Communications and Information Technology Commission

Internet Usage in the Kingdom of Saudi Arabia

Integrated (All sectors)

The first year (2007) Report .

For Any comments regarding this study :
P.O Box 75606 – Riyadh 11588 – Kingdome of Saudi Arabia
Phone : +966 (1) 4618000
Email : InternetStudy_feedback@citc.gov.sa

Table of Contents

1.0 Background

Communications and Information Technology Commission (CITC) was established under the name of Saudi Communications Commission pursuant to the Council of Ministers Decision No. (74) Dated 5/3/1422H. The Commission was entrusted with new tasks related to information technology to become (Communications and Information Technology Commission) under the Council of Ministers Decision No. (123) dated 21/5/1424H and the name was changed to CITC. The Mission Statement of the Commission is to ***"Ensure the provision of universally available, high quality and affordable communication and information technology services"***

Internet service was officially made available in the Kingdom of Saudi Arabia in 1997. Internet is becoming an integral part of the Saudi Society and Economy. CITC wants to understand the Internet status and potential growth within the Kingdom. To this end, a comprehensive study covering a wide range of the Internet related indicators in Saudi Arabia was needed. Nielsen was entrusted to conduct the study in 2007.

The study evaluates the current situation of Internet in Saudi Arabia. The study aims to identify the penetration levels, habits and usage patterns and the future potential of Internet in Saudi Arabia. It covers a wide range of information areas from infrastructure to satisfaction. It covers different types of users – individual users, home users, government agencies, educational institutes and corporate users. The research was such designed, to ensure national representation. Further, the study would be repeated annually for a minimum of three times in order to measure progress and growth.

Salient Features of the Research

- **National Representation**
- **Across Customer Types : Consumers, Corporate and Government**
- **Annual Tracking to measure progress**

This document details the findings of the survey carried out among **All the Sectors of the study** in the Kingdom of Saudi Arabia.

2.0 Methodology

2.1 Research Design

- A quantitative research exercise was conducted amongst the target respondents. Furthermore, expert in-depth interviews were conducted to validate the findings.

2.2 Target Respondents

Respondents interviewed for the survey were as follows:

- **General consumers (Individuals):** Respondents interviewed for the survey were from general population across socio-economic classes, genders and nationalities who were more than 15 years old.
- **Business Establishments:** IT / Telecom managers or the officials who are responsible for such decisions. Interviews were conducted at the head offices.
- **Health Sector:** IT / Telecom managers or the officials who were responsible for such decisions.
- **Education Sector:** The interviews were conducted with the IT head/ computer teacher/ principal or equivalent position holding individual working within each institute.
- **Government Sector:** The interviews were conducted with the IT / Telecom manager or equivalent position holding individual working within Organization.
- **Expert Interviews:** The interviews were conducted with the industry experts identified in association with CITC.

2.3 Coverage and Sampling

- Interviews were conducted across all the provinces of Saudi Arabia including urban and rural areas for the general consumer module. For the business segments interviews were conducted in Riyadh, Makkah, Jeddah, Dammam, Khobar, Joubil, Maddinah as these cities constitute majority of the universe.

- Since there were no official universe numbers for the business establishments / health / education and government sectors available in the Kingdom.
- Details of the coverage and sampling are provided in a separate document. Please refer to the Research Methodology Report 2007.

2.4 Research Instrument

- Interviews were conducted using a structured questionnaire. The questionnaire was prepared in both Arabic and English. Interviews were done in Arabic / English as convenient to the respondent.
- The questionnaires were a mix of close and open-ended questions.
- The length of the listing interview was around 10-15 minutes while the detailed interview was approximately 30-35 minutes long.

3.0 Sample Profile

In total, 10,407 individuals and entities were contacted for the purpose of this research. The following is the break-up of the sample structure.

Exhibit 3.1 Sample Composition by Segments

Segments	No. of Interviews	Error Margin (%+/-) 95% Confidence Level
General consumer (Individuals)	7,570	1.1%
Business establishments	1,296	3.1%
Health sector	400	4.9%
Education sector	700	3.7%
Government	441	4.9%
TOTAL	10,407	
Expert In-depth Interviews	9	

For analysis purpose for each segment we had further classified by various breaks (e.g. in business establishment the data was analyzed by small, medium and large companies) in order to analyze the data.

4.0 Infrastructure & Investments

4.1 Computer Penetration

Computer ownership among individuals currently stands at 68% for 15 yrs.+ population. However when we calculate at the total population/household level the ownership stands at 43%.

Total population of KSA	23,980,834
Population 15-60 yrs.	15,107,925 (63% of total population)
Computer owners 15-60 yrs.	10,273,3898 (68% of 15-60yrs.)
Computer owners out of total population	43%

(*source: www.cdsi.gov.sa Population and Housing Characteristics in the Kingdom of Saudi Arabia Demographic Survey 1428H 2007)

Ownership stands at higher levels among younger age groups, and higher socio-economic classes. Region wise, it seems that computer ownership is lower in the South region than in the other 4 regions of the country.

In parallel, 76% of all private companies operating in the Kingdom have one or more computers. The said proportion is much higher among medium and large companies than among small. On the contrary, it seems comparatively lower among companies in the "Food" sector than in other sectors.

Almost all (95%) the health institutions (hospitals, clinics and dispensers) are equipped with computers. Computer penetration is limited to comparatively lower levels (93%) among "small" health institutions than among medium (99%) and large ones (100%). It is interesting

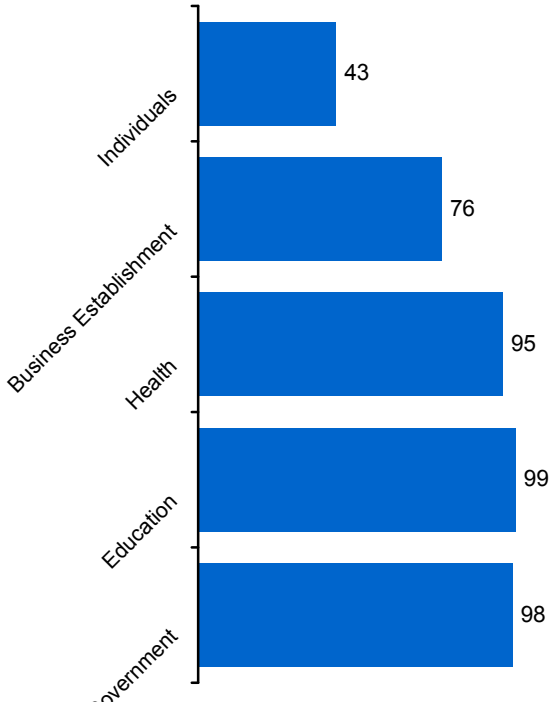
to observe that computers are present in all public hospitals.

Amazingly, the near totality of the educational institutions in the country (99%) own computers. In fact, computer ownership was universal (100%) in all types of such institutions

with the exception of very few elementary schools or kinder gardens.

Practically, the same situation regarding computer ownership is seen in government departments, where computers are present virtually in all the main offices (98%) and in 84% of the branches of governmental departments (higher in the metropolitan areas – Jeddah, Riyadh, and Dammam). It is worth mentioning that 8 in 10 government organizations contacted within the scope of the present survey maintain one or more branches in the Kingdom.

Exhibit 4.1 Computers Penetration by Segments



Note : Government Segment represents Head Offices only

Some of the expert comments were:

"If this is covering the whole of KSA, rural and urban area, I don't have any statistics about this, I think to some extent it does make sense"

Almost universal penetration of personal computer in the education, government and health sector.

Scope of increasing penetration among individuals and businesses (especially SME's)

4.2 Devices

Among the various types of personal computers, desktops remain the most popular, with 88% ownership amongst individuals. Laptops land second with 46%, evidently favored by Saudis and by the higher socio-economic classes (A,B,C1). The share of laptops falls relatively short in the South region. PDAs, on the other hand, claim a negligible share of 1%. It is worth mentioning that a significant proportion of personal computer owners (34%) have both a desktop and a laptop in their household.

