



Information Technology Observatory)

Annual ICT Indicators Collection Survey
Households and Businesses 2011

May 2012

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1. Introduction

The eighth edition of the national survey on ICT in Morocco initiated by the ANRT was carried out in keeping with the previous surveys to allow comparison and tracking of key indicators.

The Information Technology Observatory aims to establish accurate, quantitative and shared knowledge of the state of the information society in Morocco. The observatory's objective is to:

- Complete information collected from operators in the fixed line, mobile and Internet services market and to process questions on how ICT is used and how users behave in the context of ICT in order to analyze qualitative aspects such as the drivers or the brakes on equipment and its use;
- Promote accurate, quantitative knowledge of the state of and developments in information society in Morocco;
- Form a means of communication at national level;
- Feed international databases (UIT, CNUCED, etc.) and deliver figures that will be used in particular to calculate ICT indexes that classify countries with respect to their level of development in this area.

Year after year, the collection and tracking a battery of key indicators in ICT are used by the ANRT to track both telecom market developments and some of the mutations in progress within the Moroccan population, whose uses of ICT are being transformed, in particular with the democratization of the Internet.

Thanks to this study, the ANRT is able to orient and track the impact of regulatory decisions (tariffs reduction, quality of service improvement, portability, etc.) and governmental initiative that have been taken to support the development of ICT and to strengthen the extent that these technologies are being used and adopted by the citizens and businesses of the Kingdom.

The results of the 2011 survey confirm the trends observed in previous years and also bring out reorientations in the ICT equipment that individuals adopt and how they use it.

Aside from fixed line telephony, which is slowly losing ground this year with a decline in limited mobility, levels of equipment have all increased in recent years and developments are positive for 2010-2011.

2. Methodology

Recurrent surveys carried out by the ANRT are used to measure the development of ICT equipment and use within Moroccan households and businesses.

The ICT indicators collection survey complies with the international recommendations of the Partnership on Measuring ICT for Development (ITU, WB, UNCTAD, OECD, Eurostat, etc.).

As in previous years, the ANRT carried out two distinct surveys of Moroccan households on the one hand and of key decision makers in charge of ICTs within businesses on the other hand. These surveys aim to measure various types of indicator that can be grouped into four main categories:

- Access of households and businesses to ICTs
- The level of equipment in households and businesses
- The uses by individuals and businesses

These surveys were carried out during the first quarter of 2012 in similar circumstances to previous years; improvements were also made this year in sampling process, in order to:

- Improve sample representativeness, in particular in rural environments ;
- Complete the questionnaires by adding new indicators.

2.1. The Sample of Individuals

The target population of the “Individuals” survey is made up of people from 12 to 65 years of age living in an urban or a rural environment with electrification (96.8% of households in the rural environment have electrification according to the ONE).

The reference base for the population to be studied was established in compliance with the 2004 census and with projections for 2011 made by the Haut Commissariat au Plan (HCP).

The questionnaires were administered face to face in French or in dialectal Arabic (according to the respondent’s linguistic profile) during the period running from February 17th to March 15th 2012.

The 2011 survey covered 1240 households in 13 cities of the kingdom.

2.2. The Sample of businesses

The 2011 survey was carried out between February 7th and March 15th, 2012 and covered 474 businesses.

The business sample was set up in two stages:

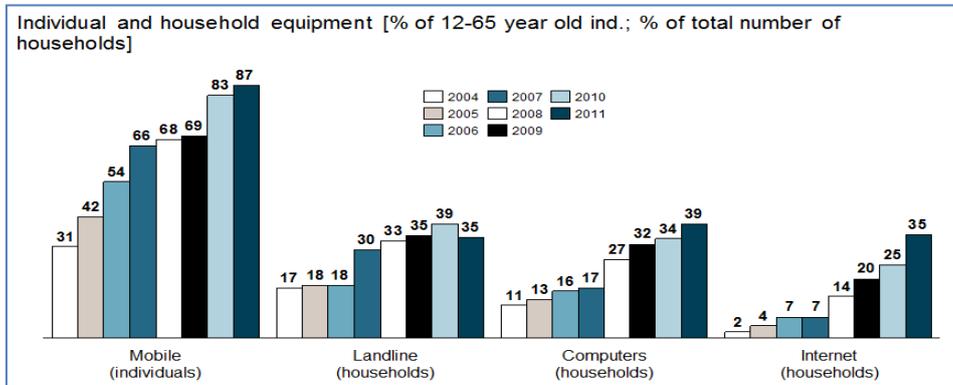
- A sample set up including 1 820 representative companies in 4 key sectors of the economy (Industry, Construction/Public works, Services, Commerce), stratified by employment segment with exhaustive and non-exhaustive levels set up by drawing a random sample from the HCP database ;
- A complementary sample of 648 representative companies from other sectors (Agriculture, Financial Services) obtained by random draw from the Kompass database.

This year, the businesses database was extended to businesses with more than 4 employees. For 2010, the scope of the survey focused on businesses with more than 10 employees.

3. Results for individuals

3.1. Total equipment within households and individuals

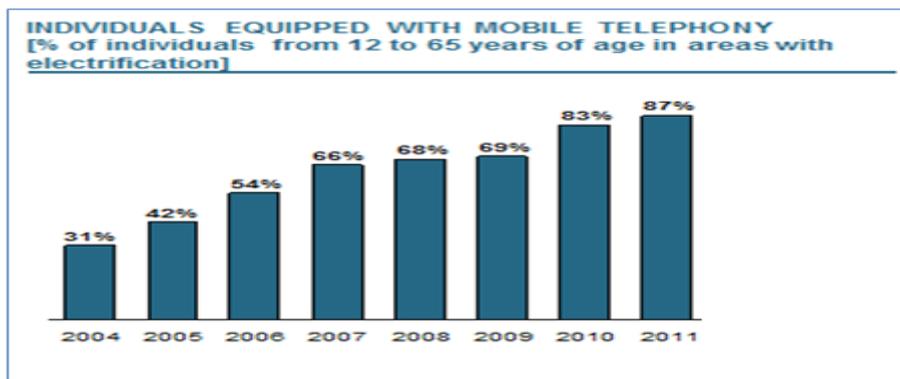
The annual survey of ICT indicators collection for 2011 has helped to highlight a marked increase in the rate of household and individuals equipment between 2010 and 2011: 87% of individuals aged 12 to 65 are equipped with mobile in 2011, 35% of households with Internet access and 39% of them have at least one computer.



3.2. Mobile telephony equipment

3.2.1. The mobile telephone is continuing to increase its penetration among individuals and reached 87% in 2011

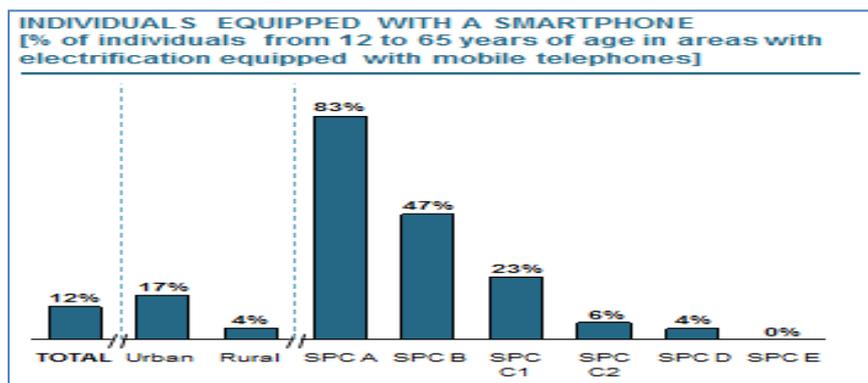
After a 14 point spurt between 2009 and 2010, the mobile telephone continued to increase its penetration among individuals more slowly and reached 87% in 2011 (+4 points between 2010 and 2011).



