



Information Technologies Observatory

Introduction

At its current disposal, ANRT has a series of observatories focussing on the situation in Morocco in the fields of fixed-line and mobile telephony, data transmission and the Internet market. The Agency wishes to enhance its means of monitoring events and changes in Morocco by setting up an Information Technologies Observatory.

A series of objectives has been assigned to this Observatory:

- It is to serve as a support for external communication, enabling everyone to obtain information on the ongoing development of information technologies in Morocco.

- It is to provide a feed source for the IT component in the databases built up by ANRT.

- It is to serve as an instrument enabling ANRT to meet its international commitments, particularly in regard to the information requirements of the ITU (the list of indicators that served as a basis for this survey was itself based on indicators suggested by specialised international organizations, especially the ITU).

- Lastly, it should constitute a tool for obtaining and disseminating knowledge of an element with which the Moroccan society is currently relatively unfamiliar. It should make it possible for ANRT to fulfil its role as a recommendation force among deciders, by virtue of the knowledge the Observatory will confer on ANRT of the strengths and weaknesses that characterise information technologies in Morocco today.

ICT indicators collection survey

Selected methodological elements

Indicators

The choice of indicators was decided on the basis of the following:

- The ability of each indicator to take account of a key component of information technologies by assembling information in a form that makes for ease of understanding.
- The availability of information required for designing the indicator.
- Due regard to reproducibility and durability requirements.

The indicators selected may be classified into three major groups, according to subject:

- Level of equipment
- Internet access
- Internet usage.

Individuals sample

In constructing the sample, structural population quotas were taken into account to provide a distribution based on the following:

- Residential environment
- Sex and age
- City region and size
- The occupational group of the head of the household (a household comprises one or more individuals residing at the same address situated in an electrified zone)

The reference base for the population under survey does not employ the master sample produced by the latest available census (1994) as the situation in Morocco has undergone considerable change since then (as shown by the initial results of the 2004 RGPH (housing and population census). It uses updates and projections made on this basis in 2003 by "La Direction de la Statistique" (statistical agency of Morocco). The target population comprises individuals aged 12 or over, living on Moroccan soil, regardless of their nationality. Where rural areas are concerned, the survey of this population is confined to people residing in electrified zones since the hypothesis of a lack of IT equipment among this population group which is difficult to reach can reasonably be accepted. Conducted on a person-to-person basis in April 2005, the survey covered a sample of 1019 individuals: 866 urban and 153 rural, giving the following confidence intervals:

- Urban: +/- 3.3% with 95% probability
- Rural: +/- 7.9% with 95% probability.

Businesses sample

The analysis is based on the results of a telephone survey conducted in March 2005 among a sample comprising 250 firms established in Morocco. In order to ensure that the sample was representative of the overall national structure, these were chosen at random from the Kompass directory in Morocco, a database comprising 40 000 Moroccan businesses classified by size and type of activity.

Firms with more than 4 employees were split into 4 sectors:

- Technological sector: Web and Multimedia, Network Construction, Integrated Company Solutions, Software Development, Mobile (mobile applications and services), Call Centres (CRM), Tele-services and Outsourcing, Equipment, Electronics, IT Services, Distance Teaching, Consulting.

- Primary sector: Fishing, Forestry/Hunting, Culture, Breeding, agriculture-related activities.

- Industrial/Manufacturing sector : Electricity and Water, Oil and Fuel, Extraction and processing of ores and various minerals, chemical industry, food industry, beverages, tobacco, Textiles and clothing, Leather and footwear, Wood and furniture, paper and cardboard, printing, press and publishing, building materials and public works.

- Service/Transport sector: Transport and Communication, Commerce, Finance, Hotels and Catering, service and industry intermediaries and auxiliaries, Real estate, Domestic services, Hygiene, Other services.

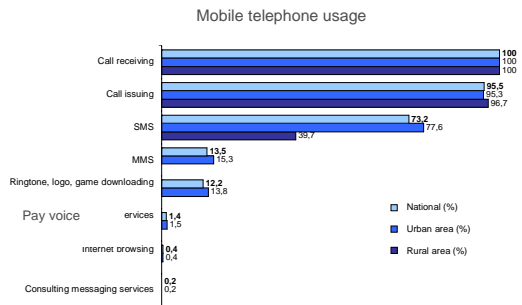
Fixed and mobile telephony

There is little fixed telephony to be found in Moroccan households: only 17% possess a fixed line.

