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**DIFFUSION AND USES OF INTERNET IN CATALONIA AND IN SPAIN**  
A Commented Summary of Available Evidence, as of 2001.

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**WORKING PAPER**

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## KEYWORDS

Internet, Catalonia, Spain, statistics, diffusion, Internet uses, socio-demographic characteristics.

## ABSTRACT

This working paper summarizes and analyzes the statistics provided by available studies on the spread and uses of Internet in Catalonia, in Spain, and in selected Spanish regions circa 2001. A data base was established by collecting and evaluating studies and surveys from various sources. Their methodology is described in the study. Relevant variables are identified, and tables are built for each variable bringing together data from various sources. An analytical commentary highlights the main findings concerning the relationships between Internet and society in Catalonia, in Spain, and in the Spanish Regions. A number of hypotheses on these relationship are suggested.

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## 2. THE CATALAN NETWORK SOCIETY.

### A commented summary of the evidence on the uses of Internet in Catalonia, 1999-2001.

Internet access has increased in Catalonia at a fast pace, similarly to other advanced countries, although with a late starting point, probably due to the high cost and low quality of connection until the late 1990s. In Catalonia the Observatori de la Secretaria per a la Societat de la Informació de la Generalitat de Catalunya (Estadístiques Societal Informació (ESI) study) shows a 18.5% penetration rate for households in 2000, which jumped to 27.1% in 2001, with an annual increase of 46.4%<sup>2</sup>. Other sources estimate the penetration rate for persons in 2001 at 24.8% and 21.1%.<sup>3</sup> In the Metropolitan Area of Barcelona, the Encuesta Metropolitana de Barcelona put the penetration rate for households in 2000 at 23.2%<sup>4</sup>. According to the Encuesta General de Medios the proportion of persons connected to Internet in Catalonia grew from 4,8% en 1997 to 24,8% in 2001, that is a cumulative growth rate of 416.6% (See Fig 1). For the city of Barcelona, the Omnibus Municipal survey showed an increase in the percentage of households connected to the Internet from 6.7% in 1997, to 11.3% in 1998, 14.7% in 1999, 26.8% in 2000, and 37.3% in 2001, with a cumulative growth rate for the period 1997-2001 of 489%<sup>5</sup>. Thus, it is safe to assume that there has been a fast diffusion of Internet, at a higher pace than in the rest of Spain, and similar, in terms of the rate of growth since the late 1990s, to the advanced countries in Northern Europe.

Even considering a significant slow down of the growth rate as Internet diffuses into less educated, poorer and older segments of the population, it is reasonable to expect that around 2005, about two thirds of the Barcelona households, and well over 50% of the households in Catalonia will be connected to the Internet. Within the first decade of the 21st century, Internet is likely to become a quasi-universal medium of communication in Catalonia, particularly counting on the development of wireless Internet access of various modes. Indeed, in 2001, 77.3% of the Catalan population were users of mobile phones<sup>6</sup>, and over 64% of households had at least one mobile phone<sup>7</sup>. Mobile phone use grew by 80.7% between 1999 and 2001<sup>8</sup>. Because mobile Internet access is the new frontier of expansion of Internet use, particularly in Europe, the convergence between widespread mobile phone use and growth of the Internet is likely to substantially increase the uses of network communication in all domains of Catalan society.

Fig 1 - Evolution of percentage of persons connected to the Internet in Catalonia (1997 – 2001)

| EGM (2001)      |                     |                        |
|-----------------|---------------------|------------------------|
|                 | % of Internet users | Yearly growth rate (%) |
| 1997            | 4.8                 | -                      |
| 1998            | 8.2                 | 70.8                   |
| 1999            | 11.5                | 40.2                   |
| 2000            | 18.6                | 61.7                   |
| 2001            | 24.8                | 33.3                   |
| Total 1997-2001 |                     | 416.6                  |

<sup>2</sup> See V.2 and Fig 2

<sup>3</sup> See V.3

<sup>4</sup> See V.1

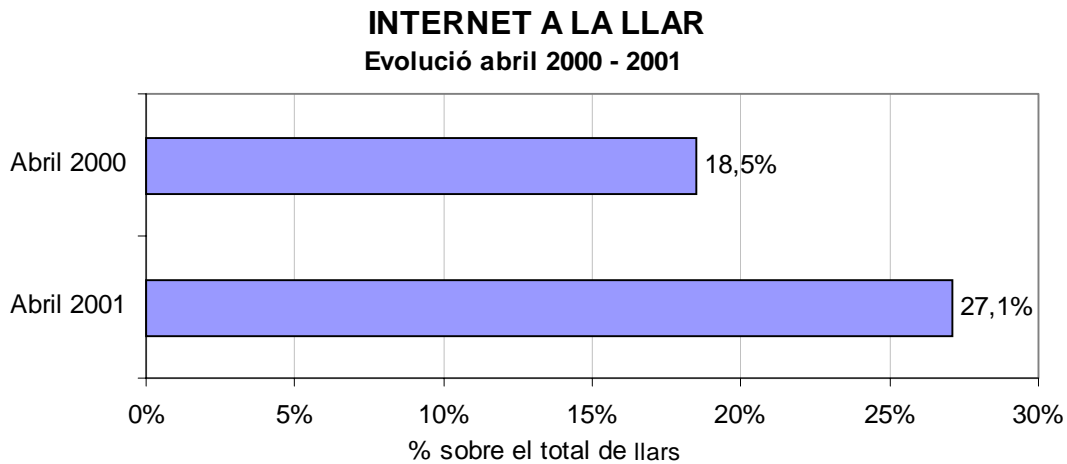
<sup>5</sup> See V.2

<sup>6</sup> See V.14

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Fig 2 - Evolution of percentage of households connected to the Internet in Catalonia (2000 – 2001)

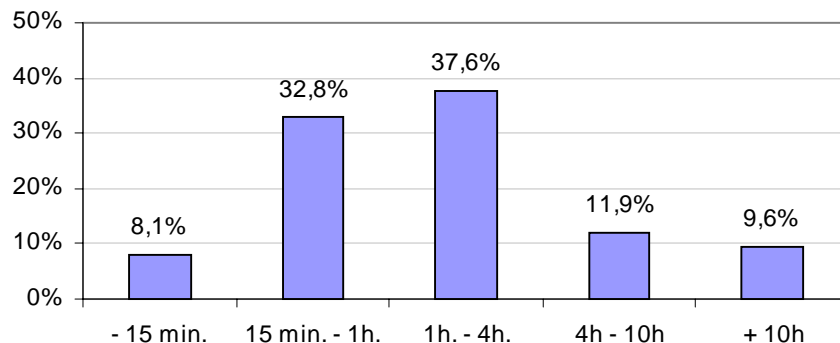


Font: Secretaria per a la Societat de la informació a partir de dades de l'INDESCAT. Abril 2001.

