



## Hows and whys of Internet usage in Chile and the world: First results of the World Internet Project-Chile

by Sergio Godoy

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See also [www.wipchile.cl](http://www.wipchile.cl))

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### **Abstract**

*This article reveals the main results of WIP-Chile's first year 2003, compares them with those of the other affiliated countries and tries to evaluate the influence of internet in people's everyday life. In contrast to other studies about the internet in Chile, WIP is a longitudinal analysis of both users and nonusers of the web, it includes provinces as well as the capital, and it is internationally comparable. The main conclusion is that the expansion of this technology is neither automatic nor inevitable, despite its potential. Factors like awareness about the web, type of access, experience, place of use, personal traits, public policies and national culture differ from country to country in a way it prevents generalizing on the rate and intensity of internet adoption around the world. Although WIP reveals some important changes in the daily life of internauts, our findings contradict comparable studies. So we must be especially careful when interpreting different data and methodologies. In any case, it seemed that more than replacing offline activities, Internet seems to deepen and refine them.*

**KEY WORDS:** *internet, digital divide, internet usage, internet non-usage, access*

### **Foreword**

When, how much, how or why a technological change affects human life? We face a quite crucial moment: the introduction, expansion, and the first signs of maturity of internet. According to many authors, it is a tool that reflects or causes such deep social and economic changes, that it can only be compared to the Industrial Revolution (Castells, 1998, 2000). For others, and mainly after the collapse of the overvalued dotcoms companies, it is a series of technological refinements within the same social and economic model –capitalism (Garnham, 2000).

But that is discussion too broad for these pages. Although it is easy to say that everyday life has been modified by the use of internet, in many cases this tool only facilitates what we used to do by other means -yet without displacing them completely.

Neither we can be sure if it deteriorates, improves or does not affect social and family life (Katz & Rice, 2002), although the present article contains favorable findings on

the matter. Concerning its potential to enhance citizen power in front of the state or corporate interests, there are interesting examples of grassroots mobilizations triggered by online fora and email chains, as well as many effective websites and online services offered both by the public and private sectors. But it is not obvious that either the estate or other great factual powers will diminish their influence by this cause. The panorama is equally ambiguous in the other scopes in which internet is penetrating.

From the need to clarify these ambiguities arose the World Internet Project (WIP) in 1999, led by the UCLA Center of Communication Policy<sup>1</sup>. Today 20 countries of Asia, Europe and North America participate; Chile was the first Latin American partner to join in 2002. This article exposes the main findings of first stage of the project in Chile, called "WIP-Chile, monitoring the digital future" (thanks to a grant from the National Fund of Science and Technology, FONDECYT, N°1030946), executed by Universidad Católica de Chile (UC) with the support of the Santiago Chamber of Commerce<sup>2</sup>. The Chilean results were compared with WIP projects in other countries whose results were updated to the date of this article.

In the first place, this text explains what is WIP-Chile and what methods were used to extract the data in this first year of studies. Immediately it comments the role of Internet within the context of other communication technologies of high social impact. Next, it explains the main factors that influence the use of the web, emphasizing on the findings in Chile and other WIP countries. Then, those data are confronted with those from another longitudinal and compared study, called e-Living. Finally the degree in which Internet has modified the human life is evaluated, cautioning on how to compare dissimilar data and studies.

### **About WIP Chile**

WIP-Chile is an annual, longitudinal and internationally comparable study about the uses, attitudes and effects of Internet in three scopes of the human life: (1) the psychological level (conducts, valuations, attitudes) and sociological, that is, in interaction with other people and institutions (mass media, government, educative system and companies suppliers of goods and services); (2) the situation of Chile compared to other countries; and (3) the variations of these uses and effects throughout time.

Unlike similar studies, WIP-Chile also studies nonusers of the technology, it includes regions outside the capital (Santiago de Chile), it covers more than a year, and it is internationally comparable thanks to a common methodology and questionnaire used by the countries affiliated to WIP. For our purposes, ***user is all person who used Internet in the last 90 days in any place for any amount of time, although he may not have a computer connected at his home.***

The methodology is a face-to-face panel survey in two consecutive years (2003 and 2004, so far). The universe comprises both users and non users of both sexes between 12 and 60 years in Santiago, Valparaíso/Viña del Mar and Concepción/Talcahuano. These cities concentrate 58.5% of the national population. The sampling is probabilistic, stratified, non proportional, with random selection in each one of its phases. The first study of 1200 cases commented in these pages was applied in October and November of 2003. The second survey is planned for the same period of 2004. Being a panel, the number of cases

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<sup>1</sup> After 2005, the University of Southern California's Center for the Digital Future. See <http://www.digitalcenter.org>

<sup>2</sup> WIP-Chile team: Francisco Fernández, Soledad Herrera, Sergio Godoy (co-ordinator). Asistente: Sergio Goldenberg. Associated researchers: George Lever, Santiago Chamber of Commerce; Ellen Helsper, PhD (c) from the London School of Economics; Cristóbal García, ISUC, PhD (c) from M.I.T.

will probably drop by 20-30% with respect to the previous year. The procedure was pre tested in a pilot study of 600 cases executed in Santiago in January of 2003<sup>3</sup>.

In order to enhance the precision of the data, both users and the highest income bracket ABC1-C2 were oversampled. Without doing so, the sample would registered hardly about 200 or 300 internauts, a number too low for making accurate estimations (see MIDEPLAN 2002). The poorer layer E (13.5% of the total population) was excluded, because their answers to questionnaire WIP would not have made great differences in the context of this study.

