COMPUTER AND INTERNET USAGE IN THE KINGDOM OF SAUDI ARABIA

INDIVIDUALS | BUSINESS | GOVERNMENT | EDUCATION | HEALTH

2007 - 2009

هيئة الاتصالات وتقنية المعلومات
Communications and Information Technology Commission

TABLE OF **CONTENTS**

INTRODUCTION

The Communications and Information Technology Commission (CITC) was established to regulate technology and communications services in the Kingdom of Saudi Arabia with the goal of ensuring that these services are "universally available, high quality and affordable ".

CITC responsibilities include keeping pace with the rapid international developments in the field of telecommunications, and making any necessary regulatory changes to maintain a competitive environment in this sector while continuing to encourage new investment.

Internet service were officially made available in the Kingdom of Saudi Arabia (KSA) in 1997. Internet has become an integral part of the Saudi Society and Economy. In 2007, CITC initiated a project to understand the Internet status and potential growth within the Kingdom. In order to monitor and evaluate the progress of the computer and internet penetration and usage in the Kingdom, CITC has undertaken a country wide survey based study.

This report is based on field surveys, which produced a total of more than 10,000 interviews each year from 2007 till 2009 and across a number of market segments. The survey data was gathered primarily from personal face-to-face interviews across all the segments. Various sampling procedures were applied depending on the nature of each survey from stratified random sampling to quota sampling, so that the demographics would reflect the population targeted by each survey.

The study evaluates the current situation of Computer and Internet Usage in Saudi Arabia and it aims to identify the penetration levels, habits and usage patterns and the future potential of the Internet in Saudi Arabia. It covers a wide range of information areas from infrastructure to satisfaction. The study covers five different types of users: individual users, government agencies, educational institutions, health institutions and businesses. The research was such designed to ensure national representation.

The results are published in consecutive annual reports which was published for three years, and can be found in CITC's website (www.citc.gov.sa). This report is a consolidated summary of the main findings and trends observed during the past three years across various segments.

EXECUTIVE **SUMMARY**

BACKGROUND

Saudi Arabia is well on its way to building an information-based society. Spurred on by the opening of the telecoms market to competition and strategic thrust from the government has put Saudi Arabia among the fast developing information and communication technology (ICT) markets in the region. Availability and proliferation of broadband internet in the recent few years has played a significant role in the development of Saudi Arabia market.

This section highlights key findings on internet usage and penetration in Saudi Arabia. The summary looks into the changes on each important stakeholder segment within the Kingdom.

INDIVIDUAL USERS (RESIDENTS)

Over the past several years, residents in KSA have made steady progress in adopting computers. The thrust from the government and the availability of affordable computers has lead to an increase in the computer penetration among individuals which has steadily increased in the past three years from 43% in 2007 to 53% in 2009. Their usage of computers has been for the basic use of surfing the internet, storing documents and using computers for entertainment i.e. playing games, watching movies, etc.

The computer ownership in 2009 is skewed towards laptops as compared to desktops, with 76% ownership of laptops vis-à-vis 66% of desktops. The trend of adopting laptops is higher and clearly shows the mobility advantage of a laptop. Amongst non-users almost a third were positively disposed towards purchasing a computer.

In terms of the internet penetration in the Kingdom it has significantly increased from 30.5% in 2007, 36% in 2008 and to 40% in 2009. This corresponds to 31% increase compared to 2007 and 11% increase compared to 2008.

This increase in penetration is primarily due to the need to access information, communication and also the availability of broadband at a reasonable cost.

Broadband has also made a significant impact, with consumers primarily moving away from dial up connection which accounted for 44% of all internet users in 2007 as compared to only 4% in 2009. Broadband connections have increased from 50% in 2007 to 96% on internet users in 2009.

Majority of the resident's access internet from home from 8 to 12 am at least once a day primarily for browsing, communicating and searching for information. Overall majority of the users are satisfied with their internet service providers as most of them have started using broadband connection.

While majority of the residents are aware of e-commerce, only few have actually done the e-transaction. Amongst those who have done e-commerce it's primarily for airlines reservation and tickets.

Amongst non-users of the internet the primary reasons for not using the internet is the lack of knowledge on how to use it and also affordability seems to be an issue. Few respondents also mentioned that their family does not allow them to have an internet connection at home.

BUSINESS ESTABLISHMENTS

The business entities in KSA are maturing and understand the usage of computers and high speed broadband internet. Computer ownership among business establishments in the Kingdom has moved up from 76% in 2007 to 82% in 2009. Most of the medium and large establishments have computer penetration of 91% and 93% respectively. Ownership is still mostly desktops but it is also important to note that laptop ownership in business establishments has increased significantly from 37% in 2007 to 55% in 2009. IT training is currently done by 62% of the establishments surveyed.

Internet penetration among business establishments has moved from 52% in 2007 to 65% in 2009. Majority of the connection type is still through broadband connection, broadband internet has continued its prevalence throughout the three years, from 69% in 2007 to almost all establishments in 2009, 89%. Satisfaction towards internet connection has continued to be true for majority of the businesses in the Kingdom with 75% noting their satisfaction towards their connection. One significant improvement in the past three years is the significant increase in the affordability perception of the internet; from 55% of the establishments it is now 75% of the businesses saying that their connection is affordable. This also reflects the market reality of competition amongst the service providers which has overall lowered the cost in the country.

EDUCATIONAL INSTITUTIONS

When it comes to educational establishments in the Kingdom, almost all establishments regardless of level have a computer. Laptop penetration though has significantly increased for colleges and universities from 50% in 2007 to 79% in 2009. This increase has not been as evident at other educational levels, primary to secondary.

Internet connections from 2007 to 2009 has also moved from a dial-up connection to 93% of the educational institutions now having broadband connection. This has also resulted to an increase in satisfaction towards their current internet connection, from 35% in 2007 to 64% in 2009. This is also primarily due to the fact that major issues with dial up being slow are being resolved by the broadband connections.

HEALTH INSTITUTIONS

The different healthcare institutions in the Kingdom have been able to continuously work on improving the computer and internet penetration numbers in the past three years.

The share of employees (nurses, doctors and administration staff) using the computer and the internet has also increased over the years. The highest increase comes from the use of these communication tools by the nurses, from 5% in 2007 to 14% in 2009. Nurses use the computer and the internet mainly for database keeping on patient files.

Internet penetration has moved from 37% in 2007 to 63% in 2009, a significant increase which translates to more activities done online among these institutions. Main activities done over the internet is on communicating with other institutions in the Kingdom and also as a channel to communicate to its target patients.

Comparable to other segments of the society, there is also a significant move from a dial up connections to broadband connections. This move has resulted in a higher satisfaction rating for their internet services.

GOVERNMENT INSTITUTIONS

The Kingdom has devoted considerable efforts to enhancing levels of “e-government” and this appears to be reflected in the results of the survey.

Computer penetration is currently at 97% and majority of the employees have access to it. 35% of the offices have laptops currently, again an increasing figure for the past three years. When it comes to IT training, in 2009 majority (57%) of the offices have noted that they conduct IT trainings which mostly are about MS office and Data Management.

Internet penetration among government offices has increased from 65% in 2007 to 73% in 2009. The connection types for government offices have also significantly moved from 69% broadband to currently 80% subscribing to a broadband connection. Satisfaction towards the internet has also improved year on year for government offices. This again stems from the fact that more and more government institutions are moving towards broadband connections.

When it comes to the activities done on the web, 67% currently use it to communicate with other government offices while 71% also use it for information sourcing.

CHAPTER 1 INDIVIDUAL

BACKGROUND

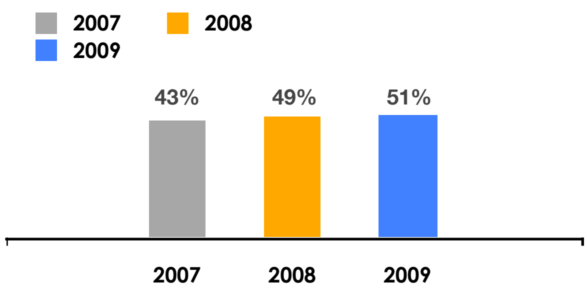
This chapter examines the internet and computer adoption levels by residents in KSA. These residents include both the local population and expatriates residing in the country. Field surveys garnered information to assess computer and internet adoption and usage levels among residents and to determine existing infrastructure among households in the country. A total of 9,151 face-to-face interviews were conducted in 2009, 8,943 interviews in 2008 and 7,570 interviews in 2007 representing the total population of Saudi Arabia.

This section details the computer and internet uptake of the individual users at the household level. It includes details on computer usage, internet usage, mobile phone ownership and fixed line ownership.

COMPUTER PENETRATION

One of the core indicator is the number of computers installed (being used or available for use) by the residents of Saudi Arabia. The term computer refers to either desktop or portable computers (laptops).