However, frequency of Internet use among Internet users, according to ESI's 2001 data, is still limited: 33.7% of users connect daily, and another 35.8% at least weekly. But considering that these percentages apply only to the Internet users, the result is that, in 2001, only 14.4% of the Catalan population connect to the Internet daily. Nonetheless, the growth of daily connections (27.6% annually<sup>9</sup>) is much higher than the growth of Internet use in the other frequency groups, thus underscoring the trend towards greater use of the medium. Yet, the intensity of the use, even among the weekly users is moderate: in 2001 43.5% of users connecting from home spent between 1 and 4 hours, and only 24.8% were on-line more than 4 hours a week<sup>10</sup>. The time spent on the Internet is even lower among those connecting from their work place: respective percentages are 37.6% and 21.5%. (See Fig 3)

Fig 3 – Average time of connection to the internet from the workplace

**Temps mitjà setmanal dedicat a Internet al treball**  
% sobre els usuaris setmanals d'Internet al centre de treball



These average percentages, however, **hide an extraordinary gap in the frequency and intensity of Internet use depending on age of the user**. Thus, while among the group of age 15-24 almost 65% use

<sup>9</sup> See V.17

<sup>10</sup> See V.21

Internet weekly, in the population over 55 years of age the proportion is only 3.4%, and only 5% have used at least once in their lives. Moreover, among the key age group in society in terms of holding positions of decision making, the one between 40 and 54 years, only 20.6% use the Internet weekly. The group 25-39 is closer to the younger group in terms of frequency use, with 44.4% being weekly users of Internet (source: ESI 2001)

This observation must be qualified. The difference of Internet use according to the age group must be placed in the social context. The data on the city of Barcelona (Omnibus Municipal) offer an interesting perspective in this regard. The younger age groups show much higher percentage of Internet use than the Catalan population at large, but so do the older groups. So, the group between 55 and 64 years of age in Barcelona shows a percentage of 19.4% of Internet use, in contrast with the 3.4% of the Catalans over 55. Only those over 65 in Barcelona show a similarly low percentage to the Catalan population at large (3.5%). Thus, there is a systematic correlation between age and the use of the Internet. But in Barcelona, in all age groups below 54 years of age, there is a significant percentage of Internet users (See Fig 4). This is certainly associated with the higher educational level of the population and with the directional functions of the capital city, but it may also be a function of the local context, of the telecommunications infrastructure, and of the personal networks and social milieux that favor the diffusion of Internet. This is to say that the more a locality is advanced as an information-based society, and the wider the diffusion of Internet. This is confirmed by the significant difference in the percentage of households with access to the Internet in towns with less than 10,000 inhabitants (19.3%) and Barcelona (29.9%). Yet, the difference between Barcelona and the medium sized towns is very small, since the percentage for towns between 10,000 and 500,000 is 28.6%<sup>11</sup>. This may be due to the excessively broad bracket of this category, and also to the fact that the largest of these towns are merged with Barcelona in the same metropolitan area.

Fig. 4 - % of Internet users by their age (% over total population)

|                           | Estadístiques SI (2001)* |
|---------------------------|--------------------------|
| Between 15 –24 years old  | 64.8%                    |
| Between 25 – 39 years old | 44.4%                    |
| Between 40 – 54 years old | 20.6%                    |
| >55 years old             | 3.4%                     |

|                           | Ómnibus municipal (2001) |
|---------------------------|--------------------------|
| Between 16 –24 years old  | 73.9%                    |
| Between 25 – 34 years old | 66.1%                    |
| Between 35 – 44 years old | 53.6%                    |
| Between 45 – 54 years old | 44.2%                    |
| Between 55 – 64 years old | 19.4%                    |
| > 65 years old            | 3.5%                     |

\* The data refer to weekly Internet users

Indeed, the comparison between the 4 Catalan provinces shows a significant difference between the percentage of users in Barcelona (32.4%) and the others: 18% for Girona, 21.3% for Lleida, and 24.9% for Tarragona<sup>12</sup>. These differences are probably not due to differences in income and education. Girona is a rich province, and Lleida and Tarragona as a whole are better off than some of the working class peripheries in the metropolitan area of Barcelona, accounting for about one half of the Barcelona province. Yet, networks of information, and information processing activities are based in the capital and its immediate hinterland, inducing higher demand for Internet use.

So, Internet, as in the rest of the world, is predominantly a metropolitan phenomenon, and within this metropolitan context, the rate of diffusion penetrates most of the population, including people until 50 years old. The average diffusion rate is lowered by the sudden decline of Internet use above 55 and particularly above 65. Given the aging of the Catalan population, these older groups weigh decisively in the overall statistic, actually providing a misleading picture of the diffusion of the Internet. Younger groups are fully in

<sup>11</sup> See V.129

<sup>12</sup> See V.144

the Internet, the proportion of users in the mature groups is roughly fifty/fifty, while above the age of 55 years, even in Barcelona, Internet users are a small minority.

The implications are that the new Catalan generation is already fully involved in the Internet as a privileged communication medium, in sharp contrast with the older generations. This is a phenomenon full of implications. On the one hand, natural succession of age cohorts will diffuse the Internet among society at large in a few years perspective. On the other hand, since the older groups are those in power positions, including the power to decide on the infrastructure and uses of the Internet, there is a clear gap of experience and knowledge between those deciding over Internet and those using it.

There is also a gender gap. In 2001, in Catalonia only 21.8% of women were Internet users, in contrast to 38.3% of men. In Barcelona, respective percentages were 31.4% and 48.7%<sup>13</sup>. However, in both contexts the annual growth rate of Internet users is significantly higher for women than for men, so it can be hypothesized that, over time, the gender gap in terms of Internet use may fade way, as it has in the United States and Scandinavia. There are no available statistics of Internet use by gender and age, but it is plausible than in the younger age groups the gender gap is considerably lower.

The education gap is substantial, as in other countries. In 2001, while over 60% of the population with a University degree are Internet users, only 10.8% of those with primary education are, and only 5.3% of the population without primary education are. Interestingly enough, context also interacts here with education. Thus, in Catalonia as a whole, almost 51% with secondary education are Internet users, a lower percentage than those with University education, but not dramatically lower. Yet, a survey conducted in the industrial town of Terrassa in 1999, shows a sharp contrast between the 52% diffusion rate for university graduates and the low 23% found among those with secondary education. In other words, working class secondary education may not be the same than secondary education at large: context matters<sup>14</sup>.