WIP partners meet once a year to comment their results and refine the procedure. The 2003 meeting was at the University of Oxford, 2004 at the University of Tokyo and 2005 at the UC's School of Communications in Chile.

### **Internet and the social and media context**

Internet use is influencing more and more aspects of people's everyday life. Yet we do not know very well to what extent. And there are important precisions to make. First, because common speech often confuses vague or even contradictory terms, such as "Information Society" (and its spin-offs, such as Post Industrial, Knowledge-based, Networked, and so on), "globalization", or "new digital media". The second cause is that Internet use is not a phenomenon that expands automatically and homogenously like a chemical reaction. It is not inevitable that this technology will grow up to 100% of the population nor it will totally displace older instruments or ways of living, like the conventional mass media, face to face purchases, exercising, going to the movies or sharing with friends and relatives at lunch time.

Concerning terminological precisions, and to prevent us from getting entangled in the discussion about the Information Society, it is enough to remember that "digital" exceeds Internet. Besides, no electronic technology has the penetration and impact of radio and TV in countries like Chile, where almost 100% of the households have nearly three receivers of each one of them. Also, cable and satellite TV has stagnated at 19% in the last three years (profits that can be extracted from each meter of wires or optical fibres laid are limited, and the biggest urban centers are already wired). Will also the "conventional", fixed-line Internet stagnate for similar reasons, unless wireless connections become massive?

Despite its limitations, the consumption of both radio and TV is quite comfortable for the average end user. Furthermore, it allows economies of scope and scale capable of financing attractive contents like soap operas, documentary and newscasts. Both media will digitize sooner or later, but they may keep the *broadcasting* model of communications of a centralized sender and a more or less passive mass of receivers. Internet, however, obeys to a different communication model, where the user is an active character interacting with contents in a non-replicable pattern, thanks to the hypertextual characteristics of its architecture. Yet that fragmented sort of consumption makes difficult to finance highly demanded products such as Chilean soap operas or newscasts. As both types of communication satisfy different human needs, they do not seem incompatible.

The evidence commented in this article suggests that except for TV, ***Internet does not necessarily substitute the "traditional media". Rather than modifying substantial aspects of everyday life, it rather complements, enriches, and deepens them.*** So the effects of Internet cannot be easily generalised and are affected by different factors. Let us see now what must be taken into consideration in this respect.

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<sup>3</sup> Visit <http://www.wipchile.cl>

## What affects the Internet use?

There is a great variety of studies on the Internet impact, but many lead to contradictory conclusions. Yet there is a certain consensus that human usage of the web is affected at least by seven variables: awareness of the technology, computing skills, access, type and place of access, experience, personal traits of the user, and contextual factors like national culture, public policies or commercial strategies of the computer companies.

- Awareness of the technology. The first step is knowing that Internet exists, and what are its uses. This seems obvious, but it is not among the world's poor (and there are too many of them). Technological ignorance constitutes the first step of the so-called *digital divide*, which marginalizes the majority of humankind from the benefits of Internet and other digital technologies. As it happens with many other technical innovations, in global terms there are fewer "haves" than "have nots" (see Katz & Rice, 2002; UCLA, 2003; Zimmer, 2003).

To be marginalized of the digital world is a serious obstacle for economic and social development. Chile lies at an intermediate position like an "adapter" next to other countries with average technological development like Spain. It is underneath the more advanced countries that create and innovate, comprising the richest 15% of the worldwide population (the G-7 countries plus Scandinavia, Switzerland, and Singapore), plus South Korea and Israel. Yet it is above less developed countries (almost all in Africa), mostly excluded. Aside from warning that prosperity will continue concentrating mainly in the advanced ones, Sachs also emphasizes on the risks having zones of the technological exclusion within each country (Sachs, 2000).

- Computer skills: recent studies emphasize this is the main factor restraining the adoption of Internet, and causing the first symptoms of stagnation of web growth in several countries. This factor is related to education and income, therefore related to the traditional preoccupations about the digital divide. In Chile (see Table A), more than half of the nonusers say they do not use the web because of lacking a computer, 46% do not know how to use it, and 35% say it is too expensive. These economic reasons are more frequent among the poorest. To alleviate this problem, some authors suggested public policies promoting both PC skills among nonusers and web access through other platforms other than the PC, such as digital television, PDAs and 3G mobile phones (Raban, 2004).

	Income level			Total
	ABC1 C2	C3	D	
<b>Not having a computer</b>	28.0%	51.2%	60.6%	53.0%
<b>Does not know to use Internet</b>	26.4%	39.7%	54.6%	45.6%
<b>It is expensive</b>	21.9%	32.2%	39.6%	34.7%

(\*) Excluding the poorest "E" segment (less than US\$ 160/month of household income), 13.5% of the population in Chile in 2000. At the national level, the richest group ABC1C2 comprises 13.5% of the population, the middle C3 28%, and the lower-middle D 45%.