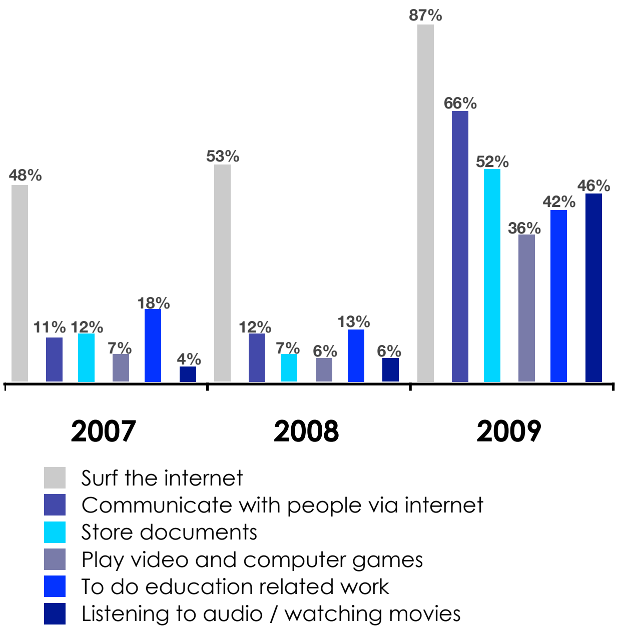
Figure 1 – Computer Penetration



The computer penetration in KSA has increased significantly in last three years from 43% in 2007 to 51% in 2009 (an increase of around 19%). Although the computer penetration is growing in KSA, specific government thrust is required to help the adoption to the non users. An intense education campaign with option of low cost PC will certainly help to further and deepen computer proliferation in KSA market

Computer ownership in 2009 is skewed towards laptops as compared to desktops, with 76% ownership of laptops vis-à-vis 66% of desktops. The trend of adopting laptops is higher year on year and clearly shows the mobility advantage of laptops. On average each household owns one personal computer either a desktop or a laptop and the usage of a computer is mostly at home.

Figure 2 – Computer Activities



Amongst non-users almost a third was positively disposed towards purchasing a computer.

In terms of the operating system used Microsoft Windows has a clear dominance in this market with Windows XP as the most popular operating system and Arabic is the language mostly used for the operating system.

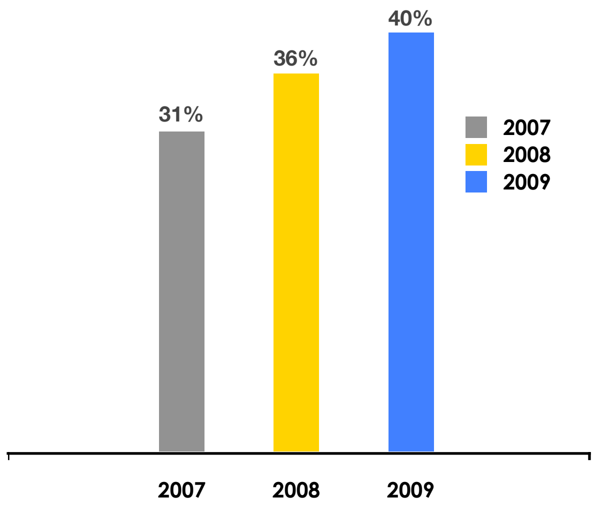
COMPUTER ACTIVITIES UNDERTAKEN BY INDIVIDUALS

Interestingly, findings in 2009 illustrate that there is a significant increase in the activities performed by the respondents on the computer. Majority of the respondents indulge in three main usages: surf the internet; communicate with people and store documents. Communicating with people is skewed more towards males than females. In 2009, far from the levels in 2007 and 2008, 36% noted that they use their computers to play video and games. As expected PC and online playing is mostly done by males in the age group of 15 to 24 years old. Youth in the country are primarily driven by entertainment activities.

INTERNET PENETRATION

Internet user penetration is defined as "the number of people who have accessed the Internet out of the entire population;" it is measured in terms of the last two weeks usage.

Figure 3 – Internet Penetration



In 2009 internet penetration reached 40%; increased by 4% as compared to 2008 (a growth of 11%).

The increase in internet penetration is mostly attributable to an increase in broadband penetration and the overall decline in the cost due to the fierce competition amongst service providers. The broadband penetration has also increased due to continuous efforts from all the ISP's in the market to increase broadband adoption in the country.

While computer and internet penetration is growing at a steady rate, there are regions where the growth rate is yet to catch up with the national average. The fact that respondents are using the internet more

Table 1 Main Reason for using Internet

	2007	2008	2009
Base: All Internet users	933	968	1077
Browsing	41%	47%	49%
Communication	30%	26%	27%
Information	10%	10%	8%
Education	5%	4%	4%
Entertainment	4%	5%	5%
Business	4%	3%	1%
Downloading	3%	2%	3%
Others	3%	3%	4%

frequently is a key indicator that majority of consumers are gaining and building trust in this ICT tool. Accessing an internet connection is perceived to have become easier within the Kingdom, a clear indicator that internet is becoming more available and that there are signs of competitiveness in the market.

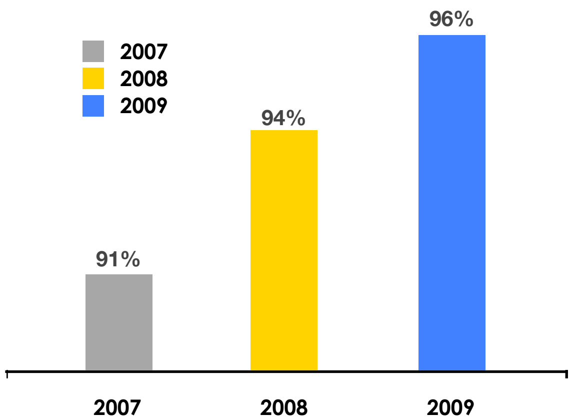
REASONS FOR USING INTERNET

In Saudi Arabia the main reasons for using the internet are for basic purposes like browsing, communication, getting information and for entertainment. Browsing and communication is common across all the provinces and demographics. Entertainment is a stronger reason for females and also for those in Riyadh and Downloading is skewed more towards younger individuals as they are heavily into gaming and listening to music.

LOCATIONS WHERE INDIVIDUAL USERS ACCESSED THE INTERNET

Though laptop ownership has increased steadily, this does not automatically translate to usage outside the home since usage is still mostly confined to home usage. Work place usage has been maintained to a third while internet café usage has not moved past 30% which suggests that people are now able to afford internet access from home. Usage in friends'/ relatives' homes still remains the lowest.

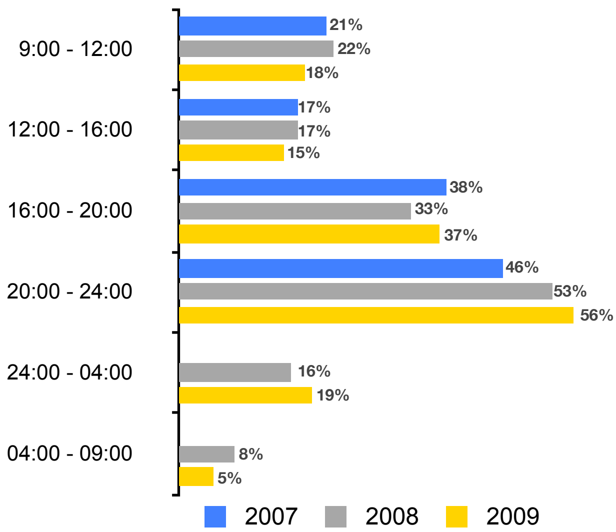
Figure 4 – Home Usage of the Internet



TIME OF INTERNET USAGE

The majority of the internet usage peaks from 16:00 hours to midnight. There are still some who would use it past midnight. The usage past midnight is skewed towards males and older individuals. The usage from 16:00 to 20:00 is higher for females and the younger individuals, 15 to 24 years old.

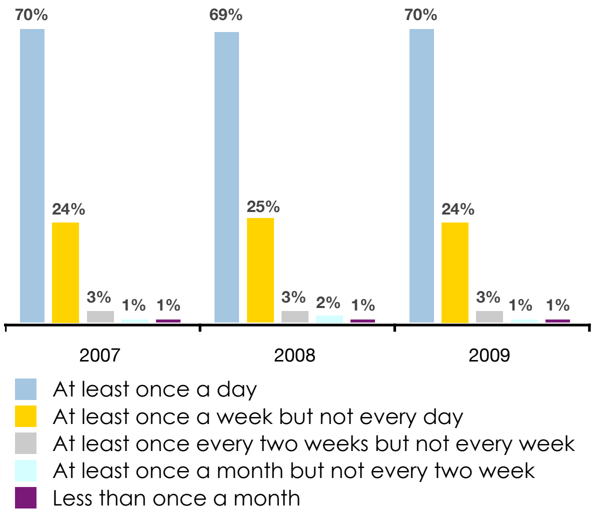
Figure 5 – Time of Internet Usage



FREQUENCY OF INDIVIDUAL INTERNET USE

In the last three years movement of usage frequency has not significantly changed as a majority still use their devices at least once a day.

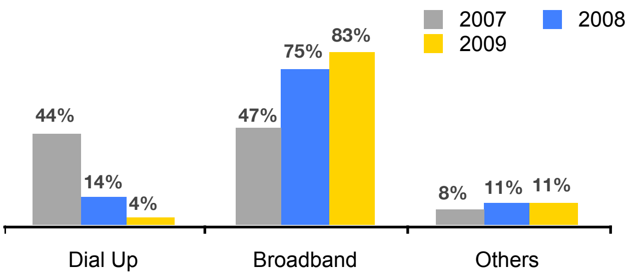
Figure 6 – Frequency of Internet Usage



TYPE OF INTERNET CONNECTION

There has been a clear shift from dial up to broadband connection between 2007 and 2008. Three quarters of those aware of the type of internet connection are now using DSL/Broadband connection compared to just 47% in the previous wave. This has clearly been affected by the service provider advertisements and aggressive moves to communicate the ease and efficiency one can get from a broadband connection versus dial-up. Furthermore, the cost of owning a broadband connection has significantly come down over the years due to the fierce competition amongst the service providers in the country. However there are areas with the lowest broadband penetration like Al-Qaseem, Assir and Tabuk.