And of course, income distribution greatly influences the use of the Internet: while 60.9% of households with income between 420,000 and 675,000 pts/month use the Internet, only 5.4% of those under 125,000 pts/month do so. In the middle, 20.4% of those between 125,000 and 210,000 use it, while among those between 210,000 and 420,000 pts/month 46% are users. However, interestingly enough, at the top of the income scale the relationship reverses: among those earning over 675,000 pts/month the percentage declines to 56.2%<sup>15</sup>. We have two hypotheses to explain this oddity. The first, that the wealthiest group is also the oldest, on average, and we know the negative correlation between age and the uses of Internet. The second may be more interesting. The higher the income level, all other factors being equal, the lower the number of children, and the greater the likelihood of a smaller household. And we observe that the size of the household tends to be inversely related to the use of the Internet, albeit with some qualification that we will state below. This is because the presence of children and young people in the household maximizes the interest of the household for the Internet, both because the young persons want it and know how to use it, and because the parents want the connection for the education of their children, eventually becoming interested themselves.

Let us check the data on the matter. While the proportion of Internet users among households with 1 person is 7%, and among those with 2 persons is 23.5%, it increases to 34.5% for 3 persons households and to 44.1% for households with 44.1%. However, for the largest households (5 people or more) it drops again to 39.1%<sup>16</sup>. This is probably due to the fact that the largest households tend to be of lower educational and income level. It is in the professional middle class (with a married couple and two children still living at home in their mid-twenties) where we may find the largest incidence of Internet use.

This hypothesis may also find support from a different statistic. Comparing percentage of Internet users by work status, there is little difference between those working for a firm or organization, and those working in their own business: in both cases the percentage is close to 40%. It drops to 20.5% among those unemployed, usually among the least educated of the population. But it jumps to 70.4% among students,

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<sup>13</sup> See V.131

<sup>14</sup> See V.139

<sup>15</sup> See V.127

<sup>16</sup> See V.125

those who are now entering a new society and economy based on the ability to manage information<sup>17</sup>. In other words, we could suggest the idea that Internet appears to diffuse as an educational tool, and as an instrument of self-development, particularly among the younger groups of the population and, by extension, their parents while they still live in the same household.

From where do people connect to the Internet? Predominantly from home. This is one of the most intriguing observations from the studies of early Internet development in Catalonia. And it is consistent among the different sources. In Catalonia at large, according to ESI's study 55.9% connect from home, while only 36.6% do so from work, and a meager 21.4% do it from universities and schools. Administration sites account for 12.5% and "other places" (probably libraries, community centers, and some cibercafes) for 23.9% (of course the percentages refer to overlapping categories). The Barcelona study shows the same trend, with a higher percentage of Internet use both from home and work, but, surprisingly, a lower percentage (14.7%) of people connecting from schools and universities (See Fig 5). The Terrassa study confirms this profile. So, Internet is part of the home, sweet digital home. Part of the explanation seems to be related to the limited access to Internet facilities in the work place. Of course between 80% and 100% of business firms declare to have an Internet connection<sup>18</sup>. But this does not appear to be integrated in the working process of most of the work force. Furthermore, of all business firms connected to the Internet in 2001 over 50% did not even have a web site<sup>19</sup>, only about 20% performed transactions on line and only about 39% interacted with their customers via the Internet<sup>20</sup>. And among those with web sites, 54% of them registered less than 50 visits per month to their web site<sup>21</sup>. According to other various sources, the percentage of business firms doing some form of e-commerce in Catalonia was somewhere in between 10% and 14%<sup>22</sup>, and revenues from on-line operations for 91% of the firms amounted to less than 5% of their annual sales<sup>23</sup>.

Fig 5 - % of Internet users by place of Internet connection (over total Internet users)\*

|                                | Estadístiques SI (2001) | Òmnibus Municipal (2001) | Terrassa (1999) |
|--------------------------------|-------------------------|--------------------------|-----------------|
| Household                      | 55.9%                   | 77.7%                    | 46%             |
| Work                           | 36.6%                   | 42.6%                    | 23%             |
| University / Centre of studies | 21.4%                   | 14.7%                    | 13%             |
| Public places /Administration  | 12.5%                   |                          |                 |
| Other places                   | 23.9%                   | 3.6%                     |                 |

\* The total sum of percentages is higher than 100% because many of the surveyed persons marked two or more answers

Therefore, according to the few studies available on the matter, it appears that, as late as 2001, the uses of Internet in Catalan business firms were extremely limited, in their sales, in their internal management, and in their relationships to customers and suppliers. Their Internet connection was more often than not an external mean of communication, and their web site a publicity poster rather than an operational tool. Under such conditions it is little wonder that people could not often connect to the Internet from their work place.

Concerning public services, about 90% of administrations do have a web site<sup>24</sup>, about 75% of city halls are provided with a web site, and over 90% of them use email<sup>25</sup>. This is in correspondence with the interest of the users, as almost two thirds of Internet users visit public administration websites weekly. On the other hand, interestingly enough, over 25% of health services organizations were still not connected to the Internet<sup>26</sup>, and the kind of services and information provided on line is probably very limited, as only 17.5% of

<sup>17</sup> See V.146

<sup>18</sup> See V.53

<sup>19</sup> See V.59

<sup>20</sup> See V.60

<sup>21</sup> See V.64

<sup>22</sup> See V.65

<sup>23</sup> See V.95

<sup>24</sup> See V.97

<sup>25</sup> See V.103

<sup>26</sup> See V.108

weekly Internet users visit the web sites of health institutions<sup>27</sup>. Of course, public services are usually consulted on-line from home.

As for schools, 100% of schools in Catalonia stated in 2000 that they were connected to the Internet<sup>28</sup>, but this is probably concentrated in the administration or in specialized classrooms, because the median of computers with Internet access per school was limited to 4.8 in the primary schools and to 18.6 in the secondary schools. The number of students per computer connected to the Internet was of 44.1 in the primary schools<sup>29</sup> and 28.2 in the secondary schools<sup>30</sup>. The ratio is not excessively low, but it appears that the use of Internet is largely external to the normal curriculum. Thus the Astrolabi project conducted in 2001 by the Universitat Oberta de Catalunya's EduLab, based on a survey of 6,000 children in 30 schools, showed that only a tiny minority of children used any kind of information technology more than one day per week. Even in 2nd of Bachillerato, in the higher level of secondary education, less than 16% of the children used computers more than 2 days a week<sup>31</sup>.