3.2.2. Smartphones start to become important especially in higher socio-professional categories

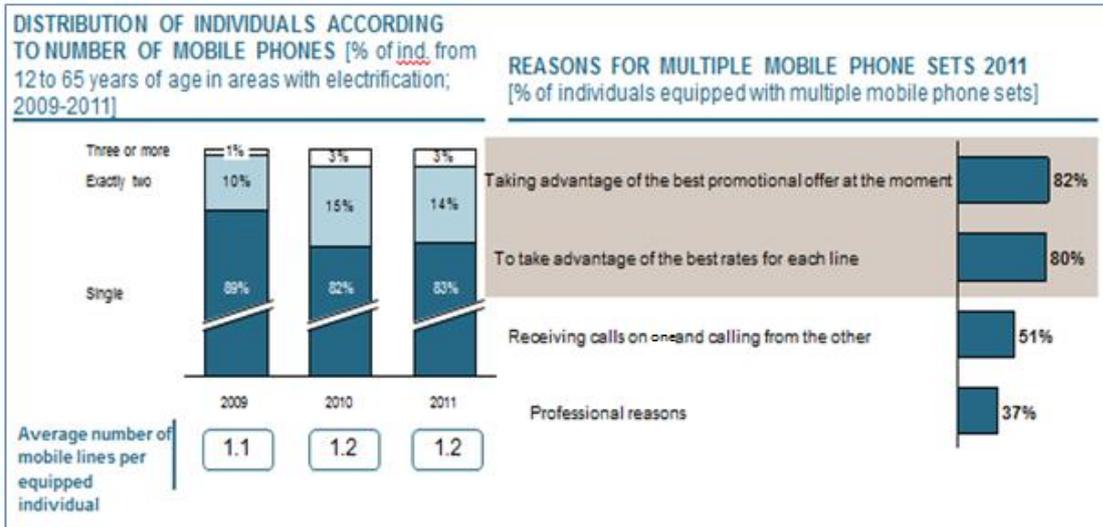
Smartphones are still not particularly present overall: only 12% of individuals equipped with mobile telephony have one, but they represent 83% of mobile telephones in higher socio-professional categories. Individuals in urban areas are better equipped than those in rural areas, with a significant gap of 13 point.

Great differences have also been observed between the various social classes: the majority of individuals in higher socio-professional categories are equipped with a smartphone while only a marginal part of those in lower social professional categories are.



3.2.3. The number of multiple phones remains stable: 1.2 mobile lines declared per equipped individual

At the end of 2011, nearly 17% of individuals equipped with mobile telephony have multiple handsets, in general two mobile phones. The number of multiple phones remains high in 2011 but this trend seems to have been stabilizing since 2010 when 18% of multiple phone-equipped individuals were counted. The number of multiple phones is most often due to the desire to optimize the total telephone bill by taking advantage of promotional offers and benefiting from better rates for each line.



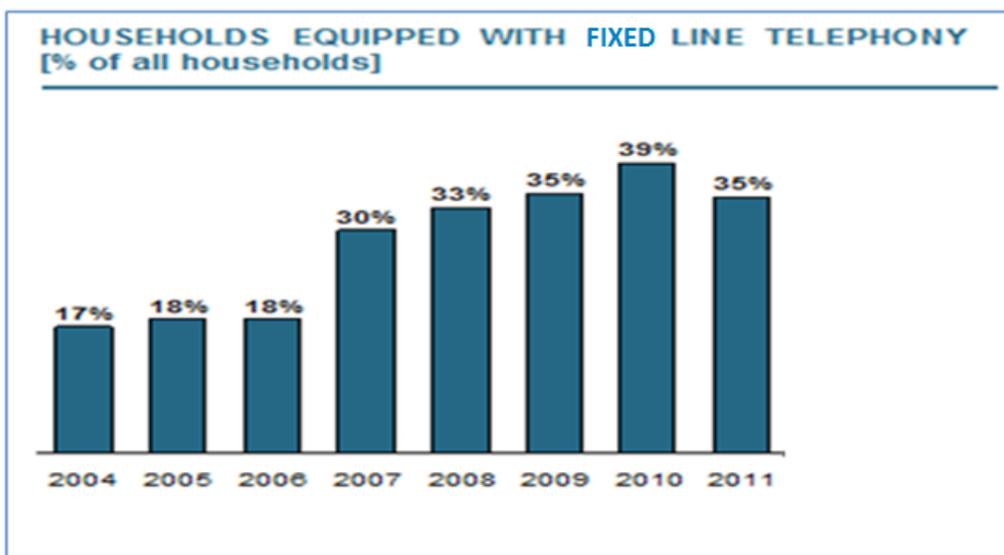
3.3. Fixed line equipment and uses among households

3.3.1. The level of fixed line telephony equipment started to decline slightly in 2011

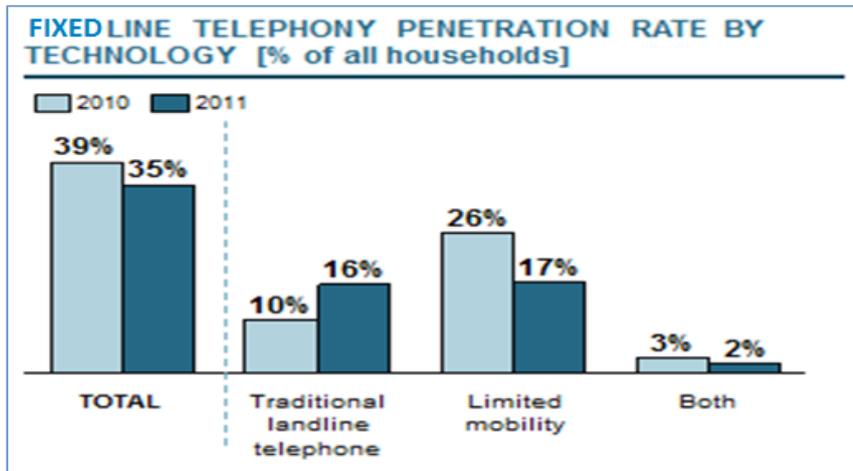
Constantly rising until 2010, the level of equipment in fixed line telephony for Moroccan households experienced a 4 point drop in 2011 compared to 2010: In 2011, 35% of households are equipped with fixed line telephony.

Fixed line telephony equipment experienced very strong growth in 2007 partly due to the launch of new fixed line telephony offers with limited mobility.

After this significant increase, growth in fixed line penetration at the household level slowed down between 2007 and 2010, growing respectively from +2 to +4 points per year. 2011 marks the decline in fixed line telephony, with a 4 point drop compared to 2010.