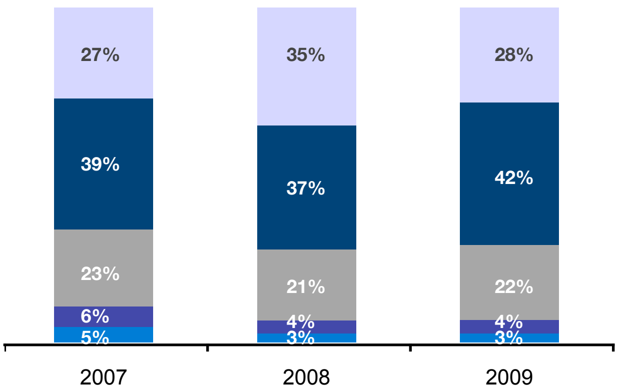
Figure 7 – Type of Internet Connection



SATISFACTION OF INDIVIDUALS WITH THEIR INTERNET CONNECTION

Due to the migration to broadband from dial up connection, Saudi's are becoming increasingly more satisfied with the internet service they receive. Very

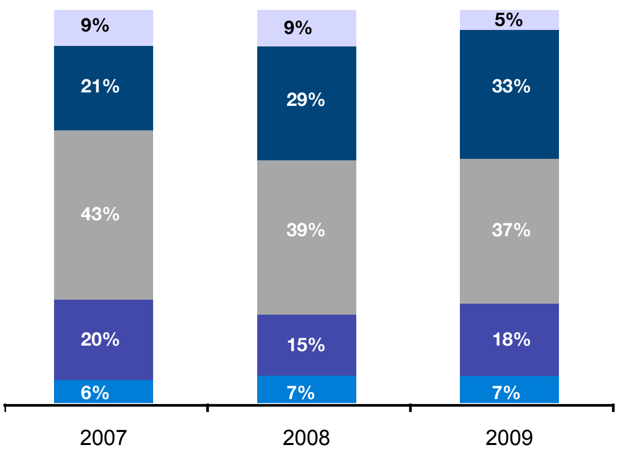
Figure 8 – Satisfaction towards internet service



few are dissatisfied with the service they receive, with the overall percentage decreasing year on year. The common reasons for citing dissatisfaction used to be speed and with the higher adoption of broadband by the consumers their satisfaction has only improved over the years towards the service providers.

PRICE PERCEPTION TOWARDS INTERNET

Figure 9 – Price perception towards internet service



Perceptions of internet costs are stagnant on a year on year basis, with the majority of internet users claiming it to be neither expensive nor affordable and this is apparent across all locations. Overall, the perceived cost of the internet is decreasing year on year, as internet services become cheaper and it becomes more available to the wider population. However there are key areas where there are cost issues and which can be addressed by making the cost of internet services more affordable, communicating with internet providers to focus on determining the price range that is acceptable and affordable to the public and ensuring that prices forwarded by the internet service providers are in the best interest of the public with constant checks on how the public perceives the different prices and what is included in each internet package.

BARRIERS TO INTERNET USAGE

The strongest barrier limiting Internet usage by residents in Saudi Arabia is the knowledge on how to use it with nearly more than half (53%) citing this as the primary reason. Other prominent barriers cited by residents were affordability and family not allowing to have an Internet connection at home. Reasons related to lack of time and generally don't want to use it were the least cited.

Table 2 Reasons for not using the internet

	2007	2008	2009
	%	%	%
I don't know how to use it	34%	33%	53%
It is not affordable	19%	11%	16%
My family does not allow me to have internet connection at home	8%	17%	12%
It is bad for children	6%	15%	9%
It is not available	12%	5%	7%
The cost of the service is not a very good value for money	7%	8%	5%
I have no spare time	4%	2%	4%
Internet line is available but I don't use it	4%	1%	1%

INDIVIDUALS WITH A MOBILE CELLULAR TELEPHONE

98% of the individuals surveyed across the Kingdom have a mobile phone. The most notable brand is Nokia with 71% ownership. Blackberry ownership is currently at 11% while other brands are still quite low.

OWNERSHIP OF FIXED TELEPHONE LINES

Each household was asked for ownership in terms of the different telecommunication devices that they own and 79% of the households in the Kingdom claim to have a fixed line telephone connection. This has remained consistent from 2007 until 2009. This is an indication that fixed telephone lines still remain important among individuals even with the prevalence of mobile phones in the country. However, it's not able to add new users as compared to mobile phones.

CHAPTER 2 BUSINESS

BACKGROUND

This chapter examines the internet and computer adoption levels by business establishments in KSA. This includes consolidated information of interviews with IT/Telecom heads of companies based all over KSA. Field surveys garnered information to assess internet and computer adoption and usage levels among businesses to determine existing infrastructure and its usage by different business entities. A total of 1,429 face-to-face interviews were conducted in 2009, 1,614 interviews in 2008 and 1,296 interviews in 2007 representing the different business sectors (size of company and the different sectors) of Saudi Arabia.

The information is reported for the sector as a whole and also disaggregated by company size. The size classification used is number of employees. These classifications were chosen to be consistent with the standards established by most other countries. Businesses with fewer than 10 employees were not surveyed in accordance with those classification standards. The report also looks at the information by areas in the Kingdom.

BUSINESS ESTABLISHMENTS WITH COMPUTERS

The overall penetration of computers in corporations in Saudi Arabia has grown slightly from 76% in 2007 to 79% in 2008 to 82% in 2009, which shows the growing maturity of the Saudi market and the increasing adoption of technology as a medium for doing business

Small organizations are driving this growth, while the growth in medium and large organizations is stagnant as the penetration is almost 100% within these organization types. However, they could be adding more number of personal computers as they expand their business.

Growth in laptop penetration comes mainly from small businesses, 43% in 2008 to 52% in 2009 probably to do with the benefits offered and costs coming down significantly over time and also as well as additions to the mobility. PDA penetration has not really increased across the businesses and there is also a significant decrease in its ownership among the large businesses.

Computer Penetration

Figure 10 - Computers Penetration by Organization Size

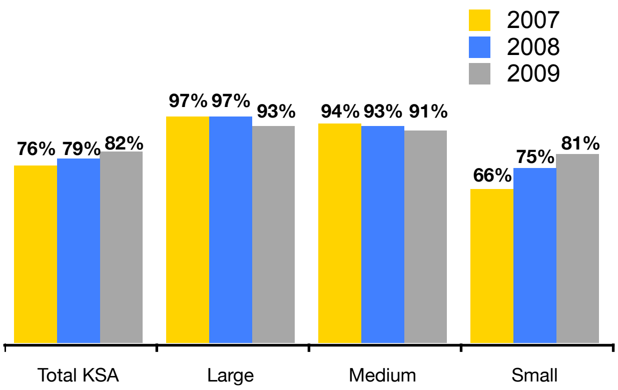
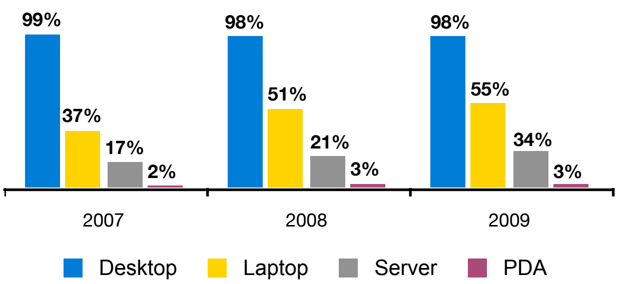


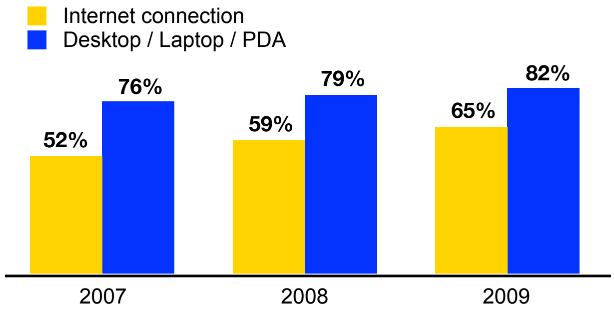
Figure 11 – Devices Owned



BUSINESS ESTABLISHMENTS WITH INTERNET ACCESS

Internet penetration has increased continuously from 2007 until 2009. Internet penetration has increased to 65% in 2009 from 59% in 2008. This is highest for large companies with 85% having internet connection and lowest for small companies with 58% internet penetration. Also, 75% of the medium size companies use internet for doing business which has remained same as compared to 2008.

Figure 12 - Internet Penetration (Total KSA)



Computers and Internet Penetration by Organization Size

Figure 13- Internet Penetration (Small Companies)

SMALL COMPANIES

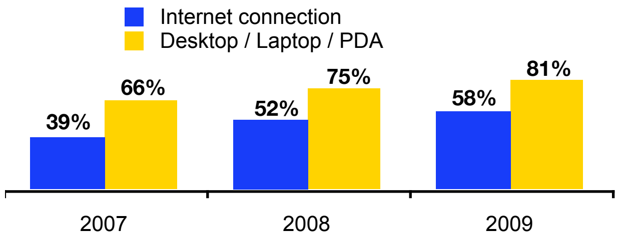
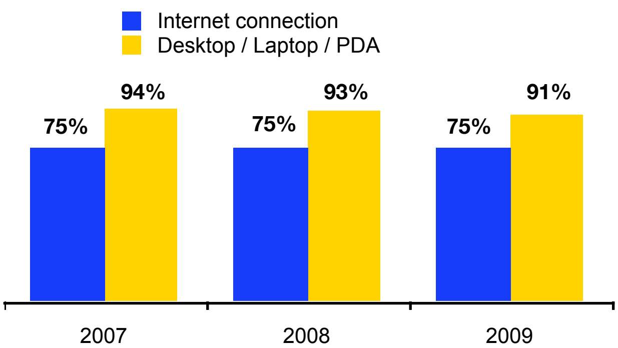


