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The distribution and use of ICT in France and Europe

Pierre Berret*

Foreword

Over the last fifteen years, information and communication technologies (ICTs) have become an integral part of our daily domestic lives, and are gradually providing wider means of accessing cultural goods and services. With digital equipment generally becoming more and more affordable (computers, consumer electronics, internet connections, etc), and with the boom in high-speed internet connections, the proliferation of new functionalities and innovations in equipment, the distribution and use of ICTs have intensified and become more accessible, although these technologies and their uses continue to depend on users' education, income and age.

The digital divide is diminishing as digital convergence gathers pace: thanks to higher download rates, access to cultural content (radio and television programmes, press, music, etc) is increasing whilst new generation mobile internet technologies are emerging (TV, e-wallets, etc.) along with high definition technologies. In each instance, the link between supply and demand of cultural goods is a key factor in the deployment of ICTs, their distribution and usages.

The digital era is reaching a certain maturity, and is thus facing a whole new range of cultural policy issues in terms of encouraging access to these technologies, developing their usages, ensuring their diversity and supporting those who use them.

P. C.

The spread of ICTs and their usage

As for other countries in Europe, to varying degrees, the digital divide in France is diminishing: the number of homes which have a computer continues to grow, as does the proportion of homes with access to the internet.

6 out of 10 of homes have a computer, half have an internet connection

In France in 2007, 62% of households had a home computer (including a palmtop) and half of homes had an internet connection (49%, see Table 1, p. 52).

With the falling cost of purchasing computer hardware, increasing access to these resources in schools, the common usage of some functionalities (message handling, information research, accessing online content, office automation, etc), the main obstacles cited for non-acquisition of a home computer are diminishing, *i.e.* lack of utility, price and lack of skills. Moreover, the growing availability of cultural, commercial or gaming content is behind increasing sales of computers particularly to households with children. Moreover, the fact of owning a computer depends, to a lesser extent than before, on age, education, income and occupation.

From another point of view, a significant proportion of the population is "outside the information society": in France in 2007 half of all households do not have internet access, despite the fact that it can be accessed *via* various means, *e.g.* computer (38% of households do not have one), mobile phone (19% did not have one in 2006), television (3% of households still do not possess a television set) or even a

*INSEE statistician, in charge of analysis and evaluation at the DEPS.

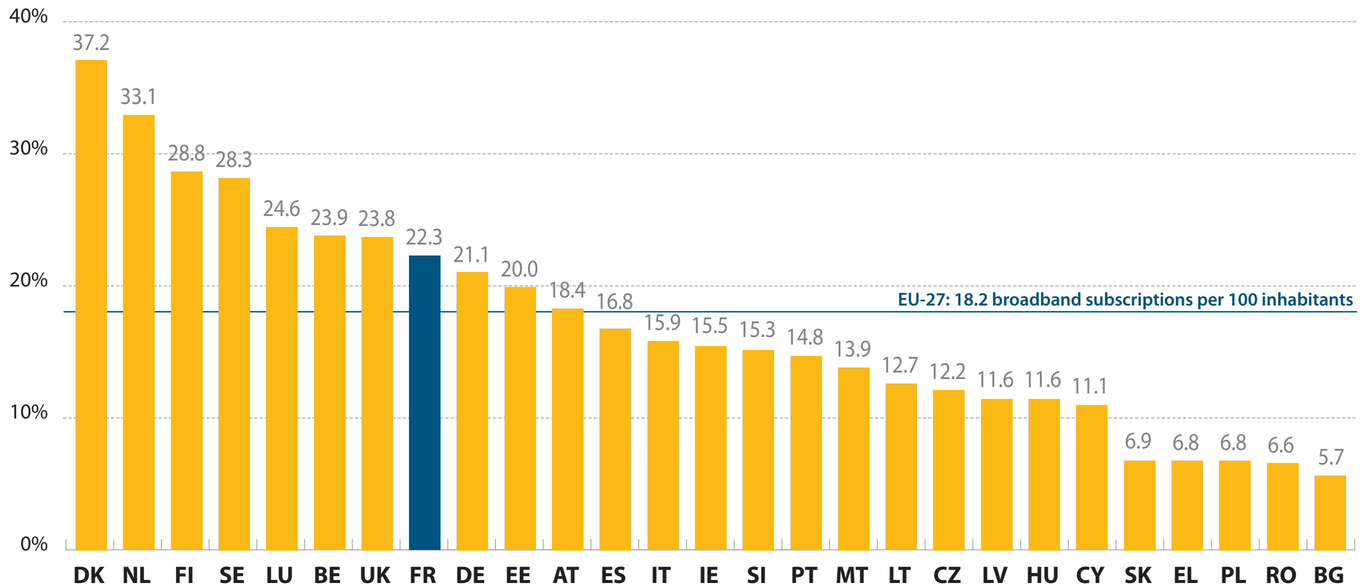
Table 1 – Household ICT adoption in the EU-27 and France 2004-2007 *(%)*

	European Union (27 countries)				France	
	2004	2005	2006	2007	2006	2007
Household hardware adoption*						
Percentage of households with access, by one of their members, to:						
a television	97	97	**97**	:	97	:
a cable television	36	31	**32**	:	11	:
a dish aerial	26	27	**26**	:	27	:
a mobile phone	:	84	**85**	:	81	:
a mobile phone with internet access/PDA- type device	:	27	**27**	:	:	:
a computer	:	:	**61**	64	:	62
a personal computer	51	58	**60**	:	56	:
home internet access	40	48	**49**	54	41	49
a palmtop computer	4	4	**4**	:	:	:
a games console	:	19	**18**	:	:	:
Devices for accessing the internet						
Percentage of households whose home internet access is via*:*						
a personal computer	38	47	**47**	52	39	48
a personal computer as the household's only means of accessing the internet	:	38	**40**	43	31	38
a mobile phone (WAP, GPRS, UMTS)	8	8	**6**	7	8	:
a games console	:	2	**2**	3	1	2
a television set (digital television or set-top box)	:	2	**1**	2	1	4
a palmtop computer	1	1	**1**	1	:	:
Types of internet connection						
*Percentage of households with a broadband connection***	14	23	**30**	42	30	43
Percentage of households using:						
a modem*** or ISDN connection	23	26	**18**	14	10	7
a DSL connection (xDSL, ADSL, SDSL, etc.)	:	17	**25**	32	29	42
other broadband connection (*e.g.* cable)	4	6	**7**	10	5	3
una mobile phone with internet connectivity (WAP, GPRS, UMTS, etc.)	:	4	**4**	5	2	5

* In 2007, this survey did not gather data on household adoption of television, telephone and games console equipment.
** High-speed connections are defined as those with a data transfer rate of 144 Kbits/s or above.
*** Modem: access through the standard telecommunications network; in 2004 this item did not include ISDN connections (Integrated Services Digital Network).
NB: data unavailable on WIFI internet connection rates.