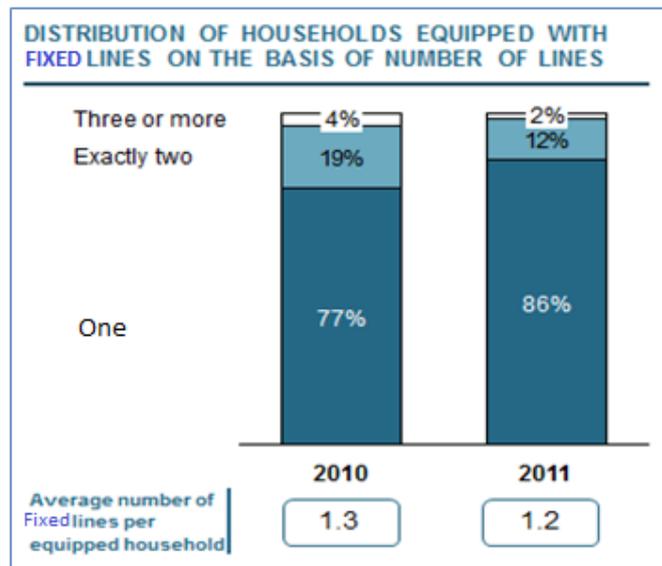


The decline in fixed line telephony was driven by that in limited mobility, present in 19% of households in 2011, a major decline compared to 2010 (29%).



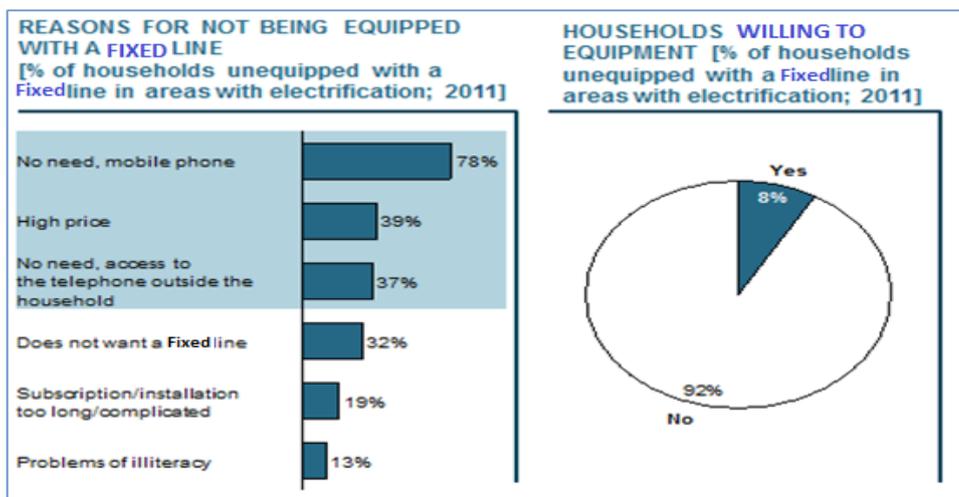
3.3.2. The number of multiple handsets is also in decline

The number of multiple handsets addresses only 14% of households equipped with fixedline telephony compared to 23% in 2010.



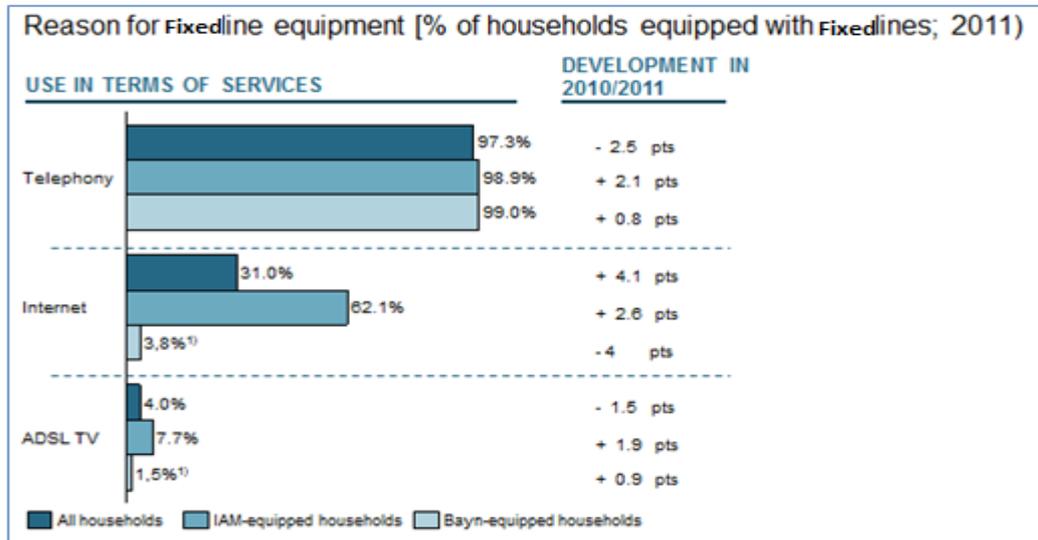
3.3.3. This decline can be explained by the replacement of fixed lines by mobile telephones

Fixed line-to-mobile replacements are strongly reducing the need to have a fixed line. Only 8% of unequipped households plan to equip themselves with fixed lines in the next 12 months compared to 11% in 2010.



3.3.4. Using Internet and TV over ADSL nonetheless constitute factors with a bearing on equipment for part of households

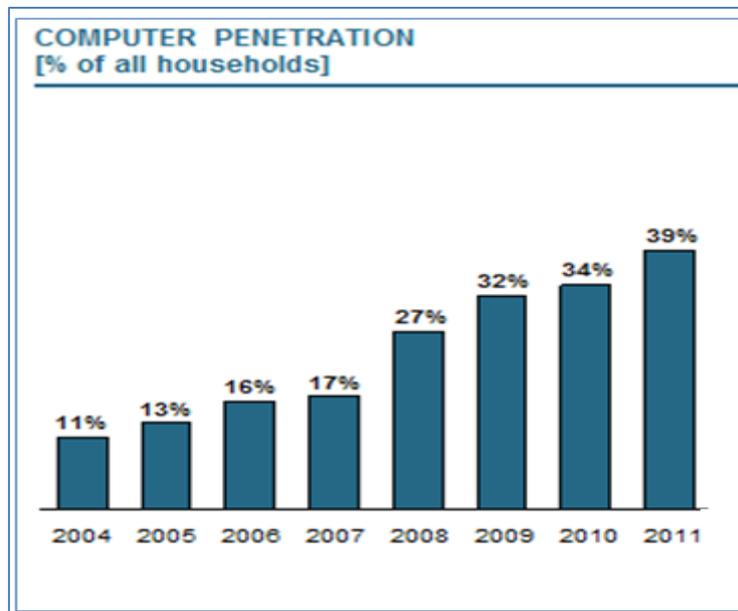
Fixed line equipment is above all focused on telephony while nonetheless being driven by the increase in demand for fixed Internet. High speed fixed Internet by ADSL is an equipment factor that is increasing in importance, with nearly two third (2/3) of households that were equipped mentioning this use. The use of IPTV is not left since almost 8% of households equipped with fixed-line mention this use.



3.4. Computer equipment within Household

3.4.1. Computer penetration among households is growing strongly: 39% in 2011

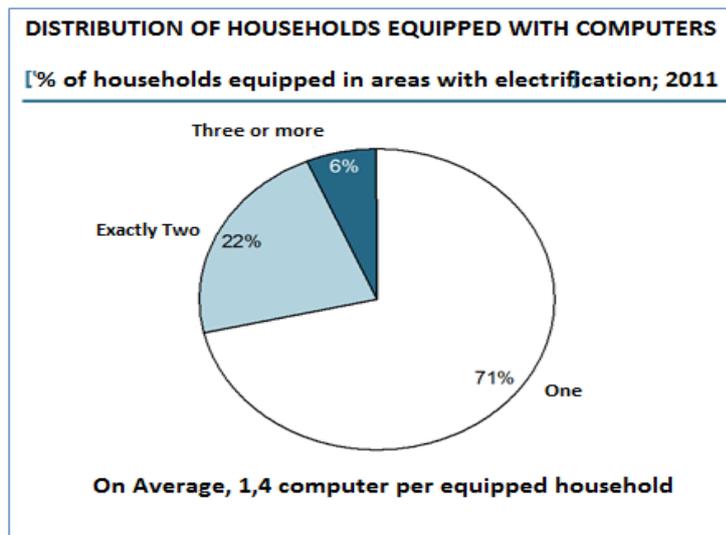
The level of equipment with computers at home has reached 39% (i.e. 5 points more than in 2010). Although equipment tends to be more popular, urban areas are still much more equipped than rural areas, with a 39 point differential. Household equipment with computer is highly variable in terms of socio-professional category, with high socio-professional categories and urban households being better equipped.



