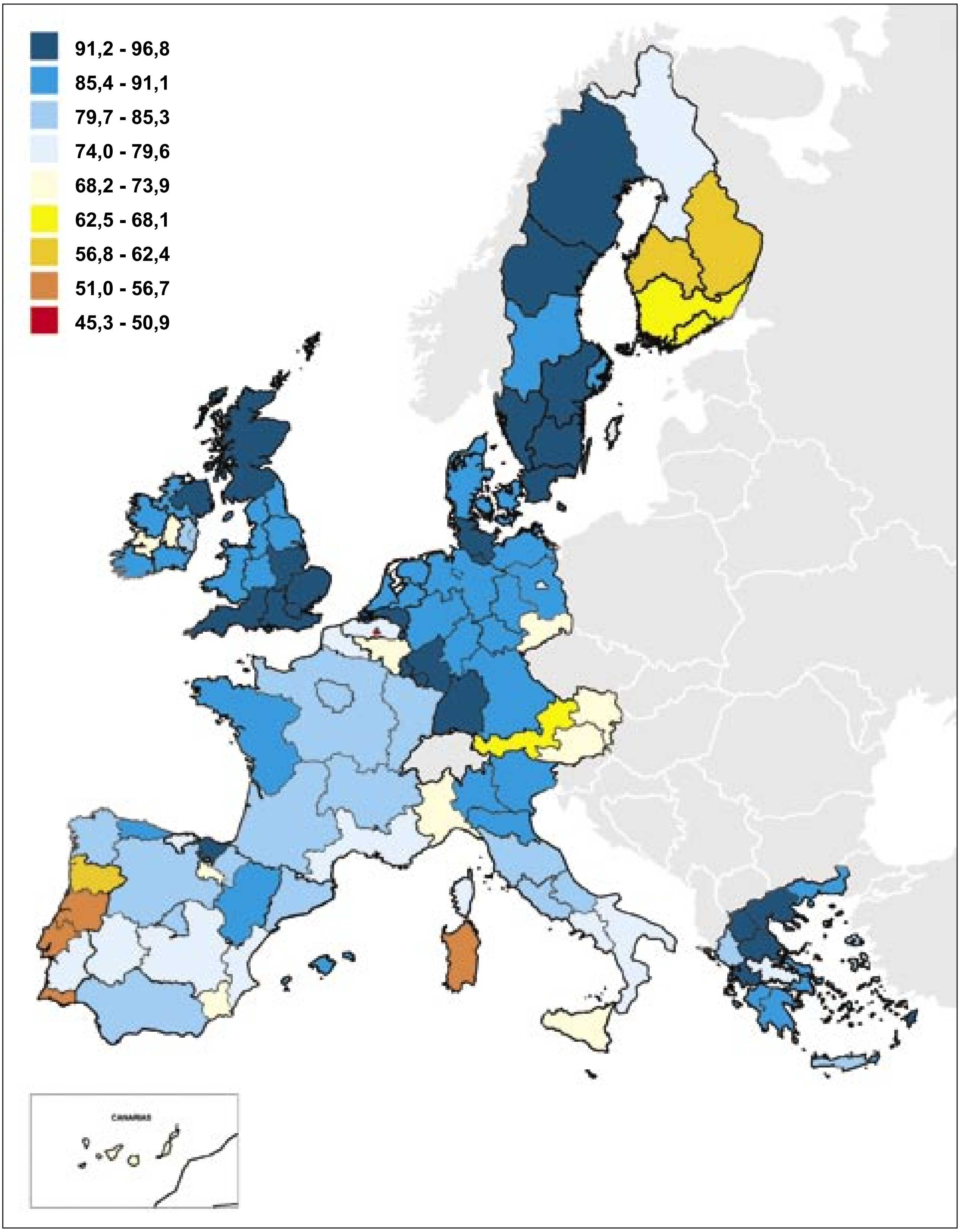
List of maps

Map I	Fixed and / or mobile	96
Map II	Households with a fixed line	97
Map III	Households with both fixed and mobile subscription	98
Map IV	Households with mobile only	99
Map V	No telephone	100
Map VI	ISDN	101
Map VII	No fixed telephone	102
Map VIII	Households with at least one mobile	103
Map IX	No mobile	104
Map X	Households with one or more forms of television access	105
Map XI	Terrestrial only	106
Map XII	Cable only	107
Map XIII	Satellite only	108
Map XIV	Digital television	109
Map XV	PC penetration	110
Map XVI	Internet access at home	111
Map XVII	Proportion of PC's connected to Internet	112
Map XVIII	No Internet at home	113
Map XIX	Broadband Internet access at home	114
Map XX	Broadband DSL	115
Map XXI	Broadband cable	116

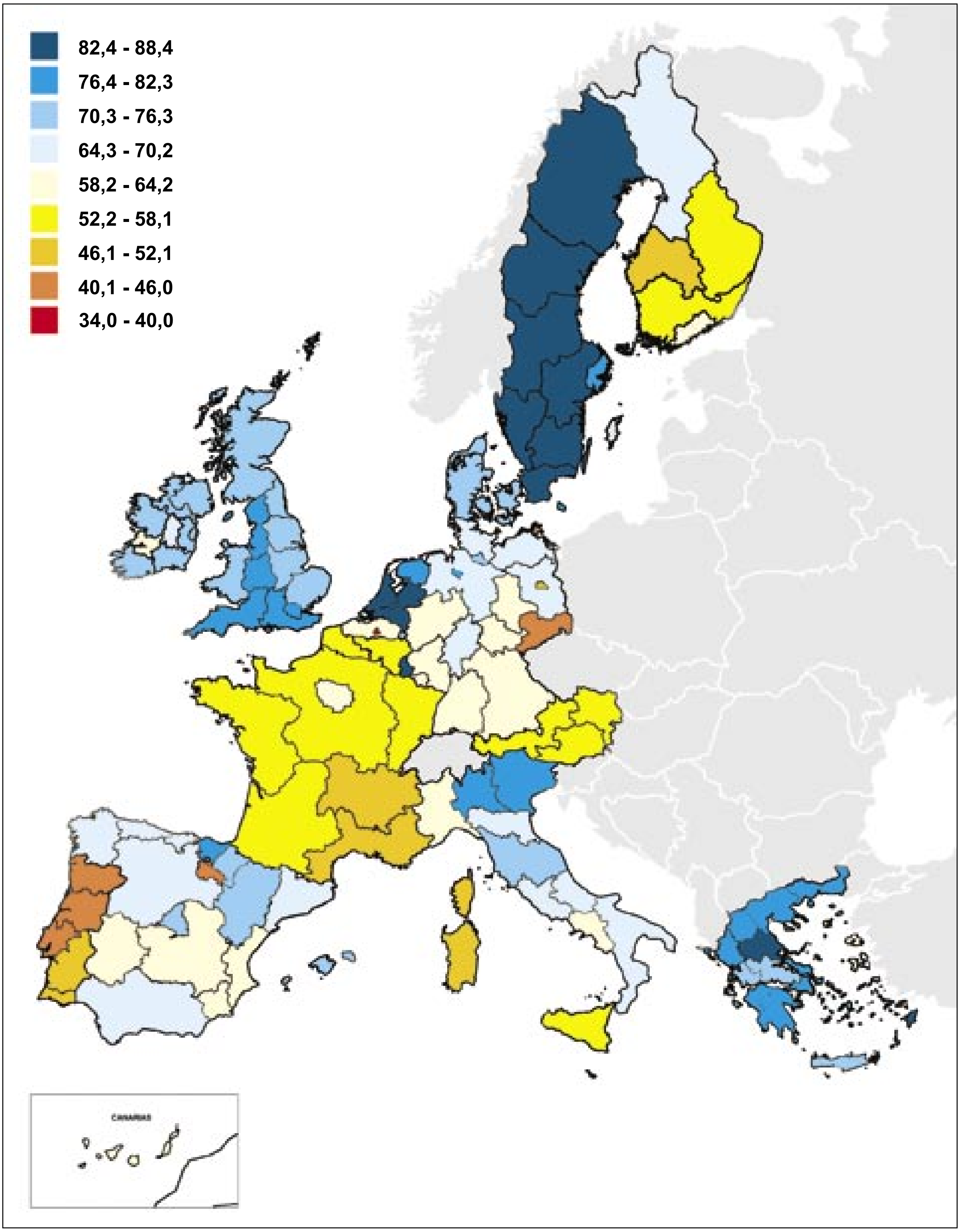
Map I : Fixed and / or mobile (in %)



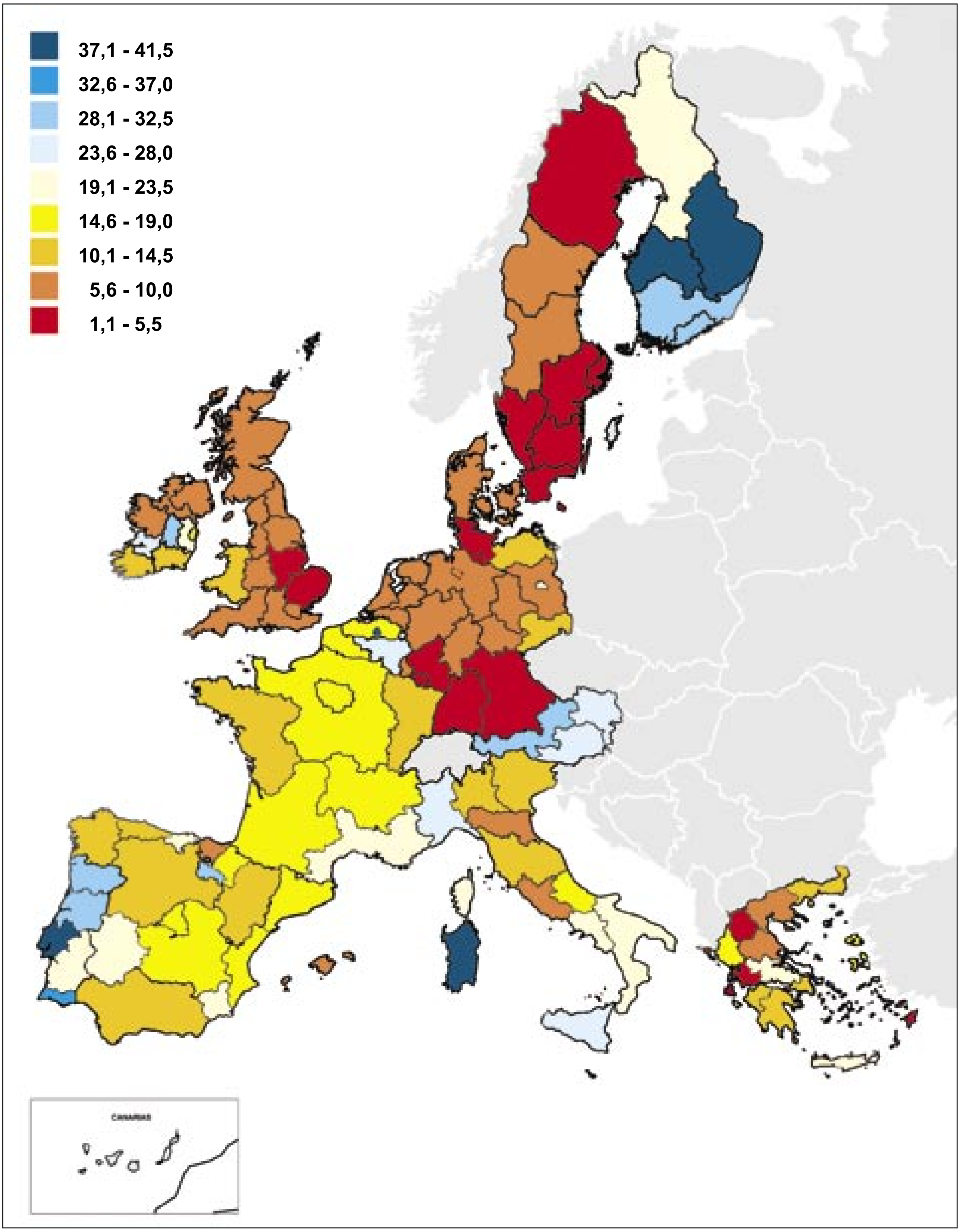
Map II : Households with a fixed line (in %)



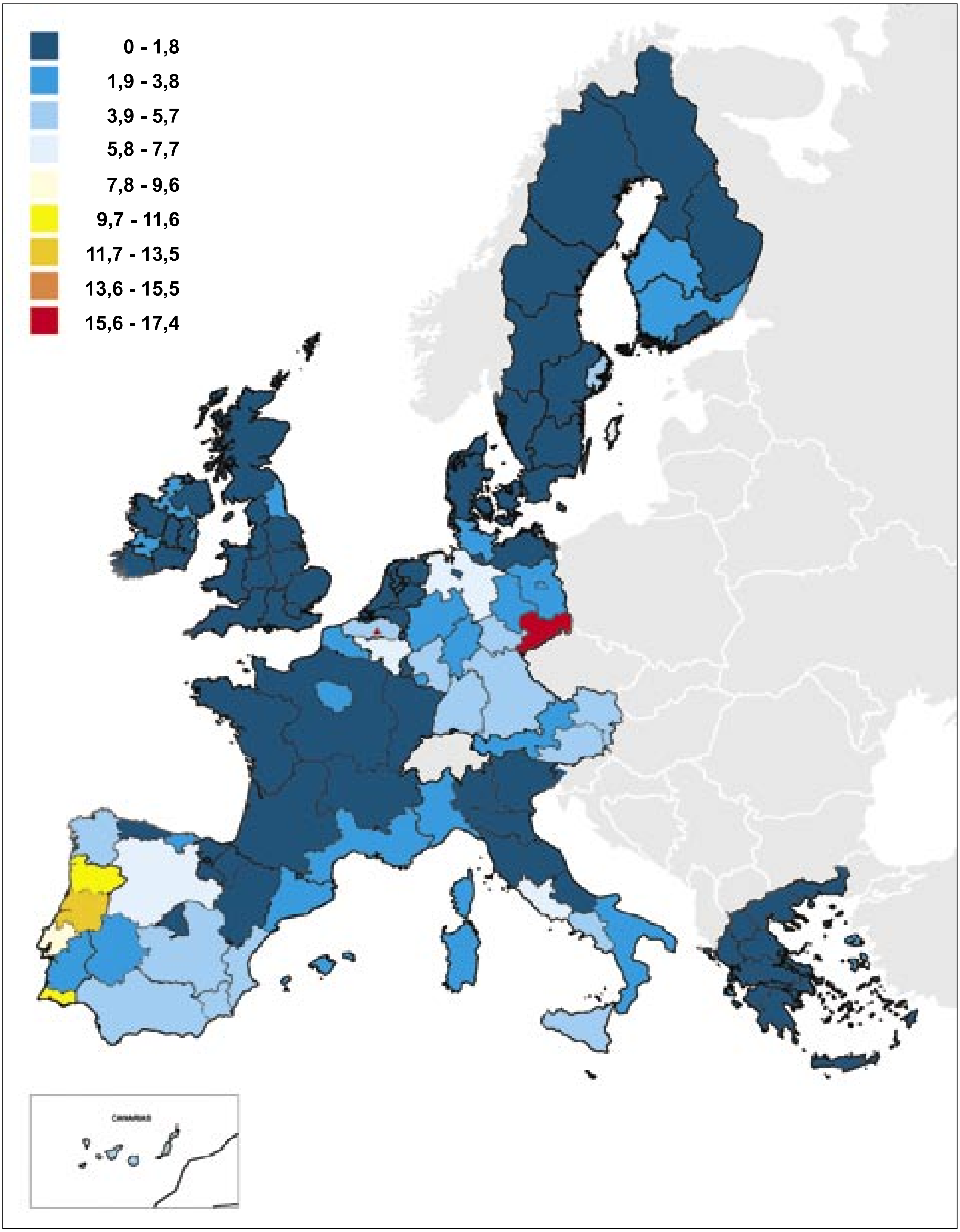
Map III : Households with both fixed and mobile subscription (in %)