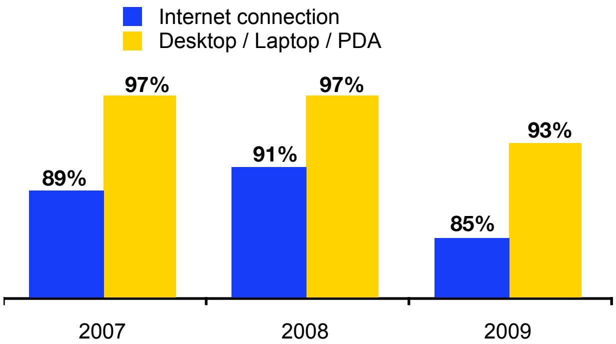
Figure 14- Internet Penetration (Medium Companies)

MEDIUM COMPANIES



LARGE COMPANIES

Figure 15- Internet Penetration (Large Companies)

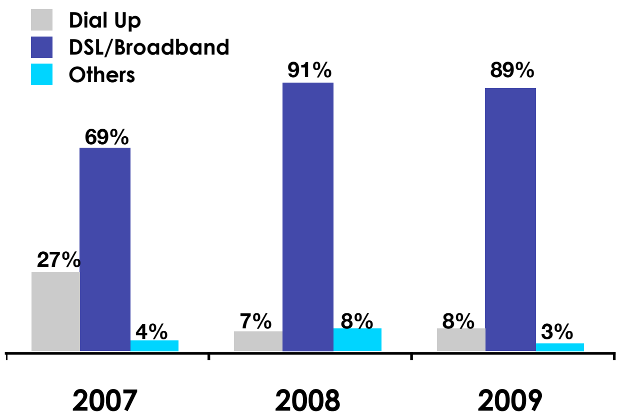


TYPE OF INTERNET CONNECTION

Broadband Internet access is eclipsing the use of dial-up among businesses in Saudi Arabia, especially among the larger business-size categories. Broadband subscription is approaching saturation among large businesses, where the penetration rate is 100% and amongst medium size business it is around 80%. Meanwhile, nearly 12 percent of small companies in Saudi Arabia have yet to shift to broadband.

Types of Internet Connections

Figure 16- Internet Penetration (Total KSA)



The shift towards broadband clearly emphasizes that business establishments understand the benefits of high speed internet, hence adopting the same.

Internet explorer dominates as a web browser with 90% of the businesses surveyed in 2009 using Internet Explorer. Only 3 % use Mozilla Firefox and 2% use Netscape. Across 2007 to 2009, the most prevalent is still Internet Explorer.

BUSINESS ONLINE ACTIVITIES

Enterprises of all sizes display consistency in terms of utilization of several basic online activities. From 2007 to 2009, the activities done online remain the same, mostly focused on information sourcing, communication internal and external. The internet serves most of the business needs of the companies.

Online Activities

Table 3 – Online Activities

ACTIVITIES	ALL			SMALL			MEDIUM			LARGE		
	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
	%	%	%	%	%	%	%	%	%	%	%	%
Getting information	84%	93%	93%	80%	90%	92%	88%	95%	97%	88%	97%	94%
Communication	74%	68%	61%	71%	67%	54%	74%	72%	72%	80%	61%	67%
Business	71%	65%	69%	63%	62%	70%	78%	69%	69%	76%	76%	75%
Entertainment	23%	20%	28%	24%	20%	33%	19%	23%	24%	27%	13%	24%

BUSINESS WITH WEB PRESENCE

Among the businesses surveyed, 48% have their own websites and it is either in English (42%) or bilingual (Arabic and English) (42%). The majority of large companies in Saudi Arabia 67% have their own website. However there is still a scope to increase the website presence amongst the large companies. There is a significant increase among small businesses that had their own websites from 2007 till 2009.

Company Website

Table 4 – Companies with websites

	ALL			SMALL			MEDIUM			LARGE		
	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
Has a company website	39%	48%	48%	26%	35%	42%	41%	61%	44%	64%	68%	67%

Website services offered are mainly the company's products and information about the company. Advanced use of the internet is less common amongst all the enterprises in Saudi Arabia.

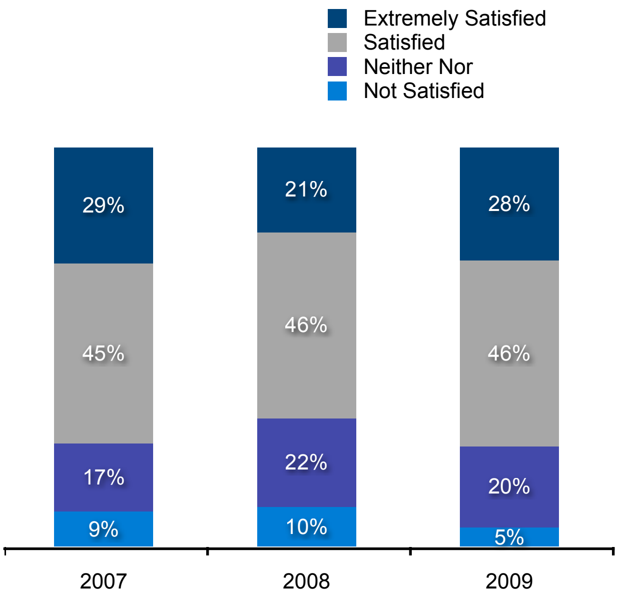
Table 5 – Services Offered

	2007	2008	2009
Base: All organizations with a website	**160**	**224**	**204**
Information about the organization	82%	88%	78%
Webmail	73%	41%	42%
Events	48%	25%	31%
Products/ services	30%	70%	63%
News	28%	25%	28%
Webinar/ E-conferencing	7%	5%	12%

SATISFACTION TOWARDS INTERNET CONNECTION

Majority of the enterprises express satisfaction with the internet service provider and there is a clear trend in the increase in satisfaction from 2008 to 2009. Dissatisfaction towards the internet connection has decreased from 2007 to 2009, with only 5% dissatisfied in 2009. This could be primarily due to the higher adoption of broadband by the enterprises across Saudi Arabia.

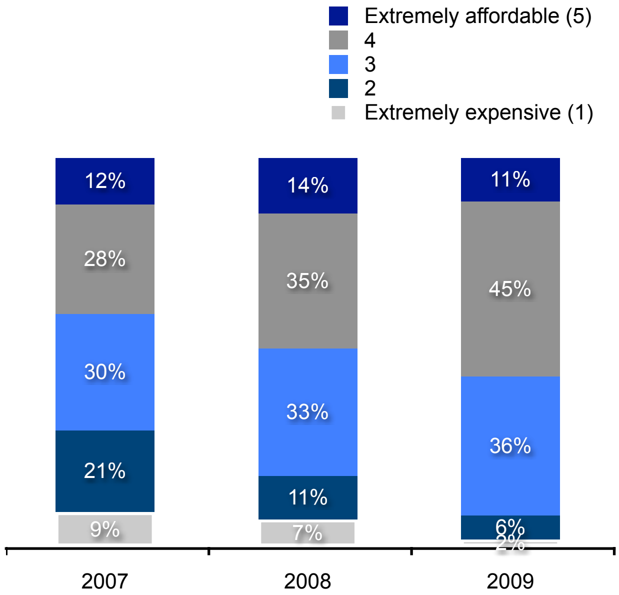
Figure 17 – Satisfaction towards Internet Service



PRICE PERCEPTION TOWARDS INTERNET CONNECTION

There is also a significant improvement in price perception towards internet costs in the kingdom. In 2009, only 8% had noted that internet costs are still expensive. Improvement in pricing could be attributed to the fact that most of the service providers have been able to offer different packages in terms of usage, giving these establishments the liberty to choose which is most applicable to their usage of internet thereby providing value for money to the companies.

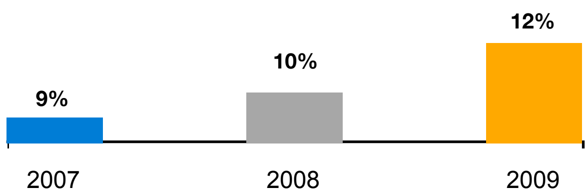
Figure 18 - Price Perception towards Internet Service



E-COMMERCE AMONG BUSINESS ESTABLISHMENTS

The business entities in KSA are not inclined towards doing business using e-commerce which is clearly evident from the results as only 12% of business entities in 2009 used e-commerce infrastructure to do business as compared to 9% in 2007. The lack of interest could be twin fold either due to lack of ecosystem or lack of trust/understanding in doing the e-commerce business in KSA. The few companies that do offer e-commerce services primarily use them for online selling of products. 36% of those with e-commerce offer payment option upon product delivery.

Figure 19 - Practice e-commerce



CHAPTER 3 EDUCATION

BACKGROUND

This chapter examines the internet and computer adoption by various educational institutes in KSA. This includes consolidated information of interviews with IT heads/ Principals of educational institutes based all over KSA. Field surveys garnered information to assess internet and computer adoption and usage levels among educational institutes to determine existing infrastructure and its usage by different institutions. A total of 710 face-to-face interviews were conducted in 2009, 709 interviews in 2008 and 700 interviews in 2007 representing the different educational institutes in Saudi Arabia.

Results for educational establishments are reported for preliminary, primary, secondary and tertiary schools.

COMPUTER PENETRATION

Looking at the basic level of computers available at educational institutes, every institute in Saudi Arabia has at least one PC, whether used for administrative, educational, or other purposes. From 2007 to 2009, there is almost 100% computer penetration across the different educational institutions. Regardless of size, schools as a segment see the computer as an important medium for their administrative work or for teaching the students.