Source: Community survey on ICT usage in households and by individuals, 2004, 2005, 2006, 2007 – Eurostat.

Graph 1 – Broadband penetration rate in Europe, 2007 *(number of subscriptions per 100 inhabitants)*



Source: Eurostat – DG INFSO survey on "Broadband access in the EU".

games console. In France, one third of the population has never used the internet or has not accessed it for over a year. This applies to 32% of men, and 36% of women. The digital divide thus affects almost as many men as women, and particularly the elderly, those on low incomes and those with the lowest levels of education. In Europe in 2007, amongst those aged between 65 and 74, 78% have never used a computer, or have not used one for over a year, 82% have never used the internet, or have not accessed it for over a year.

In 2004, one third of households within the EU had logged on to the internet from their home at least once within the last three months; this figure was almost half by 2007 (EU: 47%, France 49%). In France, 43% of households have access to broadband internet at home, which puts France slightly above the EU-27 average (42%). The northern European countries of Iceland, Denmark, Norway, Sweden, Finland and the Netherlands seem to have better adoption rates than the rest. Those in the eastern Mediterranean have lower adoption rates, due to the slower expansion of this technology within that part of Europe. Narrowband connections are tending to disappear, except within certain countries, *i.e.* within the eastern Mediterranean countries (group 1, in accordance with the groupings given on p. 59, excluding Bulgaria), low bandwidth connections are much more prevalent than broadband (see also Graph 2); in Ireland and Cyprus its usage is on a par with that of broadband, and in Germany 30% of homes with internet access use low bandwidth connections.

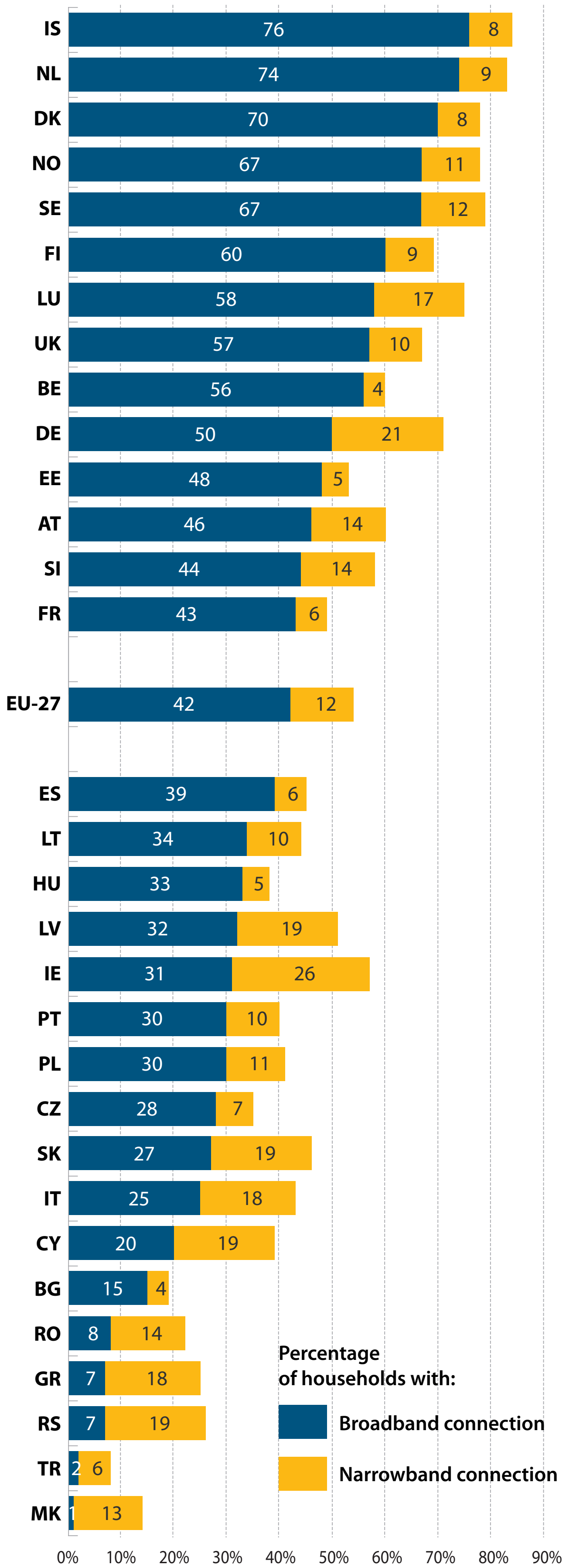
In France in 2007, of those who had accessed the internet within the last three months, 72% accessed it from home, 40% from their place of work, 8% from a training/educational establishment, and 36% at the home of a neighbour, friend or parent. Some accessed it from a cybercafé, a public library, a post office, a public service institution or a collective or charitable organisation. 29% access the internet solely from home, 8% solely from their workplace (not located in their home).

The main device used to access the internet is the personal computer, but the availability of other means is growing, such as access *via* television, games console, mobile phone and PDA.

Over 15.5 million broadband subscribers in France

According to France's electronic and postal communications regulatory authority (*Autorité de régulation des communications électroniques et des*

Graph 2 – Broadband and narrowband access rates, EU-27, 2007 *(%)*



MK: 2006 TR: 2005

Source: Community survey on ICT usage in households and by individuals, 2004, 2005, 2006, 2007 – Eurostat.

postes, ARCEP), on 1st January 2008, there were 15.5 m domestic and business broadband subscribers in France, of which 14.8 m were ADSL subscribers, which ranks France 8th in Europe, with a subscription rate of 22.3 subscriptions per 100 inhabitants, putting it just behind the UK, and ahead of Germany, Spain and Italy (see Graph 1). Northern European countries are clearly ahead of the rest of Europe; with a penetration rate of 37.2% Denmark's is twice the European average.