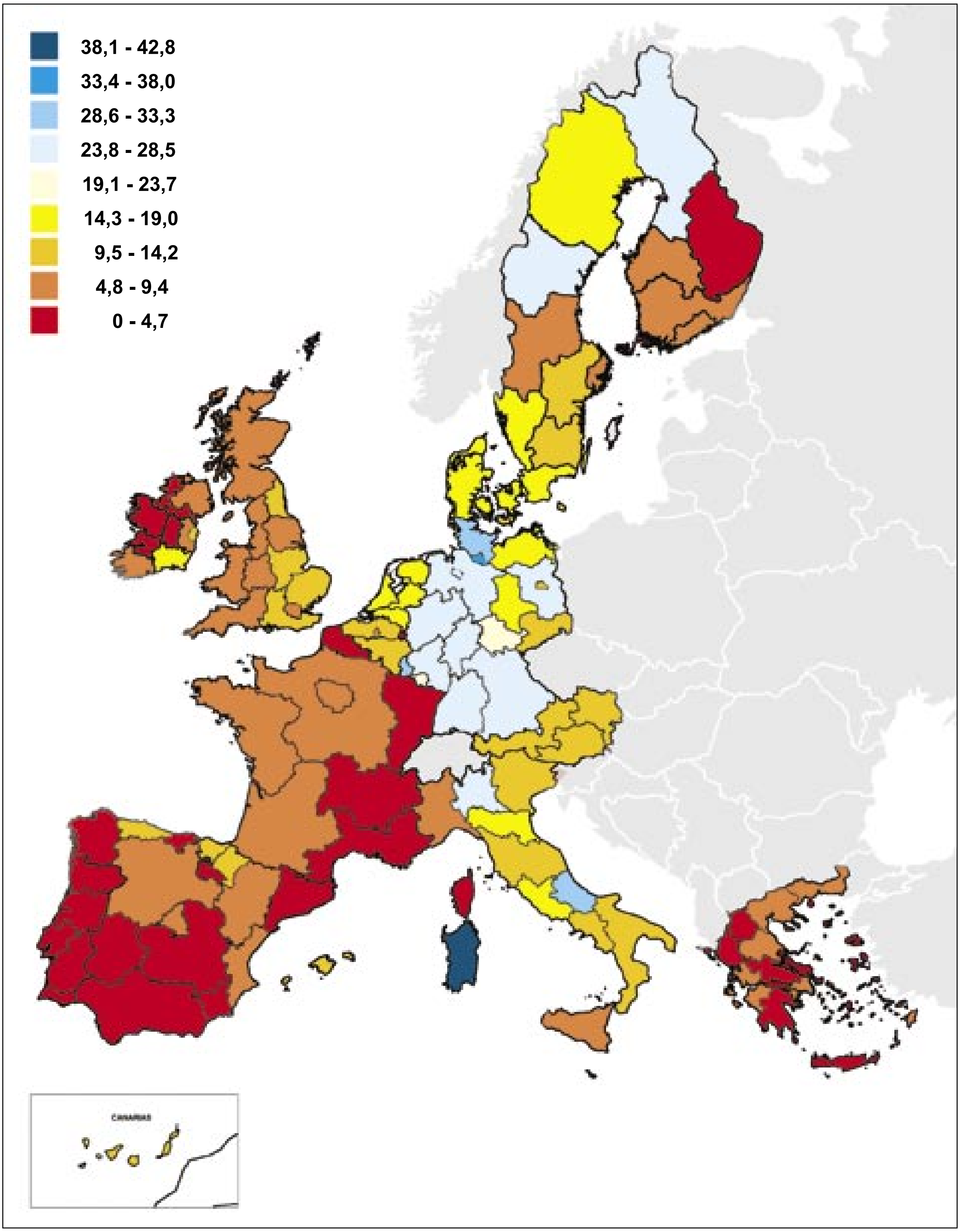
Map IV : Households with mobile only (in %)



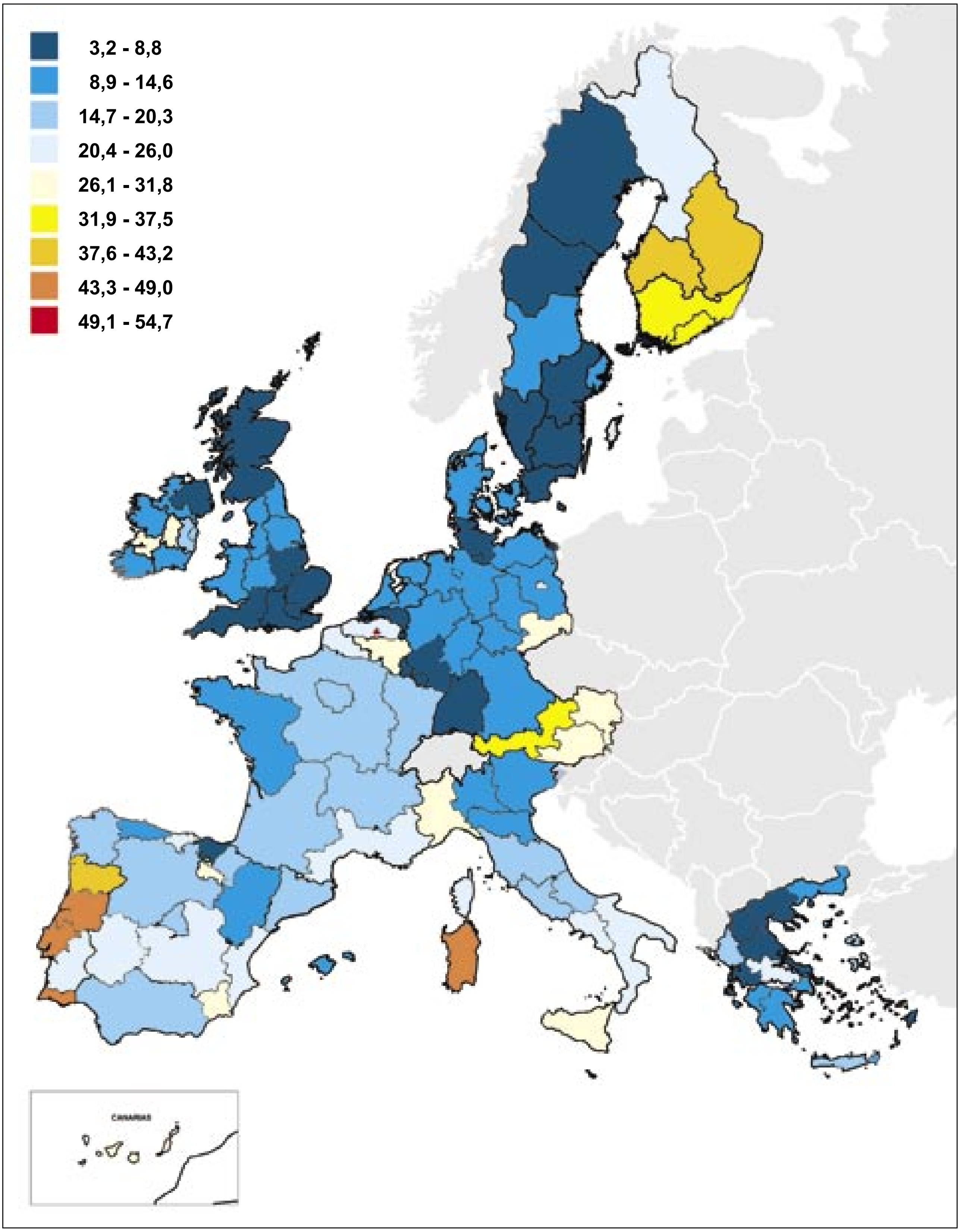
Map V : No telephone (in %)



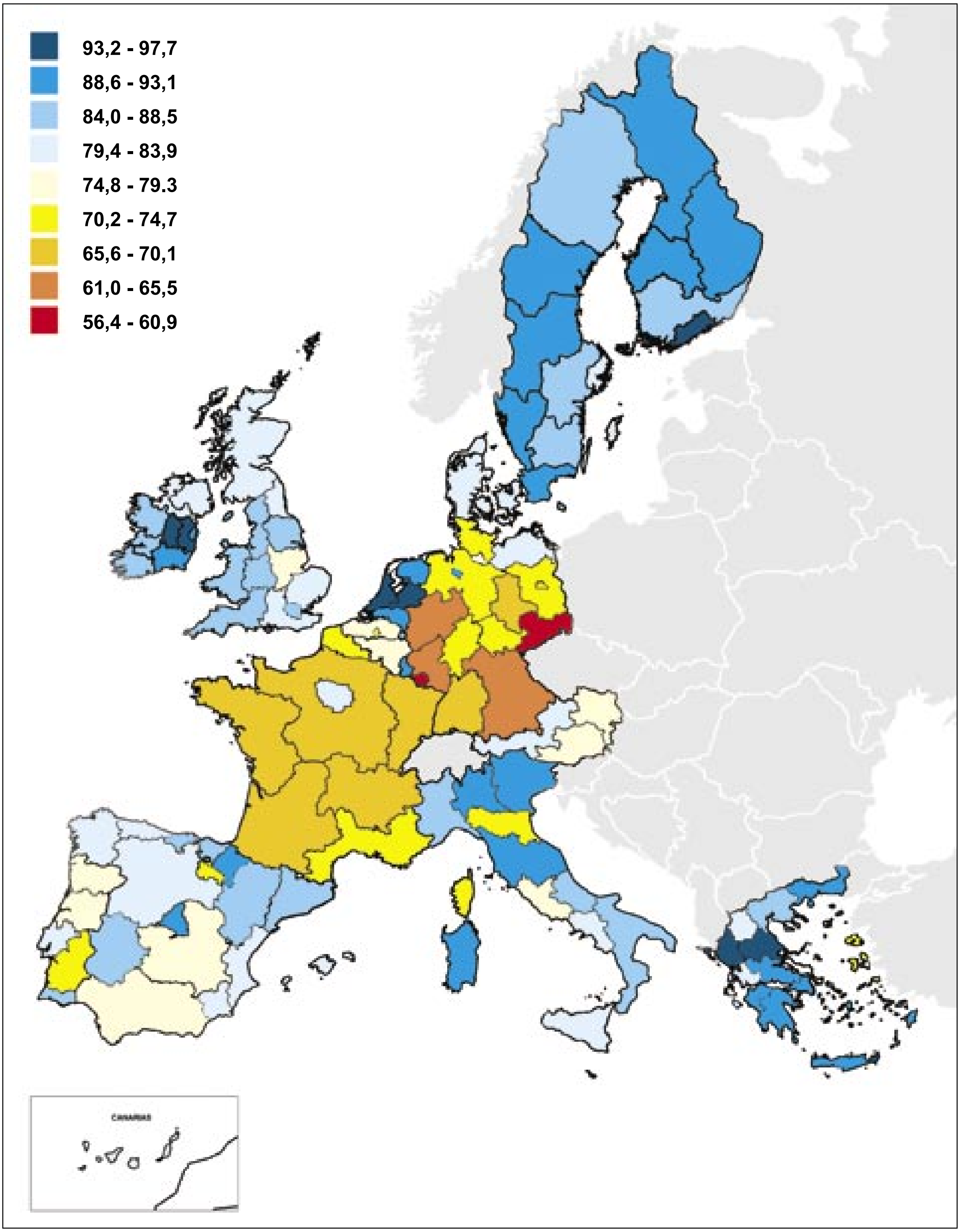
Map VI : ISDN (in %)



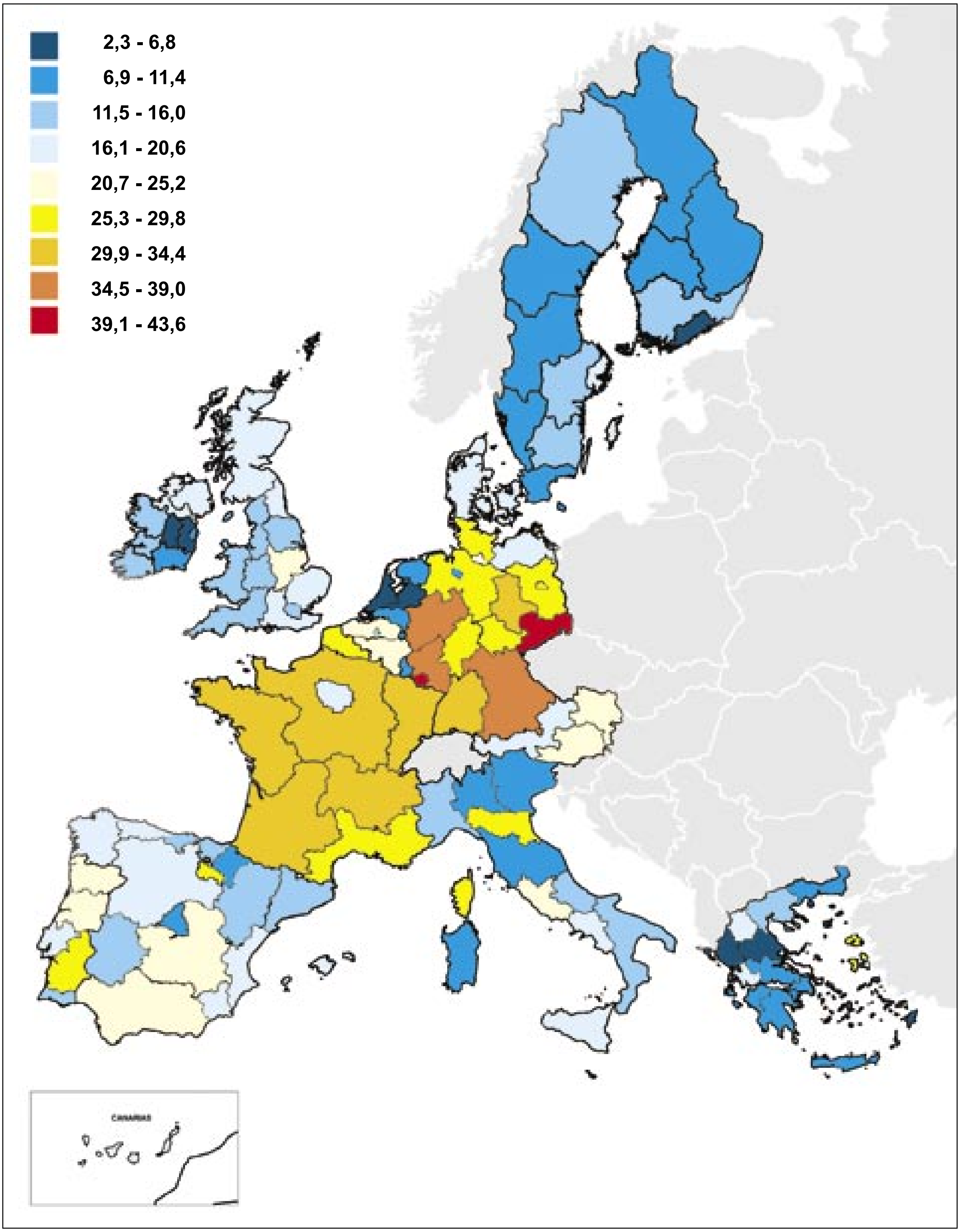
Map VII : No fixed telephone (in %)