**Thus, the picture that emerges in Catalonia is one of a home-based network society, built around the young persons and their eager parents. The diffusion of Internet is rather limited in the daily practice of the business world, in the public services, and in the school system. In spite of persistent problems with quality of infrastructure and communication costs, in most cases this low level of utilization of Internet is probably not a matter of lack of equipment, as schools, for instance seem to be reasonably provided, and most administrations, and almost all businesses, are present in the web. Our hypothesis is that organizational routine, lack of knowledge and interest from the decision makers and from the persons in charge of the service, are fundamental obstacles to the diffusion of the actual use of Internet beyond the private sphere. Internet, that is fundamentally a tool for professional activity and personal expression, is still largely confined to the initiative of the people. So people connect from home, in increasing numbers and with stepped up intensity. To do what?**

The uses of Internet in Catalonia are to some extent similar to those observed in other contexts, but only to some extent. They are similar in the overwhelming dominance of email over other uses (81.3% of users do email). Email means communication for all kind of reasons. So, networking and relation-making are, also in Catalonia, the main purpose for using the Internet. Internet as an extension of people's lives and minds. Instrumental uses are also present (over 30% do e-banking because Catalan banks have been pioneers in providing this service; 7% of users do some form of non exclusive telecommuting; 6.6 % take courses on-line). Then, almost 72% practice multi-purpose surfing, exploring the web with aims and desires beyond the sight of the researcher, although we vow to find out some day. And 37.5% practice some kind of chat, a proportion higher than the proportion found in most international studies<sup>32</sup>. It may be an extension of the Catalan favorite pastime of talking to each other, but in any case, it emphasizes that, in this context, Internet is as expressive as instrumental in people's practice. It remains to be seen if this is associated to the early stages of Internet development, to its relatively slow diffusion in the work place or, else, it is a cultural attribute, typical of Catalonia and of Spain.

It is significant to observe that, in a Catalan context, in which Catalan is the predominant language in the schools, and in which the young age groups are the main users, 82% of the visited webs are in Spanish, in contrast to 48.9% in Catalan and 44.5% in English<sup>33</sup>. This belies two notions: the rapid acculturation of the young generation in Catalan, and the dominance of English in the web. We can only speculate about the reasons, but the simplest interpretation would be that English literacy is still very limited in Catalonia, and that the supply of Spanish language sites is incomparably larger than the supply of Catalan sites. Since netizens tend to be little ideological, whatever fits their needs for information and communication is selected. Indirectly, this shows the potential of Spanish language in the Internet in bilingual contexts. It also shows that the specificity of Catalan sites either goes beyond linguistic specificity to fit into the uses and habits of the Catalan society or will always be sided by the diversity and broad range of Spanish language sources.

<sup>27</sup> See V.47

<sup>28</sup> See V.109

<sup>29</sup> See V.113

<sup>30</sup> See V.114

<sup>31</sup> See V.115

<sup>32</sup> See V.26

<sup>33</sup> See V.29



Language is one of the sources of self-identification in Internet communication, but cannot be the only one or, for that matter, the prevailing one.

**In sum, the rapid diffusion of Internet in the Catalan society is biased towards personal and social uses, as business and public services are still dominated by routine and run by a generation that does not know well the Internet and may be reluctant to it. Thus, the Catalan network society is largely split in terms of age, education, and social class, and seems to evolve along different technological and social cultures that may transform the generation gap into an informational gap. The ideology of modernity pervasive in public administration and among business leaders seems to be belied by the rigidity of organizations and the inability of middle management to adapt to the new socio-technical paradigm.**

## 2.1. Tables on Catalonia (\*)

(Organized by Variables)

(\*) We have organized the tables according to the variables we have studied on the basis of available data. We have numbered the variables, given one number to each variable, as per the list of variables shown in the appendice of this working paper.

Thus, tables do not have numbers, variables do. **Each number is unique for each variable.** All data concerning the variable from various sources are included in the table characterizing each variable. However, since our study concerns three different contexts: Catalonia, Spain, and Spanish Regions, **tables are presented in three different blocks at the end of each section of the paper.** For each context, we continue to identify the variables by their unique number, but naturally the data for the same variable are different in each one of the three contexts, and so are the tables that share the same number of the end of the three sections.

In each table we have indicated the specific source for each one of the statistics displayed in the table. Statistics may differ and usually do. This is exactly the purpose of our study: to show the diversity of estimates for the same variable, referring the reader to the methodological note in appendice for her/him to evaluate the reliability of each one of the sources presented.

**2.1.1. Internet use variables (Catalonia)**

*Access to Internet and use of Internet by households and persons in Catalonia*

## 1. % Households connected to the Internet

|  | Estadístiques SI (2001) | Òmnibus Municipal <sup>34</sup> (2001) | Encuesta metropolitana (2000) |
|--|-------------------------|--|-------------------------------|
| % Households connected to the Internet | 27.1%                   | 37.1%                                  | 23.2%                         |

## 2. Evolution of percentage of households connected to the Internet (1997 – 2001)

|                                 | Estadístiques SI (2001)                |                        | Òmnibus Municipal (2001)               |                        |
|---------------------------------|--|------------------------|--|------------------------|
|                                 | % households connected to the Internet | Yearly growth rate (%) | % households connected to the Internet | Yearly growth rate (%) |
| 1997                            |  |                        | 6.4%                                   | -                      |
| 1998                            |  |                        | 11.3%                                  | 76.5                   |
| 1999                            |  |                        | 14.7%                                  | 30                     |
| 2000                            | 18.5%                                  | -                      | 26.8%                                  | 82.3                   |
| 2001                            | 27.1%                                  | 46.4                   | 37.3%                                  | 39.1                   |
| Total 1997 – 2001 <sup>35</sup> |  | 46.4                   |  | 489                    |

## 3. % Persons connected to the Internet

|                                     | EGM (2001) <sup>36</sup> | AIMC (2001) |
|-------------------------------------|--------------------------|-------------|
| % Persons connected to the Internet | 24.8%                    | 21.1%       |

 4. % Persons connected to the Internet<sup>37</sup> (distributed by frequency of use. ) (% of population)

| Estadístiques SI (2001)      |       |
|------------------------------|-------|
| Occasionally                 | 42.9% |
| Once or more times per month | 35.4% |
| Once or more times per week  | 29.8% |
| Daily                        | 14.4% |

## 5. Evolution of percentage of persons connected to the Internet (1997 – 2001)

|                 | EGM (2001)          |                        |
|-----------------|---------------------|------------------------|
|                 | % of Internet users | Yearly growth rate (%) |
| 1997            | 4.8                 | -                      |
| 1998            | 8.2                 | 70.8                   |
| 1999            | 11.5                | 40.2                   |
| 2000            | 18.6                | 61.7                   |
| 2001            | 24.8                | 33.3                   |
| Total 1997-2001 |                     | 416.6                  |

<sup>35</sup> Except in Estadístiques SI (2001) survey, in which the data are only available from the year 2000, so the value is in that case "Total 2000-2001"