Highest adoption rates amongst families with children

As Graph 3 shows, households with children are more likely to have computers than those composed solely of adults. There is also a digital divide on levels of access to the internet. In 2007, within the EU-27, 79% of households with children living at home had a computer or palmtop computer (81% in France), whereas only 57% of homes without children had one (52% in France). In 2007, within the EU, 66% of households with children had access to an internet connection at home (68% in France), whereas only 49% of households without children had one (40% in France).

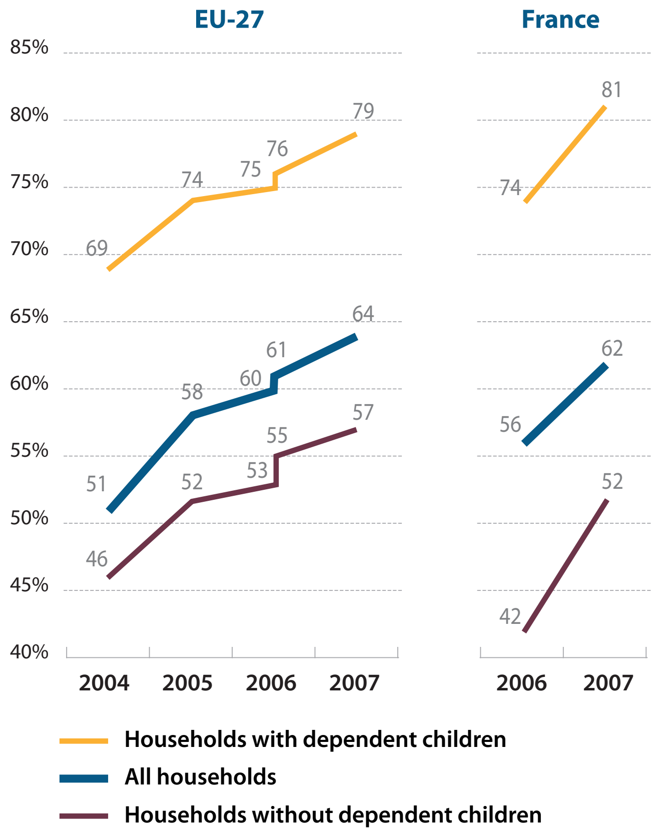
These differences show the high demand for communication and leisure activity amongst families with children. Households without children include adults living alone, households whose children have left home, and those who have not had children. These differences are to a certain extent explained by differences in household incomes. For example, single-parent families are generally less likely to have a computer than those headed by two adults: in France in 2007, 62% of households comprising one adult and one or more dependent children had at least one computer, as compared with 84% of families comprising two adults and one or more children.

Moreover, amongst the 25% of households with the highest revenues, almost three-quarters have a computer (73%), whereas this figure is only 42% for the 25% of households with the lowest incomes.

Intensification of TIC usage

In terms of digital usage, France ranks quite highly: two thirds of individuals have logged on to the internet at least once in the last twelve months, this proportion is slightly lower for the last three months (64%, see Table 2), as these individuals regularly use the internet, whether to check their email

Graph 3 – Household computer adoption rates (%)



NB: from 2006, the statistics include palmtop computers.

Source: Community survey on ICT usage in households and by individuals, 2004, 2005, 2006, 2007 – Eurostat.

or to look for information *via* a search engine. 69% of the population has used a computer over the last three months, whether at home, at work or elsewhere (63% for the EU-27).

In tandem with the distribution of hardware, usages have increased, (both the use of computers and access to the internet), including the social groups in which information and communication technologies were less widespread.

Digital convergence contributes greatly to this, as it increases the services available considerably: voice-over IP to make calls from computers, bundled offers of three or four services (television-internet-landline and/or mobile telephone). With this come new means of accessing cultural content: audio and video streaming, podcasts (downloading).

In terms of age, young people are the biggest group of internet users, and in terms of social status, they tend mainly to be students and those in work. Amongst 16-24 year-olds, 95% have used a computer within the last three months (EU-27 average: 89%), 92% have connected to the internet at least once (EU-27 average: 85%). Usage levels vary greatly with age, and particularly in France when compared with the rest of the European Union: only 15% of those between 65 and 74 connected to the

Table 2 – Individuals'computer usage, EU-27 and France, 2004-2007 *(%)*

	European Union (27 countries)				France	
	2004	2005	2006	2007	2006	2007
Frequency of computer usage over the last three months						
Percentage of individuals who have used a computer over the last three months:						
at home, at work, or elsewhere	52	58	59	63	55	69
at home	42	48	49	54	44	55
at their workplace (not located at their home)	24	28	29	31	27	34
every day, or most days	34	41	42	46	39	51
on average at least once a week (but not every day)	12	12	12	12	:	14
on average at least once a month (but not every week)	4	4	4	3	:	3
on average less than once a month	2	1	1	1	:	1
Frequency of internet access over the last three months						
Percentage of individuals who have accessed the internet over the past three months:						
at home, at work, or elsewhere	44	51	52	57	47	64
at home	32	40	41	47	35	46
at their workplace (other than home)	18	21	22	25	18	25

Source: Community survey on ICT usage in households and by individuals, 2004, 2005, 2006, 2007 – Eurostat.

internet over the last three months (EU-27: 16%). Moreover, between 2002 and 2007, usage rates in the young increased at a faster pace than those for older citizens: for instance, within the EU-15 countries, youth usage increased at a rate of 4.4 percentage points per annum, compared with 2.2 per annum for the oldest users (Graph 4, p. 56).

Email and internet research ensure regular usage

In France, 64% of the population has connected at least once over the past three months. Of these internet users, 64% are very regular users who connect daily, or almost daily; a quarter connect at least once a week, but not daily; the remaining 10% connect less often. Checking email and looking for information are, by a long chalk, the two main motivating factors behind users'internet access. In this respect, differences according to age are much less significant, whether they are regular users (connecting at least once per week), or less frequent users: in France, as in the EU-27, 90% of those who had connected within the last three months connected on average at least once a week, regardless of age, sex, education or social status (with a variation of only ± 5 percentage points).

However, amongst very frequent users, who connect daily, or almost daily, very different profiles are observed, arising from determining factors such as different possible places from which they can access the internet or availability of free time. Young people between 25 and 34 who can access the internet in the course of their studies or in their working and private life (cybercafé, home, family/friends, etc.) are very frequent users, as are those aged 65 and over, who have the advantage of greater available free time. Having a broadband connection makes users more likely to connect regularly: 71% of those with a broadband connection connect on average daily, or almost daily, compared with less than half of those with a narrowband connection.