3.4.2. Equipped households state that they own on average 1.4 computers

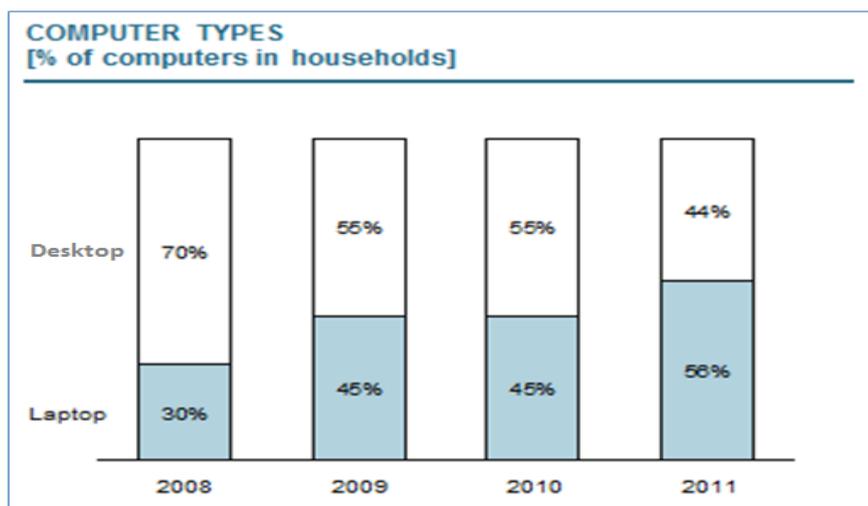
22% of equipped Moroccan households have 2 computers and 6% of equipped households have 3 computers or more. Overall, 28% of households have multiple units and on average, equipped households have 1.4 computers.

Tablets continue to be marginal: less than 2% of computer-equipped households state that they have tablets.



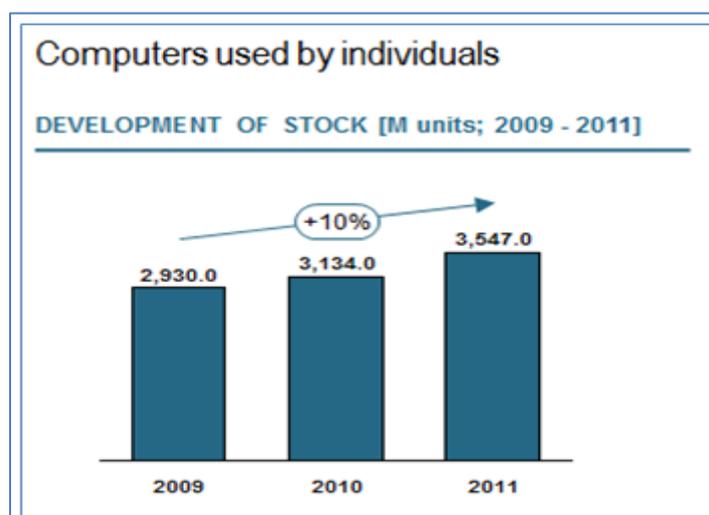
3.4.3. *The desktop computer is losing ground compared to the laptop*

While the laptop computers share among Moroccan households stabilized between 2009 and 2010, the decline in the desktop computer in favor of the laptop resumed in 2011. Laptops are more and more prevalent in households: 56% of equipment in 2011 compared to 45% in 2009 and 2010 and 30% in 2008.

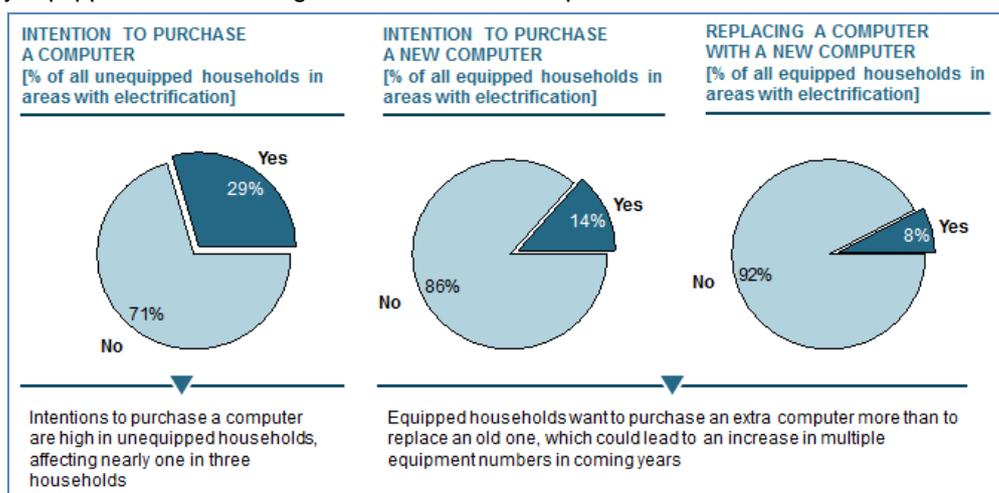


3.4.4. *The computer market for individuals is growing and should continue this trajectory*

On the basis of 6.7 million Moroccan households in 2011, the stock of computers used by individuals has reached 3.54 million of units.

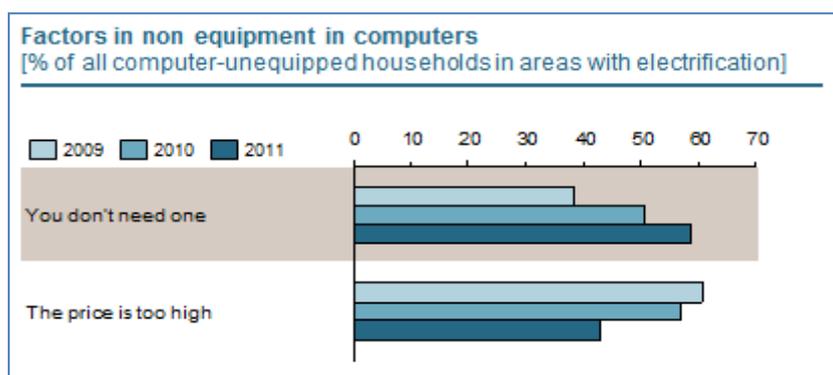


Personal computer equipment should grow strongly in coming years. Nearly one out of three (29%) of unequipped Moroccan households intends to purchase a computer. In addition, 14% of households that are already equipped show a willing to have an extra computer.