<sup>36</sup> % over total population

<sup>37</sup> Population aged 15 or more

6. Evolution of percentage of persons connected to the Internet<sup>38</sup> (distributed by frequency of use.) (2000-2001)

| Estadístiques SI (2001) |  |                 |  |                 |  |                 |  |                 |
|-------------------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|
|                         | Occasionally   |                 | Once or more times per month                                 |                 | Once or more times per week                                  |                 | Daily  |                 |
|                         | % of persons connected to the Internet over total population | Growth rate (%) | % of persons connected to the Internet over total population | Growth rate (%) | % of persons connected to the Internet over total population | Growth rate (%) | % of persons connected to the Internet over total population | Growth rate (%) |
| 2000                    | 33.3%  | -               | 24.8%  | -               | 20.6%  | -               | 10%  | -               |
| 2001                    | 42.9%  | 28.8            | 35.4%  | 42.7            | 29.8%  | 44.6            | 14.4%  | 44              |
| Total 2000-2001         |  | 28.8            |  | 42.7            |  | 44.6            |  | 44              |

## 9. % Households with a computer

|                              | Estadístiques SI (2001) | Òmnibus Municipal (2001) | Encuesta metropolitana (2000) |
|------------------------------|-------------------------|--------------------------|-------------------------------|
| % Households with a computer | 45.7%                   | 57.9%                    | 49.1%                         |

## 10. Evolution of percentage of households with a computer (1995 – 2001)

|                                 | Estadístiques SI (2001)      |                        | Òmnibus Municipal (2001)     |                        | Encuesta metropolitana (2000) |                        |
|---------------------------------|------------------------------|------------------------|------------------------------|------------------------|-------------------------------|------------------------|
|                                 | % households with a computer | Yearly growth rate (%) | % households with a computer | Yearly growth rate (%) | % households with a computer  | Yearly growth rate (%) |
| 1995                            |                              |                        |                              |                        | 32.7%                         |                        |
| 1996                            |                              |                        |                              |                        |                               |                        |
| 1997                            |                              |                        | 43.4%                        | -                      |                               |                        |
| 1998                            |                              |                        | 46.3%                        | 6.6                    |                               |                        |
| 1999                            |                              |                        | 50.4%                        | 8.8                    |                               |                        |
| 2000                            | 44.8%                        | -                      | 54%                          | 7.1                    | 49.1%                         |                        |
| 2001                            | 45.7%                        | 2                      | 57.9%                        | 7.2                    |                               |                        |
| Total 1997 - 2001 <sup>39</sup> |                              | 2                      |                              | 33.4                   |                               | 50.1                   |

## 11. % Internet connected persons among persons with access to a computer (% over the whole population)

|  | Òmnibus Municipal (2001) | Metrica SI (SEDISI)(2000) <sup>40</sup> |
|--|--------------------------|---|
| Internet connected persons among persons with access to a computer | 39.4%                    | 41.6%                                   |

## 12. Distribution of households with mobile phone according to the number of phones

| Estadístiques SI (2001)         |       |
|---------------------------------|-------|
| Households with 1 mobile phone  | 29%   |
| Households with 2 mobile phones | 22.4% |

<sup>38</sup> Over total population aged 15 or more

<sup>39</sup> Except in Estadístiques SI (2001) survey, in which the data are only available from the year 2000, so the value is in that case "Total 2000-2001". In the Encuesta Metropolitana the data are only available for 1995 and 2000, so in that case the value is "Total 1995-2000".

<sup>40</sup> Data for 1998

|   |       |
|---|-------|
| Households with 3 or more mobile phones | 12.8% |
| Total households with mobile phone      | 64.2% |

13. Evolution of percentage of households with mobile phone by the number of phones (2000 – 2001)

| Estadístiques SI (2001) |   |                 |  |                 |  |                 |   |                 |
|-------------------------|---|-----------------|--|-----------------|--|-----------------|---|-----------------|
|                         | Households with 1 mobile phone                            |                 | Households with 2 mobile phones                            |                 | Households with 3 or more mobile phones                            |                 | Total households with mobile phone                      |                 |
|                         | % of households with 1 mobile phone over total households | Growth rate (%) | % of households with 2 mobile phones over total households | Growth rate (%) | % of households with 3 or more mobile phones over total households | Growth rate (%) | % of households with mobile phone over total households | Growth rate (%) |
| 2000                    | 32.4%   | -               | 18%  | -               | 7.7%   | -               | 58.3%   | -               |
| 2001                    | 29%   | -10.4           | 22.4%  | 24.4            | 12.8%  | 66.2            | 64.2%   | 10.1            |
| Total 2000-2001         |   | -10.4           |  | 24.4            |  | 66.2            |   | 10.1            |

14. % of mobile phone users over population

| Estadístiques SI (2001)                         |       |
|---|-------|
| % of mobile phone users over Catalan population | 77.3% |

15. Evolution of mobile phone users (1999– 2001)

| Estadístiques SI (2001) |                              |                        |
|-------------------------|------------------------------|------------------------|
|                         | Number of mobile phone users | Yearly growth rate (%) |
| 1999                    | 2,600,000                    | -                      |
| 2000                    | 3,400,000                    | 30.7                   |
| 2001                    | 4,700,000                    | 38.2                   |
| Total 1999 - 2001       |                              | 80.7                   |

16. Distribution of Internet users according to their frequency of connection to the Internet (% of Internet users over total Internet users)

| Estadístiques SI (2001) |       |
|-------------------------|-------|
| Daily                   | 33.7% |
| Weekly                  | 35.8% |
| Monthly                 | 13%   |
| Less frequency          | 17.5% |

17. Evolution of percentage of Internet users by frequency of connection to the Internet (% of Internet users over total Internet users) (2000 – 2001)

| Estadístiques SI (2001) |   |                        |   |                        |   |                        |   |                        |
|-------------------------|---|------------------------|---|------------------------|---|------------------------|---|------------------------|
|                         | Daily   |                        | Weekly  |                        | Monthly                                       |                        | Less frequency                                |                        |
|                         | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) |
| 2000                    | 26.4%   | -                      | 32.2%   | -                      | 14.9%   | -                      | 26.5%   | -                      |

|                 |       |      |       |      |     |       |       |       |
|-----------------|-------|------|-------|------|-----|-------|-------|-------|
| 2001            | 33.7% | 27.6 | 35.8% | 11.1 | 13% | -12.7 | 17.5% | -33.9 |
| Total 2000-2001 |       | 27.6 |       | 11.1 |     | -12.7 |       | -33.9 |

19. % of Internet users by place of Internet connection (over total Internet users)<sup>41</sup>

|                                | Estadístiques SI (2001) | Òmnibus Municipal (2001) | Terrassa (1999) |
|--------------------------------|-------------------------|--------------------------|-----------------|
| Household                      | 55.9%                   | 77.7%                    | 46%             |
| Work                           | 36.6%                   | 42.6%                    | 23%             |
| University / Centre of studies | 21.4%                   | 14.7%                    | 13%             |
| Public places /Administration  | 12.5%                   |                          |                 |
| Other places                   | 23.9%                   | 3.6%                     |                 |