Virtually all the companies owning computers were recorded to have desktops (99%). Laptops, on the other hand, are owned by a proportion barely exceeding one third (37%). As expected, the laptop penetration is significantly higher among medium and large, than among small companies.

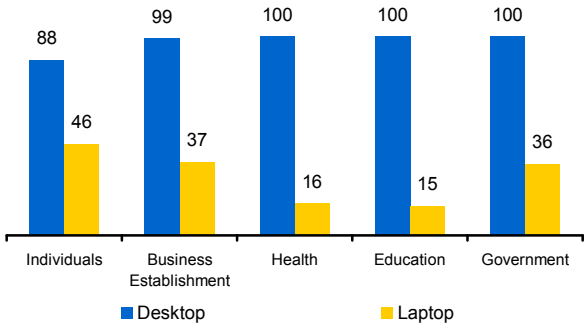
The presence of desktops in health institutions is universal, while that of laptops stands at 16%, and of PDAs at 7%. Only 1% of these institutions maintain a server in their premises.

Both laptops and PDAs are more frequently found in medium and large institutions than in small. In addition, laptops are more frequent in private hospitals (27%)

Desktops are practically present in all the country's educational institutions, while the penetration of laptops is rather limited to 15%, while that of servers to 10% (much higher in universities – 62% and 54% respectively).

Desktops are available in all governmental organizations which have computers. Laptops, on the other hand, are only present in around one third of them (36%). The penetration of servers is slightly lower (31%), while PDA's share is limited to a mere 4%. Servers and laptops are comparatively more preferred (and used) in the Riyadh, Mekkah and Medina districts.

Exhibit 4.2 Computer devices owned



Base : All who use Computer Devices

Institutional users of computers (private companies, educational institutions and hospitals) use predominantly branded computers, with a minority rarely exceeding 10% using unbranded ones (especially, educational institutions).

Nine in ten private companies only have branded computers with minor variations between desktops, laptops, PDAs and servers. Unbranded products (particularly, desktops) are only being handled by a minority of companies, of all activities and sizes. It is worth mentioning that the said proportion does not exceed 12% (desktops).

The situation described above concerning the usage of branded products is more or less the same in the educational sector as regards desktops, with 85% of all schools using branded computers. However, usage of branded laptops and servers by educational institutions seems to stand at lower levels than by private companies (85% and 71% respectively compared to 95%). Usage of branded computers by schools is significantly lower in the North region (especially so for laptops), while as a rule, smaller institutions tend to use more unbranded products than large ones.

The pattern of branded product usage by hospitals is quite similar to the one seen in the case of private companies: nine in ten hospitals (both public and private) using only branded desktops, while the corresponding percentages for laptops and PDAs stand at 97%.

As with all the above-mentioned groups, the overwhelming majority of governmental entities use branded products. More specifically, exclusive usage of branded desktops stands at 88%, while another 8% use both branded and unbranded such equipment. The corresponding figures among laptops and servers are even better (97% and 98% respectively). Exclusive usage of unbranded products stands at marginal

levels (4%, 2% and 1% for desktops, laptops and servers respectively)

Amongst those owning personal computer all of them own a desktop. Laptop usage is more skewed towards individuals, business and government sector.

4.3 No. of Computers Owned

The overwhelming majority of all households owning a personal computer stated that they have only one such device. However, a small number of these households have a second or even a third computer. Overall, the average number of computers owned by computer-owning households is 1 for desktops, PDAs, and laptops.

On the other hand, the average number of computers owned by companies is much larger and stands at 21 for head offices and 53 for branches. In both cases, the number of computers owned is significantly bigger among large companies than among small and medium ones. Either because the said number of computers is not adequate to cover the needs of all employees, or because not all employees are in need of a computer, only 32% on average of the employees of each company are given a computer to use. The said number rises to 43% in the case of large companies. It is comparatively higher among companies belonging to the IT / telecommunications and oil & gas sectors

Likewise, most health institutions own several computers, their number averaging 24 (head offices). The average number of computers owned is considerably bigger in public than in private hospitals, while of course the said number increases as the size of the institution increases. These computers are used principally by administration staff (40%), by management staff (29%), and by doctors (25%). Nursing staff get to use 5% of the institution's computers, while the remainder (1%) is used by others.

The number of computers owned by educational institutions is quite similar to that of health institutions, the average figure recorded at 25. As expected, elementary schools and kinder gardens own fewer computers on average than colleges and universities, with secondary schools lying in the middle. A third of these computers (34%) are being used by the students of the school, while administrative personnel claim the bulk of the computers (52%). Teachers use only 14%.

The average number of computers used by each governmental organization (main offices) stands at 186 (lower among branches). The said average number is bigger in the Riyadh and Mekkah districts than in other districts. The number of computers in each organization (main office) is such that covers the needs of 56% of all employees of that organization on average. This coverage is higher in the districts containing the 3 metropolitan areas (Jeddah, Riyadh, and Dammam). In the case of the branches, the said

proportion is slightly lower, with only half of all employees having access to a computer. The distribution of computers within the various types of employees of each governmental entity is rather even, with one third (33%) being assigned to general employees, another third (35%) to administration staff, and slightly less (29%) to the management.

Exhibit 4.3 Average number of Computer Devices owned

	Average no. of computer device owned
Individuals	1
Business establishments	21*
Health sector	24
Education sector	25
Government	186

*Base : All those owning Computer Devices * Head office*

4.4 Operating Systems

All target groups examined (households, business establishments, educational and health institutions, and governmental organizations) use principally Windows XP Home and Professional. The older version (Windows 2000) is still used by a minority not exceeding 21%, while the latest version (Vista) is barely visible.

Windows XP is undoubtedly the most popular operating system used by computers of individual households with a combined share (home and professional) of 87%. Windows 2000 practically claims the rest of the market, with a share of 11%. The new version of Windows (Vista) is only adopted by 3% of the household computers. These shares are quite consistently seen across all user groups (age, nationality, and region).

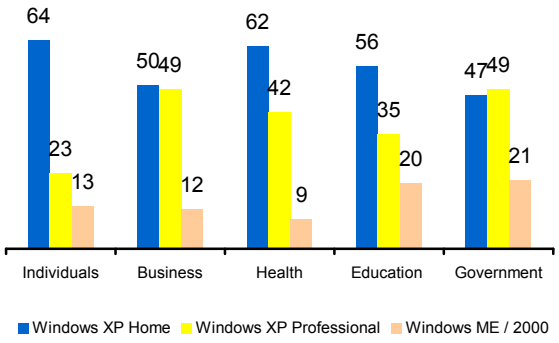
Similarly, private companies use chiefly Windows XP, either the "Home" edition (50%, and higher among small than large companies) or the "Professional" edition (49%, higher among large than among small companies). Windows 2000/ME is used by 12% of all companies, while Windows Vista only by 2%.

Windows XP Home is used by 62% of health institutions (more so by public than by private hospitals), while Windows XP Professional by 42% (more so by private than by public hospitals).

Likewise, Windows XP is the prevalent operating system used by educational institutions, with the "Home" edition being used by 56% of them, and the "Professional" edition by 35%. Windows 2000 is used by 20%.

Nearly half of all governmental entities (47%) use the Home edition of Windows XP, while an almost equal percentage (49%) the Professional edition of the same operating system. The older version of Windows (2000) is being used by approximately one fifth (21%), while the newest version (Vista) by a mere 3%.

Exhibit 4.4 Operating systems used



Base : All who use Computer Devices

Windows XP the most popular operating system in Saudi Arabia across all the segments with professional version skewed more towards the business, health, education and government sector

4.5 Language of the Operating System

As expected, Arabic is the prevailing language used by individuals in Saudi Arabia. Nearly three quarters of Saudis (70%) and 64% of expatriate Arabs use the Arabic language in their operating system. It is interesting to observe that one in five Arabs uses both the English and the Arabic language. In this respect, male Arabs are more open than females to the use of the English language either exclusively or together with the Arabic one.