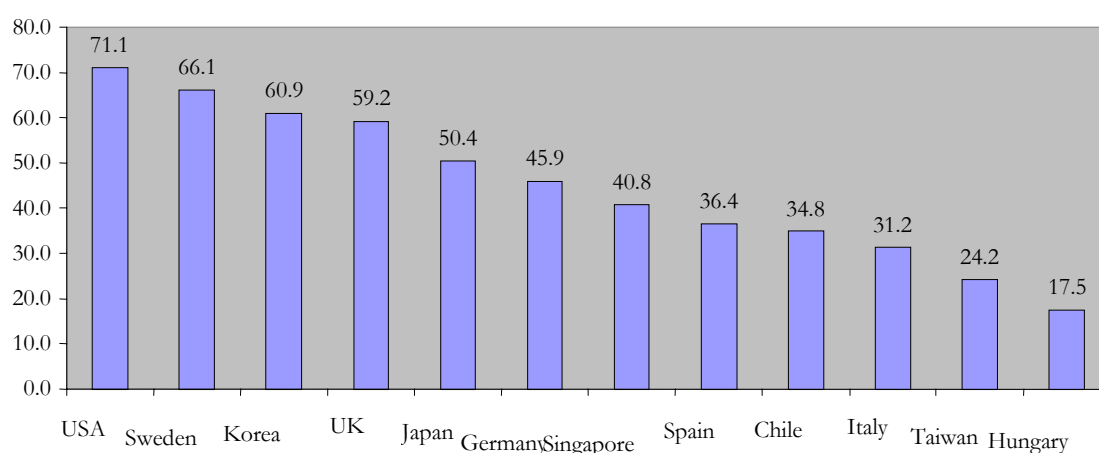
- Access. For most authors, being connected to the Internet (not necessarily at home) is the minimum to participate in the Information Society. The percentage of people

connected compared to the total population is possibly the most important indicator, usually called "Internet penetration", but is not the only accepted meaning.

Access varies wildly, and figures available are defective. The most recent data was 605.6 million people connected in the world by September of 2002 (10% of the humankind), but it was an educated guess. Of that total, 31.5% was in Europe, 30.2% in Canada and USA, 30.9% in Asia Pacific, 5.5% in Latin America and the 1.8% in Africa and the Middle East. In Latin America, Chile had the greater percentage of internauts (20.0% in 2001), followed by Uruguay (13,6%), Peru (10,7%), Argentina (10,4%), Brazil (7,8%) and Mexico (3,4%). The positive thing was that growth rates, except in sub-Saharan Africa, were very high (Pew Research Center, 2002).

Figure N°1, based on the most recent results of WIP, shows that Chile's 34.8% of users<sup>4</sup> was close to Spain and above Italy, Taiwan and Hungary.

**Figure N°1**  
**Percentage of users in WIP countries, 2003**



Disaggregated Chilean data confirms the inequality between rich and poor. Almost 70% of the richest ABC1-C2 use the web, whereas 75% of segment D does not (see Figure N°2). This socioeconomic imbalance is quite even within the studied regions of the country (see Table B); other differences between Santiago and the Chilean provinces are commented later on.

<sup>4</sup> The figure was 39,8% of interviewees, excluding the poorest E group as well as those above 60 years of age. These groups showed very low rates of Internet penetration, according to the government's CASEN survey in the year 2000. To estimate the national proportion of users, the CASEN survey was used to project the growth rates in these groups not covered by our survey.

**Figure N°2**  
**Percentage of users and non users in Chile**  
**according to income level**

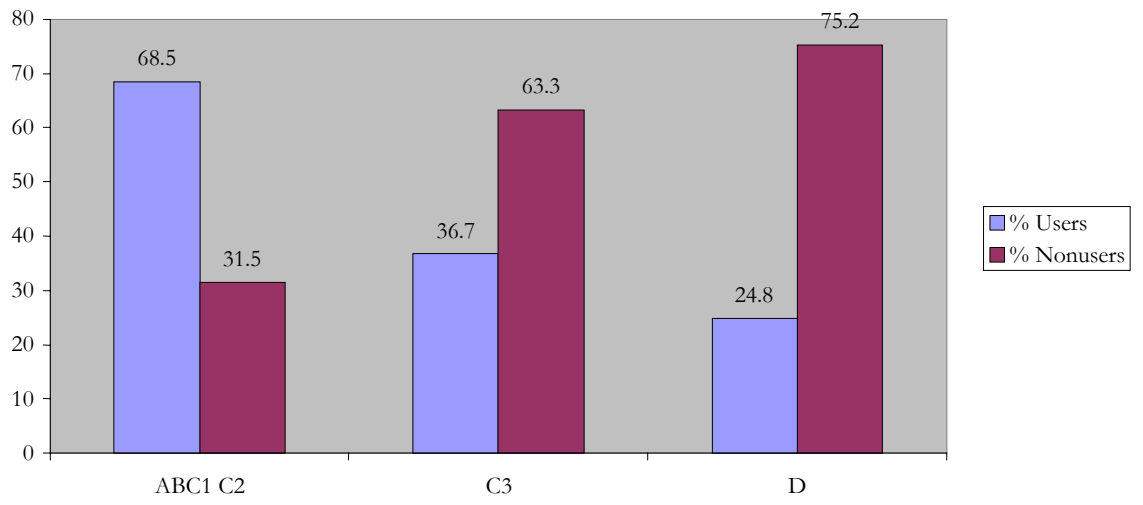


Table B Percentage of users in Santiago and regions, by income level (excluding the poorest group E)								
	Santiago				Regions			
	ABC1 C2	C3	D	Total	ABC1 C2	C3	D	Total
% Users	71,8%	33,9%	23,6%	39,9%	60,6%	42,3%	27,2%	39,8%
% Nonusers	28,2%	66,1%	76,4%	60,1%	39,4%	57,7%	72,8%	60,3%
<b>Total</b>	100%	100%	100%	100%	100%	100%	100%	100%

Initially, income and education level (variables often correlated to each other) explained most differences in access. The richest had better access than the poor. Although this is still true, both factors are less determinant thanks to the dramatic reduction in computer prices (explained by the so called Moore's Law), public policies promoting web access (such as the 'Enlaces' Plan by the Chilean Ministry of Education<sup>5</sup>) and the life cycle of the computing industry.