The country's fixed penetration rate is estimated at 4.47%.

Mobile telephony, on the other hand, is far more developed: in 41.5% of Moroccan households (2.3 million), there is at least one person with a cellphone.

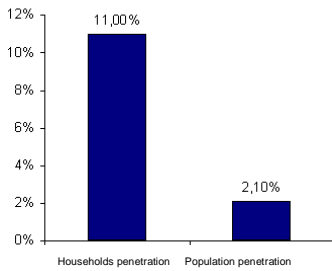
The cellular penetration rate stands at 33.54%.



Quite naturally, mobile telephony is most widely used for receiving and making calls. It is to be noted that a minute proportion (under 5%) of people possessing a cell-phone do not employ the call function, considering their phone solely as a means of being reached. SMS is also a very popular function, especially in urban areas where it is used by over 77% of cell-phone owners. The other value-added services that can be accessed with a cell-phone (MMS, downloading or ringtones, logos and games, voice information pay services, Internet browsing, e-mail) attract little interest at present. Users of these services are found chiefly in urban areas. By concerning one user out of ten, MMS and the various download services stand out in relation to pay voice services, while Internet browsing and consulting messaging services remain niche markets.

Personal computers

Households equipment



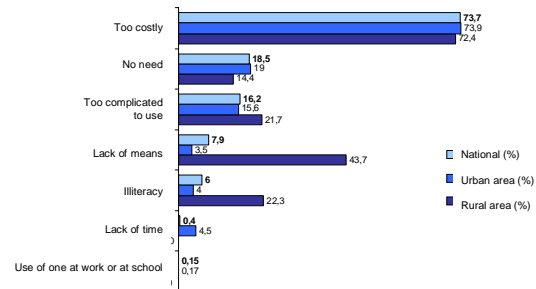
Around 11% of households are equipped with a personal computer, corresponding to an approximate **national base of 620 000 units**. The rate stands at 3.0% among people living in rural (electrified) areas and at 23.7% among those living in urban areas. At national level, 63.9% of individuals aged 12 or more living in electrified zones never have access to a computer, whether at home or elsewhere, i.e. **over 10 million Moroccans without such access**.

In regard to computer access, there is a very clear difference between rural and urban areas: 56% of Moroccans over the age of 12 living in an urban environment do not have access to a computer outside their home, while in rural areas (electrified) the figure rises to 89%. However, it seems that access to a computer outside the home has a determining influence on the possession of a computer at home. To illustrate this point, almost 75% of those with a computer at home also have access to a computer elsewhere

Personal computer usage

In the case of people with access to a computer at home, four reasons for using their computer stand out: leisure (photography, etc., 80.5%), office-type work (66.2%), games 63.9%, homeworking (34.8%). The Internet, quoted only by individuals living in urban areas, comes in the fifth place with 23.2%. It can also be seen that the use of a computer for homeworking is far more commonly found in rural areas (58.2%) than in urban areas (33.9%).

Reasons for non-equipment



The main reasons given by households (in electrified zones) for the lack of a computer at home differ greatly according to the residential environment. In rural areas, for example, "illiteracy" is quoted by over 50% of people, while in urban areas "too costly" is the reason given by 55.3% of people as the chief obstacle to buying a computer.

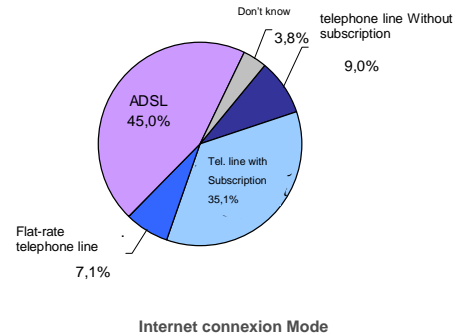
Intended acquisition

Despite this reluctance, 13% of those questioned say they intend to buy a microcomputer within a year. This would correspond to the acquisition of **3.9 million computers**.