Broadband is superior to narrowband when it comes to the ease of surfing the net and downloading and playing videos.

In France, women are slightly less likely to use the internet than men, but this minor behavioural difference is much more marked at European level.

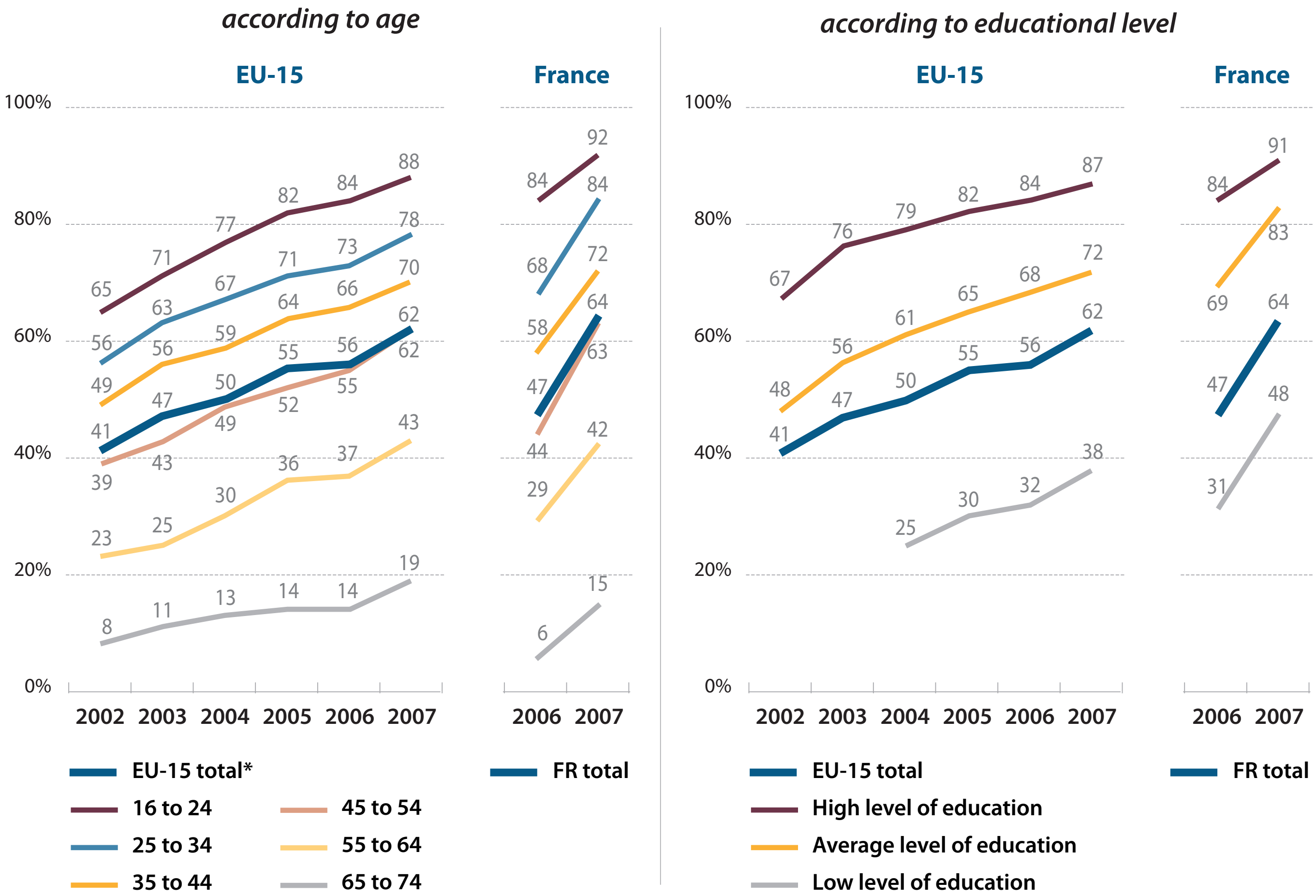
Individuals'main cultural activities

In France in 2007, 64% of French people had accessed the internet at least once over the course of the last three months either at home, at their workplace or elsewhere, and 86% of this group had used it to research information on goods and services (Table 3, p. 57), 76% had accessed their email, and one quarter to one third had used it for some other purpose: 34% had read/downloaded games and music, 28% had read/downloaded online newspapers, 27% accessed radio or television programmes, 22% had downloaded software, (bearing in mind that, having logged on, the same person may engage in several on-line activities).

If we examine figures for the period of the last twelve months rather than the last three months, the proportion of French people who have logged on to the internet still remains at two thirds (66%, as compared with 64% within the last three months), but more of them have ordered on-line (53% compared with 41%).

Graph 4 – Internet use by individuals according to age and education

Percentage of individuals who have used the internet within the last three months



* EU-15: results are similar to those for EU-27 countries, and, in addition, data for 2002 and 2003 are available.

Source: Community survey on ICT usage in households and by individuals, 2002-2007 – Eurostat

E-commerce: a preference for cultural products… available online

In France in 2007, 41% of those who went online over the last three months had made an online purchase of goods and services for their own personal usage (26% of the 64% who connected).

If we look at a longer timescale, over half of individuals who connected to the internet within the last twelve months purchased goods or services online (35% of the 66% who connected, see Table 4).

Over the last twelve months, one person in five went online to acquire films, music, books, magazines, e-learning materials or software (including video games); one in ten bought theatre, cinema, concert, opera, dance or sporting event tickets. Almost one person in ten went online to buy books, magazines or e-learning materials which are delivered (or updated) online. France has the highest rate in Europe of online activity resulting in a purchase of this type of cultural product, whilst it comes an equal third with Iceland, behind the UK and Germany (8% of individuals for each), for the purchase of music or films delivered or updated online (7%).

Overall, France's ranking is about average in relation to other EU-27 countries, with a high proportion of buyers of cultural products *via* online download (with the exception of online software), and a lower proportion of users buying holidays and holiday accommodation online.

In terms of business turnover generated, however, the travel and hotel and catering sectors take the lion's share, accounting for over one third of the total value of online sales. In early 2006, the proportion of business turnover (for businesses with over 10 employees) generated by online sales is still relatively low in Europe (4.1% for the EU-27, 3.7% for France with a maximum of almost 6% for the UK).