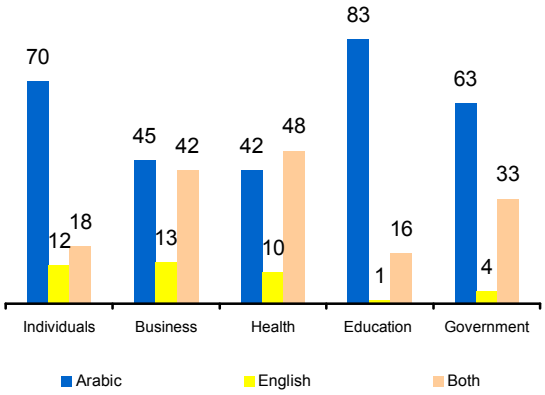
The situation is somehow different in the corporate sector: the Arabic language is still the one mostly used (45% use it exclusively, while another 43% use it along with the English language) and most preferred (57%). However, a good proportion of all companies use the English language either exclusively (13%) or in combination with the Arabic language (43%). It is evident that the bilingual operating system is used more by large companies (62%) than by small ones (32%).

Similarly, nearly half of all hospitals and clinics (48%) use a bilingual operating system, while 42% use only the Arabic version. Within the private health sector, and probably because of the presence of a significant number of non-Arab expatriate personnel, the majority (66%) use a bilingual operating system, while exactly the opposite happens in the public sector (61% use the Arabic version exclusively). In general, the use of the bilingual version is favored more by medium and large than by small such institutions.

Educational institutions show a profound preference for the Arabic language in their operating systems, with 83% of them using it on an exclusive basis, 16% in combination with English and only 1% using only the English version of their operating system. It must be noted that this situation is reversed in the case of universities, the majority of which (69%) use a bilingual version. Also, large institutions show a bigger preference for bilingual operating systems than small ones, even though the majority of them still use the Arabic version.

Finally, the Arabic language prevails among governmental entities, with 6 in 10 of them using an operating system exclusively in Arabic, while another 3 in 10 using a bilingual one. Language preferences among employees and administration personnel exhibit the same patterns, while the managers' preferences are divided between Arabic (55%) and English (45%).

Exhibit 4.5 Language of operating system



Base : All who use Computer Devices

Arabic is the most preferred operating system in Saudi Arabia especially amongst individuals, education and government segment

4.6 Average IT expenses in a month

On average, households owning a computer spend around SR 184 per month (or more correctly, SR 2,208 annually) on hardware, software and IT-related training. The said expenditure is higher in households belonging to the middle-upper and upper socio-economic classes (A/B, C1).

Private companies, on the other hand, spend a lot more on IT purchases and trainings. The average such expenditure recorded was about SR 2,500 per month. Not surprisingly, the IT expenditure varied according to the size of the company, with small companies spending much less (average SR 574) than medium (SR 1,537) and large (SR 9,000).

In turn, health institutions pay on average SR 2,300 per month on IT-related purchases and trainings. The said amount is clearly bigger in the private sector (SR 2,676) than in the public (SR 1,770). Additionally, the amount of money spent is increased as the size of the establishment gets bigger. Thus, small institutions pay around SR 1,216 per month as compared to SR5,775 paid by their large counterparts.

Finally, educational institutions' IT expenditure lies somewhere in between, with an average of SR 1,917 per month. The expenditure of universities is by far higher than of any other type of educational institution (almost 3 times as much as the average expenditure of secondary schools and colleges) which rank second in this respect. Of course, kinder gardens and primary schools have the lowest corresponding expenditure.

In contrast to all the above, the average amount spent by government organizations on IT-related purchases and training is disproportionately high, reaching SR 10,774. This amount is significantly bigger in the Riyadh (SR 24,000)

and Makkah (SR 29,000) districts (obviously, mainly represented by the cities of Riyadh and Jeddah).

Exhibit 4.6 Average IT expenditure

	Average IT expenditure per month
Individuals (month)	SR 184
Business establishments (month)	SR 2,500
Health sector (yearly)	SR 2,300
Education sector (yearly)	SR 1,917
Government (yearly)	SR 10,770

Base : All those owning Computer Devices

4.7 IT related training taken

It is evident that training on IT-related topics is not among the priorities of individual computer users (at least not training programs funded by themselves). More specifically, as many as 70% of all individual computer users claimed that they had not undertaken any such training in the past 6 months. Of the remainder, the most important trainings mentioned were on MS Office (15%), on programming languages (7%), on accounting packages (7%), on database management (7%) and on web designing (5%). Not surprisingly, younger ages are more prone to the idea of training than older people.

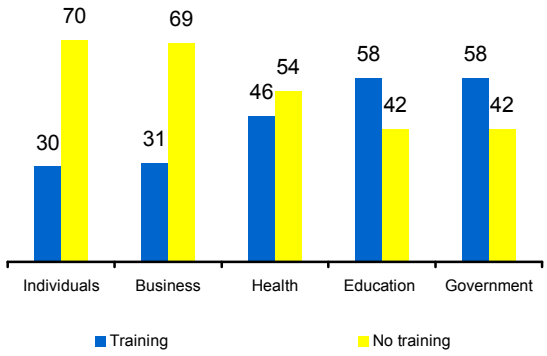
Similarly, 69% of private companies were recorded not to provide any IT trainings to their employees. The remaining offered principally accounting packages (23%), and database management (21%). Reversely, packages expected to be of high popularity remained in very low demand (MS office at 3%, programming languages at 7%, networking at 4%, CAD at 5% and web design at 5%).

The training situation with health institutions is quite similar to the one seen in the case of the educational institutions. Slightly more than half of these establishments (54%) reportedly do not provide any such trainings to their employees. The said percentage is particularly higher among small hospitals and clinics (63%) than among large ones (31%). The remainder is addressing a number of training needs, such as database management (17%), accounting (15%), and MS Office (14%). Other applications, such as networking, programming, CAD, web design, etc., elicited lower investment.

The situation is slightly improved in the case of educational institutions, with the proportion of them not providing any training to its employees (teachers and administration staff) standing at 42%. As above, the most popular programs were MS Office (26%), on programming languages (17%), on accounting packages (15%), on database management (27%) and on web designing (5%). On the other hand, networking, CAD and web design were low in the training priorities of these institutions.

Similar to the case of the educational sector, 42% of all governmental entities do not provide any IT training to their employees. Of those organizations that do provide such training, around 4 in 10 offer MS Office courses and database management training. Accounting packages are a little less popular (offered by 26%), while networking by 22%.

Exhibit 4.7 IT related training



Base : All who use Computer Devices

Majority of the organization did not have any formal IT training to their employees except for education and government where nearly two-third had some kind of training

4.8 Barriers for using computer

The main reasons for individual households not to own a computer are the lack of knowledge *(don't know how to use a computer)* 56%, the cost of its purchase *(not affordable)* 23% and the lack of a purpose to own one *(don't know what to use it for)* 12%. Computer *(lack of knowledge)* is claimed particularly by people of older ages (55+). Interestingly, a minor proportion of 7% (mostly, younger people) claims that their family in principle *does not allow the presence of a computer devise in the house.*

On the other hand, the main reason for private companies not to own computer devises is their irrelevance to the company activities *("computers are not related with / needed in our company's activities).* Claimed by an overall 70% of those companies found not to have a computer, this is practically the only reason for medium and large companies. Small companies also bring up the lack of computer usage skills by their employees (22%) and budget shortages (10%). It is reminded here that approximately 10% of all private companies operating in the Kingdom are found not to own one or more computer devises.

Lack of knowledge and budget were the main reasons mentioned by educational and health institutions for not owning computers. However, these should be considered to be the exceptions rather than the rule, as in both cases the proportion not having a computer is kept at below negligible levels (1% and 5% among educational and health institutions respectively).