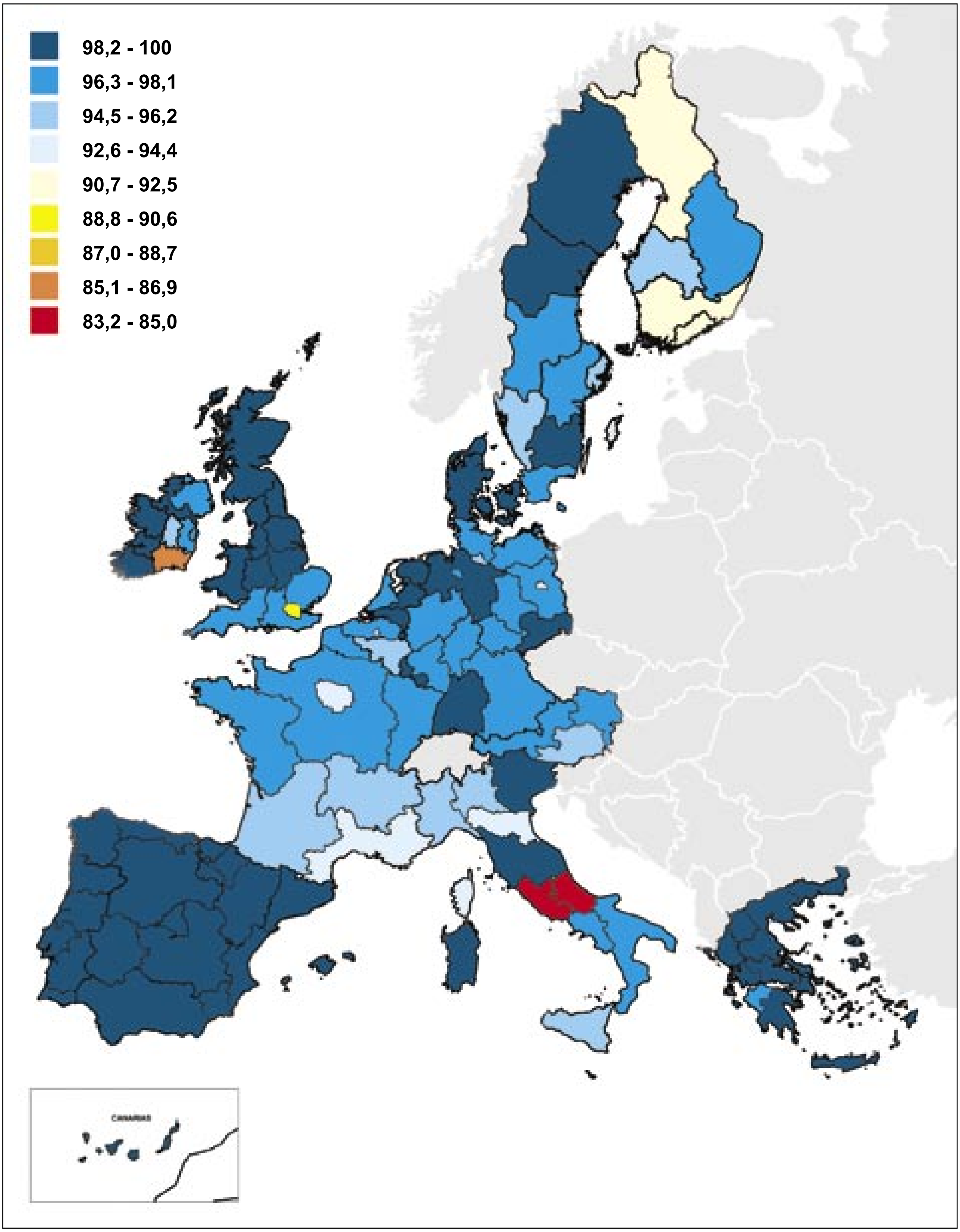
Map VIII : Households with at least one mobile (in %)



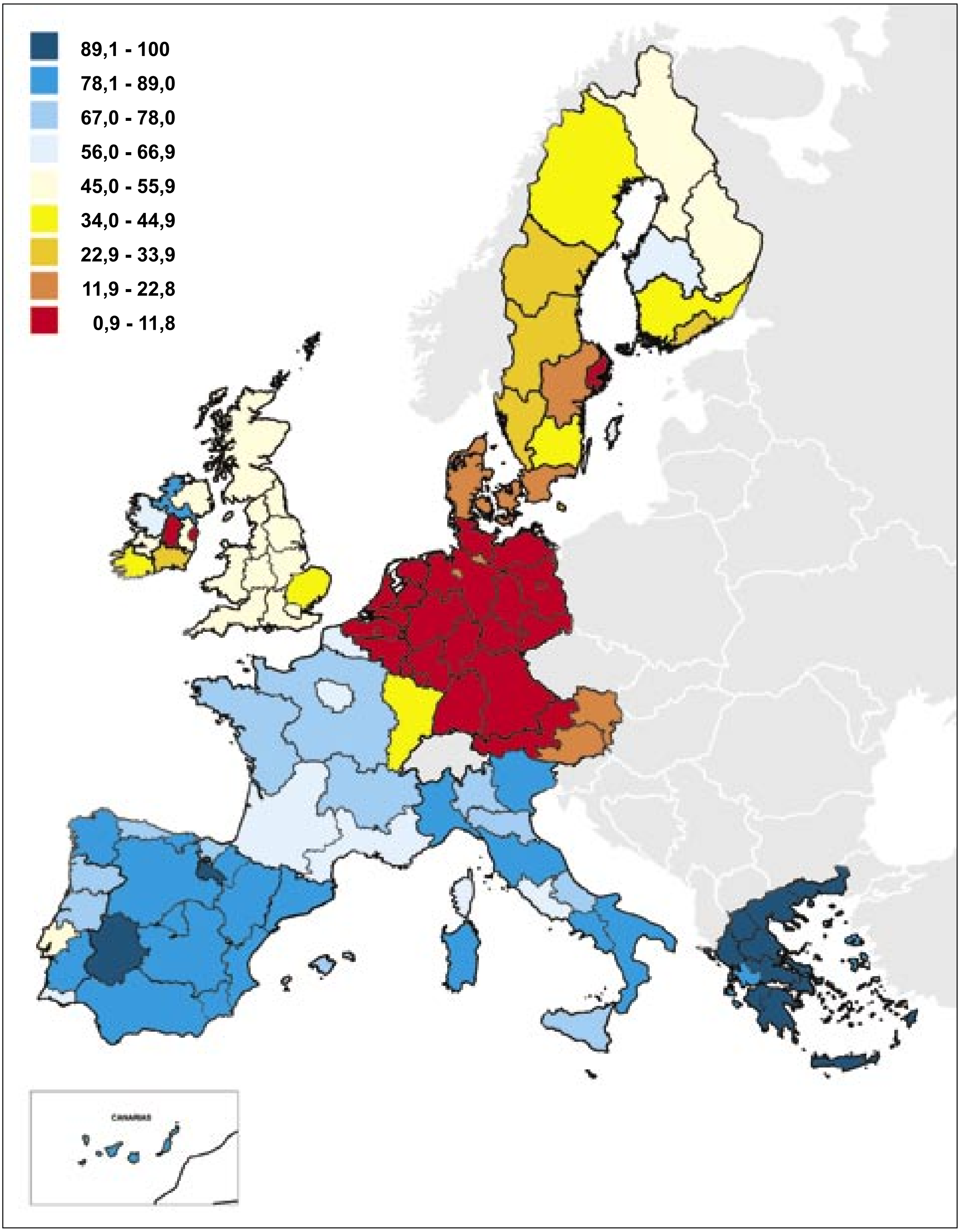
Map IX : No mobile (in %)



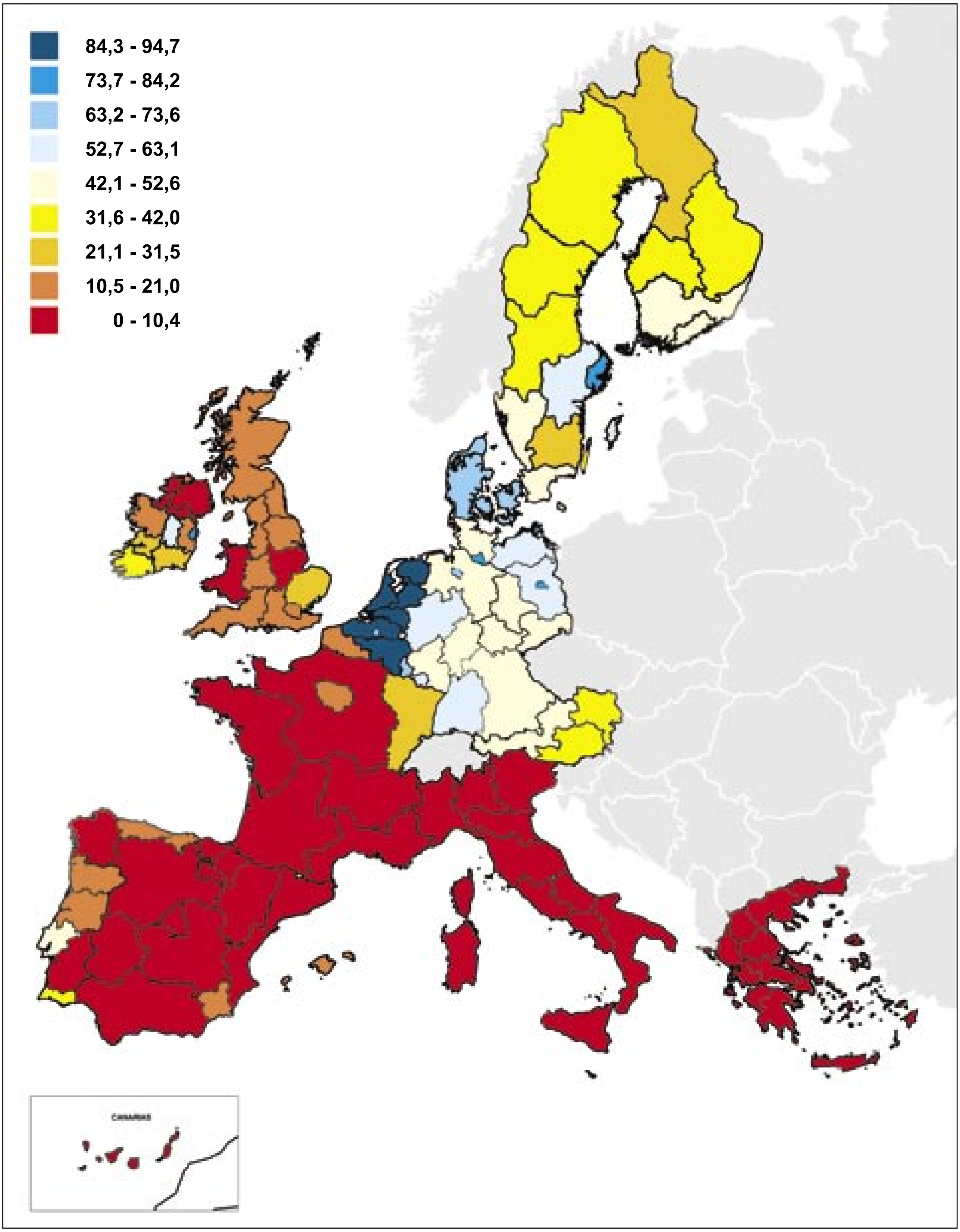
Map X : Households with one or more forms of television access (in %)



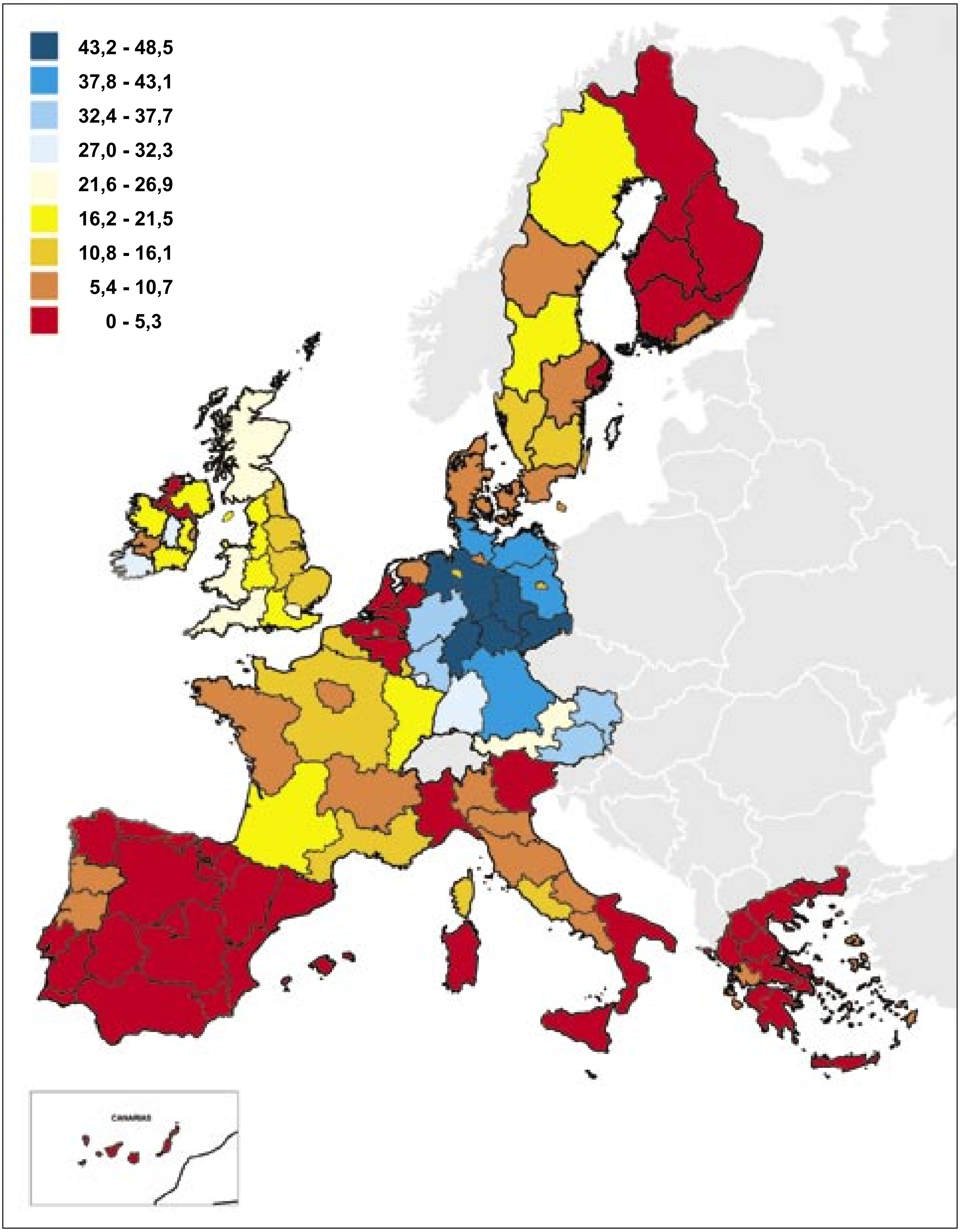
Map XI : Terrestrial only (in %)