Table 3 – Individuals'online activities, 2007 *(%)*

Of those individuals having used the internet over the last 3 months, percentage of those who logged on to:	EU-27	France
research information and services online	:	:
Research information on goods and services	**81**	**86**
Access services related to travel and accommodation	53	48
Research into health-related information	42	45
Read/download games and music	**38**	**34**
Read/download newspapers/magazines online	**36**	**28**
Access radio and television programmes	**26**	**27**
Download software	**30**	**22**
Research a job or submit a job application	20	20
communicate	**87**	**81**
Send/receive emails	**84**	**76**
Make telephone calls *via* the internet for videoconferencing	**17**	**14**
Other communication activities (talkboards, etc.)	**37**	**30**
administrative tasks	52	64
Information from public authority websites	47	58
Download official forms	31	37
Submit completed forms	22	28
banking services	44	51
training and education*	35	:
Formal educational activities (school, university, etc.)	16	:
Training after leaving school	16	:
Other specifically vocation-related trainingi	16	:
e-commerce (buying/selling)	:	:
Ordering goods and services for their own personal use over the internet	**40**	**41**
Sale of goods and services (*e.g.* auction sales)	**16**	**12**

Several possible responses.
* 2006 figures: the secondary items in the "Training and education" category changed in 2007, and the results are not available.
Communication activities or activities and cultural products are shown in blue.

Source: Community survey on ICT usage in households and by individuals, 2007 – Eurostat

Table 4 – Individuals'online purchases, 2007 *(%)*

Percentage of individuals who have ordered on the internet for their own private use over the last year:	EU-27	Highest ranked in EU-27		France
		Country	Number	
Goods and services	30	NO	63	35
Cultural or communication products:				
films/music, online books/magazines/e-learning materials or software (including video games)	18	NO	37	21
books, magazines or e-learning materials	12	LU	28	14
films, music	10	UK	27	11
software (including video games)	7	DE	19	6
films/music, books/magazines/e-learning materials or software (including video games) **delivered or updated online**	9	DE	19	15
books, magazines or e-learning materials delivered (or updated) online	3	FR	9	9
films, music delivered (or updated) on line	4	DE, UK	8	7
software delivered (or updated) on line	5	DE	14	3
tickets for live entertainment	9	NO	34	10
electronic goods*	7	NO	18	7
Non-cultural products:				
clothing or sporting equipment	12	DE	25	17
holidays and holiday accommodation	13	NO	41	14
household items (such as furniture, toys, etc.)	10	DE	24	14
computer hardware	5	DK	12	9
foodstuffs	3	UK	11	2
shares, financial services or insurance products	3	NO	10	2
taking part in betting or gambling	2	FI	14	2
other types of goods or services	3	NL	27	4

* Includes, inter alia, digital cameras, mobile phones, radios, TV, video recorders, cine-cameras.
NB: several purchases of different types of item are possible.

Source: Community survey on ICT usage in households and by individuals, 2007 – Eurostat

In terms of computer equipment (computers, internet connections), in 2007 France was slightly below the European average. On the basis of recent changes, and assuming levels continue at their present rate, projections indicate that by 2010, France should draw level with the average EU-27 internet access rate, with around 60% of households having a home internet connection (see Graph 5). There is clearly a strong correlation between the boom in e-commerce and the increase in computer use and internet access, as internet access is almost exclusively done *via* a computer.

E-commerce is expanding throughout Europe, despite the restraining factors which until recently have made users reticent about engaging in this. One indicator of this practice is more distinctive than the frequency of computer or internet usage. In fact, throughout Europe, email and the search for information (through search engines) are by far the greatest and most regular drivers of internet usage, and the frequency of internet usage is therefore higher across the board.

Four distinct groups of countries emerge with regard to the level of household computer access, internet access, and the percentage of individuals who have ordered goods and services *via* the internet for their own private use over the last twelve months. In the first group, the eastern Mediterranean countries of Romania, FYROM, Greece and Turkey are the emerging countries in terms of computing equipment and internet access (see Graph 6 and map). As these resources are still not very widespread, e-commerce is still an emerging practice. Between 15% and 40% of households have a computer, in 2007 internet access levels were below 28% and less than 5% of homes had ordered goods or services *via* the internet over the last twelve months (with the exception of Greece: 8%).

In the south-east/north-west sweep of countries which make up the second group, computer adoption levels are average (between 40% and 60%), levels of internet access are still fairly low (less than half of households have access) and in most countries between 8% and 15% of households engage in e-commerce.

Five countries, including France, form a group which is close to the European average, both in terms of adoption and internet access levels. Engagement in e-commerce divides this third group in two: France, Austria and Ireland, in which 35% of households have ordered goods or services *via* the internet over the last twelve months, and Belgium and Slovenia, in which this is less prevalent.

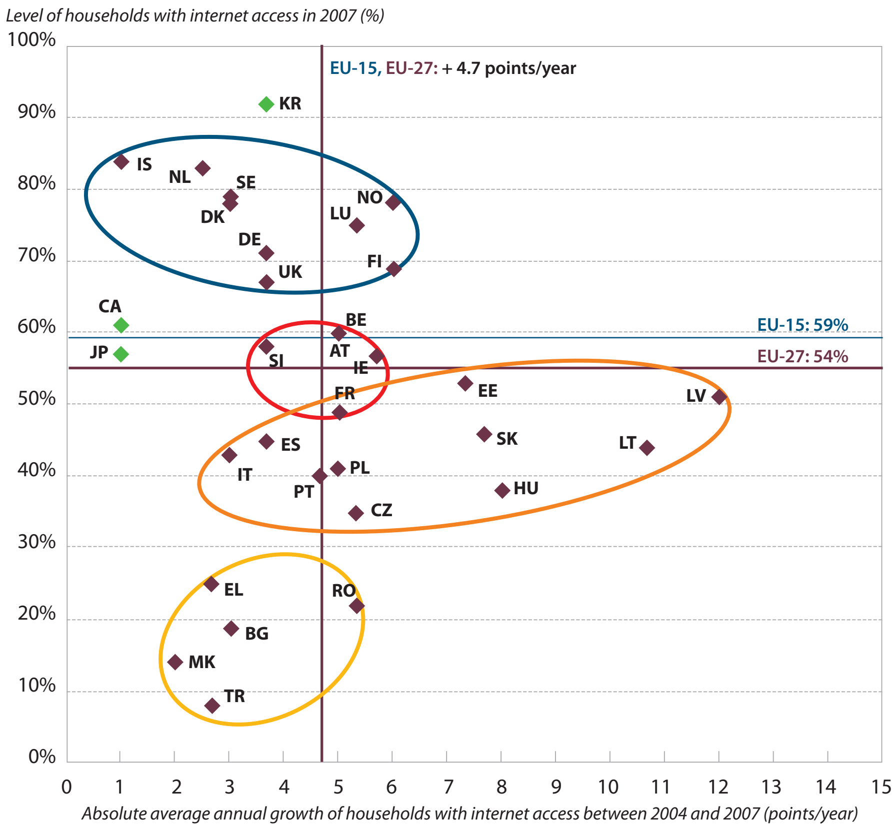
Finally a fourth group unites 9 countries which form a triangle in the centre of northern Europe, in which all rates are higher than elsewhere by at least ten points. Iceland, Norway, the Netherlands, Denmark and Sweden all have computer and internet adoption rates of around 80%. In Iceland, nine out of ten households have access to a computer. In Norway, 63% of households have made an order *via* the internet over the last twelve months.