4.9 Motivators for using computer

Entertainment, communication and work / education are the three main reasons for using the computer. Analytically, *surfing the internet* was proven to be the single most important reason for individual users, while *communicating with friends and relatives via the internet* also elicited high mentions. *Storing documents* and *doing work related to their profession or education, along with playing games, listening to music and watching video movies,* were also quite popular reasons for using the computer. The importance of the above-mentioned reasons was consistent across all demographic groups with no noticeable deviations.

As expected, *work* was the single most important reason for employees to be using corporate computer. In this respect, corporate computers were not reportedly used for entertainment reasons. Nevertheless, accessing the internet (*surfing and communicating with people*) also proved to be popular ways of using the company's computers.

In turn, computers in health institutions are being used mainly for *data basing and filing (arranging appointments, storing patient data),* and for running *professional related applications*. However, a considerable proportion of just above 50% verified that computers are used to *fill in paperwork required by the government*. Finally, internet-related usages (*mainly, surfing the internet and secondly, communicating with others*) proved to be rather popular, albeit not among the man reasons.

Entertainment reasons were also absent from the ways computers were used in educational institutions. In this case, it was evident that the computers are being used principally to run *related applications and carry out education-related work*. Usage of the school computers for *internet-related purposes* was a habit reportedly adopted by their users in around one third of the educational institutions.

Finally, and as seen in the above-mentioned sectors, the dominant reasons for using a computer in a governmental organization are *work-related*: more than 9 in 10 of these entities use their computers to *"do government-related work",* while 7 in 10 to run professional applications. *Storing personal documents* also proves to be a common usage, reported by 7 in 10 of these entities. *Surfing the internet* is practiced by half of them, while *communicating* with people by a third of them.

5.0 Opinion about Internet

At an overall level, internet is well perceived by the general population, and the professional groups examined (private companies, educational and health institutions), and the governmental organizations and departments. The majority of all the above identify the positive contribution that the internet has brought about in the overall information dissemination, confirming that it is a convenient platform where one can find up-to-date information so that one keeps abreast with any aspects of one's interests, and that the process of finding / accessing the required information has become easier. They also acknowledge the fact that the internet is a reality and is the medium, access to which by the contemporary society is of critical importance.

On the other hand, the potentially negative aspects of accessing the internet have not gone amiss, at least by considerable minorities of the above-mentioned groups. The most commonly identified of these drawbacks refers to the danger of addiction to the internet, particularly by children, this of course leading to a series of adverse effects, such as of neglecting their education, their exercising and their socializing. Other potential problems refer to the immoral content that some web sites undoubtedly include, to the wrong ideas and concepts that can be embedded into the mind of the new generation, and to the detrimental effect that

long hours of internet browsing may have on the sociability of people.

Within the various target groups examined by the present survey, the educational institutes seem to be slightly more positively predisposed towards internet than any other group (although it is true that schools have identified the risk of people becoming "electronically trapped" and thus less sociable to a greater extent than any other group), a phenomenon in itself that can lead to the further improvement of internet image, as schools are admittedly an opinion-forming body.

Some of the quotes of the IT Experts in Saudi Arabia are as stated below:

"The Internet is very crucial, especially for education, research, communication between faculty… As time has passed by, more and more has it been used in research." (King Saud University)

"The Internet for us is the main channel that we are embedding to provide to the government services… it is a very important channel to us… We are aiming to transfer business services from the traditional was to e-service using the internet to communicate to citizens and experts." (CITC)

"The internet is a very vital source of information in any organization… about 80-90% in terms of importance… We have a lot of links that support the organization with the internet, including knowledge phases, libraries, medical support groups as well as normal research and education from around the world, that is provided to the staff." (Ministry of Health)

"All our work is based on e-business… We cannot do anything without the internet… On a scale, its importance would be 100%." (Cisco Systems)

6.0 Internet Usage

6.1 Internet usage

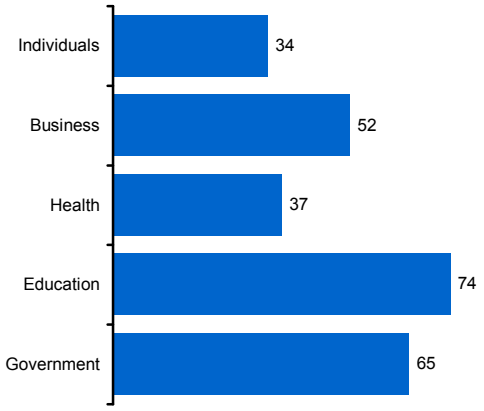
Nearly one third (30.5%) of the Saudi population have used internet at least in the last 2 weeks.

Internet users out of total population	**30.5%**
Total population of KSA*	23,980,834
Population 15-60 yrs.*	15,107,925 (63% of total population)
Internet usage 15-60 yrs.	7,705,042 (51% of 15-60 yrs.)
Internet accessed in the last 2 weeks	7,319,790 (95% of 15-60 yrs. internet user)

(*source: www.cdsi.gov.sa Population and Housing Characteristics in the Kingdom of Saudi Arabia Demographic Survey 1428H 2007)

Internet penetration (computer with internet access) in the government sector stands at 52% followed by business 49%, Health 33% and the least by education sector 20%.

*Exhibit 6.1 Internet Penetration for other sectors**



**Proportion of computers with internet access.*

Note : Government Segment represents Head Offices only

6.3 Profile of Internet Users

The demographic profile of internet users is definitely skewed towards younger ages and higher socio-economic classes. Also, in proportion to their population, more internet users can be found among local and expatriate Arabs, as well as among males than among females.

In the educational sector internet connection is mostly dial up connections while DSL is only 20% of it. Within these educational institutions, it is the administrative staff that most often accesses the internet. More specifically, on a percentage basis, administrative personnel claim 79% of all the internet access points in each institution on average, as compared to teachers' 9%, students' 9% and other staff's 3%.

Similarly, it can be recalled that the lowest internet penetration is recorded among health institutions (33%). The internet connections maintained by these institutions are shared principally by management staff (37%) and administration staff (36%), and secondly, by doctors (22%), nurses (5%),

And finally, the computers which are connected to the internet in the government sector are distributed rather evenly between the management staff (36%), administration staff (31%) and other employees (25%).

6.4 Place of accessing the internet

The internet users identified above access the internet predominantly from home (91%). In fact, their house is the place where almost all female internet users access the internet (96%). In addition, the internet is accessed from the working premises of the users (29%) and from internet cafes (20%). The work premises are a particularly favored place by Asians, whereas the popularity of internet cafes is particularly enhanced among users of younger ages (up to 24 years of age).

6.5 Frequency of internet usage

It is evident that the identified individual internet users are accessing the internet quite often: the near totality of them accesses the internet at least once a week or more often, while more than half (57%) get on the internet on a daily basis. As expected, older people (55+) are less frequent users. Apparently, the same applies to women, while the frequency of usage appears to be increasing with the socio-economic class of the users (with people belonging to the higher SEC being more frequent internet users than others).

6.6 Usage Timings

On average, each individual internet user spends around 3 hours every time they access the internet. The amount of time spent in the internet increases as the age of the user decreases. Interestingly, the reverse applies with the socio-economic class of the users. Thus, young users spend a lot more time on the internet than older ones, while users belonging to higher SEC spend more time on the internet than users of lower SEC. Finally, Saudis appear to be heavier internet users than expatriate Arabs and Asians.

Since the internet is primarily accessed from home it is natural to expect that the majority of internet users would be accessing the internet after working hours. Indeed, the most frequent time of accessing the internet was reportedly from 8:00 p.m. until midnight, with nearly half of all users (46%) browsing during those hours. The afternoon is also a popular time period, as stated by nearly 4 in 10 users (38%). In fact, the afternoon was the most favored time for users above the age of 55. One in five access the internet in the morning (9:00 am to midday), while the lowest demand is recorded in the early afternoon hours (12:00 – 4:00 pm).

6.7 Popular search engine

Google was unquestionably the leading search engine, used by 83% of individual internet users. Google's popularity was consistent among all age and gender groups. Yahoo followed at a great distance (13%), being essentially the only other search engine with an appreciable share. Yahoo seems to be preferred particularly by Asians and the lowest socio-economic classes (D/E). MSN elicited a negligible share.