3.4.5. The price constitutes a less significant brake on purchase than in previous years

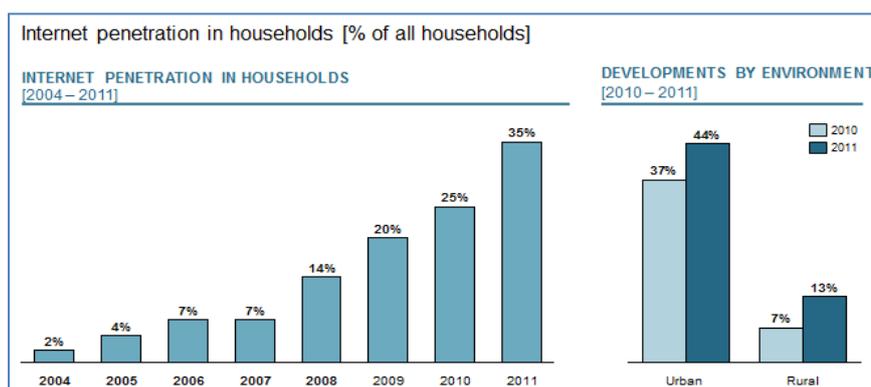
In 2011, and unlike 2010, the main brake on purchasing a computer is no longer the high price but the lack of need. While the lack of perceived need is the main factor behind non-equipment of all socio-professional categories, the price factor is fairly logically held back by low socio-professional categories. For a significant share of Moroccan households, and in particular in low socio-professional categories, complexity of use and illiteracy also continue to be a brake on equipment.



3.5. Household access to the Internet

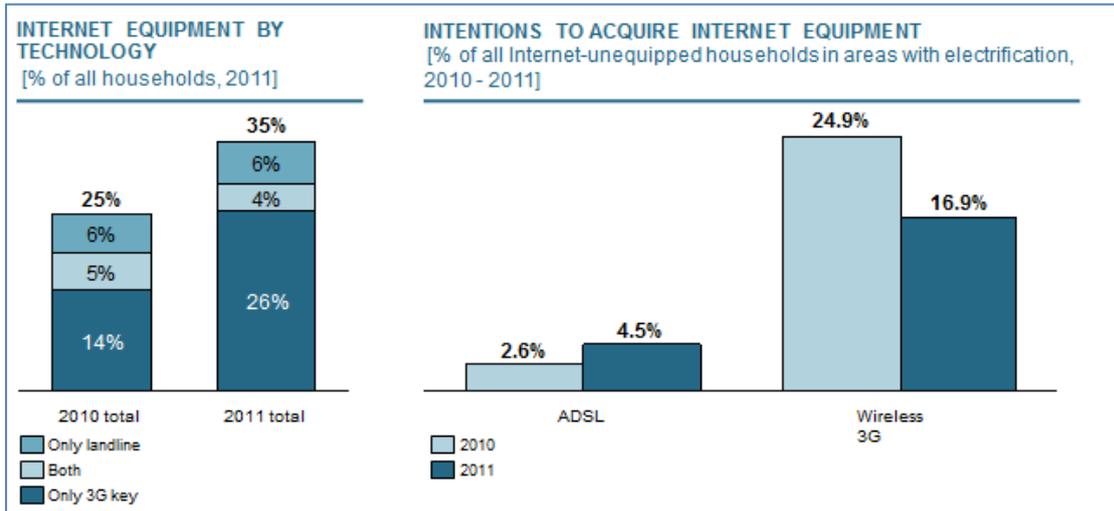
3.5.1. A third of Moroccan households is connected to the Internet

More than one out of 3 (35%) Moroccan households have an Internet connection; the penetration rate has increased quickly since 2008 (14%). Constant growth in Internet dissemination does not stop a certain number of inequalities from persisting: the disparity between rural and urban areas continues to be a great one.



3.5.2. The Internet access market is developing thanks mainly to 3G

The success of 3G dongles has contributed to the democratization of Internet access. In 2011, 26% of households are connecting to the Internet with their 3G dongles while 6% only use fixed Internet and 4% use both. 3G dongles equipment will continue to grow in 2012, 16.9% of unequipped households intend to purchase 3G dongles despite a slowdown (-8 points in equipment intentions). On the other hand, ADSL equipment should increase in 2012: 4.5% equipment intentions in 2011 compared to 2.6% in 2010. Equipped households have on average 1.3 accesses per household.

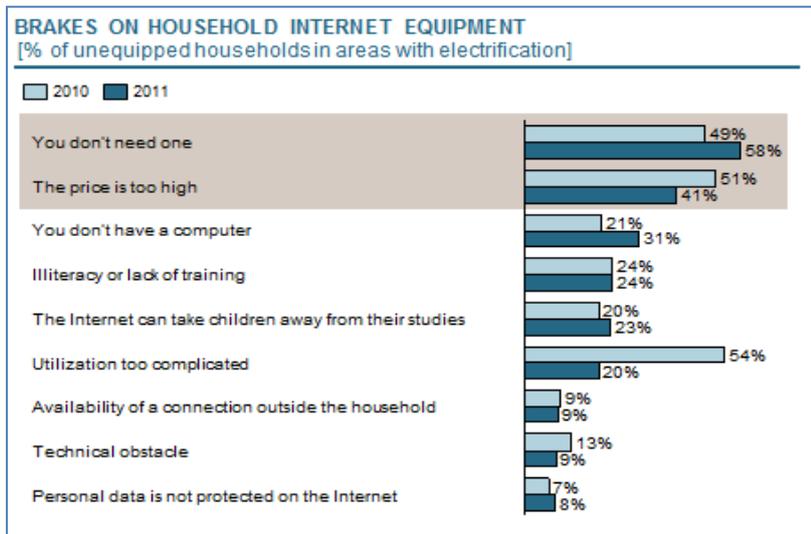


3.5.3. Lack of need, economic considerations and lack of access to a computer are the main brakes on Internet access

65% of Moroccan households are not equipped with Internet access. The main brakes on Internet equipment for Moroccans are lack of need and prices that are too high.

It should be noted that the brakes to the Internet access for households in general have moved between 2010 and 2011. The price was the main factor for non-equipment in 2010, when he loses 10 points in 2011 in favor of the factor of lack of utility.

Unlike the previous year, complexity of use is not cited as a brake on use compared to previous years.