Figure 20 - Computer Penetration

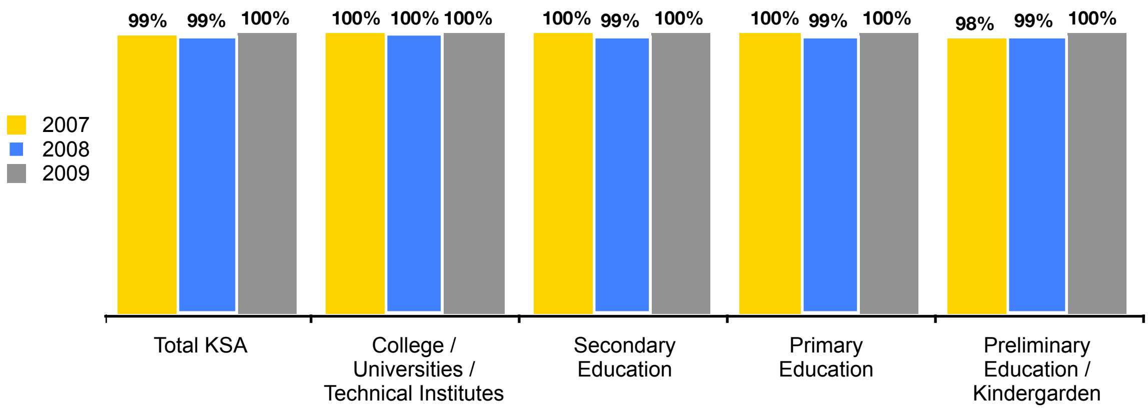


Figure 21 (a) – Average number of students and computers

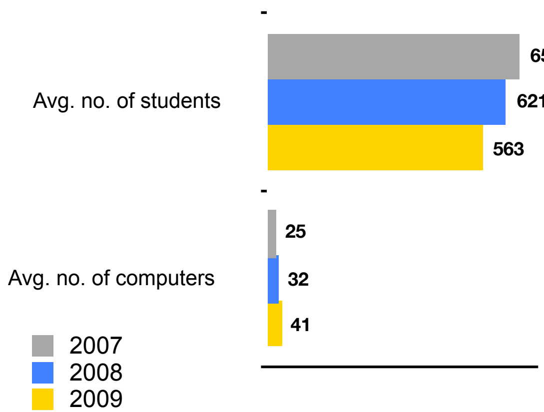
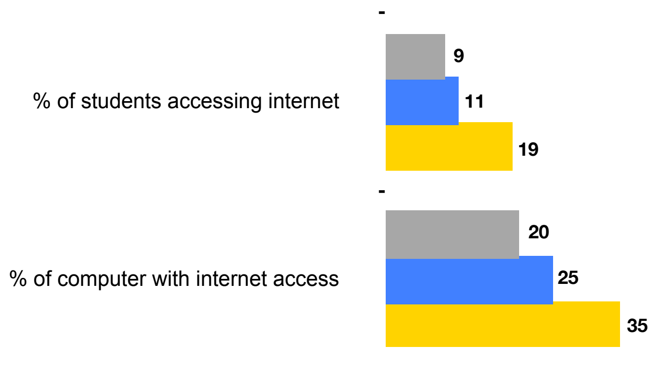


Figure 21 (b) – Percentage of students and computers



INTERNET CONNECTION

We have seen a continued increase in the average number of computers in the schools surveyed. A considerable increase is noticeable from 2007 to 2009 not only from the availability of computers in schools, but also in the availability of computers with internet access. This simply denotes that internet as a medium of teaching and imparting knowledge is well accepted and growing in KSA. Among the different grade levels, the highest increase in the percentage of computers with internet access is for those in the college segment. Primary and preliminary have doubled their figures when it comes to the percentage of computers with internet access.

Table 6 – Usage of Computers by students

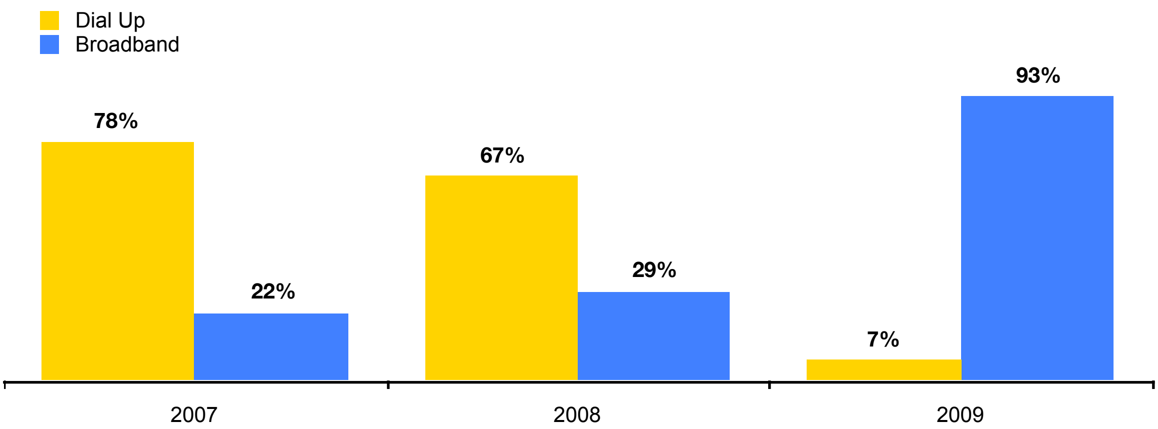
	PRELIMINARY			PRIMARY			SECONDARY			COLLEGE		
	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
Average no. of students	568	519	490	532	603	467	800	639	525	1708	1148	1889
Average no. of computers	18	16	24	18	15	15	32	47	40	121	120	135
% of computers with Internet access	19%	17%	30%	22%	24%	34%	18%	27%	31%	45%	47%	62%
% of students accessing Internet	6%	6%	15%	8%	6%	15%	12%	17%	20%	25%	39%	42%

TYPE OF INTERNET CONNECTION

Almost all the schools have moved from dial up connections to a broadband connections. The movement from dial up to broadband suggests the maturing of the institutions in embracing a new and faster medium of communication This complete move to broadband has happened most strongly in 2009 as compared to the past two years. Only colleges/universities shifted earlier to broadband.

In terms of the operating system 85% of schools surveyed still use Internet Explorer from Microsoft as their main web browser; others like Mozilla Firefox still have less than 10% usage.

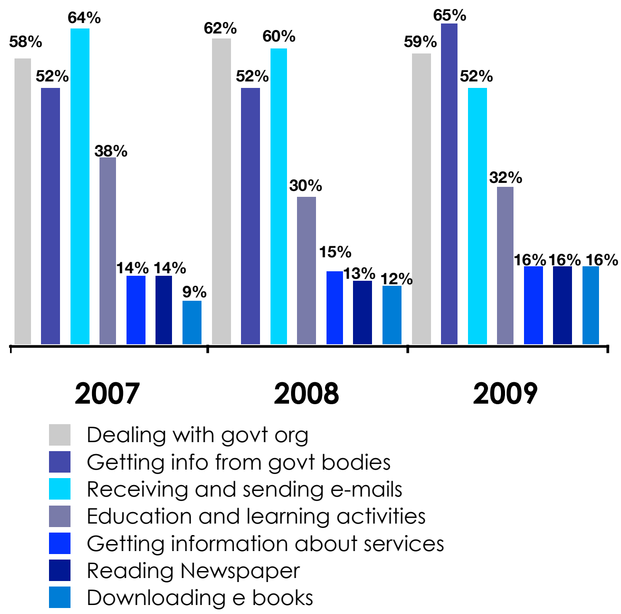
Figure 22 - Type of Internet Connections



INTERNET ACTIVITIES

An increasing use of Internet to get governmental information is well evident which has increased on a continuous basis from 2007 to 2009. This is also a channel for the majority in terms of their dealings with the government. There is a need to improve on using the internet as a source of education or learning options that schools can leverage on.

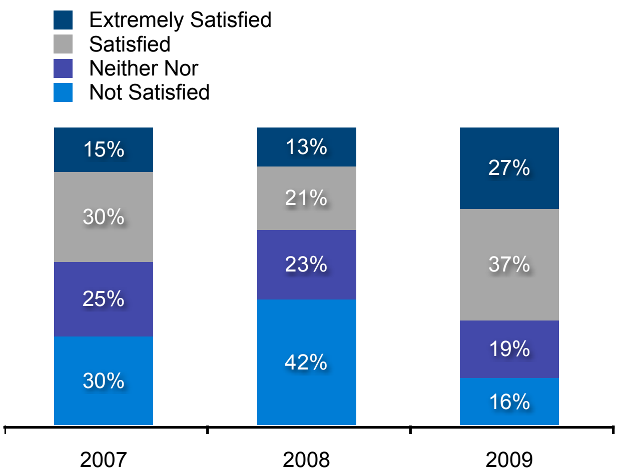
Figure 23 – Internet Activities



SATISFACTION TOWARDS INTERNET CONNECTION

Since the majority of schools have shifted to a broadband connections, satisfaction levels towards their internet connection has significantly increased from 2008, with the majority being either satisfied or

Figure 24 – Satisfaction towards internet connection



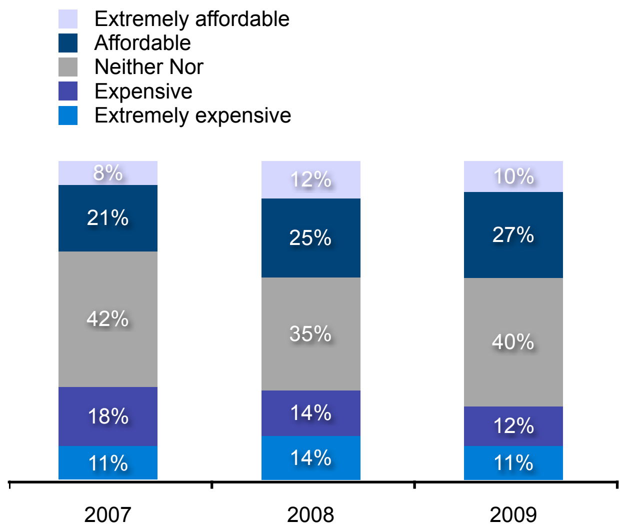
extremely satisfied with their internet connection. In 2007 and 2008 the educational institutions were relatively dissatisfied with the internet service providers and this was primarily due to the subscription to dial-up connections which had speed issues.