6.8 Popular personal e-mail host

As many as 32% of all individual internet users reportedly do not have a personal e-mail, thus they do not use any e-mail host. The proportion of internet users without a personal email rose among women, and among people of the lower socio-economic classes. Of the remainder, Hotmail was by far the most frequently used host, with two thirds of email owners (67%) using it. At 16%, Yahoo followed, while Google, Al Arabia and MSN stood at marginal levels. A number of other hosts (more than 20) were named by one or two internet users each.

6.9 Barriers to using Internet

Amongst those not accessing internet were asked to name the reasons for not using the internet. The most frequently occurring reason (34%) was that they *do not know how to use the computer*. Almost one in five (19%) claimed non-affordability (*cannot afford to have an internet connection, or probably the necessary computer to support it*). Only 8% of them stated that their *family does not allow for an internet connection at home*.

Regarding the private companies which do not have an internet connection (roughly, 17% 48% of the corporate universe), their predominant reason for this (89%) is simply their perceptions that their organization *does not need any internet connection.*

Within the health sector the primary reason for not having an internet connection is due to the perceived *no need for internet* (37%), higher among private than among public institutes, and mostly prevailing among small and medium establishments); and because *such a connection*

is not allowed in the hospital premises (29%, higher in public hospitals).

Of the educational institutions with no internet connection (26% of the universe of such institutions), the majority (53%) agrees that an internet connection is simply *not necessary for their school*. Other main reasons projected relate to the *non-availability of computers* (36%), *the cost of such a connection* (11%), and the *potential of employee misuse of an internet connection* (15%).

Regarding the governmental sector, it is reminded that around one third are currently not connected to the internet. The main reasons for this as described by these entities are that *internet is not available* (evidently, they refer to the technical barriers, if any, of the ISPs to supply them with an internet connection); and that internet is *not necessary for the type of work they carry out*. To a lesser extent, concerns were voiced that employees may *misuse the internet at the expense of their productivity*.

6.10 Type of connection

Among households with internet connections, the shares of the main connection types (dial up and DSL) are more or less the same. Thus, 44% have a dial up connection, 47% a DSL connection (mainly with speeds ranging between 128kbps and 512 kbps), and the remaining 9% are connected to the internet via other technologies.

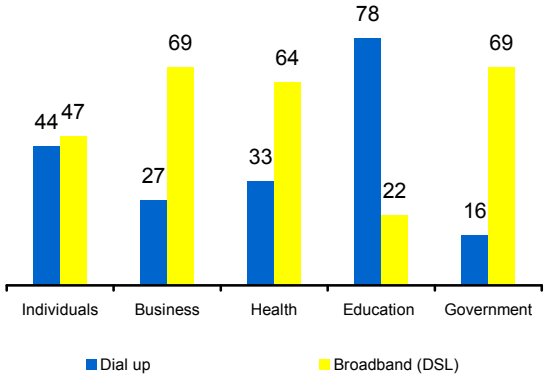
The majority of the corporate internet connections (69%) are DSL connections, with speeds ranging from 64kbps to 2 Mbps. The 256 kbps and the 512 kbps are the most popular DSL connections, each claiming a share of 24%. On the other hand, speeds of 1 and 2 Mbps are hardly visible, with shares of 5% and 1% respectively. The traditional dial up connection is limited to a share of 27%. In general, larger companies tend to choose faster connections (256 kbps and up), and less dial up connections, whilst the opposite prevails with smaller entities.

As in the case of private sector, the majority of these hospitals and clinics (64%) maintain a DSL connection (mainly, 256 and 512 kbps), while dial up is limited to 33%, particularly preferred by smaller establishments. Wireless connections are only practiced by 3% of them.

Unlike the corporate internet connections, the clear majority of the internet connections of schools (78%) are still dial up connections, with the expected exception of colleges and universities. DSL only claims 20%, while wireless solutions 2%.

Overall, DSL is the most preferred type of connection, with 7 in 10 of all governmental offices (main and branches) being connected to the internet via a DSL connection. Dial up is limited to a much smaller share (16% among main offices, slightly more among branches), while satellite and wireless are still niche solutions, with combined shares remaining below 10%.

Exhibit 6.9 Types of Internet Connections



Base : All organizations using internet.

Note : The figures may not add up to 100% as some were unable to specify

6.11 Online Activities

Individual internet users use the internet in a great number of ways, other than simply browsing (which evidently, is the most popular single practice of all). These span from communication (mainly, sending and receiving e-mails, participating in forums and chatting rooms), collecting information (mainly on services, and on health-related issues), entertainment (principally playing games and watching movies), downloading (chiefly, games), for educational activities, and for business purposes (internet banking, in the main). In order of importance, communication reasons rank first with 77% of users being involved in this activity. At 56%, collection of information lands at second position, followed by entertainment (49%) and downloading (48%), the latter being done mainly through specialized web sites, with peer to peer software being used only by 15% of downloaders. Education and learning activities are undertaken by 3 in 10 internet users, while accessing the internet for business purposes ranks last, with only 22% of all users (mainly, above 25 years of age) naming this activity.

On the other hand, business internet users (i.e., internet users who access the internet from their company's premises) pay more attention to professional issues than to personal ones. Thus, their main purposes of accessing the internet are for collecting information (84%), communication (74%), for business purposes (71%), and for dealing with / responding to various government organizations and authorities.

Internet users in health institutions access the internet to get information on various services (43%), to get information from or communicate with government organizations and authorities (67%), to receive and send e-mails (41%), and occasionally, to read newspapers (24%).

Internet users in educational institutions are using the internet in fewer ways, and mainly to get information from or communicate with government organizations and authorities (58%), to receive and send e-mails (64%), and of course, for educational and learning purposes (38%).

Governmental employees with access to the internet are involved in a wider range of applications, related to communications (mainly, sending and receiving e-mails) (74%); collection of information (principally, getting information about various services and from various governmental organizations) (73%); business (internet banking and on-line services at large) (41%); and entertainment (mainly reading and

downloading books, magazines and articles) (23%). In parallel, a very high percentage of them (71%) are reportedly accessing the internet to deal (exchange documents or fill in forms or carry out any official task) with other government organizations, while 6 in 10 access the internet simply to browse.

Exhibit 6.10 Online Activities

	Individual	Business	Health	Education	Govt.
Base	*933*	*410*	*51*	*519*	*66*
Getting information	56	84	78	57	73
Communication	77	74	55	76	74
Business	22	71	35	7	74
Entertainment	49	-	24	20	23

6.12 Browser

'Internet explorer' from Microsoft Windows is the dominating web browser used in Saudi Arabia. More than 9 in 10 individual internet users, private companies, educational and health institutions and all the governmental organizations access the internet via the said browser. Netscape is a niche browser, used by 4% to 5% of each target group, while Mozilla Firefox and Opera is barely visible.

6.13 Mobile Internet

Mobile internet connection services (MICS) are not at all widespread in the country. Despite the very high mobile phone lines penetration, the percentage of individuals and organizations using these services lies below 10%.

Of all individuals, only a small part (8%) have ever used mobile internet connection services (i.e., services that allow them to access the internet via their mobile phone, such as GPRS, 3G, WIMAX, and HSDPA). Comparative to other groups, older people (55+), women and people in the South region are less likely to be users of mobile internet connection services.

Of those who have ever used any of these services, about half (54%) consider them as alternative methods to conventional connection (i.e., to connection through a computer and a telephonic line), principally on the grounds of them being better than the ordinary connections from a speed and availability point of view. Evidently, the remainder are using both methodologies, depending on location, convenience and purpose.

The situation is quite similar among private companies, government organizations and the health sector, with the MICS user proportions standing at 8%, 5% and 4% respectively. The relevant proportion among private companies stands at comparatively higher levels among large companies in the IT / communications and oil & gas sectors. Of all identified MICS users, nearly 4 in 10 companies and governmental organizations, and 25% of health institutes use them as an alternative method, principally because of perceived better quality (as in the case of individual users) and secondly on cost issues (perceived to be cheaper).