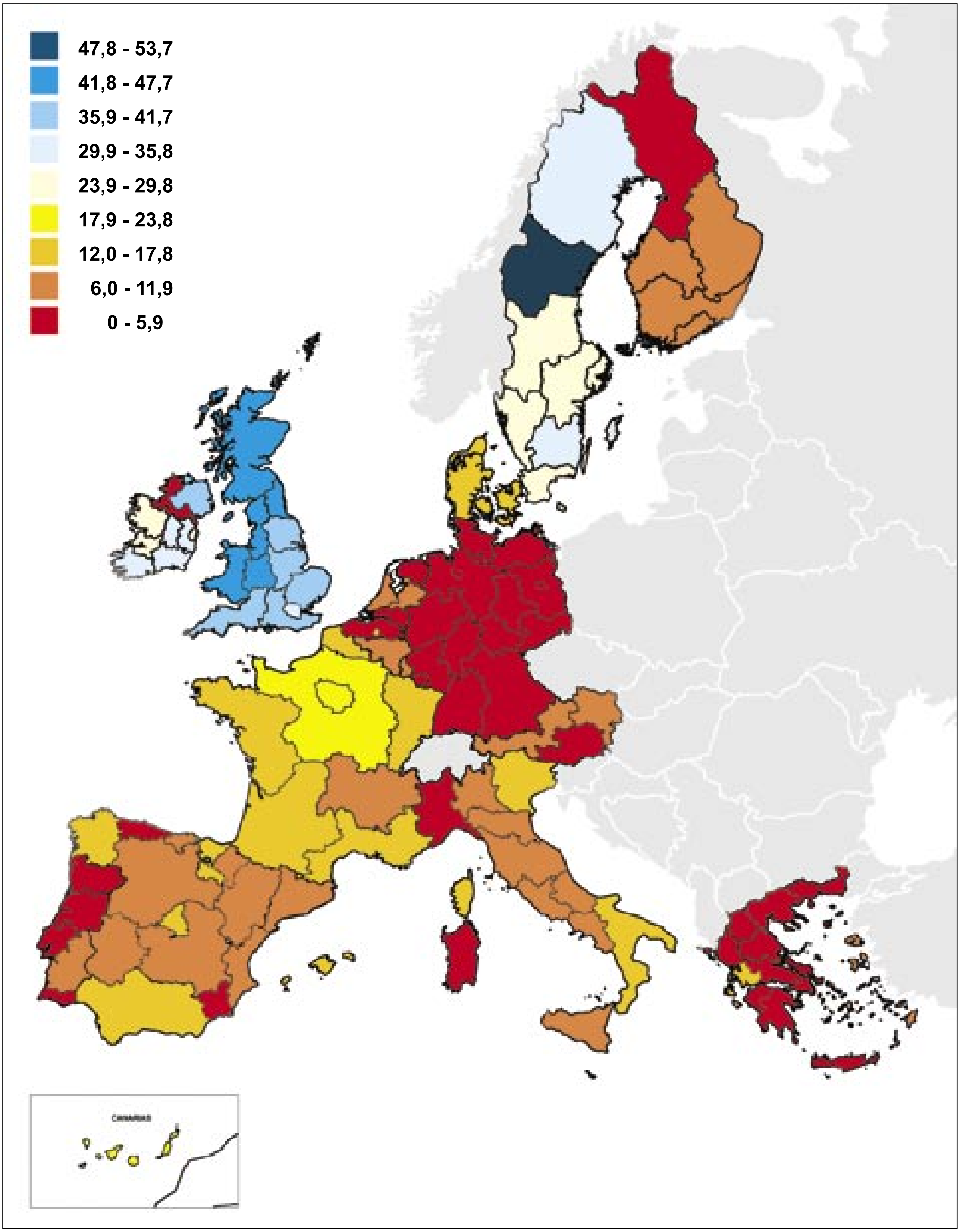
Map XII : Cable only (in %)



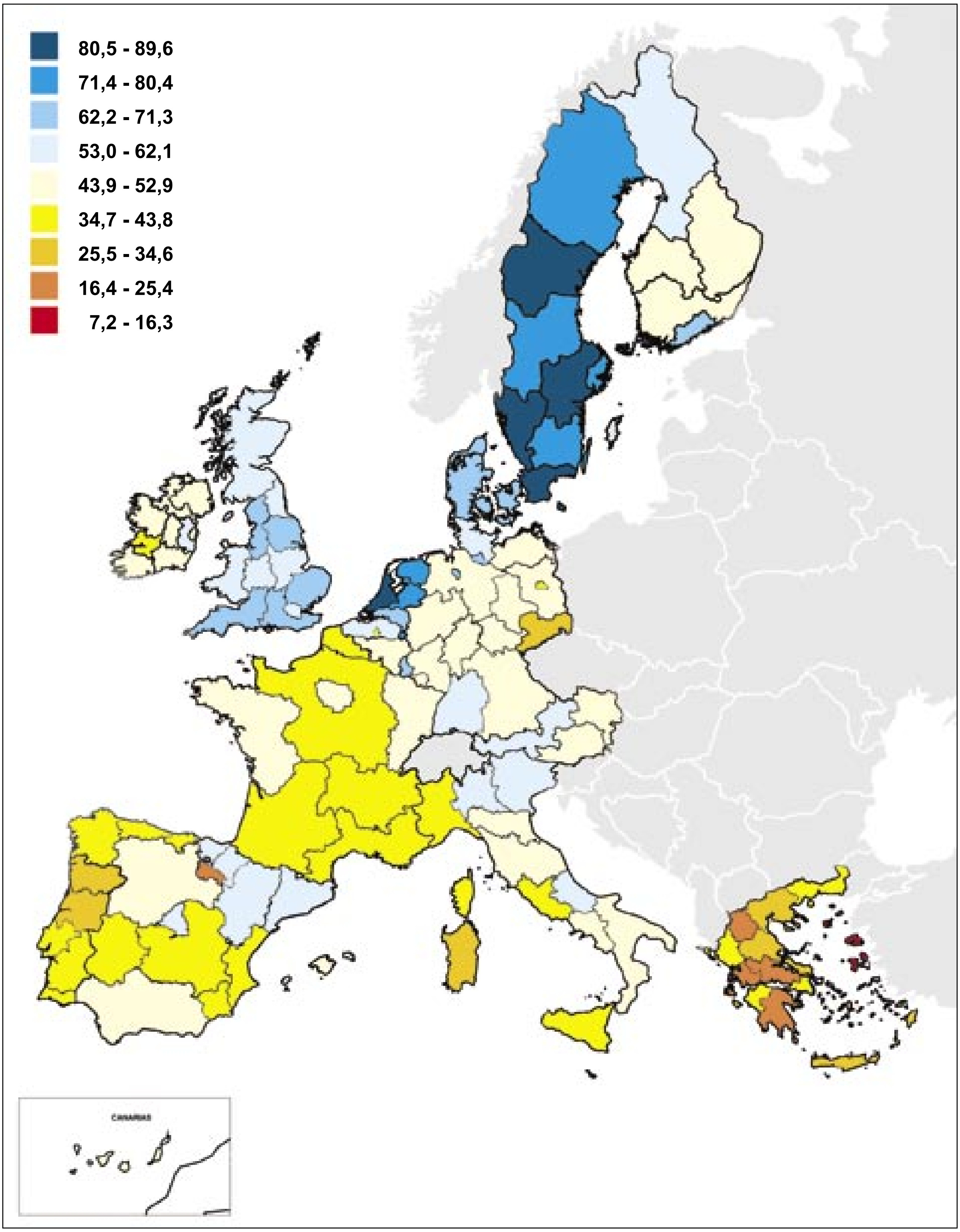
Map XIII : Satellite only (in %)



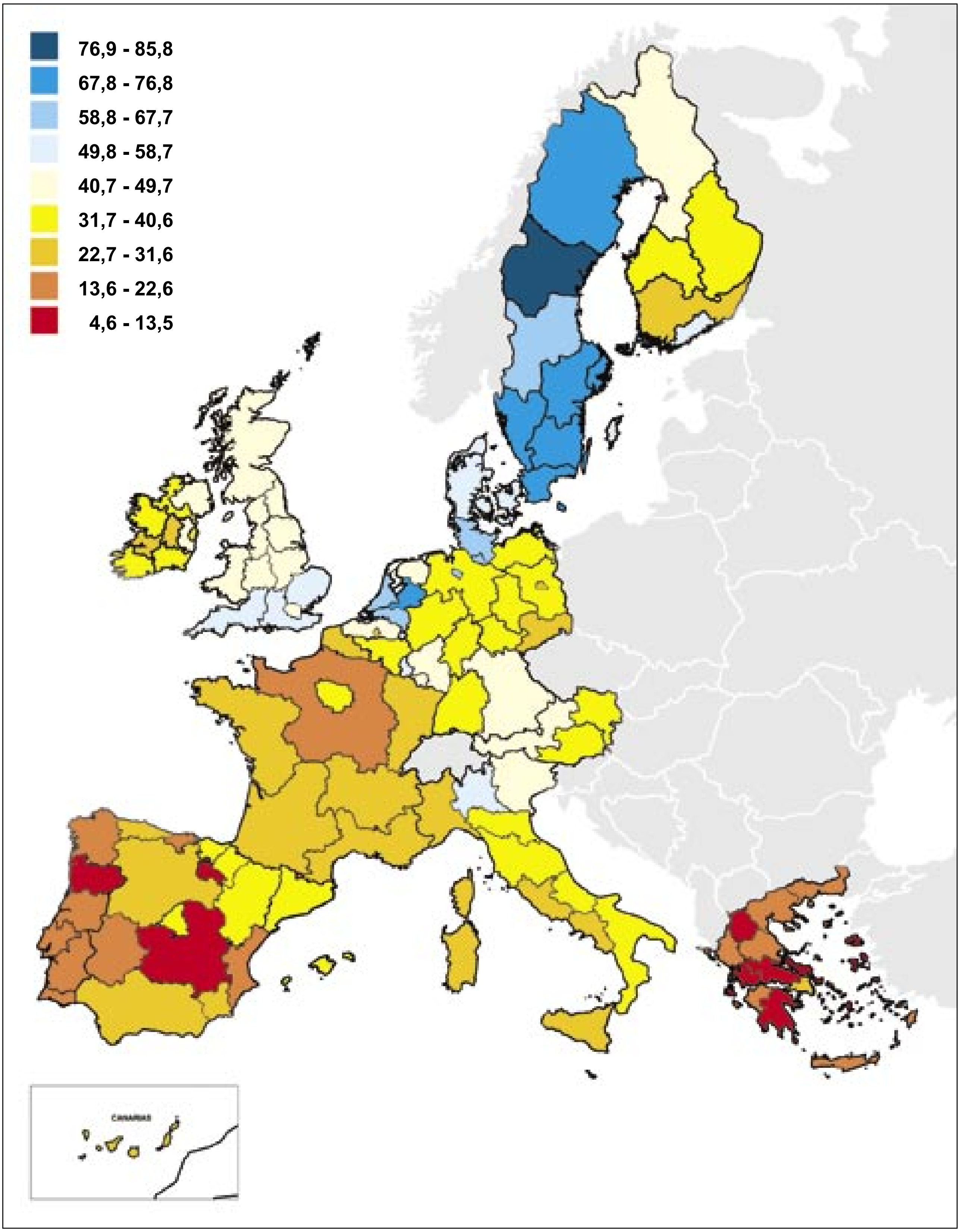
Map XIV : Digital television (in %)



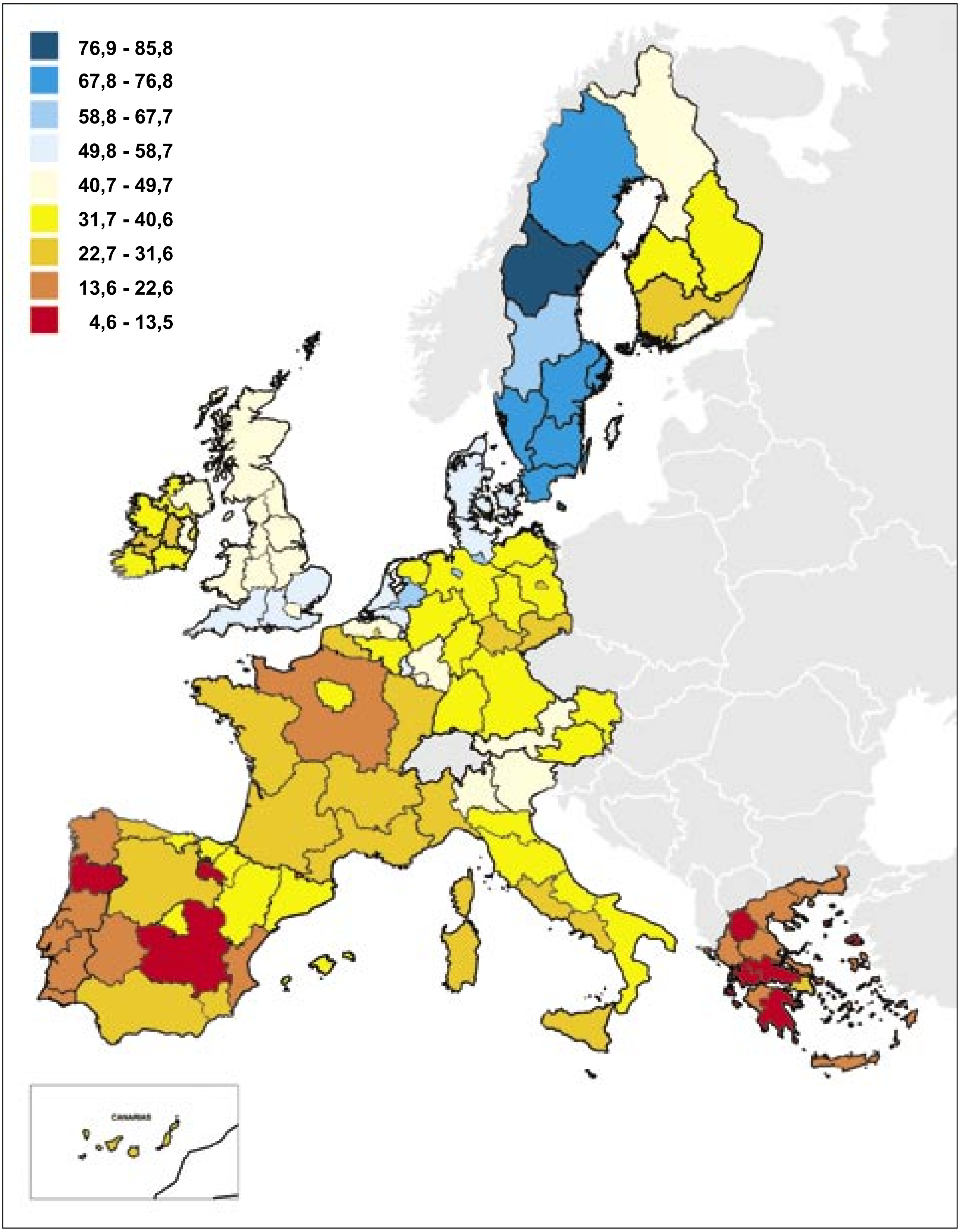
Map XV : PC penetration (in %)