The Internet and individuals

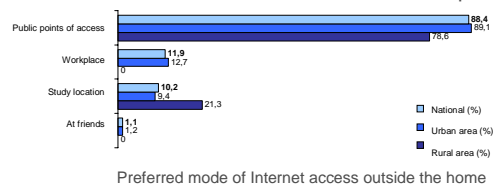
Home-based Internet: low penetration rate but high level of ADSL penetration

Around 120 000 households have a direct Internet connection, which gives a penetration rate of 0.4% of the total population. ADSL penetration, on the other hand, is high with some 60 000 households subscribing, i.e. 0.2% of the total population. Expressed as a number of potential users, this corresponds to around 600 000 people with Internet connections at home. While dial-up is still the dominant connection mode, **ADSL already boasts a 45% share of the market**.



Internet access outside the home

Close on 12% of the total population obtain Internet access outside their home, i.e. 3.7 million people. This, of course, covers all types of connection; whether of a private or professional nature and it refers to the latest 12-month period.



The Internet user concept

Level 1 Internet user and Level 2 Internet user

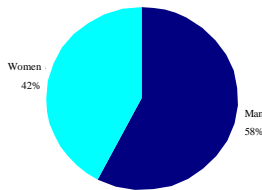
In essence, it is difficult to offer a precise description of this Internet user concept. However, the survey has made use of the following two definitions:

- A Level 1 Internet user is considered to be any physical being who has accessed the Internet at least once during the past month, regardless of place or mode of access.
- A Level 2 Internet user is considered to be any physical being who has accessed the Internet at least once in the past 12 months, regardless of place or mode of access.

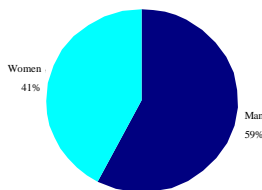
Estimated number of Internet user

	Internet users	as % of the population	Million
Level 1 Internet users	During the past month	12.4%	3.7
	December 2004	11.8%	3.5
Level 2 Internet users	During the past 12 months	12.5%	3.8
	During 2004	12.1%	3.6

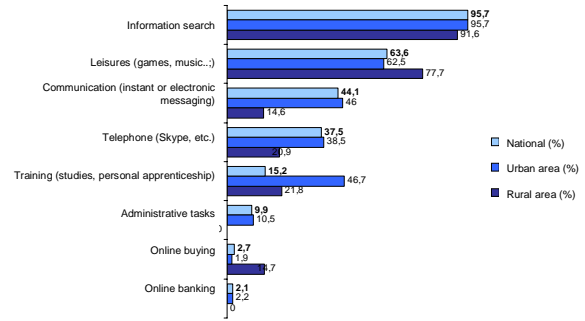
Breakdown by sex of individuals claiming to have accessed the Internet during the past month



Breakdown by sex of individuals claiming to have accessed the Internet during the past 12 months

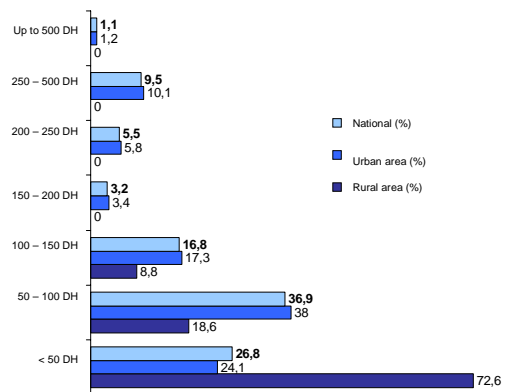


Main Internet usages



Limited spending

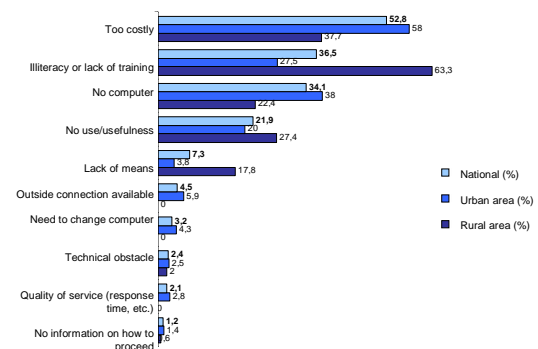
Internet spending (including all access sites) is fairly limited: 63.7% of Internet users spend less than 100 DH per month. In rural areas, 72.6% spend less than even 50 DH. This Internet budget thus generally remains appreciably lower than the mobile telephony spending.