Internet access levels continue to rise

Over the next three years, the countries with the highest adoption rates should gradually reach total adoption, and by 2010 the level of internet access will undoubtedly reach around 90%.

In the average group, France's internet access levels should reach that of the EU-27, *i.e.* around 60%. Broadband access levels in Den-

Graph 5 – Level of internet access and absolute average growth of this level between 2004 and 2007



Earliest year available: 2005 for BE, SE
Most recent year available: 2006 for MK; 2005 for TR, CA, KR, JP.
The ellipses here represent the groups of countries identified in Graph 6.

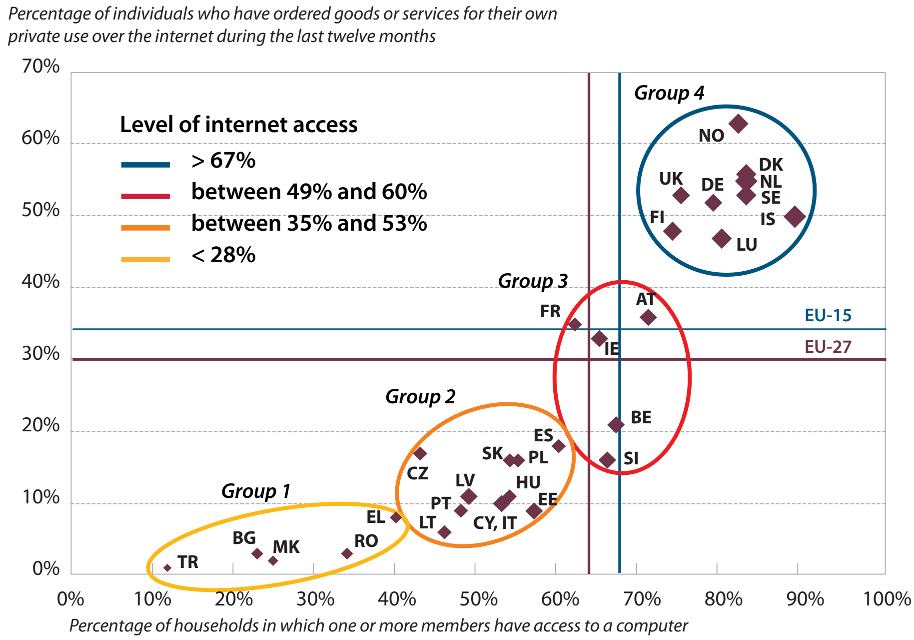
Source: Community survey on ICT usage in households and by individuals, 2007 – Eurostat

mark and Luxembourg are growing faster than for other European countries.

For the two other groups, it is likely that progress will be more mixed, even though there is generally an upward trend, it is now slowing each year as countries reach full adoption: looking at the last five years, Slovakia and Romania should stand out, the former having an internet access rate of 80-90%, the latter, 40% of homes. Nevertheless, these two countries still have a considerable proportion of narrowband users, whereas technological advances will increasingly require broadband. For other countries, there will probably be a 5-10 point increase, possibly higher in the Baltic States.

For instance, currently over 90% of Korean households have access to the internet. It is true that population density and urbanisation have meant that infrastructure investments have quickly become profitable for operators. Moreover, the government has strongly supported demand by offering free training to a wide range of the population who might otherwise miss out, *e.g.* homemakers, the disabled, etc., and by encouraging internet installation in schools, along with the introduction of new Wibro (Wireless Internet Broadband) and "Ubiquitous" technologies. South Korea has also concurrently expanded digital convergence thanks to the higher download speed which 3.5G allows, as launched on the mobile telephony market in 2002.

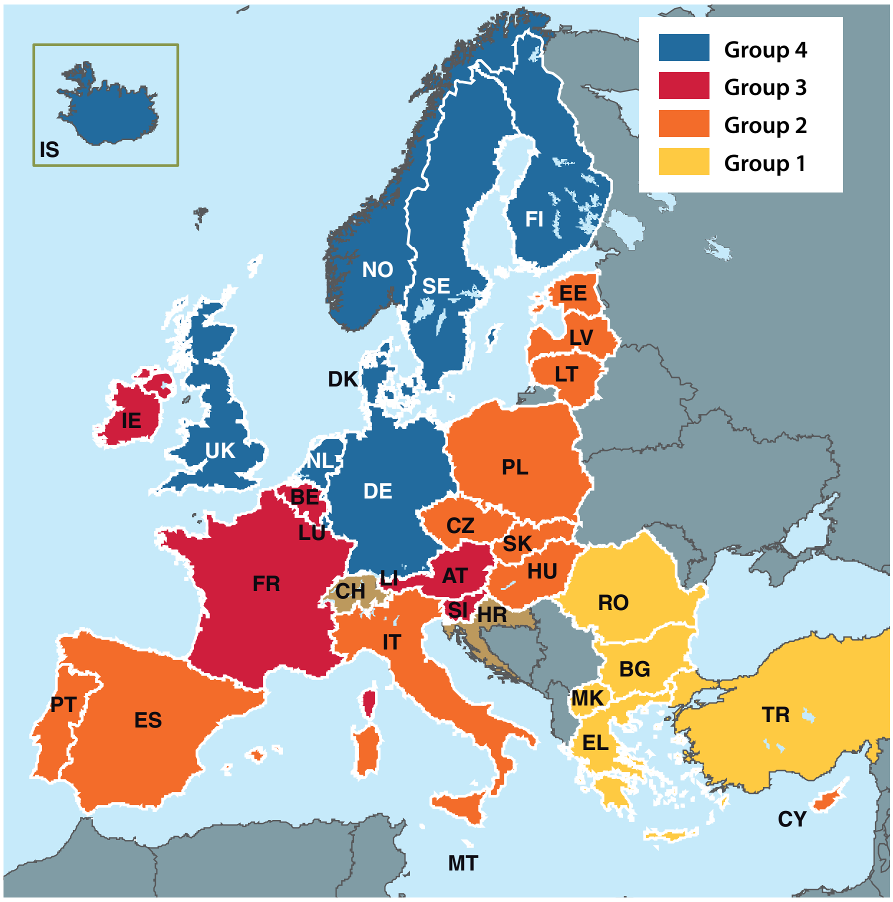
Graph 6 – E-commerce *versus* computer adoption rates and internet access levels, 2007