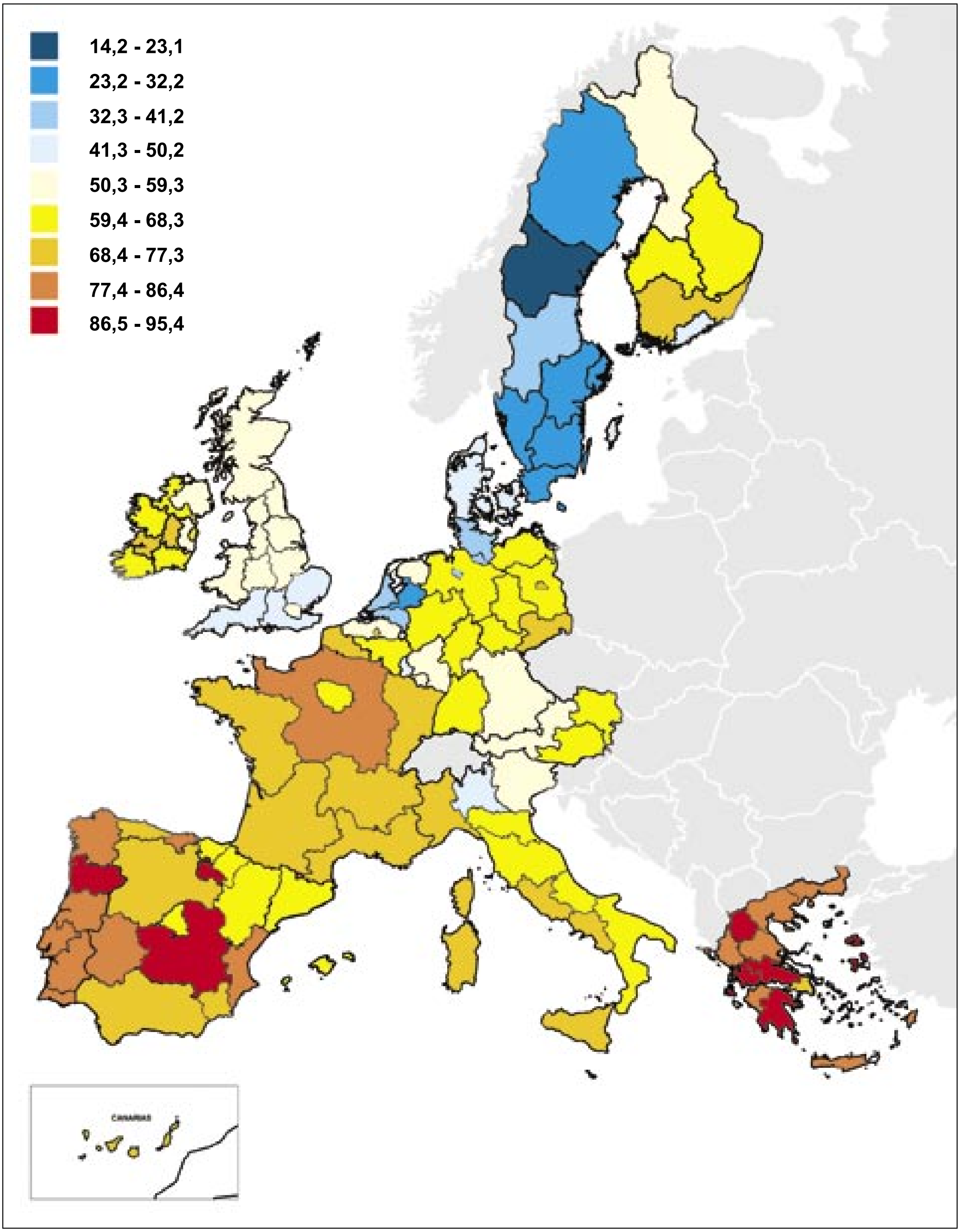
Map XVI : Internet access at home (in %)



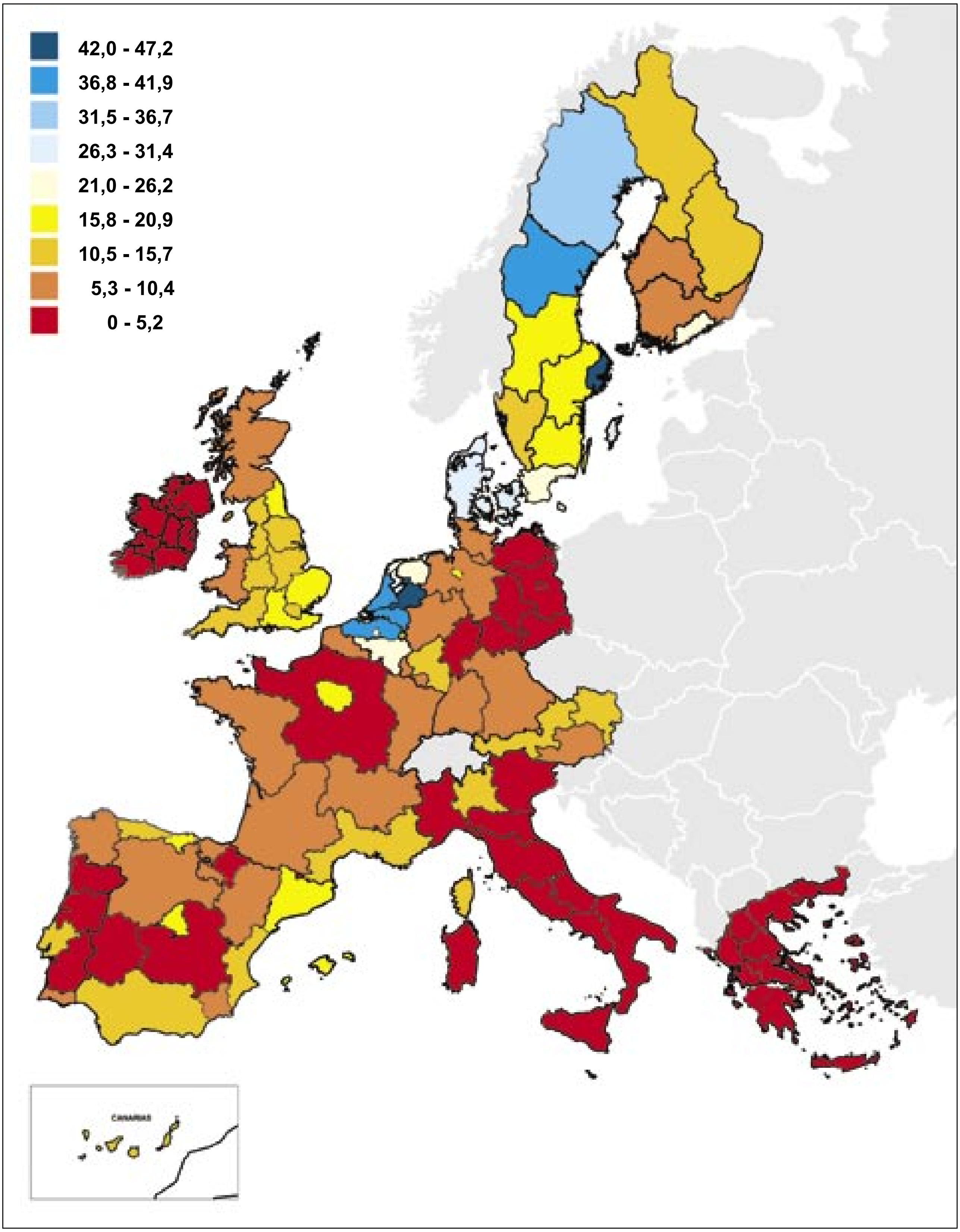
Map XVII : Proportion of PC's connected to Internet (in %)



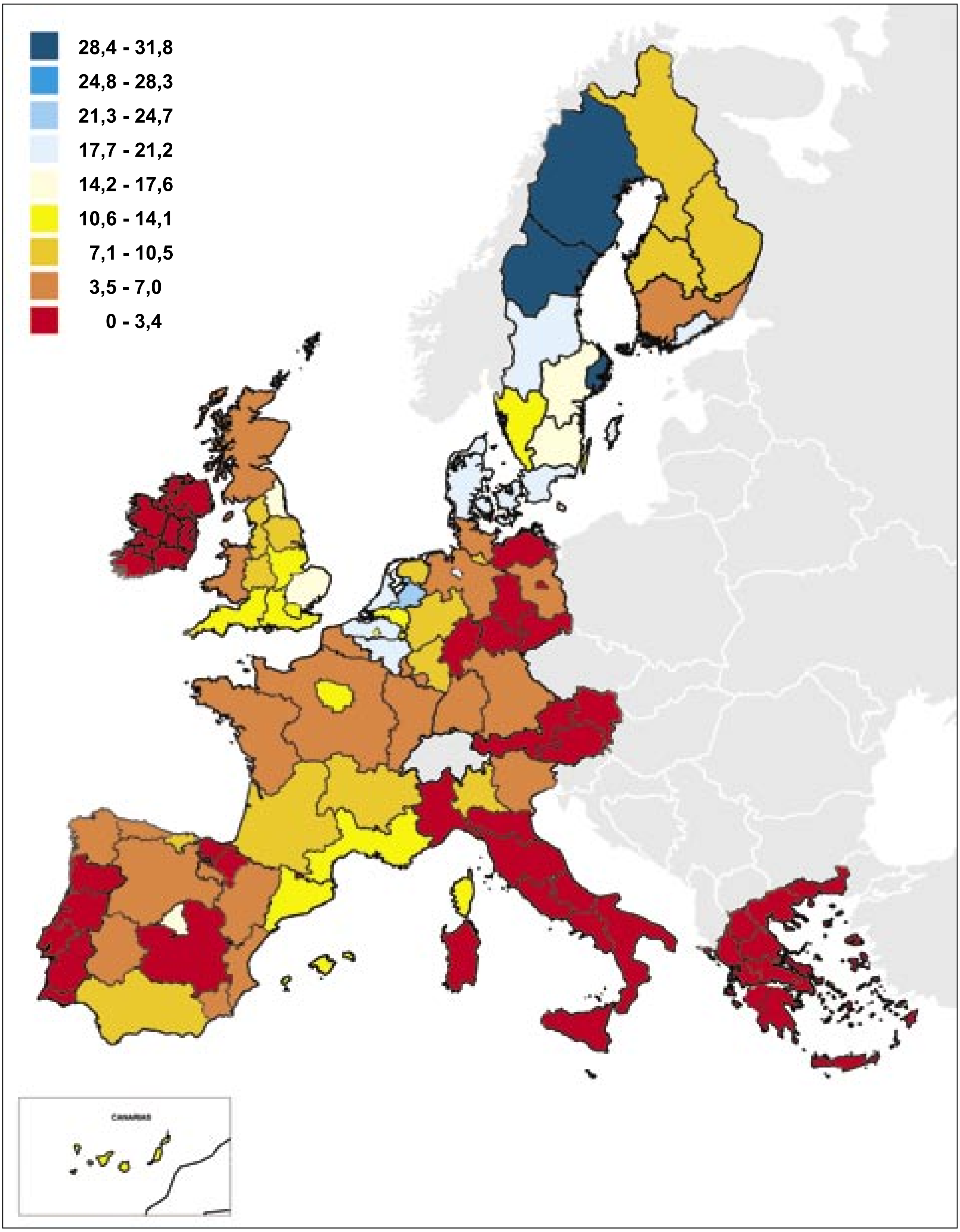
Map XVIII : No Internet at home (in %)



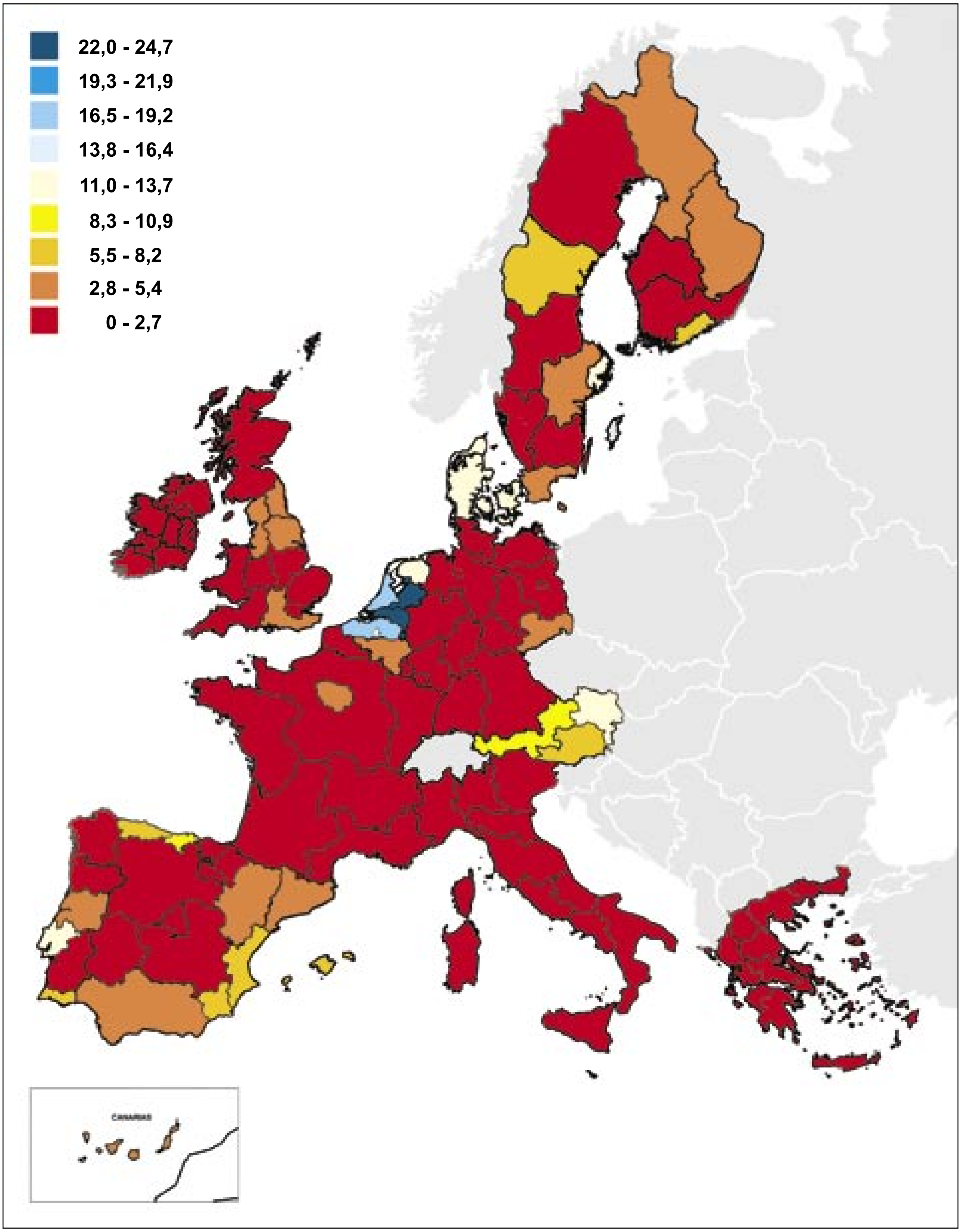
Map XIX : Broadband Internet access at home (in %)