PRICE PERCEPTION TOWARDS INTERNET CONNECTION

Though majority has shifted to broadband, price perception on internet services has not changed drastically from 2007. Nearly one third of the educational institute feel that it is reasonable.

On average educational institutes in Saudi Arabia

Figure 25 – Price perception towards internet service



spend around SAR 286 per month with colleges/universities/technical Institutes spending considerably more, on average SAR 590 per month.

E-LEARNING IN SCHOOLS

The majority of the schools in 2009 still do not offer distance learning (73%), which clearly points out that distance learning is still to gain grounds in KSA

In terms of purchasing an e-learning system, 69% of the schools have purchased one but this is significantly higher for colleges/universities. 61% of the colleges have their courses available through e-learning, for universities it is at 60% of courses. Of those who do offer e-learning, the majority of offering is towards materials (video lectures, course guidelines), and a quarter also offer bulletin boards/ forums for their participants.

SCHOOL WEB PRESENCE

An estimated 54% of the educational institutes now have their own website; which is continuously increasing as compared to 2007. All universities have their own website, while 62% of colleges have their own as well, the lowest would be secondary schools with 48% having a school website.

The schools still have their websites primarily in Arabic while universities have moved to being bilingual by adding English as a secondary language.

In terms of services offered at their websites, the majority of the websites have holistic information

Table 7 Services offered on the website

	2007	2008	2009
Information about the school/ institute	69%	64%	79%
Web mail	49%	17%	24%
Registration	44%	38%	56%
Schedules	34%	39%	49%
Contact information	18%	12%	20%
Follow-up on kids' results	16%	17%	22%
Events	14%	21%	35%
Exam records	-	49%	69%
Application for work	-	45%	52%

pertaining to information on the school, school exam records, school career opportunities and also online registrations.

CHAPTER 4 **HEALTH**

BACKGROUND

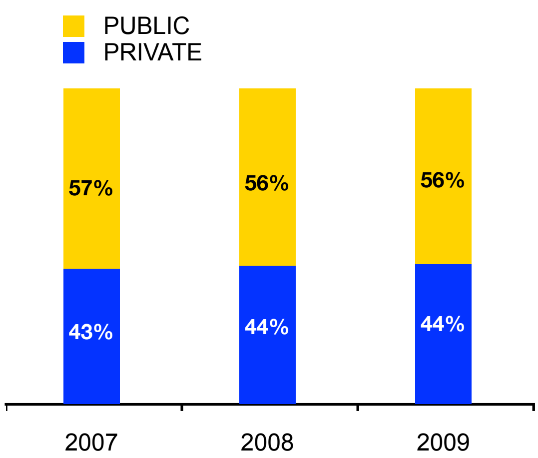
This chapter examines the internet and computer adoption by various health institutes in KSA. Healthcare professionals in various private and government hospitals, health centers, and clinics in Saudi Arabia were interviewed. Field surveys garnered information to assess internet and computer adoption and usage levels among health institutes to determine existing infrastructure and its usage by different institutions. A total of 407 face-to-face interviews were conducted in 2009, 424 interviews in 2008 and 400 interviews in 2007 representing both the private and public health sector of Saudi Arabia.

Results for health institutions are reported by private and public types.

In total, 407 health institutions were surveyed in 2009; these were in line with the numbers achieved in 2007 and 2008.

The average number of employees across the health sector has increased from 2007 to 2009 (From 90 in 2007 to 128 in 2009).

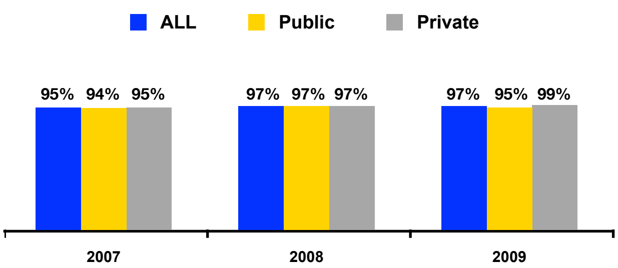
Figure 26 - Sample Composition by Public and Private



COMPUTERS PENETRATION

Computers devices are an integral part of health centers in Saudi Arabia which is evident from the high penetration of computer devices across different health institutes across three years. Computer usage in health institutions is mainly used by administrative/ management staff and Doctors.

Figure 27 - Computers Penetration



All the health centers which are computerized mainly use desktop computers. Levels of laptop penetration have not moved significantly from 2008. However the private sector seems to be having higher penetration of laptops vis-à-vis the public health sector. This could be also due to the fact that the private health clinics are run by individual healthcare professionals.

Figure 28 - Computer devices - PUBLIC

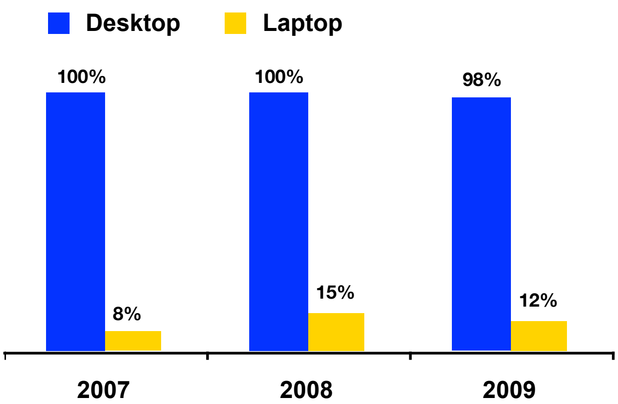
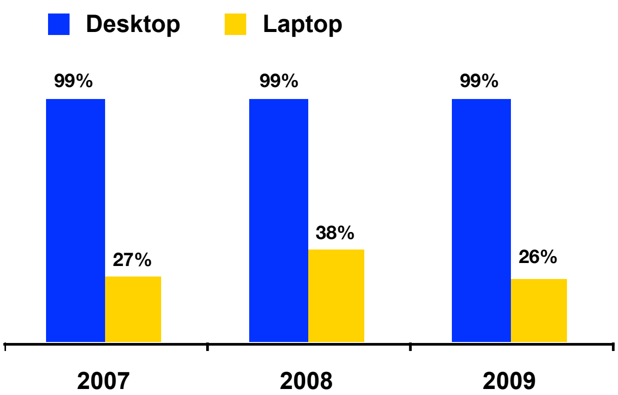


Figure 29 - Computer devices - PRIVATE



COMPUTERS USAGE

Main purposes of computer usage in health entities is generally focused on four main activities, storing patients documents, work-related applications, personnel documents and also to interact with government related requirements.

Table 8 Uses of Computers in Health Institutions

	2007 %	2008 %	2009 %
Store patients document	68%	64%	69%
Run work related applications on it	67%	68%	66%
Store personnel documents	58%	41%	60%
Appointment arrangements	57%	42%	49%
To do government related work	51%	59%	66%
Surf the internet	47%	38%	42%
Communicate with people via internet	27%	18%	23%

INTERNET PENETRATION

Internet penetration has increased significantly year on year, from 37% in 2007 to almost double in 2009 with 63% of the health entities being connected to the internet. This increase cuts across both public and health entities.

Focus needs to be given to public health centers, where internet penetration is 42% compared to 93% in private health centers. The smaller health centers also require a boost in internet penetration as they are falling behind the ICT adoption of the larger organizations. Public and large health centers find the process of obtaining an internet connection difficult. Public health centers find the process difficult because service providers do not respond fast enough, while large health centers find there is weak infrastructure in some areas.

Figure 30 - Computers and Internet Penetration - All

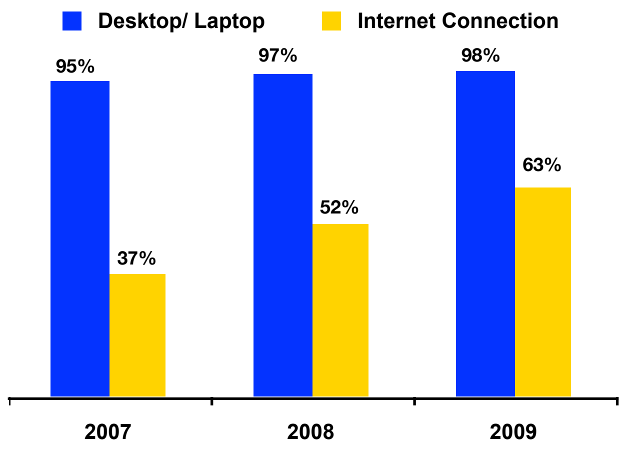


Figure 31 - Computers and Internet Penetration - Public

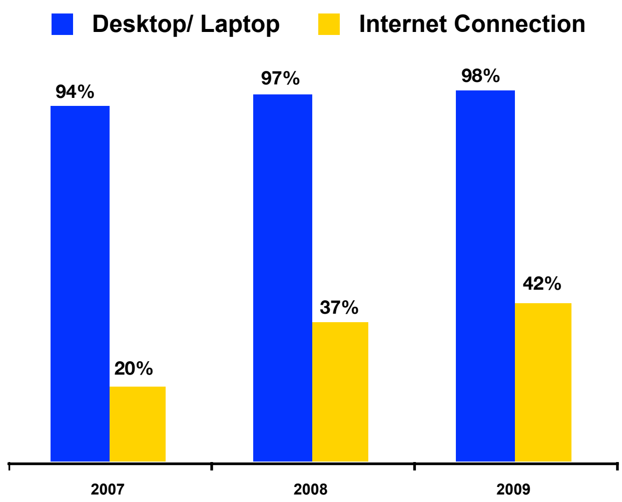
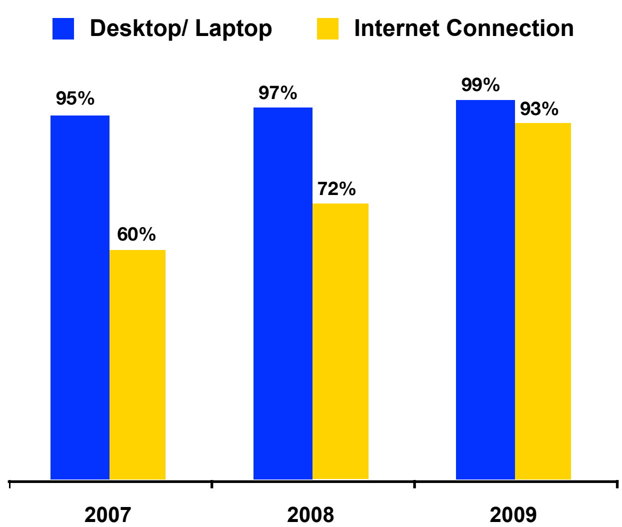