TR: 2005 data; MK: 2006

Source: Community survey on ICT usage in households and by individuals, 2007 – Eurostat

Map – E-commerce and computer equipment adoption in 2007



The groups of countries shown on the map relate to the country groupings identified in Graph 6.

Source: Community survey on ICT usage in households and by individuals, 2007 – Eurostat

Highly diverse purchases

In France, of those who have made an online purchase within the last twelve months, 59% bought films, music, books, magazines or e-learning materials, 30% bought tickets for live entertainment, 19% bought electronic goods, with individuals having possibly bought one or more types of product.

In terms of the diversity of goods purchased, France's position within Europe is about average. Compared with other European countries, France has a relatively high proportion of purchasers of cultural products either delivered or updated online (except for software) and certain non-cultural products. In 2007, of those users who had ordered online over the last twelve months, 44% had bought films, music, books, magazines or e-learning materials delivered or updated online. France is also Europe's second-largest purchaser of domestic products online (41%) just behind Germany (47%). On the other hand, the online purchase of software or electronic goods is less popular with French internet users. In some countries, the online purchase of some cultural goods is extremely prevalent: in Luxembourg, of those users who had ordered online over the last twelve months, 75% had bought books, magazines or e-learning materials; in Norway, 54% had ordered tickets for live entertainment, and in Estonia, 53%. Almost as many French internet users made an online order with a retailer found on the internet as with a retailer already known to them.

Buyers composed largely of those in employment

More of those of working age and with a regular income (aged 25 to 54) make online purchases than those in the younger age bracket (aged 16-24, many of whom are still students), and those in the older age bracket (aged 55-74). Of those aged 25 to 34, over half of internet users who had logged on to the internet within the last three months had made an online order (54%), this figure is almost halved for those aged 65 to 74 (27%), and was 35% amongst the younger age bracket.

Age, education and social status seem to be greater determining factors of computer usage and internet access than of online purchasing. On the other hand, having a broadband rather than narrowband connection has an influence on one's likelihood of making an online order: almost half of those who had connected to the internet *via* broadband within the last three months made at least one online purchase (46%), whilst only one third of those with slower connections had made a purchase within this period (32%).

In France in 2006, around one third of individuals had either ordered goods or services online more than a year ago or had never made such an order. The main reasons cited for this were: they preferred to make a purchase in the shop and where they could see the product, either through habit or loyalty to certain stores (for 45% of them); they were concerned about communicating their credit card or personal data (48%); they didn't need to order online (30%); they were not confident of either receiving goods or returning them in the event of possible complaint or other appeal (13%); they lacked the required skills (8%); they didn't have a credit card (6%). The reasons given by those who had made online purchases included: practicality (24-hour access, no need to travel); competitive prices; a range of products not always available in traditional shops; more detailed information available for online products and prices (thanks to online price comparison sites).

MOBILE TELEPHONY AND TELEVISION IN THE INTERNET AGE

The northern European countries have the highest rates of adoption and intensity of use, with an ever-more diverse range of online activities. These computer-related activities go hand-in-hand with other, more traditional, cultural activities such as reading books, newspapers and magazines. However it would seem that on average these countries spend less time watching television than other EU countries.

In 2006 practically all households in the EU had a television set, with many possessing two or more. The northern European countries watch little television in comparison with those in southern Europe: in Sweden, Denmark and Norway, the average viewer watches 2 hours 30 minutes per day, in Finland it is almost 2 hours 50 minutes, whilst in Greece, Romania, Croatia, Italy and Hungary, this figure reaches 4 hours and more. France once again falls within the average range, with 3 hours 24 minutes'viewing per day. Two countries with high computer and internet access adoption levels buck this trend: the UK and Germany, with average daily viewing times of 3 hours 36 minutes and 3 hours 32 minutes respectively. However, in 2006, the average viewing time fell for the first time in more European countries than those in which it rose, according to the European Audiovisual Observatory.

Beyond the geographical contingencies which already existed before the year 2000, it may well be that internet penetration brings with it a drop in television audiences, just as previously occurred with radio audiences. Those young people who already spent much less time than their elders in front of the television are also the ones most likely to be connecting to the internet. However, the boom in digital terrestrial television, with its greater selection of youth-oriented channels, and with digital convergence offering the possibility of watching TV on computers and mobile telephones, this trend may well be reversed. Changes to means of accessing these services favour new practices, and even their concurrent practice, which means the traditional methods of measuring and analysing audiences will have to become more sophisticated.

In terms of mobile telephony, the northern European countries are once again better equipped and are high users. However, certain southern European countries are really getting on board, with countries such as Italy and Portugal in the throes of a veritable love affair with the mobile phone.

The mobile phone boom

Whilst the penetration rate for mobile telephony has just exceeded 100 in most European countries, France had 82 subscribers per 100 inhabitants in 2006, including monthly or pay-as-you-go tariffs

Graph 7 – Access to telecommunication services *(penetration rate, per 100 residents)*

Data prior to 2006 show, for each country, the year in which mobile phone subscriptions exceeded the number of landlines

Source: Statistics on telecommunications services, 1998-2006 – Eurostat

(Graph 7). It is a fact that in France there is a higher percentage of landlines per head of population than almost anywhere else in Europe, besides Germany (61 landlines per 100 inhabitants in France in 2006 whilst Germany has 67). In fact, exceeding 100% does not mean that everyone has a mobile phone, but for reasons of fashion as much as practicality, many people have two or more mobile phones, and have one or more numbers which correspond to one or more subscriptions.