Map XX : Broadband DSL (in %)

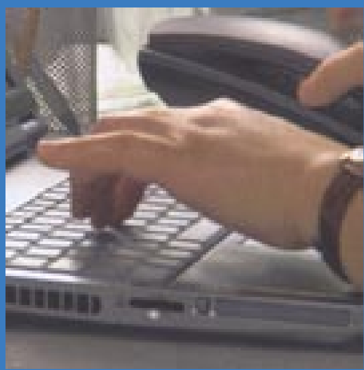


Map XXI : Broadband cable (in %)



APPENDIX

TELECOM SERVICES INDICATORS 2004



ANNEX II

Details of the survey and sampling

Nuts	EU Member state		Sample size (N)
BE	BELGIQUE-BELGIE		
BE1		REG.BRUXELLES-CAP./BRUSSELS HFDST.GEW.	190
BE2		VLAAMS GEWEST	1119
BE3		REGION WALLONNE	683
DK	DANMARK	DANMARK	
DK			2000
DE	DEUTSCHLAND		
DE1		BADEN-WUERTTEMBERG	580
DE2		BAYERN	719
DE3		BERLIN	186
DE4		BRANDENBURG	199
DE5		BREMEN	39
DE6		HAMBURG	65
DE7		HESSEN	345
DE8		MECKLENBURG-VORPOMMERN	148
DE9		NIEDERSACHSEN	461
DEA		NORDRHEIN-WESTFALEN	1143
DEB		RHEINLAND-PFALZ	210
DEC		SAARLAND	105
DED		SACHSEN	222
DEE		SACHSEN-ANHALT	318
DEF		SCHLESWIG-HOLSTEIN	187
DEG		THUERINGEN	184
GR	ELLADA		
GR11		ANATOLIKI MAKEDONIA, THRAKI	110
GR12		KENTRIKI MAKEDONIA	340
GR13		DYTIKI MAKEDONIA	50
GR14		THESSALIA	130
GR21		IPEIROS	50
GR22		IONIA NISIA	40
GR23		DYTIKI ELLADA	120
GR24		STEREA ELLADA	90
GR25		PELOPONNISOS	100
GR3		ATTIKI	790
GR41		VOREIO AIGAIO	40

GR42		NOTIO AIGAIO	50
GR43		KRITI	90
ES	ESPANA		
ES11		GALICIA	346
ES12		ASTURIAS	140
ES13		CANTABRIA	73
ES21		PAIS VASCO	267
ES22		NAVARRA	63
ES23		RIOJA	34
ES24		ARAGON	152
ES3		MADRID	635
ES41		CASTILLA-LEON	332
ES42		CASTILLA-LA MANCHA	214
ES43		EXTREMADURA	137
ES51		CATALUNA	780
ES52		COMUNIDAD VALENCIANA	498
ES53		BALEARES	90
ES61		ANDALUCIA	912
ES62		MURCIA	135
ES63		CANARIAS	192
FR	FRANCE		
FR1		ILE DE FRANCE	923
FR2		BASSIN PARISIEN	929
FR3		NORD-PAS-DE-CALAIS	330
FR4		EST	461
FR5		OUEST	686
FR6		SUD-OUEST	596
FR7		CENTRE-EST	642
FR8		MEDITERRANEE	559
IE	IRELAND		
IE011		BORDER	80
IE012		MIDLAND	20
IE013		WEST	121
IE021		DUBLIN	494

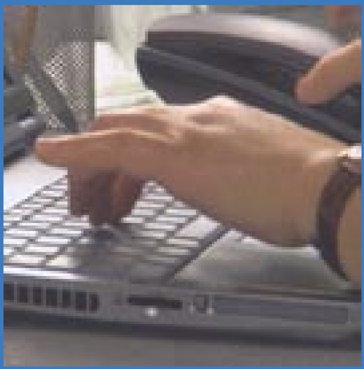
IE022		MID-EAST	179
IE023		MID-WEST	140
IE024		SOUTH-EAST (IRL)	160
IE025		SOUTH-WEST (IRL)	240
IT	ITALIA		
IT1		NORD OVEST	518
IT2		LOMBARDIA	701
IT3		NORD EST	520
IT4		EMILIA-ROMAGNA	360
IT5		CENTRO (I)	538
IT6		LAZIO	401
IT7		ABRUZZO-MOLISE	24
IT8		CAMPANIA	606
IT9		SUD	612
ITA		SICILIA	536
ITB		SARDEGNA	83
LU	LUXEMBOURG (GRAND-DUCHE)		
LU			1001
NL	NEDERLAND		
NL1		NOORD-NEDERLAND	213
NL2		OOST-NEDERLAND	396
NL3		WEST-NEDERLAND	924
NL4		ZUID-NEDERLAND	470
AT	OESTERREICH		
AT1		OSTOESTERREICH	904
AT2		SUEDOESTERREICH	854
AT3		WESTOESTERREICH	331
PT	PORTUGAL		
PT11		NORTE	780
PT12		CENTRO (P)	379
PT13		LISBOA E VALE DO TEJO	786
PT14		ALENTEJO	119
PT15		ALGARVE	86

FI	SUOMI/FINLAND		
FI13		ITA-SUOMI	374
FI14		VALI-SUOMI	238
FI15		POHJOIS-SUOMI	170
FI16		UUSIMAA (SUURALUE)	660
FI17		ETELA-SUOMI	581
SE	SVERIGE		
SE01		STOCKHOLM	266
SE02		OESTRA MELLANSVERIGE	268
SE04		SYDSVERIGE	341
SE06		NORRA MELLANSVERIGE	231
SE07		MELLERSTA NORRLAND	98
SE08		OEVRE NORRLAND	120
SE09		SMAALAND MED OEARNA	243
SE0A		VAESTSVERIGE	438
UK	UNITED KINGDOM		
UKC		NORTH EAST	236
UKD		NORTH WEST	625
UKE		YORKSHIRE AND THE HUMBER	445
UKF		EAST MIDLANDS	393
UKG		WEST MIDLANDS	482
UKH		EASTERN	539
UKI		LONDON	629
UKJ		SOUTH EAST	700
UKK		SOUTH WEST	450
UKL		WALES	276
UKM		SCOTLAND	464
UKN		NORTHERN IRELAND	146

Inhabitants	Metropolitan	Urban	Rural
Belgium	Antwerpen, Bruxelles, Charleroi, Gent, Liege	43 urban cities	Other localities
Danmark	The Copenhagen area	Over 10 000	Less than 10 000
Deutschland	More than 499 999	20 000 – 499 999	Less than 20 000
Ellada	Athens, Salonica	Over 10 000	Less than 10 000
Espana	More than 500 000	100 000 – 500 000	Less than 100 000
France	More than 100 000 and agglomeration of Paris	2 000 – 100 000	Less than 2 000
Ireland	Dublin County Borough North, Dublin County Borough South, Munster CB 1,2 and 3 (id est Cork, Limerick, Waterford) and Connaught CB (i.e.Galway)	Rest of Dublin (i.e. Belgard, Fingal and Dunlaoire Rathdown) and urban towns over 1500 people	Less than 1500
Italia	More than 500 000	50 000 – 500 000	Less than 50 000
Luxembourg	Luxembourg-ville	5 000 – 30 000	Less than 5 000
Nederland	More than 99 999	20 000 – 99 999	Less than 20 000
Österreich	Vienna and environs	Main cities and environs	Less than 7500
Portugal	More than 149 999	10 000 – 149 999	Less than 10 000
Finland	Greater Helsinki: Helsinki, Espoo, Vantaa, Kauniainen	Over 15 000	Less than 15 000
Sverige	More than 199 999	20 000 – 199 999	Less than 20 000
United Kingdom	Tyne & Wear, Merseyside, Greater Manchester, West and South Yorkshire, West Midlands, Greater London	Other areas with more than 2.84 persons per hectare	Other areas with less than 2.84 persons per hectare

APPENDIX

TELECOM SERVICES INDICATORS 2004



ANNEX III

QUESTIONNAIRE

INRA in Belgium
AVENUE DE LA COURONNE 159-165 – 1050 BRUXELLES / KROONLAAN 159-165 – 1050 BRUSSEL
TEL. 02/642.47.11 / TELEFAX 02/648.34.08

QUESTIONNAIRE n° 1565

♦ ♦

TELECOMS SERVICES INDICATORS

JPD/jml 14.10.2003

QUESTIONNAIRE n°

Your personal details will be processed separately from the answers you have provided during the interview. The interviewer records your name and address for internal quality control purposes only, though these data will NEVER be passed on to a third party.

INT.: Please read the following text carefully before starting the interview:

All our questions relate to your household at this address. So please think of your situation AND of all other members in this household when answering our questions

Many of the questions concern the kinds of telephone service that members of the household use and whether your household also has some form of Internet access.

One question concerns whether your household has *fixed* telephone service, and a number or numbers to go with it. Your household may have fixed telephone service from the telephone company or from another company. It may also be provided together with your Internet access or together with your cable TV service.
Even if the household fixed telephone line is provided together with another service or is provided by another company (and not the telephone company), you should still indicate that the household has a fixed telephone subscription.
Your household may also have fixed telephone service via an ISDN line, but there is a separate question to cover this.

♦ ♦

♦ ♦ 2

First of all, I have a short set of questions concerning the television, telephone, computer and the related services used by household members in your home.

1a) Which and how many of the following devices or services are there in this household?
INT.: Read out - One answer for each item

		0	1	2	3+
1	Television receiver INT.: (Count total number of TV receivers used in the home, provided they can receive TV services)	☐	☐	☐	☐
2	Fixed telephone line(s) subscription (but excluding ISDN – see following question) INT.: e.g. one standard line plus a second line for fax or Internet or telephone counts as 2	☐	☐	☐	☐
3	Fixed ISDN telephone line(s) INT.: An ISDN subscription - which allows two simultaneous communications – counts as one	☐	☐	☐	☐
4	Mobile (i.e.:GSM) telephone subscription(s) for personal use INT: (total number of subscriptions for personal use of household members here at home)	☐	☐	☐	☐
5	Personal computer(s) INT.: include desk-top PCs and portable PCs used at home	☐	☐	☐	☐
6	Internet access INT.: (whether or not there is a specific subscription or fee for the Internet access service. If more than one Internet access or ISP is used by household, count accordingly – if in doubt but there is definitely Internet access count as 1)	☐	☐	☐	☐

1b) Has the household stopped or cancelled its fixed telephone line subscription during the past year or more?
INT.: Read out – One answer possible

1 ☐ Yes, cancelled during the 12 months
2 ☐ Yes, cancelled but more than one year ago
3 ☐ No, the household has not cancelled its fixed telephone line subscription
4 ☐ No, the household has never had a fixed telephone line subscription at this address

FOR ALL

2) Does the household receive the television via: ...
INT.: Read out – Several answers possible

1 ☐ an aerial (on the roof or on the top of the TV set) ——> **Q. 3**
2 ☐ a cable TV network and subscription ——> **Q. 3**
3 ☐ satellite TV via a satellite dish on the top of the building or on the house or apartment ——> **Q. 3**
4 ☐ the household does not receive television at home at all ——> **Filter before Q.4**
5 ☐ **(Do not read)** DK/NA ——> **Filter before Q.4**

♦ ♦

3

3) Does the household have a subscription or an arrangement so as to receive **digital TV service**?
INT: One code only

1 ☐ YES 2 ☐ NO 3 ☐ DK/NA

INT.:	**If no fixed telephone line (code 0 at Q.1 (2 and 3))**	**——> Q. 4**
	If at least 1 fixed telephone line (code 1 to 3+ at Q. 1(2 and/or 3)	**——> Q. 5**

For those who do not have any fixed telephone line at home

4) You said there is no fixed telephone line in your household. Which are the main reasons for not having any?
INT.: Read out – Several answers possible

1 ☐ actually the household plans to get a telephone line in the next 6 months, or is awaiting installation

2 ☐ one or more household members has a mobile phone subscription and that serves the needs of the household

3 ☐ the household has in the last year given up its fixed telephone line

4 ☐ the cost to get service is too high (i.e. for connection and/or initial charges, including deposits)

5 ☐ the cost of using the service is too high (i.e. calls are too costly)

6 ☐ you or other members of your household are unable to use a normal telephone because of disability or illness

7 ☐ household members have easy access to a phone elsewhere (i.e. neighbour, work, public payphone)

8 ☐ You or other members of your household do not want a fixed telephone line

9 ☐ other reasons for not having a fixed telephone line at home **(Specify)**

OFFICE

3a

10 ☐ **(Do not read)** DK/NA

—> Q. 9

For all those who have at least one fixed telephone line

5) Does the household have or subscribe to any of the following special (fixed) telephone services?
INT.: Read out - One answer for each item

		YES 1	**NO** 2	**DK/NA** 3
1	Operator or carrier pre-selection – this is an arrangement where some or all calls are automatically connected by another company. The household may receive a separate bill from the other company or the bill may be combined with the bill received from the company providing the telephone line.	☐	☐	☐
2	A reduced line rental - this is an arrangement where the household pays a lower line rental (monthly/bi-monthly/quarterly charges) because you do not use the telephone a lot or because the household is entitled to a lower tariff as a low income or handicapped user.	☐	☐	☐
3	A flat rate or fixed fee service for dial-up access to the Internet – this is an arrangement where although the household uses the telephone line (or ISDN) for dial-up access to Internet, it does not pay each time it uses the Internet access, rather there is a fixed fee or charge, per month or per billing period.	☐	☐	☐

♦ ♦ 4

6) What is your best estimate of the total amount that the household spends on fixed telephone lines and calls, for one typical month or relevant billing period (total bill)?
INT. : If household has two or more telephone bills - e.g. for separate services (where some or all calls are made using a company that is different from the one providing the telephone line) or additional lines - give the overall total estimate - Accept the answering basis - month or billing period - preferred by interviewee, and code accordingly

[ ] Euro for one period of [ ] month(s) **OFFICE** [ ][ ]

OR

[ ] Local currency for one period of [ ] month(s) **OFFICE** [ ][ ]

7) Which operators does your household use to provide (fixed) telephone lines, e.g. the line rental?
INT.: Show card A - Several answers possible (if more than 1 in the household)

1 ☐ A
2 ☐ B
3 ☐ C
- -
4 ☐ D
5 ☐ E
6 ☐ F
- -
7 ☐ G
8 ☐ H
9 ☐ I
- -
10 ☐ J
11 ☐ other **(Specify)**
[ ] 4ca **OFFICE** [ ]
12 ☐ **(Do not read)** DK/NA

♦ ♦

5

8) Which operators does your household use to provide (fixed) telephone service (that is to make telephone calls)?
INT.: Show card B - Several answers possible (if more than 1 in the household)

1 ☐ A
2 ☐ B
3 ☐ C
4 ☐ D
5 ☐ E
6 ☐ F
7 ☐ G
8 ☐ H
9 ☐ I
10 ☐ J
11 ☐ other **(Specify)**

4da **OFFICE**

12 ☐ **(Do not read)** none
13 ☐ **(Do not read)** DK/NA

FOR ALL
9) Do any household members use public payphones (e.g. a public call box, a phone-shop or public phones)?