Until recently a connection to the web was considered enough to alleviate the digital breach. People would inevitably turn into active, responsible, happier and more empowered users in front of governments and great corporations. As it is explained ahead, the reality is not so rosy.

- Type and place of access: Ten years after the birth of the World Wide Web, it seems that being connected to the Internet is not enough by itself to enjoy all its potentialities. Thus, the discussion about the digital divide has been focused on the growth of broadband in contrast to narrow band connections (also called dial-up, telephone modem). Broadband allows greater times of use and a wider repertoire of online activities. Aside from a greater speed of data flow (measured in *kilobits* by second, Kbps), usage is favoured by flat rates. The conventional dial-up telephone connections slower and more expensive, because they charge per second of use.

Unfortunately, in this point there are also terminological confusions. In Chile, connections considered as broadband would not be considered as such developed countries. By the end of 2002 a Chilean telecommunications executive admitted that "we are calling broadband home services from 64 Kbps to 256 Kbps " (although the companies used to consider broadband speeds superior to 256 Kbps). By then, 15% of the connections in Chile were "broadband", some by TV cable services (57%), by ADSL (38%) or others (5%), and it was hoped to reach 50% of the connections in 2006 (El Mercurio, 2002).

Although less influential, the place of connection is also relevant. In more developed countries, home connections are the majority. But initially people were connected at schools, universities, or the workplaces, as it happens today in less advanced countries.

For example, in the Chinese provinces access is rather extended thanks to the proliferation of illegal cibercafes. The cost of computers and Internet connections are too high for a common home (see Liang, 2003)<sup>6</sup>. In Chile, schools are the main place of usage (50.8% in average) followed by home (50,6%). The importance of the school

<sup>5</sup> This successful initiative consists mainly on providing all public schools in Chile with computers and Internet access, in urban and rural areas. The poor in Chile almost exclusively attend to public-sector schools, as well as to Catholic ones.

<sup>6</sup> In 2003, Liang calculated that internauts were 33% in China's main three cities other than Hong Kong (Beijing, Shanghai, and Guangzhou), 24% in four provincial capitals (Chengdu, Changsha, Xi'an and Shenyang) and 27% in five small cities (Nanhai, Yima, Jimo, Guangshui and Fengnan). The estimate for the country is 6%, some 90 million people. See Liang, (2003).

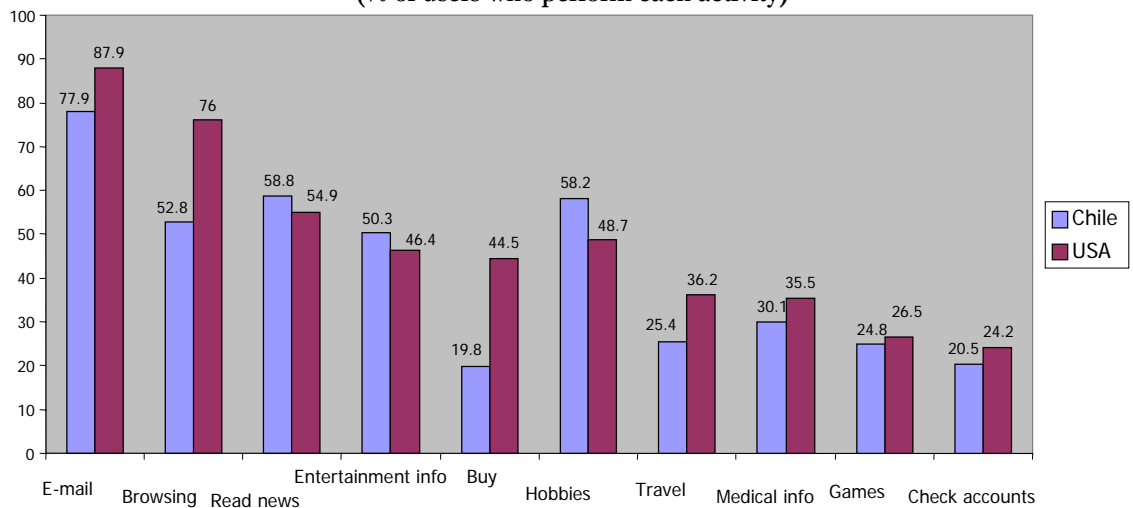
is greater in regions and for the poor, as showed in Table C. This suggests that public policies as the Ministry of Education’s “Plan Enlaces”, which provides public schools with Internet connections and computers, alleviate the digital divide (Secretaría General de la Presidencia, 2003).

	Total	Income level			REGION	
		ABC1-C2	C3	D	Santiago	Other
<b>School</b>	50.8%	34.8%	56.3%	65.1%	44.9%	67.2%
<b>House</b>	50.6%	74.6%	43.5%	18.7%	55.6%	40.6%
<b>Workplace</b>	27.2%	39.8%	21.6%	12.6%	32.2%	17.1%
<b>Total</b>	65.9%	56.9%	70.3%	75.7%	64.4%	68.8%

The importance of school will diminish in the future as home connections increase. The latter should grow by the combined effect of cheaper technology, greater user experience (which can be acquired at school), and a factor discovered by the Italian team of WIP, perhaps replicable in Chile: online sociability. Having friends, relatives and colleagues connected to the web is an important motive to use email (Mandelli & Bossi, 2003).