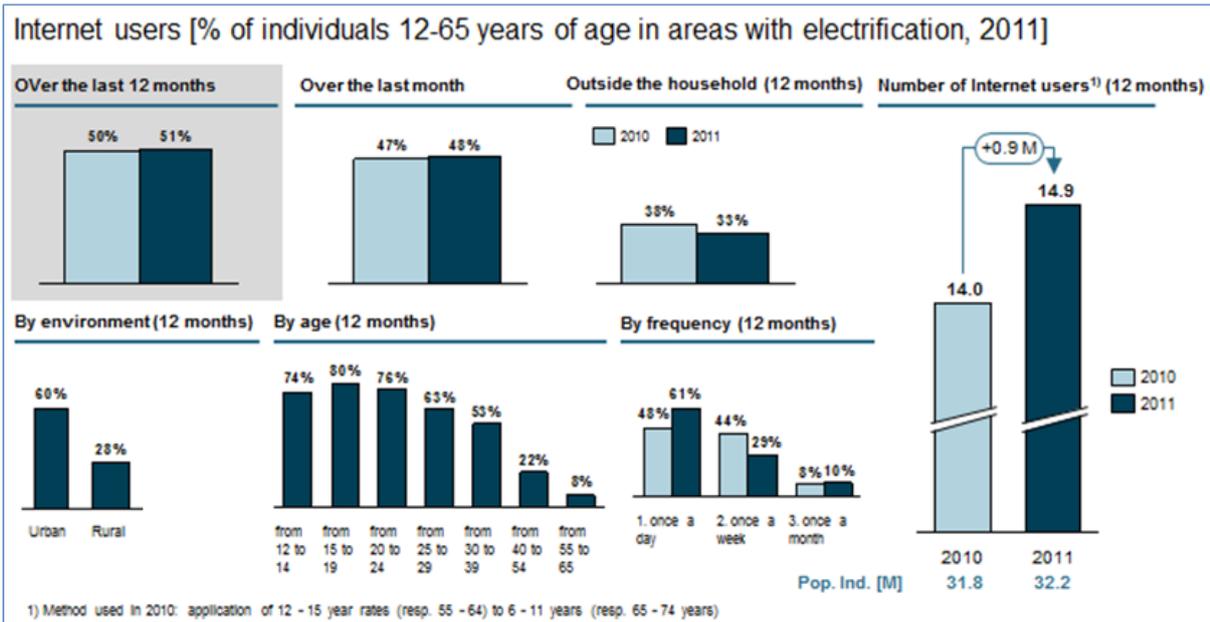


3.6. Internet uses by Internet users

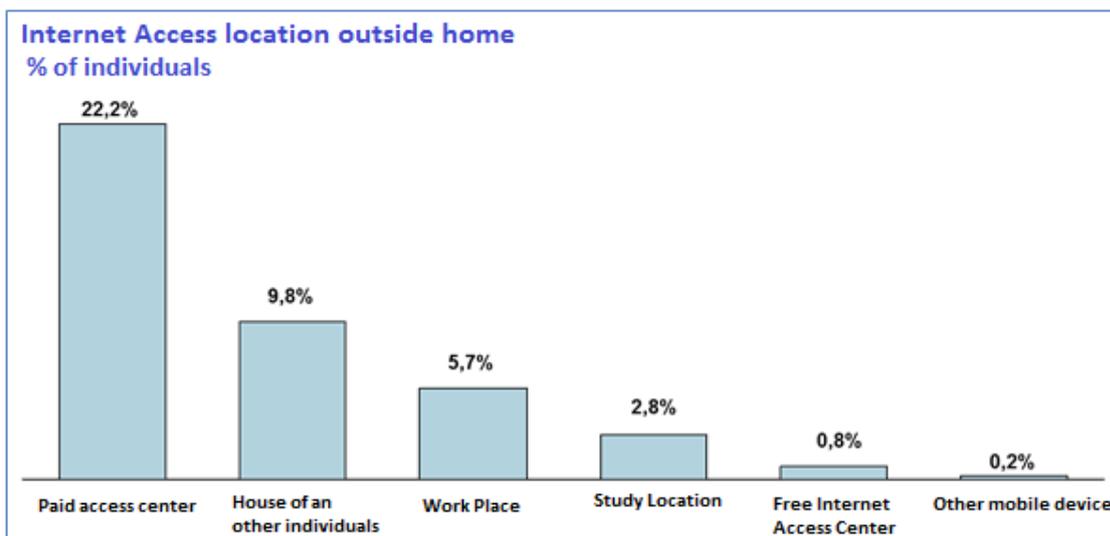
3.6.1. More than half of Internet users connect to the Internet every day

In 2011, Morocco has 14.9 million Internet users, nearly a million more than in 2010.

Monthly connection has proved to be stable between 2009 and 2010 while daily use has increased. On average, in 2011, 61% of Internet-equipped Moroccans connected to the Internet every day. This daily use experiences significant growth (48% of Moroccans connected to the Internet every day in 2010). This can be explained in part by more home equipment and less use of Internet access outside the home. Age and geographic location continue to influence connection practices heavily.



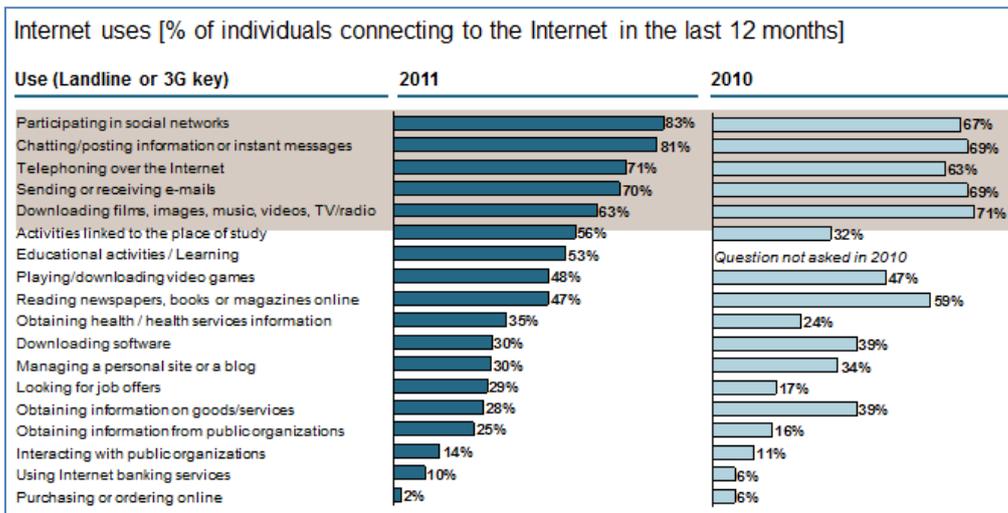
Cybercafés continue to be the main connection location outside the home, with 22% of connections, ahead of the home of another individual with 10% of connections.



3.6.2. 83% of Moroccans Internet users state that they are members of a social network

Social networks represent the main Internet use of Moroccans: 83% of individuals connected to the Internet in the last 12 months participate in them. Moreover, all media considered, social networks are the favorite use, whether for desktop computer, 3G dongles or mobile telephone. It is interesting to note that individuals accessing the Internet in rural areas show higher use of social networks.

In General, the Internet initially seems to be seen as a means of communication because a part from social networks, the favored activities are immediate messages, telephone over the Internet and sending e-mails. Compared to 2010, all these practices are rising. On the other hand, downloading content from the Internet showed a drop in 2011: only 63% of Moroccans used the Internet to download pictures, videos or music compared to 71% in 2010.



3.6.3. E-Commerce

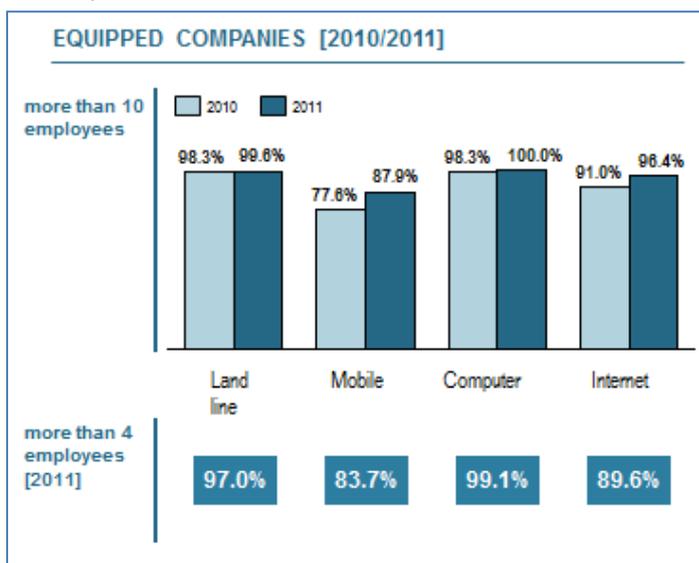
Only 4% of Moroccan Internet users made online purchases in 2011. A large part (72%) of Moroccan Internet users do not see any particular need for practicing online purchases and a majority of them do not trust the means of payment and consider prices to be too high.