20. Evolution of percentage of Internet users by place of Internet connection (over total Internet users) (2000 – 2001)

|                 | Estadístiques SI (2001)                       |                        |   |                        |   |                        |   |                        |   |                        |
|-----------------|---|------------------------|---|------------------------|---|------------------------|---|------------------------|---|------------------------|
|                 | Household                                     |                        | Work <sup>42</sup>                            |                        | University / Centre of studies                |                        | Public places /Administration                 |                        | Other places                                  |                        |
|                 | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) |
| 1999            |   |                        |   |                        |   |                        |   |                        |   |                        |
| 2000            | 44.4%   |                        |   |                        |   |                        | 3.9%  |                        | 8.1%  |                        |
| 2001            | 55.9%   | 25.9                   | 36.6%   |                        | 21.4%   |                        | 12.5%   | 220.5                  | 23.9%   | 195                    |
| Total 2000-2001 |   | 25.9                   |   |                        |   |                        |   | 220.5                  |   | 195                    |

|                 | Òmnibus Municipal (2001)                      |                        |   |                        |   |                        |   |                        |   |                        |
|-----------------|---|------------------------|---|------------------------|---|------------------------|---|------------------------|---|------------------------|
|                 | Household                                     |                        | Work  |                        | University / Centre of studies                |                        | Public places /Administration                 |                        | Other places                                  |                        |
|                 | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) | % of Internet users over total Internet users | Yearly growth rate (%) |
| 1999            | 51.3%   | -                      | 40.9%   | -                      | 19.7%   | -                      |   |                        |   |                        |
| 2000            | 66.4%   | 29.4                   | 46.6%   | 13.9                   | 20.5%   | 4                      |   |                        |   |                        |
| 2001            | 77.7%   | 17                     | 42.6%   | -8.5                   | 14.7%   | -28.2                  |   |                        |   |                        |
| Total 2000-2001 |   | 51.4                   |   | 4.1                    |   | -25.3                  |   |                        |   |                        |

<sup>41</sup> The total sum of percentages is higher than 100% because many of the surveyed persons marked two or more answers

<sup>42</sup> It's not possible to calculate the yearly growth rate in the case of "work" and "centre of studies" due to the fact that in the previous study (Estadístiques SI 2000) these two variables were one, being the value 53,3% of Internet users who connect to the Internet from work or centre of studies.

21. Distribution of households connected to the Internet according to their weekly average time of connection to the Internet (% over weekly Internet users in households)

| Estadístiques SI (2001)                               |       |
|---|-------|
| Connected to the Internet less than 15 minutes        | 3.2%  |
| Connected to the Internet between 15 minutes – 1 hour | 28.4% |
| Connected to the Internet between 1 – 4 hours         | 43.5% |
| Connected to the Internet between 4 – 10 hours        | 18.2% |
| More than 10 hours                                    | 6.6%  |

26. Distribution of Internet users according to their kind of activity in the Internet<sup>43</sup>

| Estadístiques SI (2001) |       |
|-------------------------|-------|
| e-mail                  | 81.3% |
| Spare time              | 71.8% |
| Chat                    | 37.5% |
| e-bank                  | 30.9% |
| On-line courses         | 6.6%  |
| Telecommuting           | 7%    |

29. Distribution of Internet users according to the language of visited webs<sup>44</sup>

| Estadístiques SI (2001) |       |
|-------------------------|-------|
| Catalan                 | 48.9% |
| Spanish                 | 82.7% |
| English                 | 44.5% |
| Other languages         | 7.6%  |

*E-business related uses by persons and households in Catalonia*

47. % of weekly Internet users visiting Health and Public Administration websites

| Estadístiques SI (2001)  |       |
|--|-------|
| % of weekly Internet users visiting Health websites                | 17.5% |
| % of weekly Internet users visiting Public Administration websites | 62.5% |

48. % of weekly Internet users who deal with Health organisations and Public Administration by the Internet

| Estadístiques SI (2001)  |       |
|--|-------|
| % of weekly Internet users who deal with Health organisations by the Internet  | 2.2%  |
| % of weekly Internet users who deal with Public Administration by the Internet | 19.8% |

<sup>43</sup> The total sum of percentages is higher than 100% because many of the surveyed persons marked two or more answers. The users are weekly users

<sup>44</sup> The total sum of percentages is higher than 100% because many of the surveyed persons marked two or more answers

*Internet access and uses by business firms in Catalonia*

 53. % of business firms with Internet access<sup>45</sup>

|                            | Estadístiques SI (2001) <sup>46</sup> | Tecnologies SI (SEDISI) (2000) | Terrassa 1999 |
|----------------------------|---------------------------------------|--------------------------------|---------------|
| Access to the Internet     | 83.8%                                 | 64%                            | 40.9%         |
| Not access to the Internet | 16.2%                                 | 36%                            | 59.1%         |

54. Distribution of business firms connected to the Internet by year of connection

| Bellmore Consulting (2000) |       |
|----------------------------|-------|
| Less than a year           | 25.1% |
| Between 1 year and 3 years | 39.3% |
| More than 3 years          | 35.4% |

59. % of business firms connected to the Internet with a website

|                   | Estadístiques SI (2001) | Terrassa 1999 |
|-------------------|-------------------------|---------------|
| With a website    | 49.9%                   | 17.5%         |
| Without a website | 50.1%                   | 82.5%         |

60. Distribution of business firms with a website according to the kind of use of their webpage

| Bellmore Consulting (2000)                    |       |
|---|-------|
| Give information of their products / services | 81.6% |
| Interact with the customer                    | 39.3% |
| Transactions                                  | 20.9% |

64. Distribution of websites of business firms according the monthly traffic of the website

| Bellmore Consulting (2000)   |     |
|--|-----|
| % of websites of business firms with less than 50 visits per month | 54% |
| % of websites of business firms with 50-200 visits per month       | 8%  |
| % of websites of business firms with 300 –1000 visits per month    | 32% |
| Doesn't know or doesn't answer                                     | 6%  |

65. % of business firms with e-commerce

|           | eEspaña 2001 <sup>47</sup>  |  | Tecnologies SSI (SEDISI) (2000)                                      |
|-----------|---|--|--|
|           | % of business firms with e-commerce over firms with Internet presence | % of business firms with e-commerce over the total of business firms | % of business firms with e-commerce over the total of business firms |
| Catalonia | 33%   | 10.9%  | 14%  |

66. Distribution best sold products on the Internet in Catalonia (% of business firms which sale every kind of product)

| eEspaña 2001 <sup>48</sup> |       |
|----------------------------|-------|
| Learning                   | 25.8% |
| Books                      | 25.8% |