- Experience: Surpassed the problem of access, people modify their usage based on their years of experience. This does not prevent that some activities, remarkably email, maintain their importance.

**Figure N°3**  
Ten most frequent online uses in USA against their Chilean values  
(% of users who perform each activity)

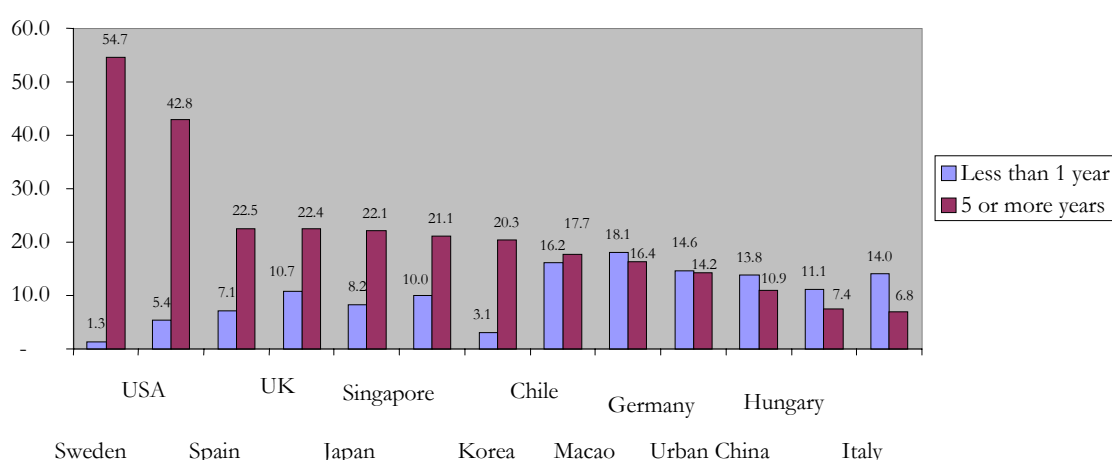


For example, the Chilean internaut uses the web for less pragmatic purposes than its more experienced US’ counterpart. An important cause for this is experience. Figure 3 compares the ten most common uses of Internet in USA to their Chilean values (the ten main uses in Chile are different). Although in both cases email is the main online

activity, North Americans buy, check banking balance, make travel reservations and review medical information most frequently. The change from more leisure-oriented patterns of use towards more pragmatic/instrumental ones is also evident in the developed countries affiliated to WIP, as well as in other studies.

Figure 4 compares the percentage of expert and inexperienced Chilean users with the rest of WIP countries. “Experts” have five or more years of experience; the others, less than a year. Chile combines the second greater number of novices after Macao with a quite high number of experts -even greater than Germany and Italy. This explains other differences in the behavior of the Chilean internaut that will be explained further on.

**Figure N° 4**  
Percentage of new users (less than a year) v/s experienced users (5 or more years)



More experience also favours purchasing online, a type of use quite revealing. Figure 5 shows that the more advanced countries have more online buyers. The position of Chile is quite consistent with its general level of development and the sophistication of its Internet usage. Although Table D reveals that in Chile the poorest, women and the provinces are disadvantaged, more years of experience enhances the chances to become an online buyer.

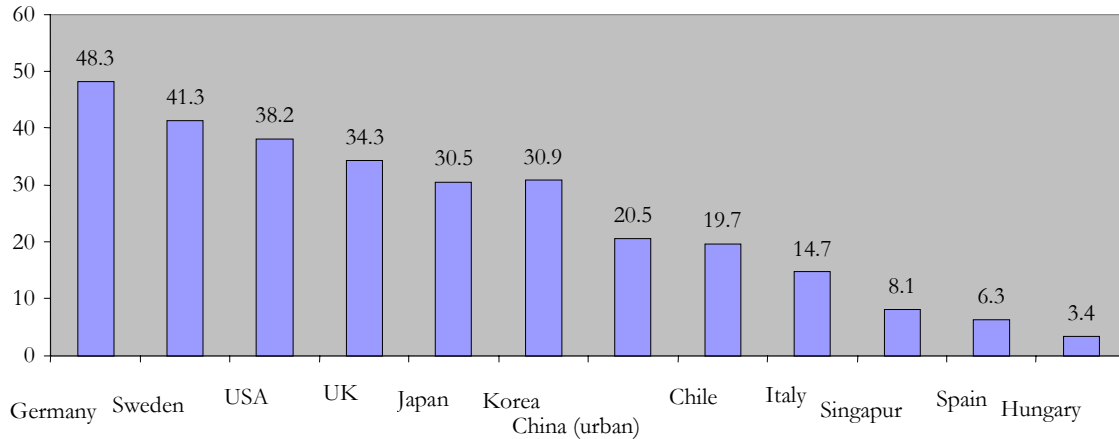
	TOTAL	Income level			AGE			SEX		REGION		EXPERIENCE (years)	
		ABC1-C2	C3	D	18-24	25-34	35-60	M	F	Santia go	Other	Less than 1	5 or more
<b>Yes</b>	19,8%	29,7%	12,3%	5,4%	12,9%	27,3%	21,3%	23,1%	14,8%	25,5%	7,4%	13,6%	40,8%
<b>No</b>	80,2%	70,3%	87,7%	94,6%	87,1%	72,5%	78,7%	76,9%	85,2%	74,5%	92,6%	86,4%	59,2%

- Other internal factors of the user: Many investigations have enumerated other personal factors that predict usage of the technology. The most important are: perception of the web’s usefulness, participation in social groups (it motivates email contacts), being a male (men use the web more than women), employment (having a job often means using corporate connections, as well as executing other types of use), possession of

portable hardware able to connect to internet (cellular phones, PDAs, notebooks) and positive attitudes about technology. Curiously, age is not so relevant (Raban, op. cit.).