7.0 Internet Satisfaction and Concerns

7.1 Satisfaction

Individual internet users subscribe to all of the country's ISPs.

Overall, the satisfaction of internet users with the internet service received is moderate with two thirds giving positive satisfaction scores. Dissatisfaction was limited to low levels (11%). DSL users (with the exception of those subscribing to the slowest speed (64 kbps) appear more satisfied than dial up users. This comes as no surprise, considering that slow speed is the main reason for dissatisfaction. Women are also more satisfied with men (probably because they are less demanding at an overall level). Other than slow speed (68% of those dissatisfied), internet users complained about high cost (30%), and connection interruptions (22%).

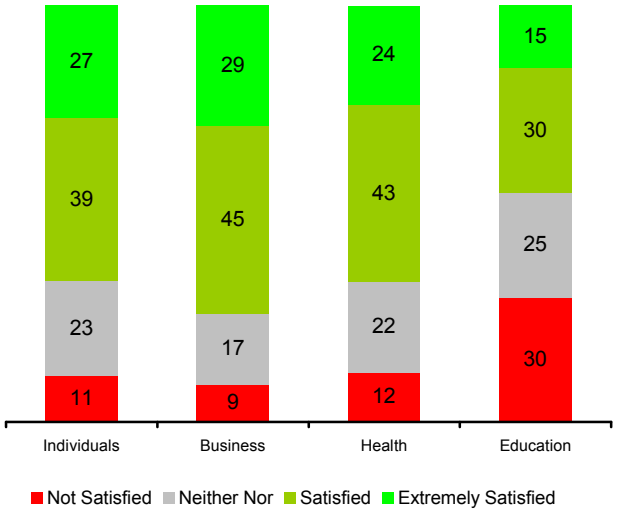
As regards private companies, satisfaction with the internet service offered also stands at moderate levels (66% among dial up users and 73% among DSL users). On the other hand, dissatisfaction (those stating that they were not satisfied with the service received) is kept at marginal levels (12% for dial up users and 9% among DSL users). As in the case of individual users, the main reason for the dissatisfaction of corporate users is the slow speed, followed by the frequent disconnections.

More or less the same picture as the one portrayed above can be seen in the case of health institutions: two thirds of them (67%), with no major deviations between public and private, small, medium and large establishments, state that they are satisfied with the internet service received, while dissatisfaction is kept at a mere 12%. Dissatisfaction results from slow speed, interruptions and perceived high cost.

The situation with educational institutions is different: satisfaction only reaches 45%, while dissatisfaction climbs to 30%, principally owed to the slow speeds experienced (77%), the (frequent) interruptions and failures (28%), and the cost (10%). Satisfaction among the various sub-groups remains practically unaltered.

Two different pictures are seen in the case of the government sector: a positive one, where the clear majority (64%) of those having a DSL connection are satisfied with the internet service (and with only 10% being dissatisfied); and a rather neutral one, where most of the dial-up internet users (74%) are neither satisfied nor dissatisfied (and with the satisfaction levels standing at only 13%). As it is evident from the above satisfaction figures, speed plays a major role, and proves to be the determining reason for dissatisfaction, followed by frequent disconnections.

Exhibit 7.1 Satisfaction



**The norm for top 2 box score (extremely satisfied + somewhat satisfied) in Saudi Arabia is 70% as the acquiescence bias in the kingdom is high due to gratitude factor (cultural reasons).* Source: Nielsen Studies conducted in KSA.

7.2 Ease of subscribing

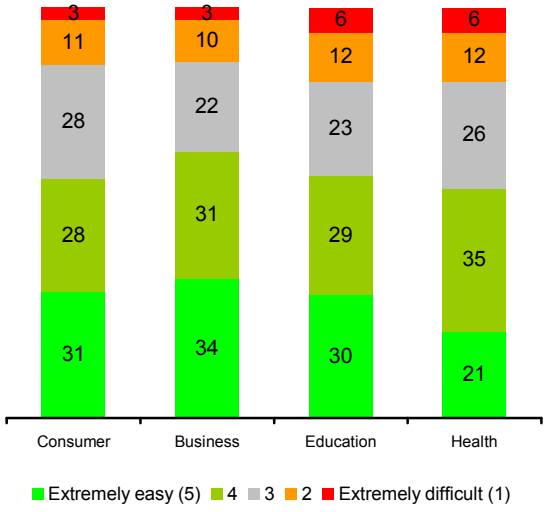
Overall, the majority of individual internet subscribers using a broadband connection (58%) consider it easy to obtain such a connection. On the contrary, 14% believe otherwise (that it is very difficult to get such a connection). No major deviations in these opinions are recorded among the various demographic sub-groups.

Obtaining a broadband connection by private companies is even easier than by individual households: 65% of private companies with an internet connection verify the ease with which they can get such a connection. On the other hand, only 13% consider it difficult, with the remaining 22% lying in the middle.

The ease of obtaining a broadband internet connection by health institutes compares more with individual users and educational institutions than with private companies: 56% and 59% of health and educational institutes respectively consider it very easy, while 18% and 17% find it hard. The said figures are rather consistent among the various types of health institutes, while educational institutes of up to 500 employees find it easier to get such a connection than larger such establishments.

A similar picture is seen in the case of governmental institutions, with 4 in 10 of broadband internet users considering that obtaining a broadband internet connection is easy and with only 22% finding it a difficult task.

Exhibit 7.2 Ease of subscribing to broadband



Base : All who use internet

7.3 Cost Perceptions

The opinions of individual internet users who subscribe to a broadband connection regarding the cost of their subscription are split: roughly 3 in 10 believe that the relevant fees are too expensive, another 3 in 10 believe that they are very affordable, and the remaining 40% are somewhere in the middle. The said split presents no major deviations within the various demographic sub-groups.

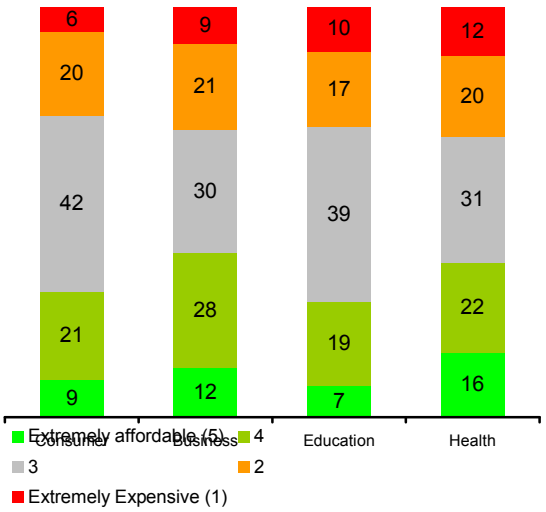
More or less, the same opinions prevail among health institutes: those considering the costs very affordable are slightly below one third (31%), while as many as 25% believe that they are too expensive.

Likewise, one quarter of the educational institutions (25%) have a positive perception of the internet costs, while a practically equal proportion (27%) is negative in this respect. More or less, the same perceptions are held by all types of these institutions.

Perceptions on cost are a little less positive among private companies: 43% of them (more so of companies of the services sectors) find the prices very affordable, 28% have an opposite opinion, while the remaining 29% stand in the middle. Opinion on costs does not differ within the various sizes of companies.

Finally, the perceptual picture among governmental institutions skews negatively, with nearly 4 in 10 connected to the internet considering that internet connection is expensive both for them and in the country in general. On the other hand, only 15% of them believe otherwise, i.e., that it is affordable.