1 ☐ YES —> **Q. 10**
2 ☐ NO —> **Q. 11**
3 ☐ DK —> **Q. 11**

10) **(If yes in Q. 9)**. What is the frequency?
INT.: Read out – Only one answer

1 ☐ regularly (i.e. once a week or more often)
2 ☐ occasionally (i.e. about once a month)
3 ☐ rarely (i.e. less often than once a month)
4 ☐ only when away from home or travelling
5 ☐ **(Do not read)** DK/NA

—> Filter before Q. 11

6

INT.: If at least 1 mobile telephone subscription (code 1 to 3+ at Q. 1(4))	——> Q. 11
If no mobile telephone subscription (code 0 at Q. 1(4))	——> Q. 13

For those households where there is at least one mobile telephone subscription

11) Indicate the total number of mobile telephone subscriptions that you and other household members have where the service is on pre-paid service arrangement (pay in advance rather than receive a bill).

INT.: Check answer against question 1 point 4 above – The number of pre-paid subscriptions must always be less than or equal to the total number of mobile subscriptions mentioned at point 4 question 1.

☐ Pre-paid subscription(s) **OFFICE** ☐

12) Which operators does your household use to provide mobile (i.e: GSM) telephone **subscription ?**

INT.: Show card C - Several answers possible (if more than 1 in the household)

1 ☐ A
2 ☐ B
3 ☐ C

- - - - - - - - - - - - - - - - - - - -

4 ☐ D
5 ☐ E
6 ☐ F

- - - - - - - - - - - - - - - - - - - -

7 ☐ G
8 ☐ H
9 ☐ I

- - - - - - - - - - - - - - - - - - - -

10 ☐ J
11 ☐ other **(Specify)**

☐ 7ca **OFFICE** ☐

12 ☐ **(Do not read)** DK/NA

♦ ♦ 7

For those households where there is no mobile telephone subscription

13) Which are the main reasons for not having any mobile telephone **subscription**?

INT.: Read out – Several answers possible

1 ☐ Actually someone in the household plans to get a mobile telephone in the next 6 months

2 ☐ There is currently no wish to have a mobile phone

3 ☐ Can not afford to have a mobile phone

4 ☐ The fixed telephone line(s) is (are) sufficient for current needs

5 ☐ Coverage in the area is not very good, so that it is not worth getting a mobile phone

6 ☐ There is good access to phones elsewhere, when outside the home (i.e. public payphones)

7 ☐ another reasons **(Specify)**

OFFICE

7ba

8 ☐ **(Do not read)** DK/NA

♦ ♦

8

TO ALL

14) We are now talking about Internet access. Could you please tell me for each member of your household, including yourself, whether they **use** Internet at home, work, at school or educational establishment or elsewhere.

INT.: Fill in the table (below) for each household member – Note that if there is Internet access at home, not all household members may use it.

		A HOME			B WORK			C SCHOOL OR EDUCATIONAL ESTABLISHMENT			D OTHER		
	HOUSEHOLD MEMBER	**YES 1**	**NO 2**	**DK 3**	**YES 1**	**NO 2**	**DK 3**	**YES 1**	**NO 2**	**DK 3**	**YES 1**	**NO 2**	**DK 3**
1	Respondent	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	Husband /Wife/ partner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	Child(ren) less than 12 years old Child 1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	Child 2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	Child 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	Child 4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	Child 5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	Child 6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9	Child 7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10	Child 8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
11	Child(ren) 12-17 Child 1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
12	Child 2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
13	Child 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
14	Child 4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
15	Child 5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
16	Child 6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
17	Other male 18 and + 1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
18	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
19	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
20	Other female 18 and + 1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
21	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
22	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

9

INT.: If no Internet access at home (code 0 at Q.1(6))	——> Q. 15
If access to the Internet at home (code 1 to 3+ at Q.1(6))	——> Q. 16

For those households that do not have access to the Internet at home

15) So you said there is no access to the Internet in your household. Which are the main reasons for not having Internet access at your home?

INT.: Read out – Several answers possible

1 ☐ Actually the household plans to subscribe/connect in the next six months

2 ☐ You do not know exactly what the Internet is or no-one in your household is interested in the Internet

3 ☐ There is no personal computer (PC) or means of connecting in your home

4 ☐ You are concerned about the cost

5 ☐ The interested members of your household have access at work, school or elsewhere and this is sufficient

6 ☐ Your household is concerned about access to unsuitable content

7 ☐ Your household has other reasons for not being connected/having access **(Specify)**

OFFICE

9a

8 ☐ DK/NA ——> **Demographics**

For those households that have access to the Internet at home

16) What is the principal means of Internet access for the household?

INT.: Read out – Only one answer

1 ☐ Dial-up using a standard telephone line

2 ☐ Dial-up using an ISDN line

3 ☐ (broadband) DSL (digital subscriber line) service

4 ☐ Via the cable TV network (using a cable modem)

5 ☐ Via the television (using set-top box and/or modem as necessary)

6 ☐ Via a mobile phone(s) service

7 ☐ Other **(Specify)**

OFFICE

10ba

8 ☐ DK/NA

♦ ♦ 10

17) Which of the following Internet services and facilities do you or other household members use, here at home?
INT.: Read out – Several answers possible

1 ☐ Email
2 ☐ Use related to work
3 ☐ Use related to school or education
4 ☐ Looking for information on subjects of interest
5 ☐ Exchanging ideas, participating in forums and discussions
6 ☐ Entertainment, recreation or games
7 ☐ Researching information on products and prices
8 ☐ Ordering goods or making purchases, or making travel reservations and/or buying tickets
9 ☐ Handling a bank-account(s
10 ☐ **(Do not read)** DK/NA

18) How often do you and other household members access the Internet here at home?
INT.: Read out – Only one answer - The highest frequency should be picked-up (e.g. If the children use the Internet every day but the respondent use it every month, the reply should be every day)

1 ☐ More than once a day
2 ☐ Once a day
3 ☐ Several times a week
4 ☐ About once a week
5 ☐ About once a month
6 ☐ Less frequently than once a month
7 ☐ **(Do not read)** DK/NA

19) How does the household pay for the use of Internet access here at home?
INT.: Read out – Only one answer

1 ☐ According to the time spent for usage
2 ☐ A fixed or flat-rate amount per month or relevant billing period
3 ☐ Other **(Specify)**

OFFICE

10fa

4 ☐ **(Do not read)** DK/NA

♦ ♦

11

20) Which operators does the household use to provide Internet service here at home?
INT.: Show card D - Several answers possible (if more than 1 in the household)

1 ☐ A
2 ☐ B
3 ☐ C
4 ☐ D
5 ☐ E
6 ☐ F
7 ☐ G
8 ☐ H
9 ☐ I
10 ☐ J
11 ☐ Other **(Specify)**

OFFICE

10ga

12 ☐ **(Do not read)** DK/NA

—> DEMOGRAPHICS

♦ ♦ 12

DEMOGRAPHICS

TO ALL

A) NUTS REGION

B) TYPE OF LOCALITY

1 ☐ Metropolitan areas 2 ☐ Other cities/urban 3 ☐ Small communes/rural

C) HOUSEHOLD SIZE

1 ☐ 1 2 ☐ 2 3 ☐ 3 4 ☐ 4 5 ☐ 5+

D) COMPOSITION OF THE HOUSEHOLD

		YES		#	OFFICE
1	Adults (18 and over)	☐	—>		
2	Children (below 12)	☐	—>		
3	Children (12-15)	☐	—>		
4	Children (16 and over)	☐	—>		

E) SEX OF THE RESPONDENT

1 ☐ Male 2 ☐ Female

F) AGE OF RESPONDENT

☐ year old OFFICE ☐

G) How old were you when you stopped full time education?

1 ☐ Up to 14 years
2 ☐ 15-16 years
3 ☐ 17-18 years

- - - - - - - - - - - - - - - -

4 ☐ 19-20 years
5 ☐ 21-24 years
6 ☐ 25 years and over
7 ☐ Still student

- - - - - - - - - - - - - - - -

♦ ♦

♦ ♦ 13

H) PROFESSION OF THE RESPONDENT

Ha) What is your current occupation?

INT. :Record in the first column below

If not doing any paid work currently (code 1 to 4 in Ha)

Hb) What was your last occupation?

INT. :Record in the second column below

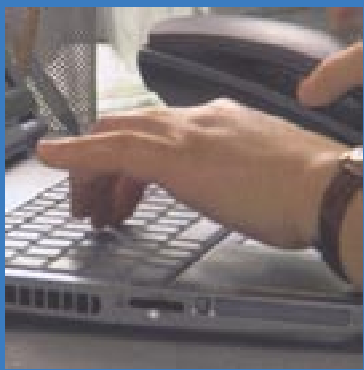
	A **Current occupation**	B **Last occupation**
NON-ACTIVE Responsible for ordinary shopping and looking after the home, or without any current occupation, not working	1	
Student	2	
Unemployed or temporarily not working	3	
Retired or unable to work through illness	4	
SELF EMPLOYED Farmer	5	1
Fisherman	6	2
Professional (lawyer, medical practitioner, accountant, architect, …)	7	3
Owner of a shop, craftsmen, other self employed person	8	4
Business proprietors, owner (full or partner) of a company	9	5
EMPLOYED Employed professional (employed doctor, lawyer, accountant, architect,…)	10	6
General management, director or top management (managing directors, director general, other director)	11	7
Middle management, other management (department head, junior manager, teacher, technician)	12	8
Employed position, working mainly at a desk	13	9
Employed position, not at a desk but travelling (salesman, driver,…)	14	10
Employed position, not at a desk but in a service job (hospital, restaurant, police, fireman, …)	15	11
Supervisor	16	12
Skilled manual worker	17	13
Other unskilled manual worker, servant	18	14
NEVER DID ANY PAID WORK		15

♦ ♦

APPENDIX

TELECOM SERVICES INDICATORS

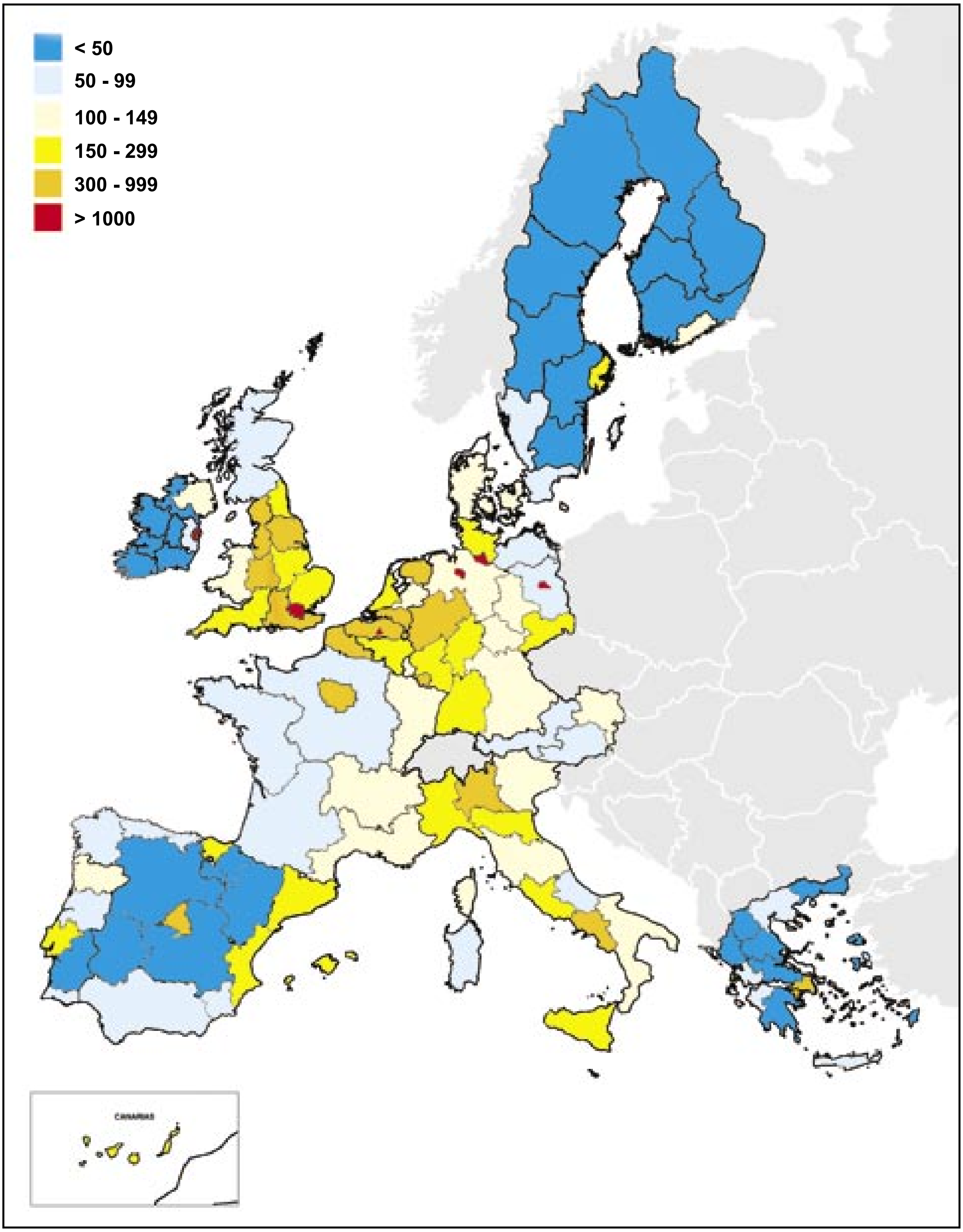
2004

ANNEX IV

Map of regional density

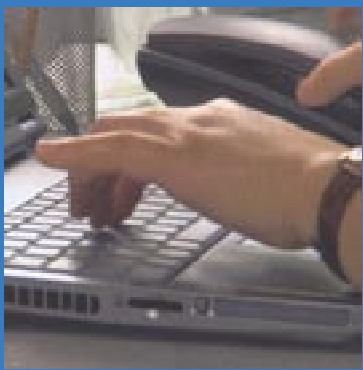
Regional density (in persons per square km)



APPENDIX

TELECOM SERVICES INDICATORS

2004



ANNEX V

Table with details of standard errors or statistical margins at 95% confidence level