4. Results for Business

4.1. Overall Market

4.1.1. ICT equipment levels of companies are very high

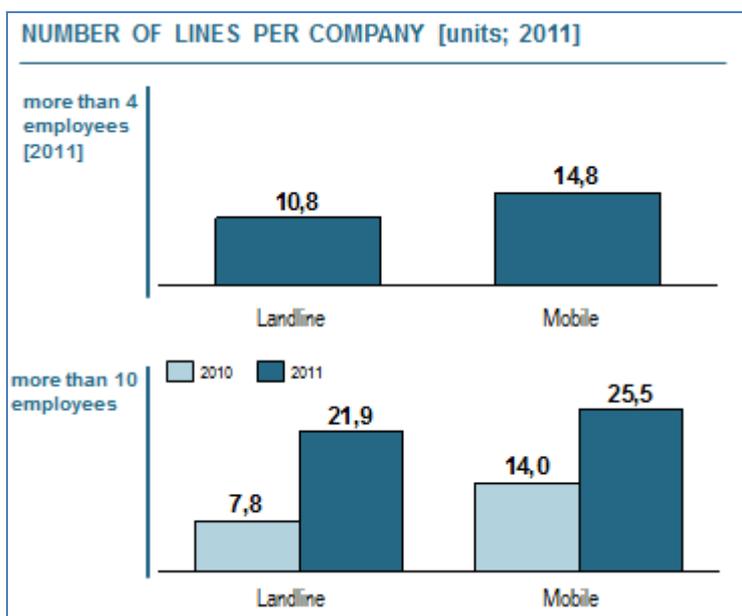
The vast majority of Moroccan businesses are equipped with information and communication technologies. The penetration rate of fixed line, Internet and desktop equipment remain unchanged compared to previous years. Mobile telephony equipment, which is historically lower, increased compared to 2010: 84% of companies with more than 4 employees are equipped with mobile telephony in 2011 and 88% of companies with more than 10 employees are equipped with mobile telephony in 2011 compared to 78% in 2010. To a lesser extent, the Internet is also increasing within businesses with more than 10 employees: 96% in 2011, compared to 91% in 2010.



4.2. Telephony equipment

4.2.1. 99,6% of businesses are equipped with fixed line telephony compared to 88% with mobile telephony

Overall, 99,6% of companies are equipped with fixed line telephony compared to 88% with mobile telephony. Companies with more than 10 employees have on average 21.9 landlines and 25.5 mobiles in 2011 compared to 7.8 landlines and 14 mobile lines in 2010. The gap between fixed line and mobile equipment has decreased.



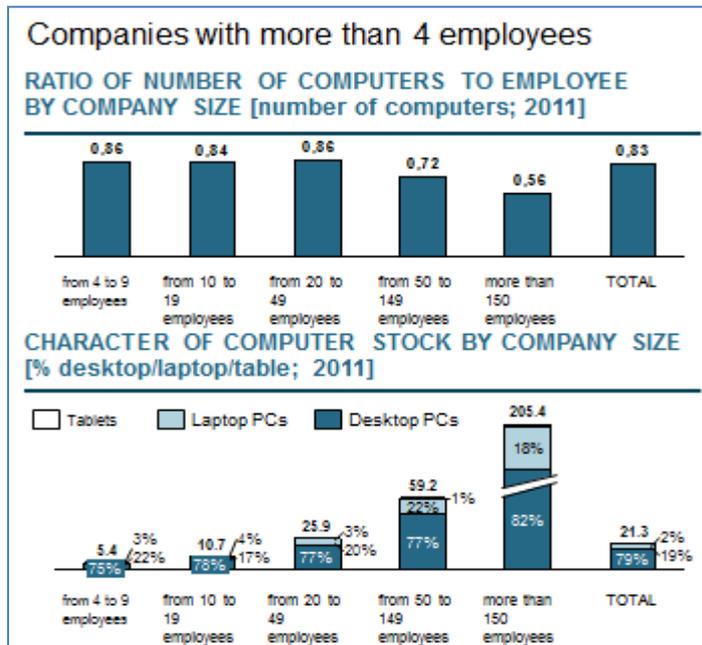
4.3. Computer equipment

4.3.1. *Almost all businesses are equipped with a computer*

Almost all companies are equipped with desktop or laptop computers.

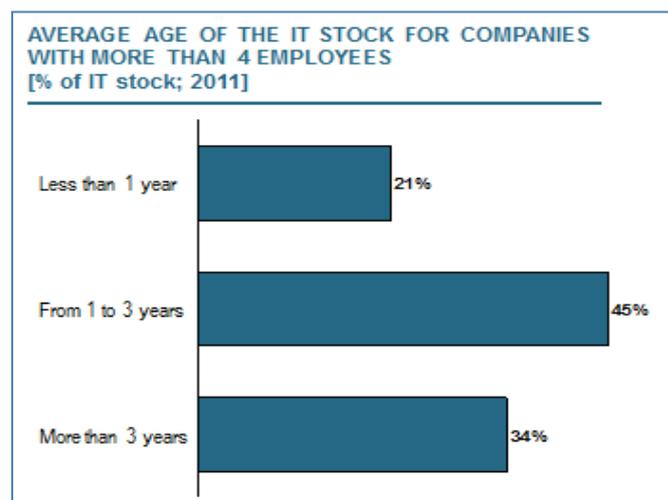
The number of computers per employee is 0.83 in 2011 compared to 0.57 in 2010. Great disparities exist from sector to sector: with on average 67 computers per 100 employees, the commercial sector is the least well equipped. On the other hand, financial services and the primary sector have on average more computers than employees: 105 computers for 100 employees.

The computer stock is for the most part made up of desktop computers even if the share of laptops is increasing slightly: 79% desktops compared to 81% in 2010 and 21% laptops compared to 19% in 2010.



4.3.2. *A half of the stock of computers is less than 3 years old*

Nearly half the computer stock in companies is between 1 and 3 years old while a third is more than 3 years old.



4.4. Internet equipment

4.4.1. *96,4% of businesses have Internet access*

Overall, 96,4% of companies are connected to the Internet. The level of Internet equipment differs according to sector. Industry and financial services are the most Internet-equipped sectors. On the other hand, the primary sector is the least well equipped.

The level of Internet equipment increases with the size of the company: all companies with more than 150 employees are connected to the Internet in 2011.

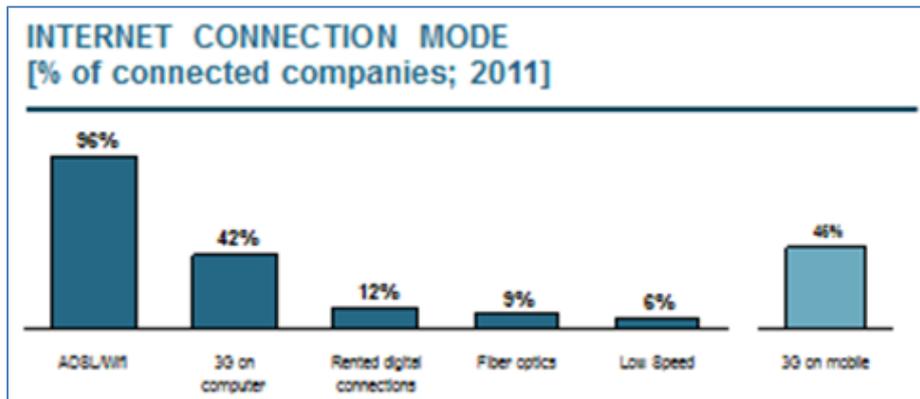
4.4.2. ADSL continues to be the means of connection most used by businesses and 3G has grown considerably

Virtually all companies with more than 4 employees have Internet access via ADSL/Wi-Fi.