Exhibit 7.3 Cost Perceptions



Base : All who use internet

7.4 Concerns

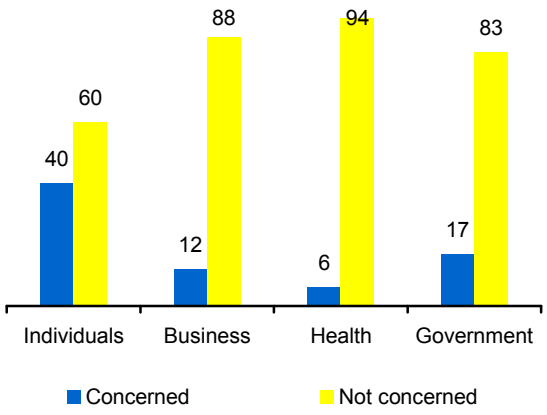
About 40% of the internet users find information filtering a concern (for some they think it is not enough, others think it is too much). However, only 24% found it to be a major concern amongst those who had concern. It is, indeed more of an issue with women (45%) as compared to men (36%). And also among users of the highest socio-economic class (A/Bs). It also increases among younger age users, reaching its peak level of 46% among 15 to 24 year olds.

The situation is somewhat better among corporate internet users: only 12% of these users are reportedly faced with information filtering that concerns them, while nearly 9 in 10 do not report any such problems.

The filtering concern is practically non-existent in the health sector, with only 6% of the health institutions with access to the internet reporting that their users encountered with filtring. This minority comes from both public and private health institutes.

information filtering is encountered by 17% of all governmental entities with an internet connection. Among them, the opinion whether this is of concern or not is divided: 45% do not consider it as a problem, while 54% are concerned with it.

Exhibit 7.4 Filtering Concerns



Base : All Internet Users

7.5 Experience of SPAM mails

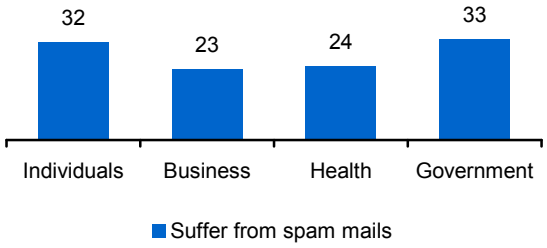
Roughly a third (32%) of all individual internet users suffers from SPAM e-mails. As stated by them, an average of 19% of all emails received by them is SPAM. Furthermore, an alarming 8% of all internet users who receive SPAM consider that SPAM emails account for 50% half or more of the total number of emails they receive. Reception of SPAM e-mails seems to be increasing in younger age internet users, and among males (as compared to females), which may denote a direct relevance between SPAM email and how heavily one uses the internet.

The situation with SPAM email is relatively better among private companies: only 23% of them identified SPAM email in their mail boxes. The said percentage is higher among companies of the oil & gas sector, while it appears to increase with the size of the company. According to the SPAM receptors, 24% of all the emails they receive are SPAM emails on average. However, the said proportion rises to dangerous levels (50% or more) for 15% of these companies.

Similarly, 24% of all health establishments with internet access receive SPAM email (the proportion is higher among private institutions – 27%, than among public ones – 17%). On average, these SPAM emails represent 10% of the total volume of emails received by these health establishments.

The relevant proportion is considerably higher among governmental organizations, with one third of all entities with an internet connection reportedly receiving SPAM mail to some extent. The said extent varies by outlet and area, but on average SPAM mail represents 28% of all emails received by these organizations in a typical day.

Exhibit 7.5 Suffer from Spam mails



8.0 Websites and e-commerce

8.1 Websites Owned

Nearly 4 in 10 private companies (39%) have their own web site. Web site ownership is particularly enhanced among companies in the oil & gas sector (62%), and in the manufacturing sector (55%). As expected, the incidence of web site ownership increases as the

size of the company increases, reaching its peak level (64%) among large companies and its lowest level (22%) among small ones.

The incidence of owning a web site in the educational sector is quite similar to the one recorded among private companies (38%), noticeably higher among colleges and universities. The said incidence increases with the size of educational institutes, with 58% of large such establishments claiming to have a web site.

On the other hand, web site ownership among health institutes stands at lower levels (20%), private medium and large organizations in their overwhelming majority.

On the other hand, the highest incidence of owning a web site is recorded among governmental entities, with 6 in 10 of those government organizations connected to the internet maintaining its own web site. As in many other indicators examined by the present survey, the district of Riyadh takes the lead in web-site ownership, with penetration levels being significantly higher than other areas.

Exhibit 8.1.1 Own Website

	Bus.	Health	Edu.	Govt.
Base	*410*	*51*	*519*	*66*
Host Website	39%	20%	38%	64%

Base: All using internet

Web sites of private companies are predominantly used to offer information about the company (82%). They also provide web mail (73%), and information on events (48%).

Hospitals and clinics owning a website offer predominantly web mail, information on the hospital / clinic, contact information, and a platform for registration.

As expected, most of the services offered through the web sites of educational institutions are related to the services offered by the school itself. Thus, 69% of these sites offer information on the school, 58% are used as platforms for forums, and 44% as a medium for registration, while web mail is offered by nearly half of them (49%).

Regarding governmental organizations, the overwhelming majority (of those who maintain their own web site) offer information on their own organization / department (95%). Other services frequently offered include news (68&); contact information (55%); web mail (48%); and information on events (45%).

Exhibit 8.1.2 Services offered on the website

	Bus.	Health	Edu.	Govt.
Base	*160*	*10**	*196*	*40*
Information about the organization	82	90	69	95
Webmail	73	80	49	48
Events	48	-	-	45
Products/ Services	30	-	-	-
News	28	30	-	68
Webinar/ E-conferencing	7	30	-	8
Forums	-	-	58	-

*Base: All hosting a website * Base Health too small*

8.2 Language of Websites

The net majority of private companies owning a website (56%) use exclusively the English

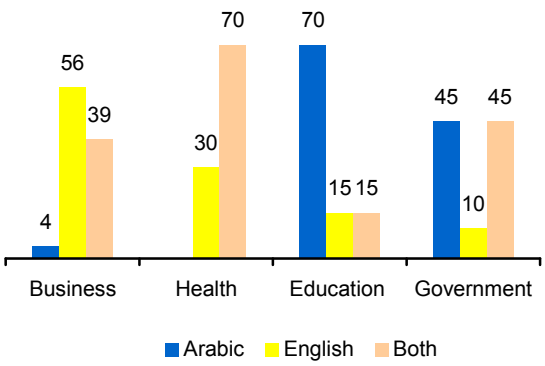
language in their site. This coupled with the fact that another 40% of these companies use a combination of English and Arabic makes the English language practically universal.

Unlike private companies, the majority of educational institutions (70%) use exclusively the Arabic language in their web sites. An additional 15% use both the Arabic and the English language while only 15% use only the English language.

The English language is an absolute must when it comes to web sites owned by health institutes: Of the few (mainly, private) hospitals and clinics having a web site, 7 in 10 use both the English and the Arabic language, while the remainder use exclusively English.

Nearly half the websites owned by governmental institutions (45%) are in Arabic only, while an equal percentage is bilingual (Arabic and English). Nevertheless, a small percentage (10%) reportedly has their web site only in English.

Exhibit 8.2 Language of the website



Base: All hosting a website

8.3 Awareness of e-commerce

Individual consumers (regardless of whether they are users of computers and the internet or not) have an acceptable level of information about e-commerce: 43% of them verified their awareness of the said concept, while the proportion rose to 56% after being reminded during the interview. The e-commerce awareness levels are comparatively lower among older ages (55+), among lower socio-economic classes and among women.

8.4 e-commerce transactions

Only a small minority of all private companies (9%) are involved in e-commerce implementation (in this case, and for the purpose of the present survey, the word "implementation" means the preparation work (design of the relevant site, premises and delivery system), the actual sales, possible on-line purchases, or a combination of the above). The said proportion is slightly higher among companies falling within the manufacturing sector. On the other hand, it is evident that only medium and large companies are involved in e-commerce. Of those private companies implementing e-commerce, around three quarters (73%) are actually selling products / services on-line. e-commerce implementation is also extremely low among government organizations (3%), undertaken only by few entities in the Riyadh and Makkah districts.