<sup>45</sup> In the Bellmore Consulting (2000) study the percentage is 100% because this study is made to business firms with e-commerce

<sup>46</sup> The data refer to business firms of 10 or more employees

<sup>47</sup> Original Source: AECE (2000)

<sup>48</sup> Original Source: AECE (2000)



68. Distribution of business firms on the Internet according to their kind of e-commerce (B2B, B2C, B2B/C)

| Bellmore Consulting (2000)           |       |
|--------------------------------------|-------|
| Business firms with B2B e-commerce   | 56.2% |
| Business firms with B2C e-commerce   | 12.5% |
| Business firms with B2B/C e-commerce | 31.2% |

95. Percent distribution of business firms with a website according to the annual sale of products /services on-line income

| Bellmore Consulting (2000)   |       |
|--|-------|
| Less than 5% of the annual sale of products /services on-line income | 91.4% |
| More than 5% of the annual sale of products /services on-line income | 8.6%  |

*Internet uses of Public Administration & Health Organizations in Catalonia*

97. % of Public Administration institutions with an accessible website

| eEspaña 2001   |   |  |  |
|--|---|--|--|
|  | Total Public Administration organizations | Total Public Administration organizations with an accessible website | % of Public Administration organizations with an accessible website (% over the total) |
| % of Public Administration institutions with an accessible website | 86  | 77   | 89.5%  |

103. % of town halls with email

| Estadístiques SI (2000) |       |
|-------------------------|-------|
| With email              | 90.5% |
| Without email           | 9.5%  |

104. Percent distribution of town halls according to their website presence

| Estadístiques SI (2000) |       |
|-------------------------|-------|
| With website            | 74.4% |
| Without website         | 25.6% |

106. % of town halls of towns with more than 20.000 inhabitants according to the accessibility of their webpage

| eEspaña 2001    |                  |   |   |
|-----------------|------------------|---|---|
|                 | Total town halls | Total town halls with an accessible website | % of town halls with an accessible website (% over the total) |
| % of town halls | 45               | 39  | 86.7%   |

108. % of health organisations connected to the Internet<sup>49</sup>

| Estadístiques SI (2000)       |       |
|-------------------------------|-------|
| Connected to the Internet     | 74.4% |
| Not connected to the Internet | 25.6% |

*Access and use of on-line education by Internet users in Catalonia*

109. % schools connected to the Internet<sup>50</sup>

<sup>49</sup> The data refer to 1998

<sup>50</sup> The data refer to public schools

| Estadístiques SI (2000)       |      |
|-------------------------------|------|
| Connected to the Internet     | 100% |
| Not connected to the Internet | 0%   |

113. Median of computers with Internet access per school (Distributed by kind of school)

| Estadístiques SI (2000)                             |         |           |       |
|---|---------|-----------|-------|
|   | Primary | Secondary | Total |
| Median of computers with Internet access per school | 4.8     | 18.6      | 8.3   |

114. Number of students per computer connected to the Internet

| Estadístiques SI (2000)                                   |         |           |       |
|---|---------|-----------|-------|
|   | Primary | Secondary | Total |
| Number of students per computer connected to the Internet | 44.1    | 28.2      | 35.0  |

115. Distribution of primary and secondary students according to the IT use frequency at schools (Distributed by courses)

| Astrolabi (2001)               |                            |                            |                            |                            |                        |                        |                        |                        |                                 |                                 |
|--------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------------|---------------------------------|
|                                | Primary courses            |                            |                            |                            | Secondary courses      |                        |                        |                        |                                 |                                 |
|                                | 3 <sup>rd</sup> of Primary | 4 <sup>th</sup> of Primary | 5 <sup>th</sup> of Primary | 6 <sup>th</sup> of Primary | 1 <sup>st</sup> of ESO | 2 <sup>nd</sup> of ESO | 3 <sup>rd</sup> of ESO | 4 <sup>th</sup> of ESO | 1 <sup>st</sup> of Bachillerato | 2 <sup>nd</sup> of Bachillerato |
| Never                          | 1.1%                       | 5.4%                       | 1.1%                       | 1.2%                       | 38.4%                  | 43.9%                  | 50.6%                  | 32.4%                  | 39.1%                           | 56.3%                           |
| 1 day /week                    | 83%                        | 83.9%                      | 75.7%                      | 70%                        | 40.9%                  | 28.2%                  | 36.4%                  | 36.7%                  | 22%                             | 26.6%                           |
| 2 days / week                  | 8.6%                       | 8.6%                       | 13.2%                      | 18.2%                      | 7.1%                   | 5.7%                   | 4.8%                   | 12%                    | 26.4%                           | 9.4%                            |
| 3 days / week                  | 2.1%                       | 0.6%                       | 5.5%                       | 4.5%                       | 9.3%                   | 14.6%                  | 5%                     | 10.9%                  | 6.4%                            | 5.9%                            |
| 4 days/week                    | 4.3%                       | 0%                         | 4.1%                       | 5.4%                       | 2.8%                   | 4.6%                   | 1.3%                   | 4.4%                   | 0.2%                            | 0%                              |
| 5 days/week                    | 0.8%                       | 1.6%                       | 0.4%                       | 0.5%                       | 0.3%                   | 0.2%                   | 0%                     | 0.4%                   | 2.3%                            | 0%                              |
| More than 5 days/week          | 0%                         | 0%                         | 0%                         | 0%                         | 0.1%                   | 0.2%                   | 0.3%                   | 0.2%                   | 1.8%                            | 0%                              |
| Doesn't know or doesn't answer | 0.1%                       | 0%                         | 0%                         | 0.1%                       | 1.4%                   | 2.6%                   | 1.6%                   | 3%                     | 1.7%                            | 1.8%                            |

116. Number of IT PhD , IT masters degrees and IT professional degrees

| eEspaña 2001           |               |                   |                                |
|------------------------|---------------|-------------------|--------------------------------|
| Number of institutions | Number of PhD | Number of Masters | Number of professional degrees |
| 13                     | 8             | 41                | 71                             |

### 2.1.2. Demographical and sociological variables of Internet users (Catalonia)

#### Persons and households

125. % of households with access to the Internet according to the household dimension (% over all households)

| Estadístiques SI (2001)   |       |
|---------------------------|-------|
| Households with 1 person  | 7%    |
| Households with 2 persons | 23.5% |
| Households with 3 persons | 34.5% |
| Households with 4 persons | 44.1% |
| Households with 5 persons | 39.1% |