WIP Chile also found differences according to income level. Whereas richer ABC1-C2 users report an average use of 17 hours per week, C3s drop to almost 13 hours and Ds to 10.5 hours. Age, sex and region are not significant.

**Figure N°5**  
**Percentage of users who buy online**



- External environmental factors: Public policies, corporate strategies of computing firms, economics and national culture also affect the adoption of technology. For example, in USA and Italy purchases online dropped between 2001 and 2002, due to the deterioration of both economies rather than by other reasons (UCLA, op. cit.; Mandelli & Bossi, op. cit.). Raban supposed that the growth of broadband in the countries affiliated to the e-Living project was caused mainly by marketing strategies of suppliers (Raban, op. cit). And Han attributed the impressive growth of broadband in South Korea to a mixture of political (a strong and proactive government promoting related policies), technological (prevalent ADSL connections) and cultural factors (demanding consumers, high levels of education and high urban concentration in high-rise buildings) (UCLA, op. cit.; Mandelli & Bossi, op. cit.).

### Is “internetisation” inevitable?

Nevertheless, Internet usage is not inevitable. Katz & Rice were probably the first to coin the concept of Internet dropouts -people who stop using the web, ranging from 8% to 11% a year in USA (Katz & Rice, op. cit.) They were mostly poorer people who lost their jobs or their telephone connections because of moving from home (telephone penetration is highly correlated to usage among the poor in the US). Only a 20% of nonusers interviewed by WIP Chile ever used Internet. Among them, 92% stopped using the web less than a year ago mainly for economic reasons ("expensive", "do not have computer" and "did not use Internet enough").

Additionally, recent studies in developed countries discovered large numbers of simply disinterested people. WIP detected that 41% of the British did not use Internet in 2002. From these nonusers, 17% were excluded against their will due to economic reasons. But the remaining 93% did not want or were not interested on using Internet. 17% rejected the technology and did not know anyone to contact by using this tool; 44% were

indifferent in spite of knowing the web's potentialities, and 22% were "proxy users" – people who rely on close relatives or friends to check the web on their behalf, and who are happy with that. Thus the British coordinator of WIP, Richard Rose, said that "the government and businesses now face the task of convincing people that using Internet is worthwhile... We will have to wait for a generation or more before 90% of the British use Internet regularly (Oxford Internet Institute, 2003).

WIP Chile detected that almost a quarter of nonusers is not interested on using the Internet, specially among those who never used it. Nevertheless, as said before, economic reasons are still more relevant in Chile.

In some developed countries, Internet churn has even surpassed to the percentage of new users in recent years (Raban, op. cit.; UCLA, op. cit.). WIP-Chile will be able to reveal numbers of *churn* next year 2005, when present data are compared with those of the next survey.

### An important precedent: the e-Living project

A very important precedent to interpret WIP's findings is another international longitudinal and comparative initiative, although restricted to six European and Mediterranean countries: the *E-Living* project. It studied Israel, Bulgaria, Italy, England, Germany and Norway between 2001 and 2002. Most comparable studies do not have the same validity, either because they analyze a single country (mainly USA) or because they do not compare successive years. For E-Living, the main indicator of Internet's success as a technology is the degree of usage *intensity*. Intensity is defined as the relation between time devoted to online activities, and their number ("depth"). Both variables are combined in the matrix described in Table E, defining four different types of internaut.

- Efficient versus focused users: In the two years studied by e-Living, 40% of users belonged to these two opposed types. The "efficient" ones execute an wide range of online activities in relatively short periods of time, whereas "focused" ones do the opposite (few uses during long periods). There is greater dynamism and moving of people from one category to the other in contrast to intensive/light internauts. Efficient users increased from 23.9% to 29.4% between 2001 and 2002, whereas the focused ones fell from 15.8% to 11,2%. Those with broadband connections tend to become efficient users.

Table E Matrix of users of Internet of the e-Living project *			
		"DEPTH" OF USE (Number of executed activities in last 3 months) **	
		LOW (Less than 2)	HIGH (more than 2)
TIME OF USE	LOW (less than 20 minutes)	LIGHT USERS	EFFICIENT USERS
	HIGH (more than 20 minutes)	FOCUSED USERS	INTENSIVE USERS

\* Analyzed countries: England, Italy, Germany, Norway, Bulgaria and Israel.  
 \*\* Activities: to buy on line; to use banking services, of library, travel/vacations, education; to obtain medical data, on the environment; to download music; to apply/get information for a work; email to contact friends.

- Intensive versus light users: Light users are those who dedicate a very short time to Internet and execute very few online activities, in opposition to intensive ones. Altogether, both categories concentrate to 60% of internauts. Although intensives increased from 34.4% in 2001 to 36.1% in 2002 and the lights fell from 25.9% to

23.4%, the categories are quite stable, with little exchange of people from a group to the other.

Contrary to the popular belief, neither age, education, nor income is the most important difference between both groups. It is *marital status*. 71% of light users are married, against only 47% of their opposites. It is the youngest and without household responsibilities those who have more time to dedicate to the web more intensively.