High as the e-commerce awareness levels may be, the usage of e-commerce by individuals for purchases proves quite low, with only 6% of the people aware of the concept confirming that they have ever bought anything on-line.

The bulk of individual internet users who do not buy on-line justify their reluctance to do so by projecting a number of reasons: evidently, non-trust, i.e., the belief that on-line purchases are not safe, plays a vital role in their decision not to buy on-line (29%). In addition, large masses of consumers with access to the internet are still not convinced about the comparative advantages of shopping on-line. Thus, 27% of them claimed that "*whatever they need, they can find off-line, so there is no need to buy them on-line*". Smaller groups have also expressed disbelief for the very concept of e-commerce (7%), have doubted the quality of items bought on-line (5%) and claimed that they would not feel good buying something without first inspecting it (8%).

The low incidence of 9%.of companies indulging in e-commerce was generally agreed to, even as experts felt that certain industries would have more of that.

9.0 Summary

9.1 Individuals

Related to Computers

	Saudi Arabia	
Ownership of a computer in the household (projected to total population)	43%	
Type of PC *(among PC owners)*	Desktop	88%
	Laptop	46%
	PDA	1%
Operating system usage *(among PC owners)*	Windows XP Home	64%
	Windows XP Professional	23%
	Windows 2000	11%
	Windows Vista	3%
	Windows ME	2%
	Macintosh	1%
Language of the operating system *(among PC owners)*	Arabic	70%
	English	12%
	Both	18%
IT Related Trainings for Individuals *(among PC owners)*	MS Office	15%
	Programming languages	7%
	Accounting packages	7%
	Database management	7%
	Web designing	5%
	No training	70%
Location of computer usage *(among computer owners)*	At home	91%
	At work	34%
	Internet café	15%
	Friend/relative home	6%
	Place of education	5%
Reasons for not using computers *(among non users of computers)*	Don't know how to use it	56%
	Not affordable	23%
	Don't know what to use it for	12%

Related to Internet

		Saudi Arabia	
Proportion of individuals who used the internet (projected to total population)		30.5%	
Proportion of households with internet access at home		34%	
Type of internet connection (projected to total population)		Broadband	15%
		Cable modem	0.3%
		ISDN	0.03%
		Dial-up	14%
Frequency of internet usage *(among internet users)*	At least once a day		56%
	At least once a week but not every day		38%
	At least once a month but not every week		5%
	Less than once a month		1%
Web browser usage *(among internet users)*	Internet Explorer		90%
	Netscape		5%
	Opera		5%
Visiting Arabic web sites *(among internet users)*	10% - 25% Arabic		5%
	26% - 50% Arabic		7%
	51% - 75% Arabic		15%
	76% - 100% Arabic		54%
	All English		19%
Satisfaction with Internet Services *(among internet users)*	Satisfied		66%
	Dissatisfied		11%
Perception on Internet cost	Expensive		26%
	Affordable		30%
Concerns on internet filtering **(***(among internet users)*			40%
Receiving spam emails *(among internet users)*			32%
Reasons for not using internet *(based on non users of internet)*	Don't know how to use it		34%
	Not affordable		19%
	Not available		12%
E-Commerce	Awareness		43%
	Ever bought or sold products online		6%
E-learning	Awareness		49%
	Used e-learning *(among those aware of e-learning)*		5%

9.2 Business Establishment

Related to Computers

		Saudi Arabia
Proportion of corporates with computers	76%	
Type of PC *(among corporates with computers)*	Desktop	99%
	Laptop	37%
	Server	17%
Operating system usage *(among corporates with computers)*	Windows XP Home	50%
	Windows XP Professional	49%
	Windows ME/2000	12%
Reasons for not using computers *(among corporates not using computers)*	Not related to core of our business	70%
	Employees don't know how to use it	22%
	There is no budget to buy	13%

Related to Internet

		Saudi Arabia
Proportion of corporates which use internet	52%	
Type of internet connection *(among corporates using internet)*	Broadband	71%
	Dial up	27%
Web browser usage *(among corporates using internet)*	Internet Explorer	96%
	Netscape	4%
Proportion with staff using mobile internet	8%	
Satisfaction with Internet Services*(among corporates using internet)*	Satisfied	66%
	Dissatisfied	13%
Perception on Internet cost *(among corporates using internet)*	Expensive	30%
	Affordable	40%
Concerns on internet filtering *(among corporates using internet)*		12%
Receiving spam emails *(among corporates using internet)*		23%
Corporates with websites		39%
E-Commerce	Proportion of corporates that have implemented e-commerce	9%

9.3 Health Sector

Related to Computers

	Saudi Arabia	
Health organizations with computers	95%	
Type of PC *(based on organizations which use computer devices)*	Desktop	100%
	Laptop	16%
	PDA	7%
Operating system usage *(based on organizations which use computer devices)*	Windows XP Home	62%
	Windows XP Professional	42%
	Windows 2000/ME	9%
Language of the operating system *(based on organizations which use computer devices)*	Arabic	42%
	English	10%
	Both	48%

Related to Internet

	Saudi Arabia	
Proportion of organizations who use the internet	37%	
Type of internet connection	Dial-up	33%
	Broadband	64%
	Others	3%
Barriers to using internet	Not necessary for the work	37%
	Not allowed	29%
	Employees don't know how to use it	10%
	Not affordable	6%
Web browser usage **(based on internet users)**	Internet Explorer	94%
	Netscape	4%
	Opera	2%
Companies with websites **(based on internet users)**	20%	
Satisfaction with Internet Services (based on internet users)	Satisfied	67%
	Dissatisfied	12%
Perception on Internet cost	Expensive	32%
	Affordable	38%

9.4 Education Sector

Related to Computers

		Saudi Arabia
Institutions with computers		99%
Type of PC *(based on institutions with PCs)*	Desktop	100%
	Laptop	15%
	Servers	10%
Average number of computers per institute *(based on institutions with PCs)*	Preliminary	18
	Primary	18
	Secondary	32
	College/Technical Institute/University	121
Operating system usage *(based on institutions with PCs)*	Windows XP Home	56%
	Windows XP Professional	35%
	Windows 2000/ME	21%
	Others	2%
IT Training provided		58%

Related to Internet

		Saudi Arabia
Proportion of institutions that use the internet		74%
Type of internet connection*(among institutions with internet connection)*	Broadband	22%
	Dial-up	78%
Key online activities *(among institutions with internet connection)*	Receiving and sending e-mails	64%
	Dealing with government organisations	58%
	Getting information from govt. bodies	52%
	Browsing	25%
Web browser usage *(among institutions with internet connection)*	Internet Explorer	91%
	Netscape	5%
	Opera	1%
Satisfaction with Internet Services *(among institutions with internet connection)*	Satisfied	45%
	Dissatisfied	30%
Perception on Internet cost	Expensive	27%
	Affordable	26%
Institutions with web sites		38%
Institutions offering e-learning		24%

9.5 Government Sector

Related to Computers

	Saudi Arabia	
Penetration of computers in head offices	98%	
Penetration of computers in branch offices	84%	
Type of PC *(among organizations which use computer devices)*	Desktop	100%
	Laptop	36%
	Server	31%
Operating system usage *(among organizations which use computer devices)*	Windows XP Professional	49%
	Windows XP Home	47%
	Windows 2000/ME	24%
Language of the operating system *(among organizations which use computer devices)*	Arabic	95%
	English & Arabic	32%

Related to Internet

		Saudi Arabia	
Proportion of organizations who use the internet		Head office	65%
		Branch office	49%
Type of internet connection		Head office	Branch Office
	Dial-up	16%	21%
	DSL/Broadband	74%	71%
	Others	12%	5%
Online Activities	Communication		74%
	Getting information		73%
	Business		41%
	Entertainment		23%
Web browser usage *(among organizations which use computer devices)*	Internet Explorer		100%
Use of mobile internet	5%		
Satisfaction with Internet Services *(among organizations which use computer devices)*	Satisfied		62%
	Dissatisfied		12%
Perception on Internet cost	Expensive		39%
	Affordable		22%