Figure 32 - Computers and Internet Penetration - Private



TYPE OF INTERNET CONNECTION

Broadband Internet access is eclipsing the use of dial-up among health institutes in Saudi Arabia across both public and private sector. Broadband subscriptions are approaching saturation among both the public and private health sectors, where the penetration rate is 93% and 90% respectively. We can clearly see the shift from dial up to broadband from 2007 to 2009.

Table 9 - Types of Internet Connections

	ALL			SMALL			MEDIUM		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
	%	%	%	%	%	%	%	%	%
Dial-up	33%	9%	3%	44%	13%	2%	28%	7%	4%
DSL/ Broadband	64%	83%	92%	48%	77%	93%	69%	89%	90%
Others	3%	8%	5%	6%	12%	5%	3%	7%	6%

In terms of the web browser among the different health entities surveyed, almost all of them use Internet Explorer (91%) as their web browser; only a few use Netscape (6%) or Mozilla Firefox (3%)

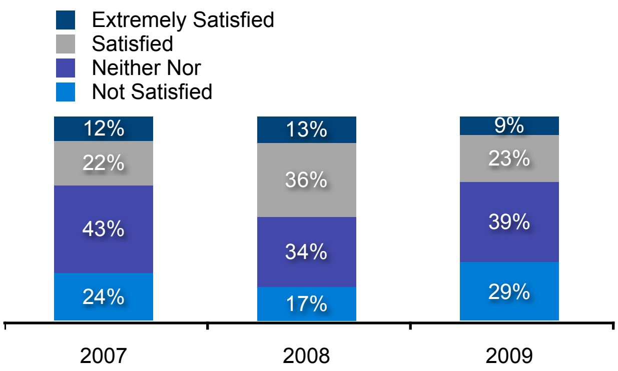
Main online activities are still mainly hinged on getting information (81%) and email communications (59%). These are also the main activities that were seen in 2007 and in 2008.

SATISFACTION TOWARDS INTERNET CONNECTION

The majority of the health institutions express satisfaction with their internet service provider and there is a clear trend in the increase in satisfaction from 2008 to 2009. Dissatisfaction towards internet connections has decreased from 2007 to 2009, with only 9% dissatisfied in 2009. This could be primarily due to the higher adoption of broadband by the enterprises across Saudi Arabia.

For the few who were not satisfied with their connections the main reason cited was about the slow speed of their connection speed.

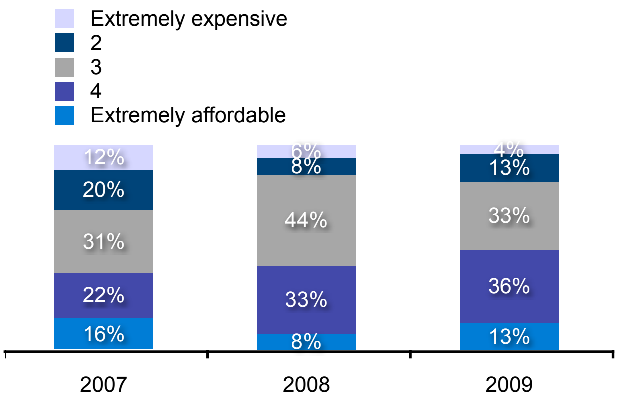
Figure 33 – Satisfaction towards internet service



PRICE PERCEPTION TOWARDS INTERNET CONNECTION

There is also a significant improvement in price perception towards internet costs in the kingdom. In 2009, only 4% had noted that internet costs are still expensive. Improvement in pricing could be attributed to the fact that most of the service providers have been able to offer different packages in terms of usage, giving the health institutions the liberty to choose which is most applicable to their usage of internet thereby providing value for money.

Figure 34 – Price perception towards internet



HEALTH WEB PRESENCE

The majority of the health entities still do not have their own website, for those who do have (29% in 2009), the majority would have it either English or Bilingual (English and Arabic). These websites are mainly offering information about the hospital (95%), and also information on its doctors (75%) and the necessary contact details (60%).

CHAPTER 5 **GOVERNMENT**

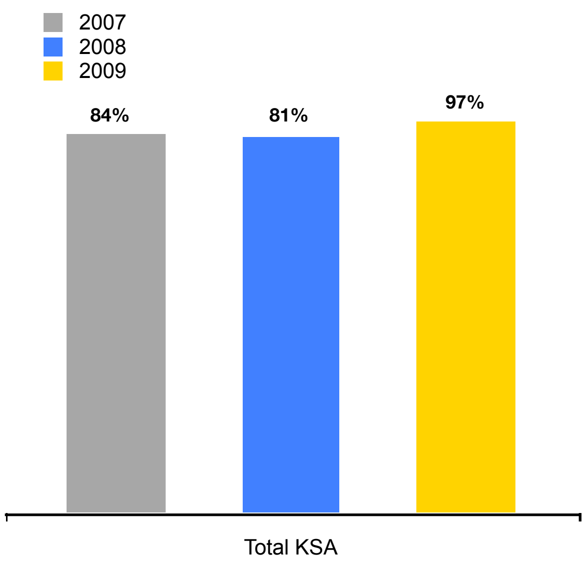
BACKGROUND

This chapter examines the internet and computer adoption by various government institutes in KSA. This includes consolidated information of interviews with IT heads of government institutes based all over KSA who are responsible for taking decisions regarding IT in their respective organizations. Field surveys garnered information to assess internet and computer adoption and usage levels among government institutes to determine existing infrastructure and its usage by different institutions. A total of 509 face-to-face interviews were conducted in 2009, 505 interviews in 2008 and 441 interviews in 2007 representing the different educational institutes in Saudi Arabia.

COMPUTERS PENETRATION

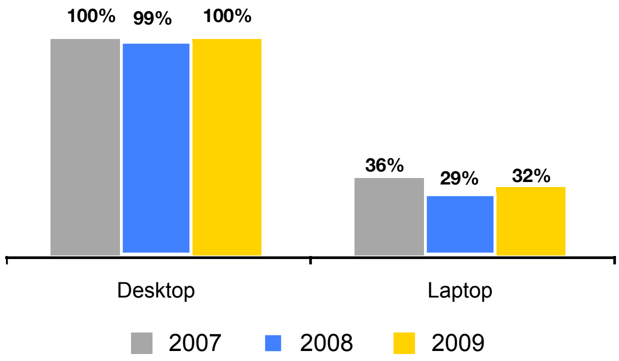
Computers have made steady entry in most of the government offices which is evident from the penetration numbers mentioned below. The computer penetration has grown from 84% in 2007 to 97% in 2009 across most provincial government offices. This is slightly higher than the business sector.

Figure 35 - Computer Penetration



Desktop is the most widely used computer device, with 100% penetration.

Figure 36 – Desktop and Laptop Ownership



In terms of the operating system the majority of the offices use an Arabic operating system (61% in 2009) and this has been the trend since 2007. English is not a popular choice with less than 4% in 2009 opting for this type of operating system. This current choice in operating system follows the preference of the government staff, as majority prefer the Arabic operating system.

INTERNET PENETRATION

Internet penetration has increased continually from 2007. In 2009, 73% of the surveyed head offices have an internet connection which has grown from 68% in 2008. 68% of the branch offices now have internet access which has grown from 58% in 2008. The steady increase in the internet usage at the branch level clearly shows that the new way of doing business using internet is gaining deeper acceptance in the Saudi government ministries.

Also, across the offices the IT heads were of the opinion that the internet is a good source of information which has made information sourcing to be simple, convenient and the information sourced keeps the office members updated with what they need. However, similar to the other members of the society, there are still a third of these IT managers in various government offices that are careful on evaluating the moral content of the internet and its impact to the new generation.