Obstacles to the spread of the Internet

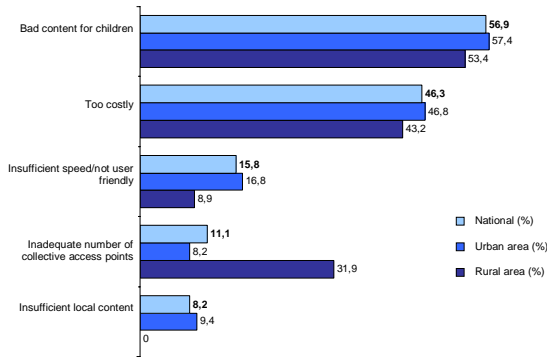
Reasons for the lack of Internet access in the home

This absence may be explained in various ways depending on the residential environment. In rural areas, the main reasons are illiteracy or a lack of training. These reasons are put forward by 63.3% of people living in electrified rural areas, ahead of the reason “too costly” to install Internet access at home (37.7%). This latter reason, however, is the main one given for non-installation of Internet access at home in urban areas (58%), ahead of the figure for non-equipment in terms of personal computers (38%).



Internet factors seen as negative

The most frequently stated negative points, regardless of the Occupational Group of the head of the household, the residential area or the sex and age of the individual, are “bad content for children” and “too costly”.



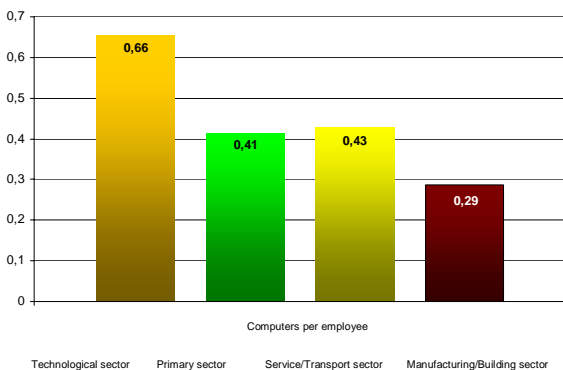
Obstacles to online buying

The major obstacle to Internet buying is the lack of conceived usefulness (46.1%). Additionally, Moroccans consider that the availability of products is unsatisfactory (38.3%) and that online prices are too high (33%). Other important factors hampering the development of online buying are problems bound up with secure transactions (25%) and the need to possess an international credit card for payment of purchases (24.1%).

Businesses and ICT

IT equipment in businesses

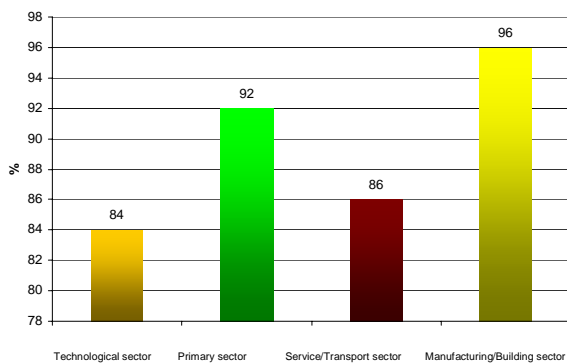
The 40 000 Moroccan firms listed in the Kompass directory represent a computer base of 1.039 million. The average number of computers per employee is 0.37, although this average ratio that embraces all sectors conceals wide differences from one sector to another.



The Internet and businesses

Internet connection

On average, 90% of firms (i.e. around 35 000) are connected to the Internet, of which less than 1% via a non-subscription access. An analysis of connectivity in relation to company characteristics (sectors and employees) reveals wide variations between sectors.



Connection modes

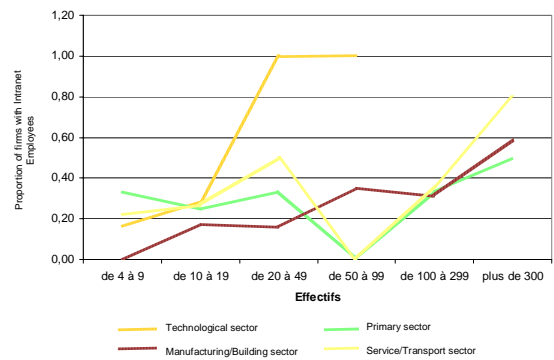
Among the firms with an Internet connection; more than 17% use more than one technology and combine either several broadband technologies or one broadband and one narrowband technology, or a low or high-speed fixed technology with a low-speed mobile technology. ADSL services are by far the most widely employed solutions for accessing the Internet. Over 85% of businesses with broadband Internet connections have opted for ADSL, which corresponds to more than 60% of all firms with Internet connections (broadband and narrowband).