3G on mobile phones and 3G dongles has increased considerably since 2010, with nearly one out of two companies using this technology (7% of companies with more than 10 employees in 2010).

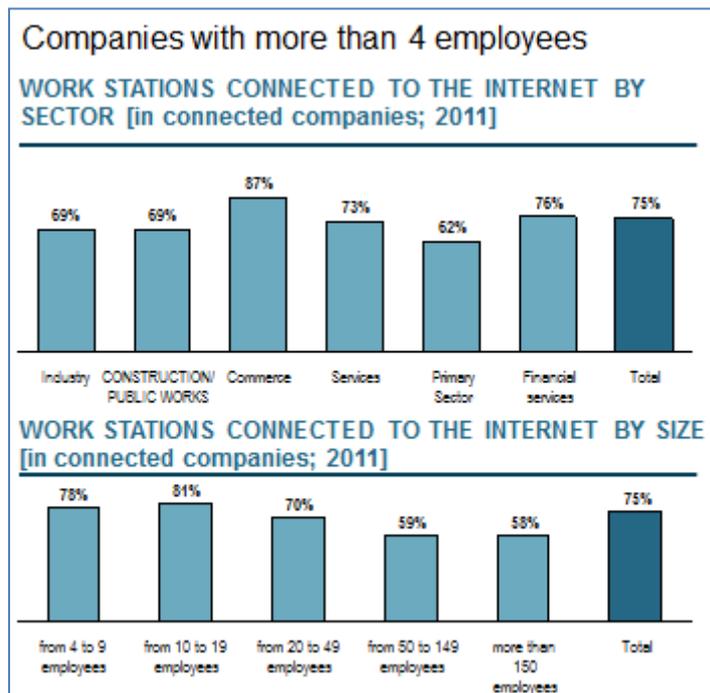
Fiber optics has also made an appearance and is deployed in nearly one out of ten companies, mainly in large ones.

Low speed is in sharp decline with only 6% of companies being equipped with it in 2011 (compared to 20% of companies in 2010).



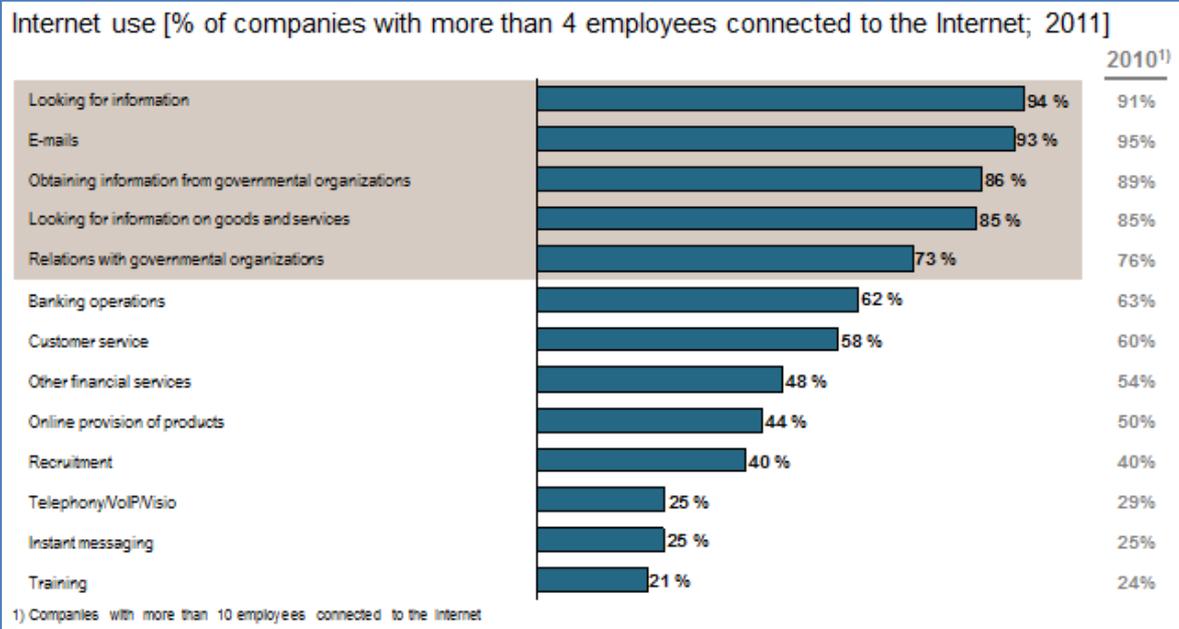
4.4.3. 75% of work stations are connected to the Internet

On average, 75% of work stations are connected to the Internet in companies with at least one Internet access point (compared to 67% of companies in 2010).



4.4.4. Businesses mainly use the Internet to send e-mails or to search information

More than three quarters of companies search for commercial or official information, have access to e-mail and maintain relations with governmental organizations through the Internet.



4.5. E-Commerce

4.5.1. Online purchasing and selling practices are spreading

Online purchasing is gradually becoming more democratic with now nearly a third of companies with more than 10 employees being already adept in this or planning to purchase online in the next 12 months.

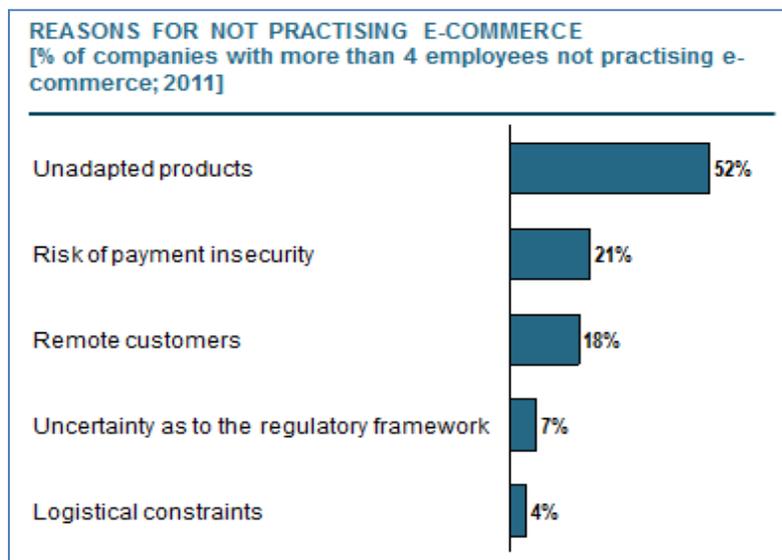
Compared to 2010, more companies are practicing online sales (14%), and more and more are doing so on their own web site.

4.5.2. Products that are not adapted to online sales are considered to be the main brakes on the development of e-commerce

For 52% of companies, one of the main brakes on using e-commerce is linked to the type of products, which are not adapted to online sales.

21% of companies are still resistant to online sales due to the payment security risk.

Finally, 18% consider that their customers would not be ready to purchase the type of product or service offered through the Internet.



4.6. ICT investment and training

4.6.1. Companies in the Commerce and Financial Services sectors as well as mid-size companies invest in ICTs more than average

Businesses in the Commerce sector devote 5% of their investment to ICT along with 4% of their training budget.

Companies in the Financial Services sector devote 5% of their investment to ICT along with 2% of their training budget.