Another distinguishing factor, although less important, is the availability of broadband: 14.1% of the intensives has it, against 6.7% of the light users. This seems to confirm the findings of the Pew 2002 project, which concluded that North American users of broadband dedicate more time, execute more activities most frequently and than those with modem connections (Horrigan & Rainie, 2002).

Indeed, in the six countries studied by e-Living the internautes who switched to broadband from modem devoted more time to Internet than before. It was not clear if this was caused by the new connections themselves, or because those who got wider connections were merely intensive users waiting for this innovation in order to use the web more intensively. In addition, the contrast of the data from one year to the other revealed that broadband users became more efficient. I.e., they spent less time with the technology after an initial period of more intensive usage (Raban, op. cit.).

In addition to this typology of users, E-Living grouped the uses of Internet in three big clusters: educative, commercial and social. This additional characterization confirmed that the effect of the web is not homogenous nor mechanic, since the size and composition of each cluster varied according to each country's culture as well as personal traits of the internautes. For example, 45% of Italians fell into the social cluster and 35% into the educative one, whereas 71% of Norwegians fitted into the commercial cluster. Most of those belonging to the commercial cluster were married and worked, and were more educated and wealthy than those from the other two sets.

The conclusions of the project e-Living were not very euphoric about the success of Internet. First, because its growth was beginning to stagnate. The percentage of users was close to the computer skills available in each country. The most advanced, Norway, had 76% of PC skills among its population, and 67% of internautes. In Bulgaria, the web was used by 12% of the people, but PC skills were frozen at 18%. In other words, the growth of Internet was not inevitable: Bulgaria would not reach Norway's penetration unless the PC skills were expanded *in the first place*.

Secondly, important levels of Internet dropouts were detected. These were people who regarded the Internet useless, or just rejected it. In Norway, the total number of internautes *diminished* as deserters overtook the new users. However, the probabilities of dropping out are reduced if people use email more, acquire greater experience, and became more intensive users.

Thirdly, the time of Internet use turned out to be very limited (although it may change if broadband expands). *According to E-Living, usage hardly averaged 20 minutes per day in the six analyzed countries, that is 140 minutes per week*. This ranged from 13 minutes per day in Norway to 27 in Italy. Israel exceeded the norm with 48, but it had very peculiar characteristics that were not applicable elsewhere. According to a study by Stanford University in the USA, only when usage exceeds five hours per week significant changes in everyday life appear. Below that level, time dedicated to other offline activities are not modified substantially (Nie & Erbring, 2000).

E-Living discovered that, except in England, the use of the web did not affect the other aspects of everyday life. In fact, the correlation between time spent online and offline leisure time (sports, cinema, restaurants, reading, visiting friends) turned out to be positive: the more time spent online, the *more* was dedicated to those other activities.

Like WIP, e-Living detected that time devoted to TV watching diminished according to Internet experience. But if experience was discarded, TV consumption *increased* (perhaps because users *rest* by watching television). Therefore, and contradicting several studies like WIP itself (see UCLA, op. cit.; Haythornthwaite & Wellan, op. cit.), E-Living concluded that "Internet use probably takes time away from some activities such as eating outside and perhaps house cleaning, but not from (communications) media, leisure, going out or visiting friends... When experience is kept constant, intensive use of Internet is associated to more TV consumption" (Raban, op. cit., p. 32).

### Internet, does it make the difference?

How much has Internet changed us? If so, were these changes positive or "successful"? If positive, persons should dedicate more time and/or execute a wider repertoire of online activities than before using Internet. Let us examine three cases.

Table F compares the average weekly hours devoted by Chilean users and non users to ten important offline activities. The data deny several beliefs about the impact of the web, and confirm others. For instance, they contradict the image of the internaut as a sedentary and socially isolated being. In fact, users spend more time sharing with friends, practising sports and speaking by the telephone, while sharing less with their families.

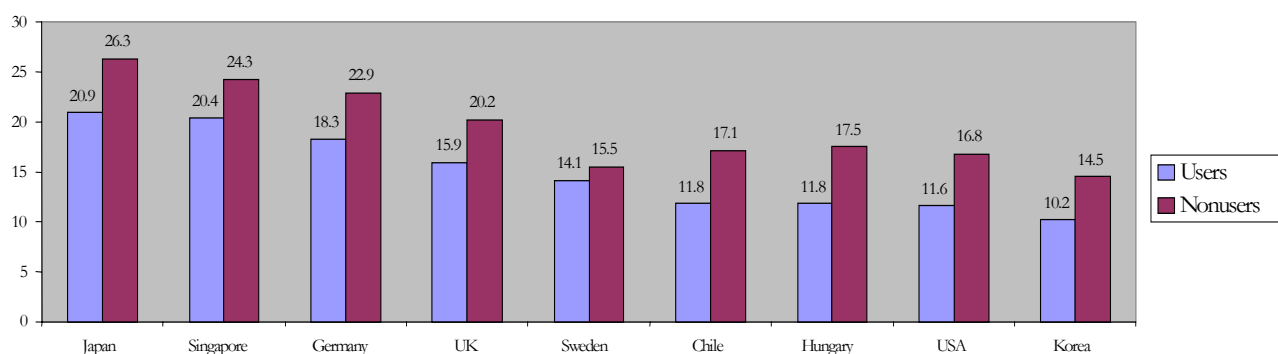
	Users	Nonusers	Difference in favor of users
Sharing with the family	23.61	29.90	-6.29
Watching TV	11.77	17.14	-5.37
Listening radio	7.75	12.37	-4.62
Reading newspapers	1.75	1.81	-0.06
Reading magazines	0.53	0.51	+0.02
Playing videogames or using the PC offline	1.19	0.27	+0.92
Speaking by telephone	3.69	2.32	+1.37
Listening to recorded music	6.92	5.40	+1.52
Exercising/sports	3.19	1.54	+1.65
Sharing with friends	10.93	5.49	+5.44

Table G shows the percentage of Chilean internauts declaring the increase or decrease of time spent with different social groups. In most cases, there are no differences perceived. And when there are some, as in the case of colleagues and friends, *more* time is reported than before.