OBS%=	5.0	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5	90.0	92.5	95.0	97.5
n= 100	4.3	5.2	5.9	6.5	7.0	7.4	7.8	8.2	8.5	8.8	9.0	9.2	9.3	9.5	9.6	9.7	9.8	9.8	9.8	9.8	9.8	9.7	9.6	9.5	9.3	9.2	9.0	8.8	8.5	8.2	7.8	7.4	7.0	6.5	5.9	5.2	4.3	3.1
n= 150	3.6	4.2	4.8	5.3	5.7	6.1	6.4	6.7	6.9	7.1	7.3	7.5	7.6	7.7	7.8	7.9	8.0	8.0	8.0	8.0	8.0	7.9	7.8	7.7	7.6	7.5	7.3	7.1	6.9	6.7	6.4	6.1	5.7	5.3	4.8	4.2	3.5	2.5
n= 200	3.0	3.7	4.2	4.6	4.9	5.3	5.5	5.8	6.0	6.2	6.4	6.5	6.6	6.7	6.8	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.8	6.7	6.6	6.5	6.4	6.2	6.0	5.8	5.5	5.3	4.9	4.6	4.2	3.7	3.0	2.2
n= 250	2.7	3.3	3.7	4.1	4.4	4.7	5.0	5.2	5.4	5.5	5.7	5.8	5.9	6.0	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.0	5.9	5.8	5.7	5.5	5.4	5.2	5.0	4.7	4.4	4.1	3.7	3.3	2.7	1.9
n= 300	2.5	3.0	3.4	3.7	4.0	4.3	4.5	4.7	4.9	5.1	5.2	5.3	5.4	5.5	5.5	5.6	5.6	5.7	5.7	5.7	5.6	5.6	5.5	5.5	5.4	5.3	5.2	5.1	4.9	4.7	4.5	4.3	4.0	3.7	3.4	3.0	2.5	1.8
n= 350	2.3	2.8	3.1	3.5	3.7	4.0	4.2	4.4	4.5	4.7	4.8	4.9	5.0	5.1	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.1	5.1	5.0	4.9	4.8	4.7	4.5	4.4	4.2	4.0	3.7	3.5	3.1	2.8	2.3	1.6
n= 400	2.1	2.6	2.9	3.2	3.5	3.7	3.9	4.1	4.2	4.4	4.5	4.6	4.7	4.7	4.8	4.8	4.9	4.9	4.9	4.9	4.9	4.8	4.8	4.7	4.7	4.6	4.5	4.4	4.2	4.1	3.9	3.7	3.5	3.2	2.9	2.6	2.1	1.5
n= 450	2.0	2.4	2.8	3.1	3.3	3.5	3.7	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.7	3.5	3.3	3.1	2.8	2.4	2.0	1.4
n= 500	1.9	2.3	2.6	2.9	3.1	3.3	3.5	3.7	3.8	3.9	4.0	4.1	4.2	4.2	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.7	3.5	3.3	3.1	2.9	2.6	2.3	1.9	1.4
n= 550	1.8	2.2	2.5	2.8	3.0	3.2	3.3	3.5	3.6	3.7	3.8	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.3	3.2	3.0	2.8	2.5	2.2	1.8	1.3
n= 600	1.7	2.1	2.4	2.6	2.9	3.0	3.2	3.3	3.5	3.6	3.7	3.7	3.8	3.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.5	3.3	3.2	3.0	2.9	2.6	2.4	2.1	1.7	1.2
n= 650	1.7	2.0	2.3	2.5	2.7	2.9	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7	3.6	3.5	3.4	3.3	3.2	3.1	2.9	2.7	2.5	2.3	2.0	1.7	1.2
n= 700	1.6	2.0	2.2	2.5	2.6	2.8	3.0	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.2	3.1	3.0	2.8	2.6	2.5	2.2	2.0	1.6	1.2
n= 750	1.6	1.9	2.1	2.4	2.6	2.7	2.9	3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.3	3.2	3.1	3.0	2.9	2.7	2.6	2.4	2.1	1.9	1.6	1.1
n= 800	1.5	1.8	2.1	2.3	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.2	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.2	3.2	3.1	3.0	2.9	2.8	2.6	2.5	2.3	2.1	1.8	1.5	1.1
n= 850	1.5	1.8	2.0	2.2	2.4	2.6	2.7	2.8	2.9	3.0	3.1	3.1	3.2	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.2	3.1	3.1	3.0	2.9	2.8	2.7	2.6	2.4	2.2	2.0	1.8	1.5	1.0
n= 900	1.4	1.7	2.0	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.3	2.2	2.0	1.7	1.4	1.0
n= 950	1.4	1.7	1.9	2.1	2.3	2.4	2.5	2.7	2.8	2.8	2.9	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.5	2.4	2.3	2.1	1.9	1.7	1.4	1.0
n= 1000	1.4	1.6	1.9	2.0	2.2	2.4	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.5	2.4	2.2	2.0	1.9	1.6	1.4	1.0
n= 1100	1.3	1.6	1.8	2.0	2.1	2.2	2.4	2.5	2.6	2.6	2.7	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.2	2.1	2.0	1.8	1.6	1.3	.9
n= 1200	1.2	1.5	1.7	1.9	2.0	2.1	2.3	2.4	2.5	2.5	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.5	2.5	2.4	2.3	2.1	2.0	1.9	1.7	1.5	1.2	.9
n= 1250	1.2	1.5	1.7	1.8	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.3	2.2	2.1	2.0	1.8	1.7	1.5	1.2	.9
n= 1300	1.2	1.4	1.6	1.8	1.9	2.1	2.2	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.2	2.1	1.9	1.8	1.6	1.4	1.2	.8
n= 1400	1.1	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.7	1.6	1.4	1.1	.8
n= 1500	1.1	1.3	1.5	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.5	1.3	1.1	.8
n= 1600	1.1	1.3	1.5	1.6	1.7	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.7	1.6	1.5	1.3	1.1	.8
n= 1700	1.0	1.3	1.4	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.7	1.6	1.4	1.3	1.0	.7
n= 1750	1.0	1.2	1.4	1.5	1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.8	1.7	1.5	1.4	1.2	1.0	.7
n= 1800	1.0	1.2	1.4	1.5	1.6	1.8	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.8	1.6	1.5	1.4	1.2	1.0	.7
n= 1900	1.0	1.2	1.3	1.5	1.6	1.7	1.8	1.9	1.9	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	1.9	1.9	1.8	1.7	1.6	1.5	1.3	1.2	1.0	.7
n= 2000	1.0	1.2	1.3	1.4	1.6	1.7	1.8	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.6	1.4	1.3	1.2	1.0	.7
n= 2200	.9	1.1	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.7	1.6	1.5	1.4	1.3	1.1	.9	.7
n= 2250	.9	1.1	1.2	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.5	1.4	1.2	1.1	.9	.6
n= 2400	.9	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.5	1.4	1.3	1.2	1.1	.9	.6
n= 2500	.9	1.0	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.2	1.0	.9	.6
n= 2600	.8	1.0	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.5	1.5	1.4	1.3	1.2	1.0	.8	.6
n= 2750	.8	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.5	1.4	1.3	1.2	1.1	1.0	.8	.6
n= 2800	.8	1.0	1.1	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.5	1.5	1.4	1.3	1.2	1.1	1.0	.8	.6
n= 3000	.8	.9	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.2	1.1	.9	.8	.6
n= 3200	.8	.9	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.2	1.1	1.0	.9	.8	.5
n= 3250	.7	.9	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.2	1.1	1.0	.9	.7	.5
n= 3400	.7	.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.3	1.3	1.2	1.1	1.0	.9	.7	.5
n= 3500	.7	.9	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1	1.0	.9	.7	.5

OBS. %=	5.0	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5	90.0	92.5	95.0	97.5
n= 3600	.7	.9	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.0	.9	.7	.5
n= 3750	.7	.8	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1	1.1	1.0	.8	.7	.5
n= 3900	.7	.8	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1	1.1	1.0	.8	.7	.5
n= 4000	.7	.8	.9	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.1	1.0	.9	.8	.7	.5
n= 4200	.7	.8	.9	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.1	1.1	1.0	.9	.8	.7	.5
n= 4250	.7	.8	.9	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.1	1.1	1.0	.9	.8	.7	.5
n= 4400	.6	.8	.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0	.9	.8	.6	.5
n= 4500	.6	.8	.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.1	1.0	1.0	.9	.8	.6	.5
n= 4600	.6	.8	.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.1	1.0	1.0	.9	.8	.6	.5
n= 4750	.6	.7	.9	.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	.9	.9	.7	.6	.4
n= 4800	.6	.7	.8	.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	.9	.8	.7	.6	.4
n= 5000	.6	.7	.8	.9	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.0	.9	.8	.7	.6	.4
n= 5250	.6	.7	.8	.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.0	1.0	.9	.8	.7	.6	.4
n= 5500	.6	.7	.8	.9	.9	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.0	.9	.9	.8	.7	.6	.4
n= 5750	.6	.7	.8	.9	.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.0	.9	.9	.8	.7	.6	.4
n= 6000	.6	.7	.8	.8	.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	.9	.8	.8	.7	.6	.4
n= 6500	.5	.6	.7	.8	.9	.9	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.0	1.0	.9	.9	.8	.7	.6	.5	.4
n= 7000	.5	.6	.7	.8	.8	.9	.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	.9	.9	.8	.8	.7	.6	.5	.4
n= 7500	.5	.6	.7	.7	.8	.9	.9	.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	.9	.9	.9	.8	.7	.7	.6	.5	.4
n= 8000	.5	.6	.7	.7	.8	.8	.9	.9	.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	.9	.9	.9	.8	.8	.7	.7	.6	.5	.3
n= 8500	.5	.6	.6	.7	.8	.8	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.8	.8	.7	.6	.6	.5	.3
n= 9000	.5	.5	.6	.7	.7	.8	.8	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.8	.8	.7	.7	.6	.5	.5	.3
n= 9500	.4	.5	.6	.7	.7	.8	.8	.8	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.8	.8	.8	.7	.7	.6	.5	.4	.3
n= 10000	.4	.5	.6	.6	.7	.7	.8	.8	.8	.9	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.9	.8	.8	.8	.7	.7	.6	.6	.5	.4	.3
n= 10500	.4	.5	.6	.6	.7	.7	.8	.8	.8	.9	.9	.9	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.9	.9	.9	.8	.8	.8	.7	.7	.6	.6	.5	.4	.3
n= 11000	.4	.5	.6	.6	.7	.7	.7	.8	.8	.8	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.8	.8	.8	.7	.7	.7	.6	.6	.5	.4	.3
n= 11500	.4	.5	.5	.6	.7	.7	.7	.8	.8	.8	.8	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.8	.8	.8	.8	.7	.7	.7	.6	.5	.5	.4	.3
n= 12000	.4	.5	.5	.6	.6	.7	.7	.7	.8	.8	.8	.8	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.8	.8	.8	.8	.7	.7	.7	.6	.6	.5	.5	.4	.3
n= 12500	.4	.5	.5	.6	.6	.7	.7	.7	.8	.8	.8	.8	.8	.8	.9	.9	.9	.9	.9	.9	.9	.9	.9	.8	.8	.8	.8	.8	.8	.7	.7	.7	.6	.6	.5	.5	.4	.3
n= 13000	.4	.5	.5	.6	.6	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.9	.9	.9	.9	.9	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.6	.6	.5	.5	.4	.3
n= 13500	.4	.4	.5	.6	.6	.6	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.6	.6	.6	.5	.4	.4	.3
n= 14000	.4	.4	.5	.5	.6	.6	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.6	.6	.5	.5	.4	.4	.3
n= 14500	.4	.4	.5	.5	.6	.6	.7	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.7	.6	.6	.5	.5	.4	.4	.3
n= 15000	.3	.4	.5	.5	.6	.6	.6	.7	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.7	.6	.6	.6	.5	.5	.4	.3	.2
n= 15500	.3	.4	.5	.5	.6	.6	.6	.7	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.7	.6	.6	.6	.5	.5	.4	.3	.2
n= 16000	.3	.4	.5	.5	.6	.6	.6	.6	.7	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.7	.6	.6	.6	.6	.5	.5	.4	.3	.2
n= 16500	.3	.4	.5	.5	.5	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.5	.5	.5	.4	.3	.2
n= 17000	.3	.4	.5	.5	.5	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.8	.8	.8	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.5	.5	.5	.4	.3	.2
n= 17500	.3	.4	.4	.5	.5	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.5	.5	.4	.4	.3	.2
n= 18000	.3	.4	.4	.5	.5	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.5	.5	.4	.4	.3	.2
n= 18500	.3	.4	.4	.5	.5	.5	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.5	.5	.5	.4	.4	.3	.2
n= 19000	.3	.4	.4	.5	.5	.5	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.5	.5	.5	.4	.4	.3	.2
n= 19500	.3	.4	.4	.5	.5	.5	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.6	.5	.5	.5	.4	.4	.3	.2

OBS. %=	5.0	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5	90.0	92.5	95.0	97.5
n= 20000	.3	.4	.4	.5	.5	.5	.6	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.6	.6	.5	.5	.5	.4	.4	.3	.2
n= 21000	.3	.4	.4	.4	.5	.5	.5	.6	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.6	.6	.5	.5	.5	.4	.4	.4	.3	.2
n= 22000	.3	.3	.4	.4	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.4	.4	.3	.3	.2
n= 23000	.3	.3	.4	.4	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.4	.4	.3	.3	.2
n= 24000	.3	.3	.4	.4	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.4	.4	.3	.3	.2
n= 25000	.3	.3	.4	.4	.4	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.4	.4	.4	.3	.3	.2
n= 26000	.3	.3	.4	.4	.4	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.4	.4	.4	.3	.3	.2
n= 27000	.3	.3	.4	.4	.4	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.4	.4	.4	.3	.3	.2
n= 28000	.3	.3	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.3	.3	.2
n= 29000	.3	.3	.3	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.3	.3	.3	.2
n= 30000	.2	.3	.3	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.3	.3	.2	.2
n= 31000	.2	.3	.3	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.3	.3	.2	.2
n= 32000	.2	.3	.3	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.3	.3	.2	.2
n= 33000	.2	.3	.3	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.3	.3	.2	.2
n= 34000	.2	.3	.3	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.3	.3	.2	.2
n= 35000	.2	.3	.3	.3	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.3	.3	.3	.2	.2
n= 36000	.2	.3	.3	.3	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2
n= 37000	.2	.3	.3	.3	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2
n= 38000	.2	.3	.3	.3	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2
n= 39000	.2	.3	.3	.3	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2
n= 40000	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2
n= 41000	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2
n= 42000	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.1
n= 43000	.2	.2	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2	.1
n= 44000	.2	.2	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2	.1
n= 45000	.2	.2	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2	.1
n= 46000	.2	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2	.1
n= 47000	.2	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2	.1
n= 48000	.2	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2	.1
n= 49000	.2	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2	.1
n= 50000	.2	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.2	.1
n= 51000	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.1
n= 52000	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.1
n= 53000	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.1
n= 54000	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.1
n= 55000	.2	.2	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.2	.2	.1
n= 56000	.2	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.2	.1
n= 57000	.2	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.2	.1
n= 58000	.2	.2	.2	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.2	.1
n= 59000	.2	.2	.2	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.2	.2	.2	.1
n= 60000	.2	.2	.2	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.2	.2	.2	.1