Personalised Internet access

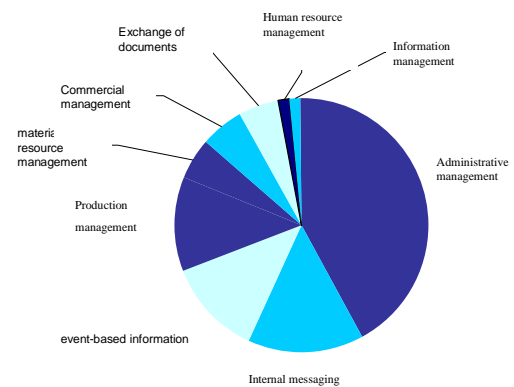
The preferred indicator for determining Internet availability among employees takes the form of the ratio of computers connected to the Internet to the total number of computers used by the firm. Among those firms claiming to possess an Internet connection, an average of 56% of computers are connected, i.e. one out of every two computers.

Internet usage in businesses

An average of 30% of firms claims to have an Intranet. In the technological sector, the size of the firm has an important impact, since while few firms with fewer than 20 employees have an Intranet; all firms of a larger size are equipped with an Intranet. A similar but less pronounced effect can be observed in the other sectors.

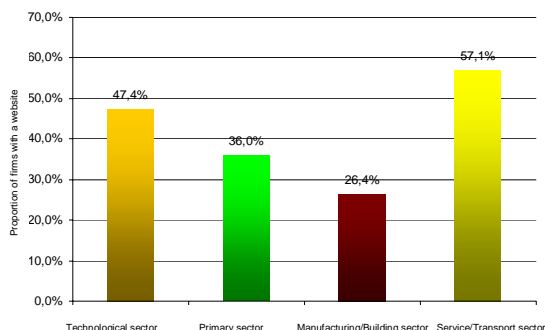


Firms use their Intranet chiefly for administrative management purposes.

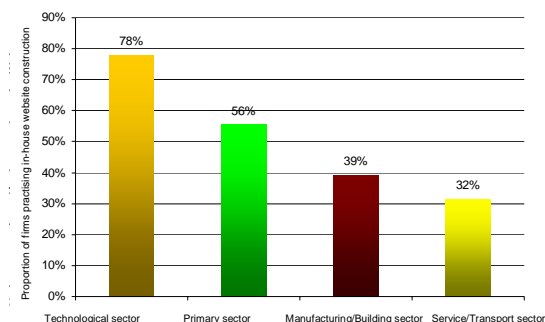


Website and domain name

38% of all Moroccan firms claim to have a website, giving a figure of 15 600 websites. 78% of these possess their own domain name and in 75% of cases the site is of a commercial nature.



The methods employed for developing a website also provide interesting information. While there are on average as many firms designing their website internally as those outsourcing the task, a sector-based approach reveals that it is the technological sector that makes greatest use of internal resources for website development (over 77% of firms in this sector).

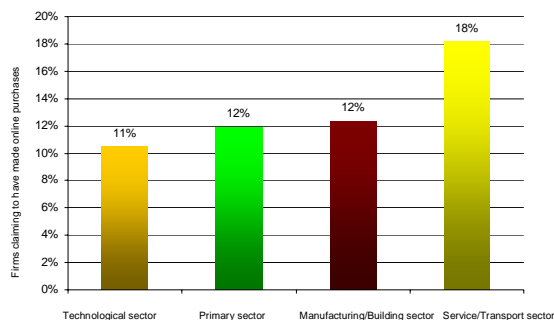


Online trading

Online buying

Only 14% of firms say they make use of online buying. In 95% of cases, the sum involved does not exceed 4% of the total purchasing bill.

The size of the firm has little impact on its buying practices. From a sector-based point of view, on the other hand, there are differences in buying behaviour: the service and transport sector claim to use online buying in 18% of cases, compared with an average of 12% in other sectors.



Online sales: practices, volume and intentions

This remains a small-scale activity with only 4% of the firms interviewed claiming to practise online selling, the sums involved representing not more than 5% of turnover in over 50% of cases.

In terms of intentions within the next twelve months, 15% of firms intend the possibility of introducing online selling. The manufacturing and building sector is making a breakthrough: the intentions expressed in this sector are identical to those in the technological sector with 17% of firms declaring their intention to roll out this type of service.