Figure 37 - Internet Penetration by office type

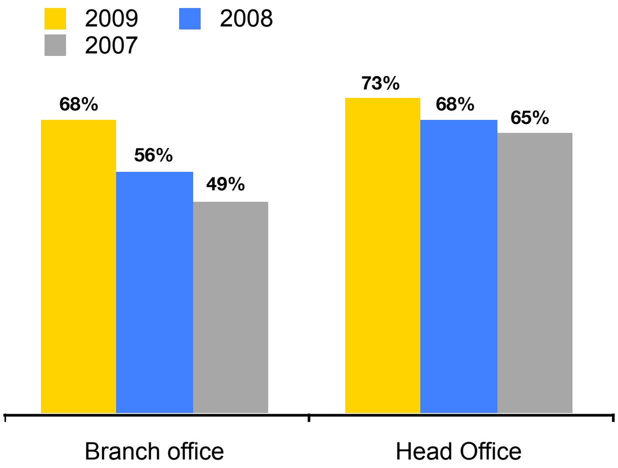


Figure 38 (a) - Internet access

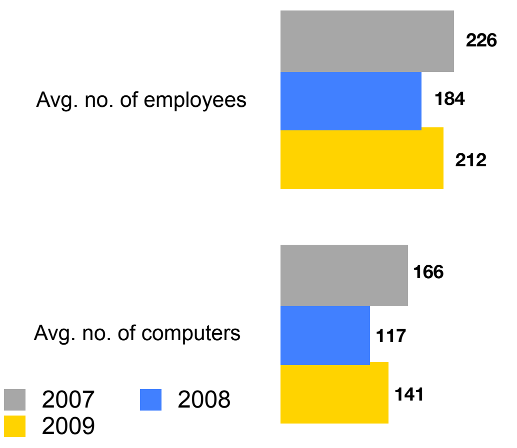
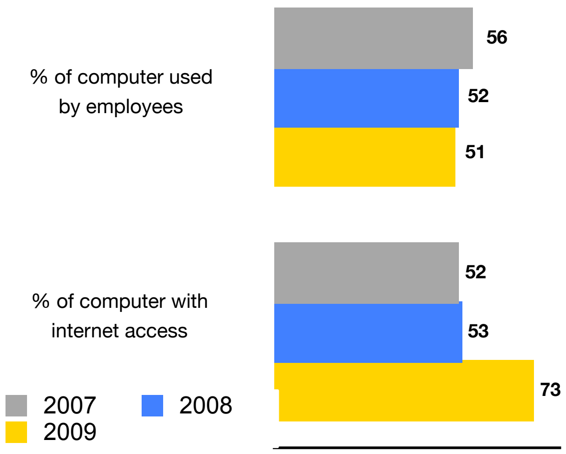


Figure 38 (b) - Percentage of Internet access



TYPE OF INTERNET CONNECTION

Broadband connection is the preferred connection type across the different government offices. The

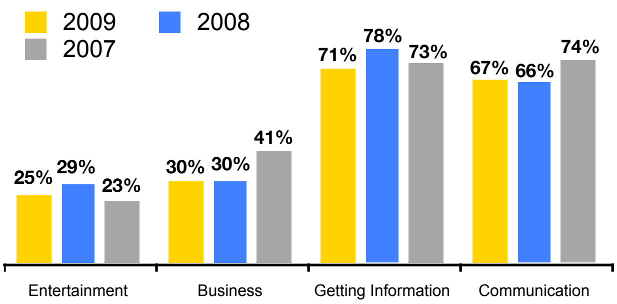
Table 10 Type of Internet Connection

	Head Office			Branches		
	2007	2008	2009	2007	2008	2009
Base: All departments using Internet	288	345	372	178	222	206
Dial-up	16%	6%	2%	21%	5%	3%
DSL/ Broadband	69%	80%	80%	70%	79%	83%
Others	17%	26%	20%	6%	22%	14%

preferred broadband connection type is mainly 512 kbps and 1 mbps types. The two main online activities across the offices are mainly focused on communications and information sourcing. Dial-up has observed a steady decline and is minimally used in government departments, however broadband has gained prominence both at head office and at branch level.

In terms of the internet explorer 83% of the

Figure 39- Online Activities



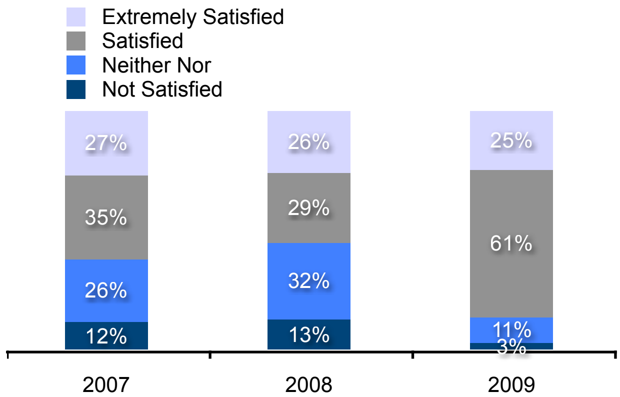
government offices in KSA are using internet explorer, while only 3% are using Mozilla Firefox. The key reasons for not using internet in offices are either the non availability of internet in the vicinity or they still do not feel the requirement of subscribing to internet.

The main online activities in the government departments are getting information and using it for communication purpose.

SATISFACTION WITH INTERNET CONNECTION

The majority of the government offices express satisfaction with their internet service provider and there is a clear trend in the increase in satisfaction from 2007 to 2009. This could be primarily due to the higher adoption of broadband by the enterprises across Saudi Arabia. Dissatisfaction towards the internet connection is only 13% in 2009.

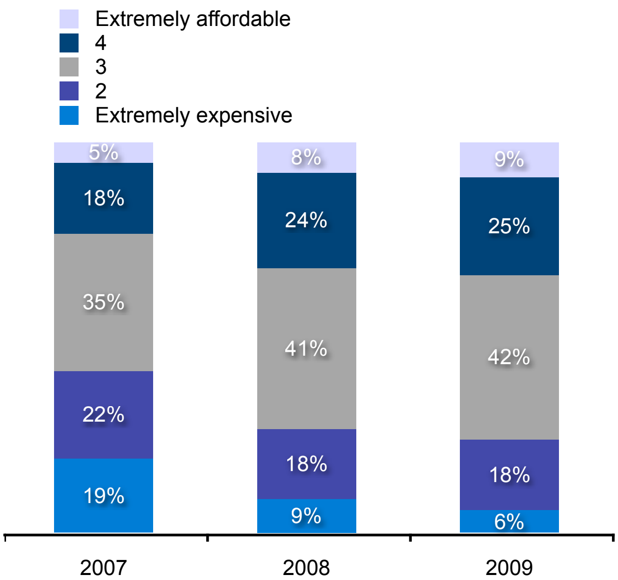
Figure 40 – Satisfaction towards internet service



PRICE PERCEPTION TOWARDS INTERNET CONNECTION

There is also a significant improvement in price perception towards internet costs in the kingdom. In 2009, only 6% had noted that internet costs are still expensive. The percentage of people who feel that cost of accessing internet has become affordable has gone up from 22% in 2007 to 34% in 2009. Improvement in pricing could be attributed to the fact that most of the service providers have been able to offer different packages in terms of usage, giving the organization the liberty to choose which is most applicable to their usage of internet thereby providing value for money to the offices.

Figure 41 – Price perception towards internet service



GOVERNMENT OFFICES WEBSITE PRESENCE

The majority of the offices surveyed have their own website (54%) and the language of the site is mostly in Arabic (49%) with some also opting for a bilingual website (38%). These websites are largely hosted internally (70%), which suggests that the ministries are using their internal capabilities to maintain the websites.

The websites are there to give information about the government office and the services that it can offer. Majority would also offer news about the industry and also the events that are spearheaded by the office.

Table 11 Language of Website

	2007	2008	2009
Arabic	45%	41%	49%
English	10%	7%	13%
Both English and Arabic	45%	52%	38%

Table 12 Services offered on the website

	2007	2008	2009
Information about department	95%	82%	81%
Information on types of services offered	-	75%	60%
News	68%	57%	55%
Contact information	55%	41%	57%
Web mail	48%	45%	36%
Events	45%	45%	49%
Webinar/ e-conferencing	8%	5%	9%

APPENDIX: **METHODOLOGY**

FIELD SURVEY

The KSA survey was conducted on a yearly basis from 2007 until 2009. Various sampling procedures were used depending on the nature of each survey, random stratified or snowballing, in order to achieve demographics that mirror the population targeted by each survey. The field work in 2007 was conducted from September 2007 to January 2008. For 2008 the field work was conducted from October 2008 to February 2009 and for 2009 the field work was conducted from January 2010 to April 2010.

The surveys and their respective samples were as follows:

RESIDENTS

- In 2007, 7570 interviews were conducted. In 2008 the total number of interviews was 8,943 and in 2009 the interviews totaled to 9,151. The interviews were conducted amongst residents 15 yrs.+ in the Kingdom of Saudi Arabia.

BUSINESS ESTABLISHMENTS

- In 2007, 1,296 interviews were conducted. In 2008 the total number of interviews was 1,614 and in 2009 the interviews totaled to 1,429

- Corporate representatives across the country were interviewed and target respondents interviewed for the survey were:

    - IT / Telecom managers or the officials who are responsible for such decisions
    - Interviews were conducted at the head offices.

EDUCATION

- In 2007, 700 interviews were conducted. In 2008 the total number of interviews was 709 and in 2009 the interviews totaled to 710

- Interviews were conducted among the principals of the school and also among its IT administrator

HEALTH

- In total, 407 health institutions were surveyed in 2009; these were in line with the numbers achieved in 2007 and 2008. 74 % of the health centers interviewed in 2009 did not have branches.

- Interviews were conducted among the IT administrators of these offices

GOVERNMENT

- In total, 509 government offices were surveyed in 2009; these were in line with the numbers achieved in 2007 (441) and 2008 (505).

- Interviews were conducted among the IT administrators of these offices

For your inquiries or feedback about this study please contact us by :

Email : InternetStudy_feedback@citc.gov.sa
Phone number : +966 1 4618000
P.O Box 75606 – Riyadh 11588 – Kingdom of Saudi Arabia

هيئة الاتصالات وتقنية المعلومات
Communications and Information Technology Commission