As of 2000, mobile telephony had overtaken fixed-line telephony in most European countries, with northern European countries in the lead, with the exception of those in which fixed telephony was already very well established (*e.g.* Luxembourg, Denmark, Germany and France). Certain latin countries such as Portugal and Italy crossed this line in 1999. By 2006, all European countries favoured mobile phones over landlines, which may allow a large proportion of the population to access the internet *via* their mobile phones, including when away from home.

With 15 billion text messages (or SMS, *short message service*) sent in 2006, France has a relatively low rate of text messaging: per active subscription, in 2006, the average user sent 24 text messages from their mobile phone each month (Table 5). By contrast, Lithuanians sent 160. These considerable differences are actually linked not only to practice but also to the more or less favourable tariffs offered by the operators. ■

Table 5 – SMS traffic, 2006

	Number of outgoing text messages *(millions)*	Average number of text messages sent per active subscription
LT	9 034	160
DK	10 158	145
CY	1 362	130
MT	410	104
IE	5 745	100
NO	5 225	86
PT	12 458	85
PL	26 297	60
HR	2 511	48
FI	3 088	45
CH	3 677	41
CZ	6 230	41
BE	4 474	40
TR	25 088	39
IS	120	31
EL	3 827	31
LU	248	28
SE	2 857	25
SI	538	25
SK	1 324	24
FR	**15 050**	**24**
DE	22 200	22
AT	2 059	18
ES	8 761	16
HU	1 709	14
EE	215	11
RO	2 253	11
BG	538	5

Countries listed by decreasing volume of average monthly SMS traffic
EL, SK, MT: data from 2005
Data unavailable for IT, NL and UK.

Source: Statistics on telecommunications services – Eurostat

SOURCES

Community survey on ICT usage in households and by individuals (Eurostat)

In order to issue consistent and comparable data on the usage of information and communication technologies, Eurostat provided a questionnaire type which covered the following areas:
- access to certain information and communication technologies (data collected on households);
- use of a computer, location, frequency of use, activities (data collected on individuals);
- internet use (data collected on individuals);
- business conducted online (data collected on individuals).

Using this survey model, the national statistical institutions or member states'government ministries collect data on the information and communication technologies (ICT) and e-commerce usages. ICT indicators have been available annually since 2002.

Those surveyed were aged 16-74. Businesses were also the subject of the same type of co-ordinated survey on their ICT usage.

Within this study, the term "computer/s" refers to personal computers belonging to households or individuals. 'Practices' or 'activities' refer to their use, whilst 'internet practices' or 'internet activities' cover private use whether on a personal computer or not, at home or elsewhere (work, educational institution, cybercafé, library, or other public places, at friends 'or families' homes etc.). Except where otherwise stated, within the study, 'e-commerce' only refers to purchases made on the world-wide web by individuals and for their own private use.

TERMS AND DEFINITIONS

Information and communication technologies (ICT) – The term ICT covers a wide range of services, applications, technologies, hardware and software which allow information to be generated, processed and transmitted, *i.e.* tools such as telephony and the internet, distance learning, television, computers, networks and software.

Computer – Desktop and laptop computers, and, as of 2006, palmtop computers are also included under this term.

Desktop computer – A personal computer or professional workstation which is generally in a fixed location and has a keyboard and screen.

***Portable computer* (laptop)** – Fairly compact computer designed to be easily portable and capable of performing the same functions as a desktop computer. This category does not include the palmtop computer.

***Palmtop computer or PDA* (personal digital assistant)** – Handheld computer which can be stored in a bag or pocket. A PDA works using a touch-sensitive screen or has an integrated keypad with miniature keys. A PDA is a pocket organiser with additional telephone functionality, whilst a *smartphone* is, in appearance, more like an advanced mobile phone to which PDA functionalities have been added.

High speed or "broadband" internet connection – System which transfers data at speeds above 144kbit/s. This may be transmitted in a number of ways: cable and DSL technologies send data *via* copper wires (ADSL = Asymmetric Digital Subscriber Line, in which download speed is faster than the upload speed, SDSL = Symmetric high-speed DSL, etc); through a LAN (Local area network) and FWA technologies (Fixed wireless access) for wireless local loop; *via* fibre optic cable (using laser and light-emitting diodes); by satellite; *via* the UMTS (Universal Mobile Telecommunications System, for 3G mobile technology); or *via* HSDPA (High Speed Downlink Packet Access) for 3G + mobile technology.

Low speed, or "narrowband" internet connection – A system which transfers data at speeds below 144kbit/s, using a modem (modulator-demodulator which converts digital computer signals into analogue signals compatible with the switched telecommunications network, and vice versa), using ISDN (Integrated services digital network), or using 2G mobile telecommunications technologies such as WAP (Wireless Application Protocol) or GPRS (Global Packet Radio Service).

Electronic commerce – According to the OECD definition, an electronic transaction is the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organisations, conducted over computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. This OECD definition includes not only ordered received and placed *via* a website, but also those made using minitel, interactive telephone systems (Audiotel) or even, for business-to-business transactions, through direct, electronically-exchanged data communication systems such as EDI. This term excludes, however, transactions placed using non-interactive means, such as facsimile and telephone, as well as emails when they are not exchanged within the framework of an interactive application (sending of a conventional email followed by manual order handling).

Level of broadband internet access **–** Percentage of households with access to high-speed internet within the home.

Broadband penetration rate **–** Number of current high-speed private and business internet subscriptions across the average population expressed as a percentage. A country's broadband penetration rate is an indicator of market deregulation, and may exceed 100.

The level of household high-speed internet access indicates the adoption rate of France's 26.5 m households, and takes into account the country's consumer broadband distribution; it will reach 100 when all homes are equipped. These two indicators are mutually complementary. Households may have access to a number of items such as computers, mobile telephones, etc. covered by one or more subscriptions. Moreover, when comparing countries, the average household size varies slightly from one country to another; in metropolitan France the estimated figure for 2007 was around 2.25 people, with that number predicted to continue falling up to 2030, whilst the number of households continues to increase.

COUNTRY CODES AND SYMBOLS

European Union (EU-27): Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE), United Kingdom (UK).

EU-15 countries, up to 1st May 2004: BE, DK, DE, IE, EL, ES, FR, IT, LU, NL, AT, PT, FI, SE, UK.

Applicant countries: Croatia (HR), former Yugoslav Republic of Macedonia (FYROM, MK), Turkey (TR).

European Free Trade Association (EFTA): Iceland (IS), Liechtenstein (LI), Norway (NO), Switzerland (CH).

Other countries: Canada (CA), Japan (JP), Republic of Korea (KR).

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