	Increased	Same	Diminished
...work/profession colleagues	32.6%	65.4%	1.9%
...friends	31.8%	65.9%	2.3%
...fans to same hobbies	17.1%	80.1%	2.9%
...relatives	13.6%	81.4%	5.0%
...who shares political interests	5.0%	92.5%	2.5%
...who shares religion	3.8%	80.1%	3.2%

Concerning the impact on “traditional” mass media (conventionally regarded as contributors to social cohesiveness due to their massively shared contents), web users report less time watching TV than nonusers in all WIP countries (see figure 6). The trend is stronger when web experience increases. Yet in general media are not harmed. In some countries, users report reading more newspapers, magazines, and books, and listening more radio than nonusers. In Chile, radio consumption is almost as low as TV viewing among users. This may be related by the contents offered by Chilean radios, mostly foreign music in English, which can be easily obtained either from the web or from recordings.

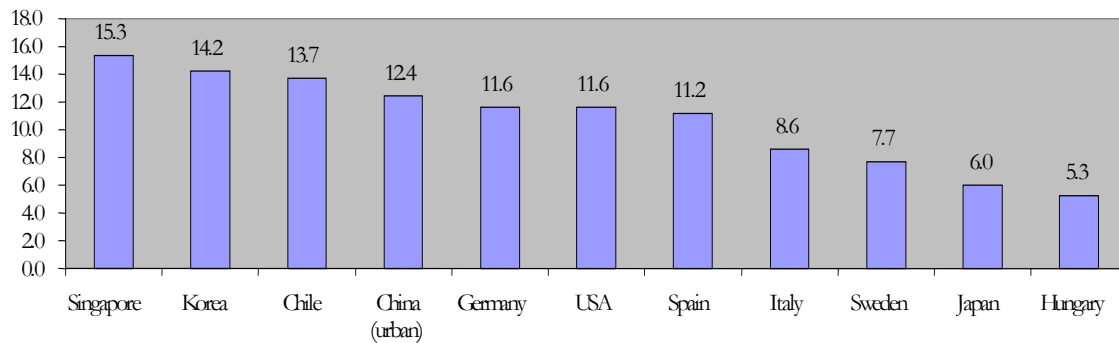
**Figure N° 6**  
Average weekly hours devoted to watch TV (users v/s nonusers)



### About usage and how it is measured

That the E-Living project concluded that the average impact of Internet among the population is not very high does not mean that the web is not important for those who are users, specially if they are intensive or efficient. Nevertheless, internautes from WIP countries reported higher times of web use than e-Living. Particularly in emergent countries like Singapore, South Korea and Chile (and Israel in the case of the mentioned European project, another small but rather thriving nation in the field). All of them exceed the five hour per week defined before as the limit from which everyday life would be affected (see figure 7).

**Figure N° 7**  
Average weekly hours devoted to internet use



Italy and Germany are included both in WIP and in e-Living, but the reported times of usage are different. For Germany, WIP estimates 11.6 hours per week against 2.1 of e-Living. For Italy, the difference is between 8.6 hours weekly against 3.15 respectively<sup>7</sup>. This discrepancy draws the attention to an important factor: the methodology used to study the impact of the web. Like in other scopes of the human life, science must reach a compromise between what it is possible and what is ideal. The e-Living project asked for usage times with a self-administered diary, a quite slow and expensive procedure which, sometimes, tends to underestimate times of usage<sup>8</sup>. In the case of WIP, which covers many more aspects of Internet use, the countries affiliated decided that the diaries were not viable despite being more accurate to determine this variable. In fact, WIP draws the figure from the question: "In an average week, how many hours/minutes do you dedicate to..." (WIP Chile case also distinguished between weekend and working days). This has advantages and defects exactly opposite to those indicated.

What is the real figure then? Possibly it lies somewhere between both figures. Because these (and others) methodological differences, indiscriminately mixing different data and studies must be avoided. Doing so can lead us to erroneous conclusions about the social impact of the Internet, specially if we compare different moments and places.

## Conclusion

The fast growth of Internet is neither an automatic nor an inevitable process, despite the great potentialities of this technology. Factors like awareness, type of access, experience, place of use, personal predispositions, public policies and national culture contribute with so many aspects, that it is dangerous to generalize about how Internet is being adopted in different countries. In some cases there is some evidence of stagnation, even a drop of the number of users. Although WIP reveals some important changes in users' everyday life, these findings contradict similar studies. Thus, special care must be taken when interpreting different data and methodologies. In any case, more than replacing offline activities, Internet seems to deepen and refine them. This coexists with a large number of people simply not interested on using this technology.

<sup>7</sup> E-Living showed average minutes per day. Weekly totals indicated here result from multiplying that figure by seven. There was no indication about the representativeness of that daily average in a week.

<sup>8</sup> In a research project about time spent on information and media technologies in Chile, we used the expensive self-administered diaries because of their accuracy. See Godoy (2001).

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