127. % of households with access to the Internet according to their monthly income levels (% over all households)

| Estadístiques SI (2001)                                       |       |
|---|-------|
| Households with income levels of less than 125.000 ptas/month | 5.4%  |
| Households with income levels of 125.001-210.000 ptas./month  | 20.4% |
| Households with income levels of 210.001-420.000 ptas./month  | 46%   |
| Households with income levels of 420.001-675.000 ptas/month   | 60.9% |
| Households with income levels of more than 675.000 ptas/month | 56.2% |

129. % of households with access to the Internet according to city / town dimension (% over all households)

| Estadístiques SI (2001)                |       |
|--|-------|
| Barcelona (City)                       | 29.9% |
| Between 10.000 and 500.000 inhabitants | 28.6% |
| Less than 10.000 inhabitants           | 19.3% |

131. % of Internet users according to their gender (% over total population)

|        | Estadístiques SI (2001) | Ómnibus municipal (2001) |
|--------|-------------------------|--------------------------|
| Male   | 38.3%                   | 48.7%                    |
| Female | 21.8%                   | 31.4%                    |

132. Evolution of percentage of Internet users according to their gender<sup>51</sup> (1999 – 2001) (% over total population)

|                                 | Estadístiques SI (2001) <sup>52</sup> |   |                            |   | Ómnibus municipal (2001) |   |                            |   |
|---------------------------------|---------------------------------------|---|----------------------------|---|--------------------------|---|----------------------------|---|
|                                 | % of male Internet users              | Yearly growth rate of male Internet users (%) | % of female Internet users | Yearly growth rate of female Internet users (%) | % of male Internet users | Yearly growth rate of male Internet users (%) | % of female Internet users | Yearly growth rate of female Internet users (%) |
| 1999                            |                                       |   |                            |   | 25.9%                    | -   | 13.7%                      | -   |
| 2000                            | 26.9%                                 | -   | 14.7%                      | -   | 34.6%                    | 33.5  | 20.2%                      | 47.4  |
| 2001                            | 38.3%                                 | 42.3  | 21.8%                      | 48.2  | 48.7%                    | 40.7  | 31.4%                      | 55.4  |
| Total 1999 - 2001 <sup>53</sup> |                                       | 42.3  |                            | 48.2  |                          | 88  |                            | 129.1   |

<sup>51</sup> % over total population

<sup>52</sup> The data refer to weekly Internet users

<sup>53</sup> Except in Estadístiques SI (2001) survey, in which the data are only available from the year 2000, so the value in that case is "Total 2000-2001"

135. % of Internet users by their age (% over total population)

|                           | Estadístiques SI (2001) <sup>54</sup> |
|---------------------------|---------------------------------------|
| Between 15 –24 years old  | 64.8%                                 |
| Between 25 – 39 years old | 44.4%                                 |
| Between 40 – 54 years old | 20.6%                                 |
| >55 years old             | 3.4%                                  |

| Barcelona Only            | Òmnibus municipal (2001) |
|---------------------------|--------------------------|
| Between 16 –24 years old  | 73.9%                    |
| Between 25 – 34 years old | 66.1%                    |
| Between 35 – 44 years old | 53.6%                    |
| Between 45 – 54 years old | 44.2%                    |
| Between 55 – 64 years old | 19.4%                    |
| > 65 years old            | 3.5%                     |

136. Evolution of percentage of Internet users by their age (1999 – 2001) (Barcelona Only)

| Òmnibus municipal (2001) |                                     |                                     |                                     |                                     |                                     |                                   |  |  |  |  |  |  |
|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|--|--|--|--|--|--|
|                          | % of 16-24 years old Internet users | % of 25-34 years old Internet users | % of 35-44 years old Internet users | % of 45-54 years old Internet users | % of 55-64 years old Internet users | % of >65 years old Internet users | Yearly growth rate of 16-24 Internet users (%) | Yearly growth rate of 25-34 Internet users (%) | Yearly growth rate of 35-44 Internet users (%) | Yearly growth rate of 45-54 Internet users (%) | Yearly growth rate of 55-64 Internet users (%) | Yearly growth rate of >65 Internet users (%) |
| 1999                     | 40%                                 | 34.5%                               |                                     |                                     |                                     | 2.1%                              |  |  |  |  |  |  |
| 2000                     | 54.7%                               | 47.9%                               | 37.9%                               | 21.5%                               | 9.2%                                | 0.8%                              | 36.7   | 38.8   |  |  |  |  |
| 2001                     | 73.9%                               | 66.1%                               | 53.6%                               | 44.2%                               | 19.4%                               | 3.5%                              | 35.1   | 37.9   | 41.4   | 105.5  | 110.8  | 337.5  |
| Total 1999 - 2001        |                                     |                                     |                                     |                                     |                                     |                                   | 84.7   | 91.5   | 41.4   | 105.5  | 110.8  | 66.6   |

139. % Internet users according to their educational level (% over total population)

|                                | Estadístiques SI (2001) <sup>55</sup> | Terrassa 1999 |
|--------------------------------|---------------------------------------|---------------|
| No studies                     | 5.3%                                  | 0%            |
| Primary education (EGB / ESO)  | 10.8%                                 | 7%            |
| Secondary education (BUP / FP) | 50.9%                                 | 23%           |
| University degree              | 60.5%                                 | 52%           |

144. % of weekly Internet users according to their cultural / geographical origin (% over total population)

| Estadístiques SI (2001) |       |
|-------------------------|-------|
| Barcelona               | 32.4% |
| Girona                  | 18%   |
| Lleida                  | 21.3% |
| Tarragona               | 24.9% |

146. % of weekly Internet users according to their job (% over total population)

| Estadístiques SI (2001)        |       |
|--------------------------------|-------|
| Work in his /her own business  | 39.9% |
| Work for a firm / organisation | 39.9% |
| Student                        | 70.4% |

<sup>54</sup> The data refer to weekly Internet users

<sup>55</sup> In the Estadístiques SI (2001) study the Internet users are weekly Internet users

|            |       |
|------------|-------|
| Unemployed | 20.5% |
| Housewife  |       |
| Retired    |       |

*Business firms*

147. % of business firms connected to the Internet according to their dimension (over the total of business firms of 10 or more workers)

| Estadístiques SI (2001)   |       |
|---------------------------|-------|
| Between 10-99 employees   | 100%  |
| Between 100-249 employees | 100%  |
| More than 250 employees   | 82.4% |

149. % of business firms with connection to the Internet according to their activity (over the total of business firms of 10 or more workers)

| Estadístiques SI (2001)              |       |
|--------------------------------------|-------|
| IT and contents                      | 95.2% |
| Food                                 | 80.2% |
| Automotive                           | 93.9% |
| Chemistry                            | 90.2% |
| Shopping / Accommodation / Transport | 79.1% |
| Rest of industry and construction    | 82.9% |
| Financial and insurance services     | 89%   |
| Rest of services                     | 87.8% |